Funding Proposal

FP321: Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation

Moldova | International Bank for Reconstruction and Development and International Development Association (WorldBank) | Decision B.46/04

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Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the GCF Information Disclosure Policy, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:
fundingproposal@gcfund.org
Please use the following name convention for the file name:
"FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]"

A. PROJECT/PROGRAMME SUMMARY

A.1. Project or programme	Project	**A.2. Public or private sector**	Public
A.3. Request for Proposals (RFP)	Not applicable		

A.4. Result area(s)

*Check the applicable GCF result area(s) that the overall proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of **GCF and Co-financers' contribution** devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.*

	GCF contribution	Co-financers' contribution[1]
Mitigation total	Enter number %	Enter number %
☐ Energy generation and access	Enter number %	Enter number %
☐ Low-emission transport	Enter number %	Enter number %
☐ Buildings, cities, industries and appliances	Enter number %	Enter number %
☒ Forestry and land use	50%	50 %
Adaptation total	Enter number %	Enter number %
☒ Most vulnerable people and communities	Enter number 27%	27 %
☐ Health and well-being, and food and water security	Enter number	Enter number
☐ Infrastructure and built environment	Enter number %	Enter number %
☒ Ecosystems and ecosystem services	Enter number 23%	23%

A.5. Expected mitigation outcome *(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)*	3.95 million tCO2e GHG removal in 20 years lifetime of mitigation activities (i.e., 197 654 tCO2e per year)	**A.6. Expected adaptation outcome** *(Core indicator 2: direct and indirect beneficiaries reached)*	*Total number of direct and indirect beneficiaries: 185,000 persons*	
			Direct beneficiaries: 30,000 persons -15,600 women (52%); % of total population: 7% =14,400 men (48%) % of total population: 7%	*Indirect beneficiaries: 155,000 persons* -80,600 women (52%) % of total population: 36.2% -74,400 men (48%); % of total population: 36.2%
			Indicate % of direct beneficiaries vis-à-vis total population: 3.5%	*Indicate % of indirect beneficiaries vis-à-vis total population: 39.2%*

A.7. Total financing (GCF + co-finance[2])	49,280,000 USD	**A.9. Project size**	Small (Upto USD 50 million)
A.8. Total GCF funding requested	39,280,000 USD		

A.10. Financial instrument(s) requested for the GCF funding	*Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.* ☒ Grant 39,280,000 USD ☐ Loan Enter number ☐ Guarantee Enter number ☐ Equity Enter number ☐ Results-based payment Enter number		
A.11. Implementation period	5 years	**A.12. Total lifespan**	20 years.
A.13. Expected date of AE internal approval	*This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/ programme, if available.* *30/10/2026* *Click or tap to enter a date.*	**A.14. ESS category**	B
A.15. Has this FP been submitted as a CN before?	Yes ☒ No ☐	**A.16. Has Readiness or PPF support been used to prepare this FP?**	Yes ☐ No ☒
A.17. Is this FP included in the entity work programme?	Yes ☒ No ☐	**A.18. Is this FP included in the country programme?**	Yes ☒ No ☐
A.19. Complementarity and coherence	Yes ☐ No ☒		
A.20. Executing Entity information	**Executing Entity (EE)**: is the Republic of Moldova, represented by the Ministry of Finance, acting through the Ministry of Environment.		

A.21. Executive summary (max. 750 words, approximately 1.5 pages)

The Republic of Moldova is among the most climate-vulnerable countries in Europe due to its high reliance on climate-sensitive agriculture, degraded ecological infrastructure, and increasing exposure to droughts, floods, and hydrological variability. These vulnerabilities are particularly acute in the Southern Development Region (SDR), a predominantly rural area characterized by semi-arid conditions, degraded soils, fragmented shelterbelts, limited forest cover, and declining water retention capacity. Agriculture occupies over 70 percent of national land area and remains largely rain-fed, rendering production systems highly exposed to increasing climate variability. Recurrent droughts,

[1] Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.
[2] Refer to the Policy of Co-financing of the GCF.

including the severe 2022 drought, have already generated significant economic losses and reduced agricultural output, while future climate projections indicate intensifying water stress and temperature increases across southern Moldova.

Climate vulnerability is further exacerbated by long-term land degradation and declining ecosystem functionality. Fragmentation of forests, wetlands, and riparian systems has weakened natural water regulation, soil stability, and microclimatic buffering functions. These dynamics disproportionately affect rural communities, particularly smallholder farmers and vulnerable groups, who face declining agricultural productivity and adaptive capacity. Despite strong national policy commitments under the National Forest Extension and Rehabilitation Programme (NFERP) 2023–2032 and the National Climate Change Adaptation Programme (NCCAP 2030), implementation of ecosystem-based adaptation (EbA) and landscape restoration at scale remains constrained by institutional, technical, and financial barriers.

A fundamental constraint is the structural adaptation financing gap associated with ecosystem restoration. EbA investments generate substantial public climate benefits, including improved water regulation, reduced land degradation, enhanced ecosystem resilience, and carbon sequestration, but yield limited direct financial returns. As a result, such investments cannot be adequately financed through commercial capital or sovereign borrowing alone. Public budgets remain insufficient to meet the scale of restoration required, while ecosystem services benefits accrue broadly across society and cannot be fully monetized. This creates a clear case for concessional grant financing to enable implementation at scale. The proposed *Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation* project addresses these constraints through an integrated, landscape-scale EbA approach aimed at strengthening the resilience of ecosystems and rural livelihoods in southern Moldova. The project objective is to improve climate resilience of targeted landscapes in southern Moldova and strengthen institutional capacity for climate-informed planning. The project is structured around four mutually reinforcing components. First, it strengthens enabling conditions through institutional capacity development, climate-informed restoration planning systems, geospatial and hydrological modelling tools, and environmental monitoring frameworks. Second, it finances large-scale restoration of ecological infrastructure, including forests, shelterbelts, riparian systems, wetlands, and silvopastoral systems, to enhance soil stability, water retention, ecological connectivity, and resilience of agricultural production systems. Third, it supports community engagement and climate-resilient livelihoods, strengthening local stewardship systems and ensuring sustained maintenance of restored ecosystems, with a focus on inclusion of women and vulnerable populations. Fourth, it ensures effective implementation, adaptive management, and knowledge generation to support long-term sustainability and scaling.

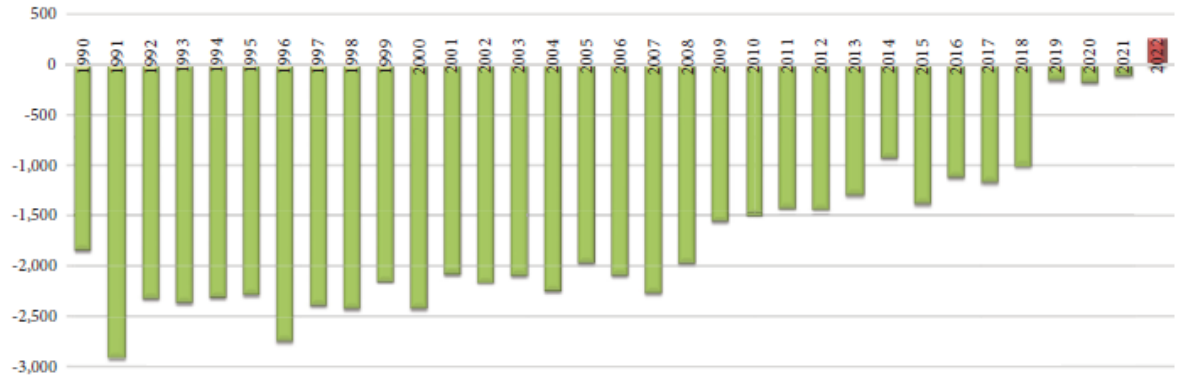
The project is expected to generate significant adaptation benefits for approximately 185,000 people, including 30,000 direct beneficiaries, through improved drought resilience, enhanced water regulation, reduced soil degradation, and strengthened ecosystem services supporting agricultural productivity. It will also deliver mitigation outcomes through carbon sequestration associated with restoration activities, estimated at approximately 3.95 million tCO_2e over a 20-year period.

Total project financing amounts to USD 49.28 million, comprising a USD 39.28 million grant from the Green Climate Fund (GCF) and USD 10 million in co-financing from the International Bank for Reconstruction and Development (IBRD). The financing structure reflects a clear division of roles: the IBRD loan supports capital-intensive restoration investments where sovereign financing is appropriate, while the GCF grant finances adaptation-specific activities, enabling systems, and public climate goods that cannot be sustained through debt financing. The concessional GCF grant is therefore essential to bridge the financing gap and ensure adequate scale, quality, and sustainability of EbA interventions. The Executing Entity (EE) is the Republic of Moldova. The GCF proceeds will be channelled through the World Bank – International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA) – acting together as the Accredited Entity (AE) of the GCF and will be made available to the Republic of Moldova (as the Executing Entity). The World Bank will enter into a Subsidiary Grant Agreement with the Republic of Moldova, represented by the Ministry of Finance (MoF) and acting through the Ministry of Environment (MoE). The Project Implementation Unit (PIU) will be hosted by the National Office for the Implementation of Environmental Projects (NOIEP), while strategic oversight will be provided through a Project Steering Committee (PSC) chaired by the MoE and comprising relevant national institutions responsible for environment, agriculture, forestry, water resources and public finance.

Moldova is a small, landlocked country with around 60 percent of the population lives in rural areas, Moldova's economy has long been characterized by low-productive, small-scale agriculture and around 57 percent of Moldovans derive their income and food mainly from their own production (https://hdr.undp.org/content/national-human-development-report-2020-moldova). The vast majority (98 percent) of Moldovans who's livelihoods depend on agriculture are small-scale farmers owning 0.8–10.0 hectares, or (mostly informal) farmworkers (UNDP 2020). Moldova has relatively low forest cover with forest vegetation estimated at around 13.4 percent of the total land area.

Moldova submitted its latest National Inventory Report (NIR) in December 2024 covering the period 1990-2022. The total emissions in 2022 were estimated at 12.95 million t CO2 equivalent without considering emissions and removals from land use, land use change and forestry (LULUCF). When including LULUCF, the total emissions in 2022 were estimated as 13.37 million t CO2 equivalent. This means that in 2022, LULUCF was a net source of emissions, accounting for 3.2 percent of Moldova's total emissions. This is a significant change from the past. The historic time series submitted by Moldova show that for a long period, the LULUCF sector was a significant net sink. In 1990, the sector removed 1,830,486 t CO2 equivalent and by 2000, net sinks from LULUCF were enough to offset around 20 percent of Moldova's total emissions. However, sequestration from LULUCF declined steadily in the subsequent decades and by 2022 the LULUCF sector has become a net source of emissions (see figure 1 below). The NIR states that this trend is mainly due to changes in land-use and land management practices, which contributed to significant decrease in organic carbon stocks in cropland. The trend was also influenced by changes in forest management and forest-use, such as the increase in authorized harvesting of wood, significant increase in illegal logging, increased conversion of cropland to forest land, etc.

Figure 1 CO2 removals/emissions from 'LULUCF' in Moldova between 1990-2022



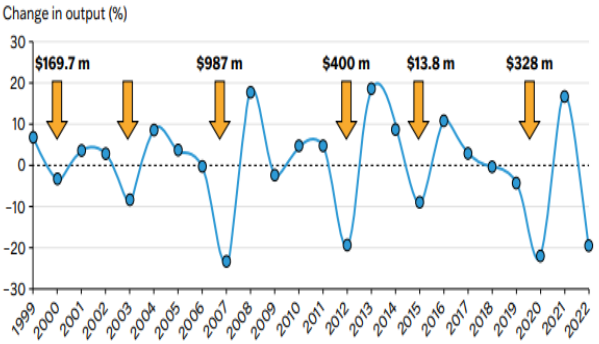
Source: Moldova's National Inventory Report 1990-2022

In terms of adaptation, Moldova is considered as one of the most climate-vulnerable nations in Europe according to the NDGAIN vulnerability assessment methodology. While Moldova has experienced droughts on a regular basis throughout its history, droughts have become more frequent and severe in the last two decades. Between 2000 and 2012, the country experienced four devastating droughts, in 2000, 2003, 2007 and 2012, and further droughts in 2015, 2020, and 2022 (World Bank. Moldova - Country Climate and Development Report). At the same time, increasing rainfall variability and episodic heavy rainfall events contribute to localized flooding, soil erosion, and degradation of watershed systems. Scenario analysis performed by the World Bank, using six climate scenarios to represent the uncertainty pertaining to future climate change impacts, predicts that these trends will continue and that by 2050, Moldova is likely to experience an increase in temperature between 1.9°C to 2.8°C, relative to the 1995–2020 average. (World Bank. Moldova - Country Climate and Development Report), The impact on precipitation is less clear from the scenario analysis but it is expected that changing precipitation patterns will result in an increased frequency and intensity of extreme events, including droughts and floods.

The increased occurrence of droughts and floods is having an increasingly large impact, in particular on agricultural output and incomes of small farmers and poor communities whose livelihoods are directly dependent on climate-sensitive natural resources. NCCAP 2030 is expecting that agricultural productivity will be significantly reduced due to increased water

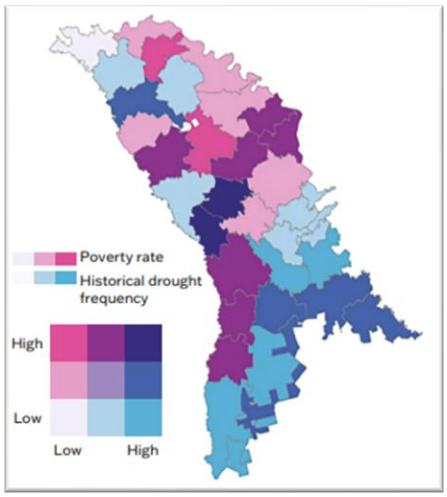
stress on crops, even without considering the upward impact of extreme weather events. This expectation is supported by evidence from recent droughts that occurred in the country (see Figure 2). The 2007 drought, which affected 80 percent of the country's territory, led to a 23 percent decline in agricultural production and caused an estimated $1 billion in economic losses (World Bank 2021). The drought of late 2020 is estimated to have caused a 22 percent decline in the value of output for individual farmers and put upward pressure on food prices. The World Bank. Moldova - Country Climate and Development Report highlighted that climate change has heterogeneous impacts across households in Moldova. An analysis of the 2020 drought shows that the poorest populations—particularly rural women and people living in the southern raions—are some of the most vulnerable to climate shocks, suffering from both income and price fluctuations. Without adaptation, the scale of crop losses that Moldova experiences in historic drought years could become a normal feature with most crops expected to experience large declines in yields through 2050, especially due to precipitation changes (World Bank. Moldova - Country Climate and Development Report).

Figure 2 Drought impacts on agricultural output and associated economic losses



Source: World Bank staff calculations, based on data from the National Bureau of Statistics of the Republic of Moldova and the Food and Agriculture Organization of the United Nations.

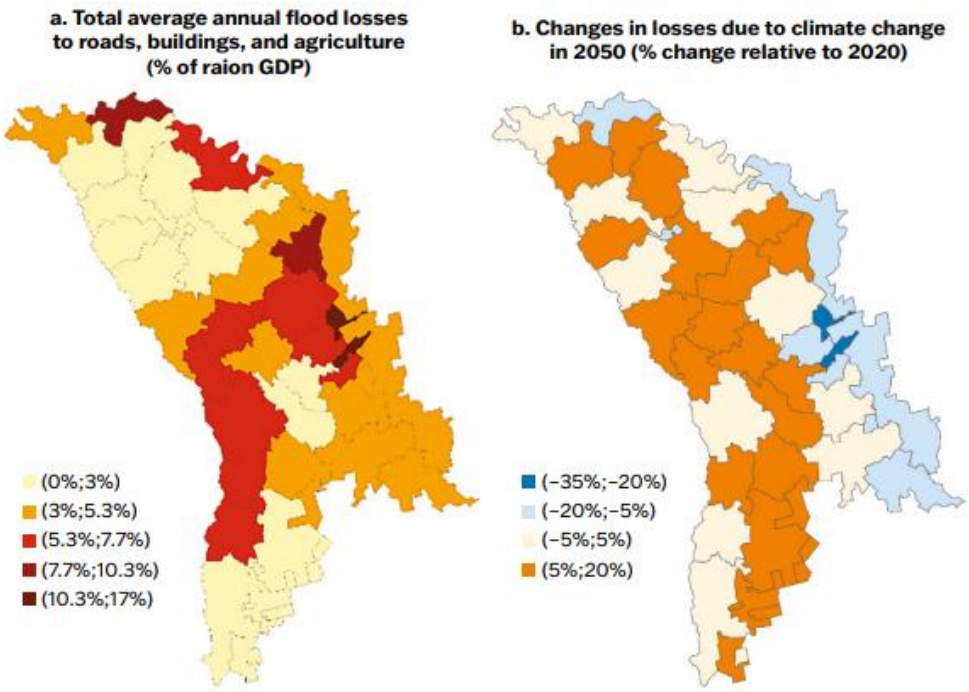
Figure 3: Poverty rate and historical drought frequency, by raion



Source: World Bank. 2023. Moldova Poverty Assessment

Floods already cause substantial damage, and their frequency and intensity are expected to increase because of climate change. Flood impacts on roads, buildings, and agricultural land cost Moldova about 0.8 percent of GDP annually in asset damages alone, primarily to roads, followed by buildings. These costs are distributed unevenly across the country. In the southwest, several raions face a combination of above average flood exposure and poverty. For example, by 2050, climate change under a dry RCP4.5 scenario is expected to result in a decrease in fluvial flood damages along the Dniester River due to reduced river flows, while pluvial floods could worsen due to intensified precipitation. As a result, raions along the Dniester River could see net reductions in flood damages, while all other raions, particularly in the south, could see significant increased damages.

Figure 4 Flood exposure in Moldova



Source: World Bank. Moldova - Country Climate and Development Report

Forests and other ecosystems in Moldova are also expected to be severely affected by climate change. Moldova's NCCAP 2030 identifies significant risks to forests including changing sensitivity of forest species to water scarcity and increasing damage caused by fires, windstorms, floods and droughts. The share of forested land in Moldova is among the lowest in the ECA region, and forest cover is highly fragmented. Forest dependency in Moldova remains high, including as a source of firewood, which contributes to deforestation and indoor air pollution.

As shown in Figure 3 and 4, farmers, communities and ecosystems in the Southern Development Region (SDR) are particularly at risk. The SDR covers approximately 9,200 km² over eight districts plus the Autonomous Territorial Unit of Găgăuzia (ATUG) and is characterized by semi-arid steppe and forest-steppe ecosystems. The region also hosts the ecologically significant Bugeac steppe, with important biodiversity and cultural heritage, and the Lower Prut and southern catchments which provide important biodiversity, Moldova's NCCAP 2030, building on the scenario analysis done for Third National Communication, identifies the south as one of the most climate-exposed areas of Moldova in terms of agricultural production. Agriculture dominates land use, covering more than 70 percent of the landscape and relying heavily on rainfall due to limited irrigation coverage. These factors combine to create high exposure to climate risks, particularly drought and soil moisture deficits, and constrain the resilience of agricultural systems and rural livelihoods. The south is also an area with high poverty rates, which further increases the exposure of households and communities to potential shocks

The table below summarizes the Climate Risk Assessment

Impacts	Exposure	Vulnerability
Increase in frequency and intensity of droughts and water stress .	Agriculture relies heavily on rainfall due to limited irrigation coverage. Drought and soil moisture deficits lead to decreased agricultural output.	Decline in the value of output for individual farmers deceases income. Increased reliance on buying food in combination with upward pressure on food price exacerbates poverty in rural areas

Increase in frequency and intensity of floods	Increases in occurrence of crop loss and increased soil erosion	Loss of agricultural crops and income exacerbates poverty in rural areas

The expected effect of climate change on the agricultural sector, forests and other ecosystems is being exacerbated by ongoing and extensive land degradation. This land degradation is caused by land fragmentation; inadequate practices that affect soil health (especially tillage); overgrazing; and poor forestland management (including illegal logging of protective forest belts) (World Bank and CIAT 2016). Degraded soils, erosion-prone slopes, fragmented forest systems, and diminished wetland and riparian ecosystems have significantly reduced the capacity of landscapes to regulate water flows, retain soil moisture, and buffer climatic extremes. In turn, these conditions amplify the impacts of climate hazards, creating a feedback loop in which ecosystem degradation increases exposure to climate risks, while climate change accelerates further environmental degradation.

Integrated EbA and landscape restoration are considered as key activities to both address climate change as well as land degradation. Restoration of forests, shelterbelts, wetlands, and riparian systems can simultaneously enhance climate resilience, reverse land degradation and generate mitigation outcomes by strengthening carbon sinks. EbA interventions are designed to restore ecosystem functionality, strengthen ecological connectivity, stabilize soils, improve water-retention functions, reduce erosion, improve microclimatic regulation, enhance groundwater recharge, and increase resilience of agricultural systems exposed to increasing drought and temperature variability. Through integrated restoration of forest, agricultural, pasture, and floodplain systems, EbA seeks to strengthen landscape-scale resilience while at the same time increasing carbon stocks and carbon sequestration across landscapes.

B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

As discussed in section B.1, EbA and landscape restoration are considered as key activities in Moldova. The Government of Moldova has established a strong policy framework for these activities, including through the NCCAP 2030 and NFERP. These frameworks prioritize ecosystem restoration, afforestation, and climate-resilient land management as core strategies for enhancing climate resilience and supporting national climate commitments. While the NFERP provides an important platform for expanding forest cover, its primary focus is the establishment and rehabilitation of forest vegetation. The programme does not systematically address the broader climate resilience challenges facing Moldova's production landscapes, including declining water retention capacity, degraded floodplain systems, fragmented shelterbelts, ecosystem connectivity, climate-informed landscape planning, community stewardship, and adaptive management under increasing climate variability. For forests, existing planning processes remain primarily oriented toward technical management objectives and provide limited guidance on integrating climate adaptation priorities, ecosystem services, communal forest management objectives, naturally regenerated forests, and participatory engagement of Local Public Authorities (LPAs) and local stakeholders. In addition, significant areas of forest vegetation occurring on communal lands or through natural succession remain outside formal management planning frameworks, limiting their integration into long-term restoration and climate adaptation strategies. Most LPAs maintain local development strategies or planning instruments of varying quality and vintage that could be purposed toward ecosystem restoration outside of forest lands. However, significant disparities remain in planning capacity, technical expertise, and implementation resources across municipalities. Existing restoration programmes therefore provide an important foundation but are insufficient to deliver the integrated ecosystem-based adaptation approach required to address climate risks at landscape scale. Therefore, despite the existing policy alignment, implementation remains constrained by several structural barriers.

Key barriers to climate-resilient landscape management in Moldova can be grouped into three interrelated categories. First, institutional barriers, include fragmented institutional coordination, limited climate-informed restoration planning systems, and insufficient stewardship mechanisms constrain the ability of national and local institutions to plan, implement, and sustain ecosystem-based adaptation interventions at landscape scale. These limitations reduce the effectiveness of restoration investments and hinder the integration of climate resilience objectives into planning and management systems. Knowledge and information barriers limit the use of climate-informed decision-making. These include insufficient environmental monitoring systems, limited availability and use of climate information and adaptation opportunities for communities, weak integration of restoration priorities into spatial planning processes, and inadequate decision-support tools for adaptive landscape and floodplain management. As a result, restoration investments are often not sufficiently aligned with climate risks, ecosystem dynamics, or long-term adaptation priorities. Second, technical barriers undermine restoration effectiveness and long-term ecosystem resilience. These include degraded and fragmented ecological infrastructure across agricultural landscapes, declining functionality of forest and floodplain ecosystems, limited availability of climate-adapted forest reproductive material (FRM), insufficient restoration standards

and technical guidance and weak local implementation capacity. Together, these constraints reduce ecosystem functionality, ecological connectivity, water regulation capacity, and resilience to increasing droughts, floods, and land degradation. economic and financial barriers constrain long-term sustainability and scaling of restoration efforts. Limited resources for ecosystem maintenance, insufficient incentives for stewardship, and inadequate financing mechanisms for restoration and ecosystem management reduce local ownership and weaken the long-term viability of restoration investments. These barriers collectively limit Moldova's ability to establish a resilient climate pathway based on healthy ecosystems, climate-informed decision-making, and sustainable management of natural resources.

Southern Moldova faces an accelerating convergence of climate hazards, increasing drought frequency and intensity, rising temperatures, flash floods, and land degradation projected to intensify under future climate scenarios. These hazards generate severe and compounding impacts on natural and human systems: declining forest cover and degraded shelterbelts reduce windbreak protection and accelerate soil erosion; degraded riparian and floodplain systems lose their water-retention function, increasing both drought severity and flood peaks; and agricultural systems exposed to soil degradation, reduced groundwater recharge, and temperature extremes face declining yields. Rural communities, particularly women and other vulnerable groups, face increased livelihood insecurity as these systems fail, with vulnerability deepened by fragmented institutional coordination, limited access to climate information and adaptation opportunities, and insufficient financing mechanisms for ecosystem management.

The project's Theory of Change is based on the premise that climate resilience at landscape scale can be strengthened when the institutional, knowledge, technical, and financial barriers constraining EbA are addressed through a combination of climate-informed planning systems, restoration investments, strengthened institutional and community capacity, improved community access to climate information and adaptation opportunities, and early warning systems, locally embedded stewardship mechanisms. By simultaneously strengthening enabling conditions for restoration, restoring climate-resilient ecological infrastructure, and establishing sustainable management systems, the project addresses both the underlying drivers of climate vulnerability and the barriers limiting implementation of EbA. The Theory of Change therefore links barrier removal, ecosystem restoration, and long-term stewardship to improved ecosystem functionality, adaptive capacity, and climate resilience. In parallel, landscape-scale ecosystem restoration delivers significant carbon sequestration and GHG removal, constituting a primary mitigation outcome of the project alongside its adaptation results.

The Theory of Change assumes that if national and local institutions strengthen their climate-informed planning, environmental monitoring, decision-support systems, and restoration governance; if climate-resilient ecological infrastructure is restored across forests, wetlands, riparian systems, shelterbelts, and silvopastoral landscapes; and if communities are empowered to participate in stewardship and sustainable ecosystem management, then ecosystem functionality, adaptive capacity, and resilience to climate-related shocks will increase across vulnerable production landscapes, and measurable GHG removal will be achieved through landscape-scale ecosystem restoration, while contributing to long-term climate mitigation objectives.

The Theory of Change follows three mutually reinforcing pathways.

First, the project strengthens climate-informed institutional capacity, planning systems, and community access to climate information and adaptation opportunities. This pathway addresses both the institutional and knowledge barriers that prevent effective EbA, recognising that resilience requires action at both the governance and community levels simultaneously.

At the institutional level, the project invests in inter-sectoral coordination mechanisms, restoration prioritisation frameworks, geospatial and hydrological modelling systems, and climate-informed planning tools. By strengthening restoration governance and integrating climate vulnerability data into spatial and landscape planning processes, the project creates the institutional foundation for sustained, climate-aligned restoration investments.

At the community level, the project modernises climate information services and improves access to actionable climate knowledge for farmers, rural households, and local institutions. This includes modernisation of climate and hydrometeorological data systems, development of user-oriented climate information services, and scenario-based drought and flood risk modelling. Communities currently facing drought, flood, and extreme heat with limited access to timely and actionable information are among the most exposed and least equipped to adapt. By improving the quality, accessibility, and relevance of climate information services in this way, the project directly strengthens communities' capacity to anticipate climate risks, make informed decisions, and respond effectively to increasing climate variability.

Together, the institutional and community dimensions of this pathway produce a primary project outcome: strengthened climate-informed decision-making and institutional capacity, and improved community access to tailored climate information and adaptation opportunities. These results enable the effective implementation and long-term sustainability of restoration investments under Pathway 2.

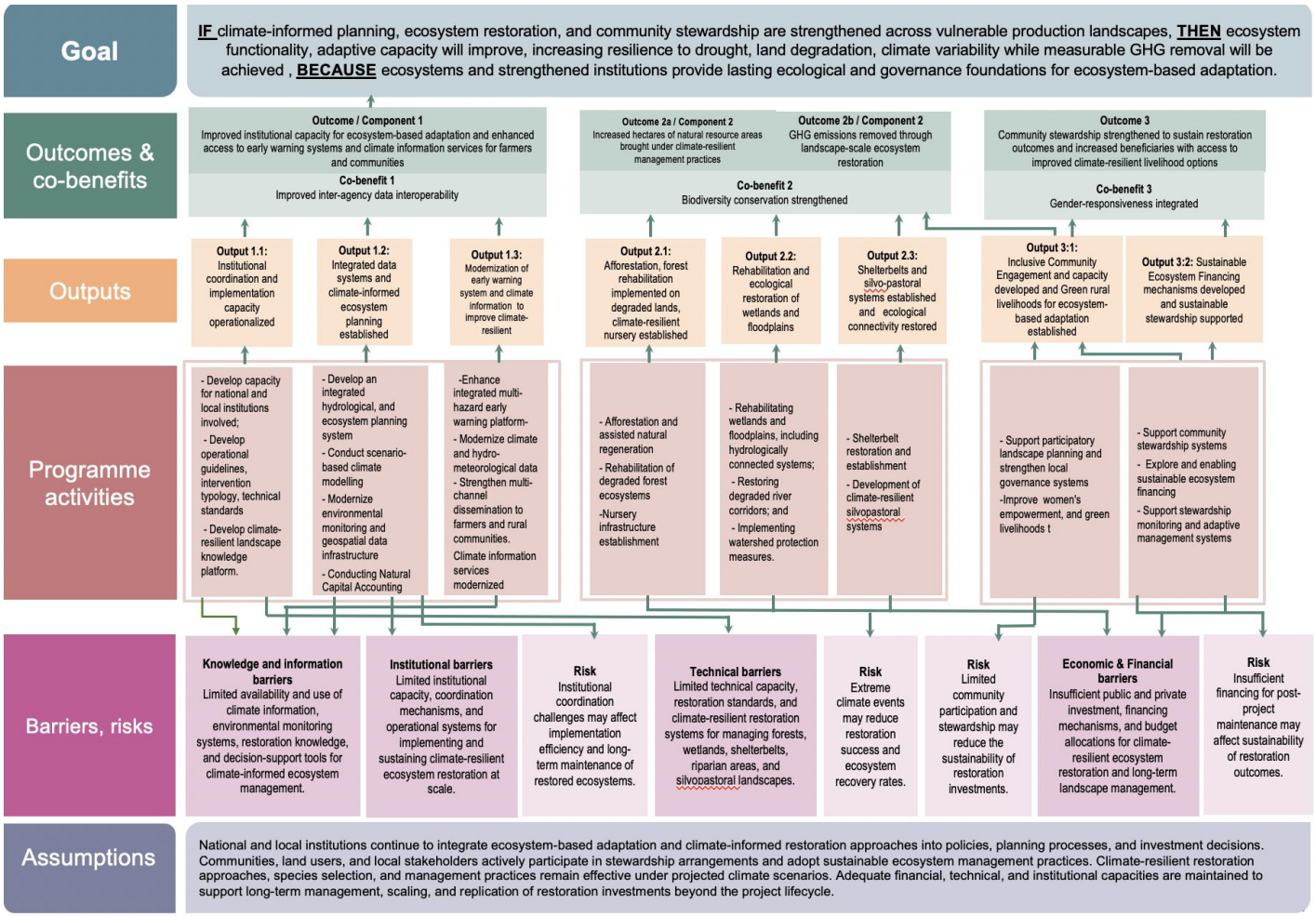
Second, the project restores ecological infrastructure across degraded and climate-exposed production landscapes through afforestation, reforestation, assisted natural regeneration, forest rehabilitation, restoration of shelterbelts and riparian vegetation, wetland and floodplain restoration, and implementation of climate-resilient silvopastoral systems. These interventions are designed to restore ecosystem functionality, strengthen ecological connectivity, stabilize soils, improve water-retention functions, reduce erosion, improve microclimatic regulation, enhance groundwater recharge, and increase resilience of agricultural systems exposed to increasing drought and temperature variability. Restoration investments are supported by strengthened nursery and FRM systems to ensure availability of climate-resilient and site-adapted planting material required for long-term scaling of restoration efforts. The adaptation rationale of this pathway is grounded in the direct relationship between ecosystem condition and climate exposure. Degraded and fragmented ecological infrastructure amplifies the vulnerability of rural communities and agricultural systems to drought and flooding, eroded soils lose moisture retention capacity, degraded riparian zones fail to regulate flood peaks, and fragmented shelterbelts offer little windbreak or microclimatic buffering. By restoring functional ecological infrastructure at landscape scale, the project directly reduces the physical exposure of communities and agricultural systems to these hazards, strengthening resilience through improved soil stability, water regulation, and microclimatic conditions across southern Moldova.

Through integrated restoration of forest, agricultural, pasture, and floodplain systems, the project seeks to strengthen landscape-scale resilience while generating socio-economic co-benefits for rural communities. In addition to adaptation benefits, through landscape-scale afforestation, reforestation, and ecosystem restoration, the project increases vegetative biomass, soil organic carbon, and ecosystem carbon stocks, generating measurable GHG removal of 3.95 million tCO2e over 20 years. Third, the project strengthens long-term sustainability, local ownership, and adaptive capacity through participatory planning, community stewardship mechanisms, climate-resilient livelihood support. These activities are designed to strengthen local ownership and long-term maintenance of restored ecosystems, while restoration-linked green livelihoods, women's economic empowerment, and climate-resilient income diversification activities strengthen socio-economic resilience in vulnerable rural communities. The project will further support institutional readiness and pilot approaches for longer-term ecosystem financing and stewardship mechanisms, including exploration of payments for ecosystem services and biodiversity financing where technically feasible and institutionally appropriate. Together, these measures help ensure that restoration outcomes are sustained beyond the project lifetime and provide a foundation for future scaling and replication.

These pathways are interdependent and mutually reinforcing. Improved institutional coordination, climate-informed planning systems, and community access to tailored climate information and adaptation opportunities enable more effective targeting and adaptive management of restoration investments. Restoration of ecological infrastructure strengthens ecosystem functionality and reduces exposure of rural communities and agricultural systems to climate-related risks. Strengthened community stewardship systems and restoration-linked livelihood opportunities improve long-term sustainability, maintenance, and scaling potential of restoration outcomes. Together, these interventions establish an integrated EbA platform capable of supporting climate-resilient landscape management across southern Moldova.

Over the longer term, the project is expected to deliver two primary outcome-level results: increased climate resilience of vulnerable landscapes and communities across southern Moldova, and measurable GHG removal through large-scale ecosystem restoration. By integrating ecosystem restoration, climate-informed planning, digital climate services, and community stewardship systems into national and local implementation frameworks, the project aims to institutionalize EbA as a scalable and sustainable approach for managing climate risks across Moldova's climate-sensitive landscapes. Through strengthened restoration standards, decision-support systems, stewardship mechanisms, and climate-resilient restoration models, the project establishes the conditions for sustained implementation, scaling, and replication of ecosystem-based adaptation approaches beyond project intervention areas, contributing to a long-term paradigm shift toward climate-resilient landscape management in Moldova.

Figure 5. Theory of Change diagram



B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

Outcome (Component) number	**GCF Mitigation Results Area (MRA 1-4)**				**GCF Adaptation Results Area (ARA 1-4)**			
	MRA 1 Energy generation and access	**MRA 2** Low-emission transport	**MRA 3** Building, citiies, industries, appliances	**MRA 4** Forestry and land use	**ARA 1** Most vulnerable people and communities	**ARA 2** Health, well-being, food and water security	**ARA 3** Infrastructure and built environment	**ARA 4** Ecosystems and ecosystem services
Outcome 1 – Institutional capacity, climate-informed planning, and decision-support systems strengthened for ecosystem-based adaptation	☐	☐	☐	☐	☒	☐	☐	☒
Outcome 2a –	☐	☐	☐	☒	☐	☐	☐	☒

Climate-resilient ecological infrastructure restored across vulnerable in production landscapes								
Outcome 2b - GHG emissions reduced, avoided or removed/sequestered	☐	☐	☐	☒	☐	☐	☐	☐
Outcome 3 – Community stewardship, climate-resilient livelihoods, and local adaptive capacity strengthened to sustain restoration outcomes	☐	☐	☐	☒	☒	☐	☐	☒

Co-benefit number	**Co-benefit**					
	Environmental	**Social**	**Economic**	**Gender**	**Adaptation**	**Mitigation**
Co-benefit 2 –**Biodiversity conservation strengthened**	☒	☐	☐	☐	☒	☐
Co-benefit 1 – **Improved interoperability of environmental and climate information systems**	☐	☐	☐	☐	☒	☒
Co-benefit 3 –**Gender-responsiveness integrated in EbA and landscape management**	☐	☒	☐	☒	☐	☐

B.3. Project/programme description (max. 2500 words, approximately 5 pages)

The Moldova Green Shield project is consistent with the GCF's Strategic Plan for 2024–2027. Under Target 5 (Ecosystems & Ecosystem Services), the operation restores degraded landscapes. Simultaneously, it achieves Target 4 (Sustainable Food Systems) by expanding agricultural shelterbelts across wind-exposed production terrains, thereby directly stabilizing local microclimates, lowering evapotranspiration, and preserving rain-fed smallholder cereal and fruit production in the climate-stressed SDR.

It is structured around four mutually reinforcing components designed to strengthen climate resilience across production landscapes of Moldova through EbA interventions combining restoration planning instruments, ecological infrastructure investments, climate-informed decision-support tools and community stewardship.

The project targets vulnerable rural communities and production landscapes with the main focus on the SDR. The project interventions contribute directly to strengthening the ecological infrastructure that regulates soil stability, improves water regulation functions, enhances micro-climate buffering capacity, and increases resilience of rural livelihoods dependent on climate-sensitive agricultural systems.

The operation contributes to implementation of priorities under the NCCAP 2030 and supports operationalization of restoration targets under the NFERP 2023–2032 through climate-risk-informed targeting of restoration investments. The map in Annex 16 presents the proposed project sites, indicating the locations and corresponding target areas for restoration. This map illustrates the project's focus on targeted, climate-resilient landscape interventions and enables stakeholders to understand the spatial distribution of restoration efforts.

The European Investment Bank (EIB)Moldova Forest Development Programme (EUR 200 million), approved in 2024 is a key investment supporting implementation of the NFERP. The proposed GCF intervention is designed to complement, not duplicate, these programs. While these initiatives primarily finance expansion and rehabilitation of forest cover, the

proposed GCF project addresses critical gaps that remain largely unfunded, including climate-informed restoration planning, EbA, restoration of riparian and wetland ecosystems, climate-informed landscape modelling, ecosystem service valuation, environmental monitoring systems, community stewardship mechanisms, climate-resilient livelihood development, and adaptive management systems. These investments are specifically designed to address climate risks and enhance ecosystem resilience and would not be financed through conventional afforestation programs alone.

Component 1: Institutional Capacity Development and Data-Driven Planning

The main objective of this component is to strengthen the institutional, technical, and operational capacity of both national and local stakeholders. This will help them effectively plan, implement, and sustain climate-informed ecosystem restoration and EbA efforts across Moldova establishing the institutional, human, and social foundations required for effective ecosystem restoration. It addresses key barriers identified in national implementation experience, including weak inter-sectoral coordination, limited local implementation capacity, insufficient maintenance systems, and low community ownership of restoration outcomes. It ensures that EbA-type interventions are not only technically feasible but institutionally implementable and socially sustained, thereby enabling long-term effectiveness of restoration investments under Components 2 and 3.

Sub-Component 1.1: Institutional Strengthening, Implementation Capacity Building and Knowledge Platforms

The objective of this sub-component is to enhance institutional coordination, technical implementation capacity, and operational effectiveness of national and local actors responsible for ecosystem restoration and EbA interventions in Moldova. It will establish the institutional, technical, and operational foundations required for effective implementation of restoration investments planned under Component 2, including climate-informed planning, inter-sectoral coordination, technical guidance systems, and implementation support mechanisms for climate-resilient landscape management.

This sub-component will include the following grouped activities:

(a) Capacity development for national and local institutions involved in field implementation, including training on ecosystem restoration techniques, climate-resilient forestry, silvopastoral systems, riparian buffer restoration, wetland rehabilitation, and adaptive management under increasing drought and climate variability. The sub-component will place particular emphasis on strengthening Moldsilva territorial enterprises and LPAs as primary implementation entities responsible for on-the-ground execution and long-term stewardship of restored landscapes. The sub-component will also finance the overall capacity development of NOIEP, enabling it to become an effective and efficient environmental project implementation agency for the Republic of Moldova;

(b) Development of operational guidelines that consider restoration typologies, technical standards, site-selection and prioritization approaches, specific site-species and land condition criteria, and implementation manuals for ecosystem restoration under climate-stressed conditions, matching restoration interventions to local ecological, hydrological, climatic, and socio-economic conditions;

(c) Development of a climate-resilient landscape knowledge platform to support data sharing, communication, and institutional learning. The platform will integrate restoration prioritization outputs, modelling results, and implementation experience generated under other project components, and make these accessible to national and local stakeholders. It will support restoration investment planning by integrating restoration priorities, ecosystem service assessments, climate risks, and natural capital information to inform future public and private investments in resilient landscapes.

Sub-Component 1.2: Integrated Data Systems and Climate-Informed Ecosystem Planning for the Prut River Catchment and Southern Landscapes

The objective of this sub-component is to establish a robust, integrated, and climate-informed decision-support system to guide ecosystem restoration and ecosystem-based adaptation planning across southern Moldova, with a focus on the Prut River Catchment (with priority on the Lower Prut landscape), degraded forest-steppe zones, and climate-vulnerable agricultural production systems. It will strengthen the analytical foundation for climate-informed restoration planning and further support development and application of Natural Capital Accounting approaches in ecosystem restoration and monitoring of outcomes.

This sub-component will include the following grouped activities:

(a) Development of an integrated climate, hydro-ecological, and ecosystem planning systems to support evidence-based decision-making for floodplain in transition. The focus will be placed on the Prut River Catchment of interconnected floodplain and adjacent production landscapes extending along the Prut River corridor;

(b) Conducting scenario-based climate and ecosystem modelling to assess drought risk, flood exposure, hydrological variability, habitat connectivity, ecosystem service provision, and land degradation dynamics, particularly in climate-vulnerable southern districts. The outputs will directly inform spatial prioritization of ecosystem restoration investments under the NFERP and related national programs;

(**c) Modernization of environmental monitoring and geospatial data infrastructure,** including standardized systems for sharing and presenting data on hydrology, land use, vegetation cover, soil degradation, forest condition, and ecosystem health indicators. Accessing diverse datasets via data exchange protocols transforms resource management by replacing static maps with near-real-time, predictive monitoring of environmental changes and ecological threats in alignment with the EU Inspire Directive. This continuous data flow democratizes complex spatial statistics, allowing stakeholders across multiple institutions to dynamically quantify ecosystem services and make immediate, evidence-based conservation decisions;

(d) Conducting Natural Capital Accounting (NCA) to assess and integrate the economic value of ecosystems and biodiversity into national and local planning. This includes mapping and valuing ecosystem services from protected and restored landscapes, including pollination, soil fertility, water regulation, and carbon sequestration. The project will conduct spatial and economic assessments of pollination services to quantify their contribution to crop and fruit production in surrounding agricultural areas. The outputs will support ecosystem service assessments, restoration planning, and future ecosystem financing mechanisms, including Payments for Ecosystem Services (PES), biodiversity finance, and other nature-based financing approaches.

Sub-Component 1.3: Climate-Resilient Digitalization and Modernization of the Early Warning System

The objective of this sub-component is to strengthen climate resilience in Moldova by enhancing hydrometeorological and early warning infrastructure to deliver timely, impact-based advisories on droughts, heatwaves, and other climate-related hazards, with a particular focus on ecosystem restoration, agriculture, and vulnerable communities. Building on national-level climate information systems and decision-support investments already underway through complementary initiatives, the project will reinforce last-mile early warning capacity at the LPA and community levels, ensuring that local actors can effectively access, interpret, and act on the information and tools being developed at the national scale.

This sub-component will include the following grouped activities:

(a) Enhancing of an integrated, digital multi-hazard early warning platform hosted by Meteorology and Environmental Monitoring Authority (MEMA) and linked with the National Crisis Management Center, with a deliberate orientation toward local usability and last-mile delivery. The platform will enable real-time integration and analysis of meteorological, hydrological, climate, and ecosystem data, incorporating climate projections and localized risk layers that reflect hazard patterns relevant to specific landscapes, agricultural zones, and communities across Moldova. Critically, the platform will be designed to generate actionable, place-specific outputs, including drought alerts, heatwave advisories, and ecosystem stress indicators that LPAs and community-level actors can readily interpret and act upon, without requiring advanced technical capacity. It will also support climate-informed restoration planning, drought monitoring, and adaptive landscape management at the sub-national level, complementing national investments in disaster risk management while ensuring those investments translate into tangible tools and information for the communities most exposed to climate hazards.

(b) Modernizing climate and hydrometeorological data systems and services through a centralized, cloud-based infrastructure, improved interoperability across institutions. Automated monitoring systems will be selectively expanded where required to support restoration planning and climate risk assessment, with priority coverage in climate-vulnerable southern districts. Satellite-based observations will complement ground-based monitoring systems, all data being available via data sharing protocols developed under Sub-component 1.1;

(c) Strengthening multi-channel warning dissemination with user-oriented climate information services through SMS, mobile applications, and media integration, with geo-targeted alerts and tailored communication for farmers and rural communities in Southern Moldova. It will also develop digital climate services, including local dashboards, farmer advisory tools, and two-way communication systems that support ecosystem restoration, climate-resilient agriculture and adaptive landscape management to support anticipatory action and climate-informed decision-making.

Component 2: Climate-resilient ecological infrastructure restoration in production landscapes

The primary objective of this component is to restore ecosystem functionality and reduce climate vulnerability across southern Moldova, particularly in drought-prone districts including the Prut basin, all through large-scale, climate-informed EbA interventions. Restoration will focus not only on vegetation establishment, but also on recovery of ecosystem structure, ecological processes, connectivity, and long-term ecosystem functionality.

Component 2 emphasizes ecosystem recovery through a combination of approaches. It aims at restoring ecological infrastructure at landscape scale by integrating forest, water, agricultural, and pasture systems into a coherent adaptation framework. It addresses systemic drivers of ecosystem degradation while strengthening ecological connectivity and ecosystem services, including pollination services that support climate-resilient agricultural production systems. It generates inclusive socio-economic co-benefits and enhances resilience while aligning directly with Moldova's climate, biodiversity, forest restoration, and land degradation neutrality objectives.

Site selection will follow a two-phase approach. In the first phase, a broad set of criteria will be developed to guide LPAs in identifying potential project sites within their jurisdictions. LPAs will formally confirm the minimum available hectares for investment under each investment category in writing to the Ministry of Environment in accordance with the agreed criteria and procedure in the Project Operational Manual (POM). In the second phase, those LPAs that meet the minimum level of investment will undergo detailed site selection based on GIS-based mapping and a prioritization methodology will be applied as elaborated in the POM. These will be used to identify community investment sites and to identify additional sites on state lands managed by NAAM and Moldsilva, where the bulk of project activities are expected to take place. This phased approach ensures early confirmation of site availability while allowing final site selection to reflect the most current climate, ecological, hydrological, and socio-economic conditions.

Sub-Component 2.1: Climate-Resilient Forest Restoration and Ecological Connectivity Enhancement

The objective of this sub-component is to restore and enhance the resilience, structural diversity, and ecological functionality of forest ecosystems in selected areas in the southern Moldova through integrated afforestation, reforestation, assisted natural regeneration (ANR), and forest vegetation rehabilitation, supported by strengthened forest reproductive material (FRM) systems. Restoration interventions will be implemented within the framework of climate-resilient Forest Management Plans that prioritise ecosystem functionality, ecological connectivity, biodiversity outcomes, watershed protection and climate resilience objectives rather than solely tree establishment targets.

This sub-component will include the following grouped activities:

(a) Afforestation and ecological restoration of degraded communal lands, erosion-prone slopes, and fragmented forest-steppe landscapes, with priority given to ecological corridors and connectivity areas. The activity will also include maintenance and assisted recovery of naturally expanding forest and woody vegetation on forest-adjacent landscapes and other suitable areas, particularly near key forest massifs such as Codrii Tigheciului or Flamanda Forest;

(b) Rehabilitation of degraded forest stands through selective silvicultural interventions. Restoration approaches will promote structurally diverse, mixed-species, climate-resilient forests based on site-specific ecological assessment and climate projections, improving soil moisture retention, groundwater recharge, biodiversity and drought resilience;

(c) Establishment of the Southern Regional Forest Reproductive Material Centre (RFRMC), including modernization of nursery systems, improved local seed sourcing, provenance selection, and genetic diversity management. The Centre will support the assessment and deployment of locally adapted genetic resources, focussing on native species or other climate-promising taxa from neighbouring regions, all aligned with climate adaptation needs, relevant EU standards and international best practices.

Sub-Component 2.2: Climate-Resilient Watershed and Floodplain Restoration (Prut River Catchment)

The objective of this sub-component is to enhance water security and climate resilience in southern Moldova by restoring the natural capacity of landscapes to capture, store, retain, and regulate water across river basins, floodplains, and associated catchments. Through restoration of wetlands, riparian systems, sediment regulation, floodplains, and watershed functions, the sub-component will increase water availability during dry periods, reduce vulnerability to droughts and floods, improve groundwater recharge, and strengthen ecosystem services that support climate-resilient agricultural production and rural livelihoods. The following activities are proposed:

(a) Rehabilitation and ecological restoration of wetlands and floodplains including hydrologically connected systems, restored natural hydrological processes, enhancement of water retention functions, reconnection of floodplain habitats where appropriate, and recovery of native wetland/meadow vegetation and associated biodiversity;

(b) Restoration of degraded river corridors to improve water quality, stabilize riverbanks, reduce erosion and sedimentation, restore aquatic and terrestrial habitats, enhance biodiversity and ecosystem connectivity, strengthen climate resilience to floods and droughts, and support sustainable livelihoods and ecosystem services for local communities;

(c) Watershed protection and enhancement measures, including rehabilitation of small reservoirs through targeted desiltation, shoreline stabilization, and improved water regulation infrastructure to enhance groundwater recharge, restore water storage capacity, and improve drought buffering and flood risk management, with priority given to catchments and water bodies serving climate-vulnerable agricultural communities in southern Moldova.

Restoration planning processes under this sub-component will be supported by modelling outputs developed under Component 1, ensuring adaptive watershed and floodplain management and avoiding maladaptive grey infrastructure approaches.

Sub-Component 2.3: Climate-Resilient Agricultural Landscapes, Shelterbelts, and Silvopastoral Systems

The objective of this sub-component is to reduce climate exposure and enhance resilience of agricultural and pasture systems in selected areas through restoration and expansion of ecological infrastructure and multifunctional forest-steppe landscape elements. That will enhance habitat connectivity and ecosystem services, including support for pollinators important for orchards, vineyards, and other agricultural systems.

This sub-component will include the following activities:

(a) Restoration and establishment of shelterbelts in wind-exposed agricultural landscapes through: (i) rehabilitation of degraded shelterbelts by enrichment planting, structural restoration, and multi-species systems adapted to local ecological conditions and projected climate variability. The restored shelterbelt networks will help reduce wind erosion, stabilize soils, improve microclimatic conditions, reduce evapotranspiration losses, and strengthen climate resilience of adjacent agricultural production systems. The shelterbelt network will also support pollinator habitat and associated ecosystem services important for fruit production, viticulture, and household properties.

(b) Development of climate-resilient silvopastoral systems including in the Bugeac Steppe region, integrating trees into grazing systems to improve soil moisture, reduce erosion, stabilize soils, and enhance pasture productivity. Interventions will improve soil fertility, reduce evapotranspiration losses, and strengthen ecological connectivity across production landscapes.

Component 3: Community Engagement, Climate-Resilient Livelihoods, and Local Stewardship Systems for Ecosystem Restoration

The objective of this component is to ensure the long-term sustainability, local ownership, and resilience benefits of EbA investments implemented under Component 2. While Component 2 finances the physical restoration of forests, shelterbelts, riparian systems, wetlands, and silvopastoral landscapes, Component 3 focuses on site-level landscape and forest management planning, stewardship arrangements, community engagement, sustainable financing mechanisms, and livelihood activities necessary to reduce pressure on restored ecosystems and maximise their adaptation benefits.

The component is structured around three mutually reinforcing pillars. First, it will strengthen local planning systems, ecosystem stewardship arrangements, and participatory management processes to ensure that restoration investments are integrated into formally recognized planning and management frameworks and supported by local stakeholders. Second, it will promote climate-resilient rural livelihood solutions that reduce dependence on unsustainable resource use while enhancing the adaptive capacity of vulnerable rural households. Third, it will assess and pilot sustainable financing mechanisms that can support the long-term maintenance of restored ecological infrastructure and create ground work for continued stewardship by local authorities, communities, and land users.

Through these interventions, the component will help ensure that restored forests, shelterbelts, wetlands, riparian systems, and silvopastoral landscapes continue to deliver adaptation benefits after project completion by strengthening the institutional, financial, and socio-economic foundations required for their long-term management. The component complements Moldova's Forest Code (2024), the NFERP, and the NCCAP 2030, while contributing to GCF priorities

related to strengthening adaptive capacity, enhancing resilience of vulnerable communities, and promoting the long-term sustainability of climate adaptation investments.

Participating communities will be identified from within the project intervention areas using transparent eligibility criteria linked to the restoration site selection process. The criteria will consider factors such as proximity to restoration sites, climate vulnerability, dependence on ecosystem services and community commitment to activity area targets to be achieved under Component 2. These criteria, along with a detailed selection procedure and eligibility requirements for stewardship support will be outlined in the Project Operations Manual (POM).

Sub-Component 3.1: Inclusive Community Engagement, Capacity Development, and Green Rural Livelihoods

The objective of this sub-component is to strengthen local ownership, governance capacity, and long-term stewardship of ecosystem restoration investments through participatory planning, climate-resilient forest and landscape management, community capacity development, and restoration-linked livelihood opportunities. The sub-component recognises that the long-term sustainability of ecosystem restoration depends not only on physical investments, but also on the existence of effective planning systems, clearly defined management responsibilities, and tangible socio-economic benefits for participating communities. Activities under this sub-component will therefore establish the institutional and community foundations required to sustain restoration outcomes beyond the lifetime of the project, while enhancing the adaptive capacity of rural communities and local institutions. This sub-component will finance:

(a) Supporting participatory landscape planning and strengthening local governance systems

The project will support the preparation and implementation of climate-resilient Forest Management Plans (FMPs) and Community Stewardship Plans for targeted restoration landscapes supported under Component 2. These instruments will provide the operational framework for restoration, management, protection, monitoring, and long-term stewardship of restored ecosystems. The preparation of Community Stewardship Plans will be led by the Institute for Forest Research and Management Planning (ICAS), subordinated to MoldSilva, as the competent national authority responsible for the development of Landscape Management Plans. Community Stewardship Plans will be developed for shelterbelts, communal pasture lands, wetlands, riparian corridors, rehabilitated forest areas, naturally expanding ecosystems and other restoration assets supported under the project. The Climate-resilient FMPs will also be prepared by ICAS, through participatory processes and working in collaboration with Moldsilva, State Forest Enterprises, LPAs and other relevant stakeholders.

These plans will define management responsibilities, maintenance obligations, sustainable use provisions, monitoring arrangements, and mechanisms for resolving conflicts related to resource use. The plans will be endorsed by participating LPAs and incorporated into local development plans and strategies to enhance sustainability beyond project completion.

(b) Improving women's empowerment, and green livelihoods through financing of tools and assets for communities enabling support to ecosystems' rehabilitation and climate-resilience. Particular focus will be on women-led and youth-led cooperatives and or/enterprises in rural areas.

The project through PIU will finance the direct procurement and transfer of tools and assets — including beehives and honey extraction equipment, NTFP processing units, seedling production infrastructure, drip irrigation systems for agroforestry plots, and cold storage or drying facilities for medicinal and aromatic plant value chains, and other items. Asset packages will be standardized by enterprise type and delivered through transparent, community-verified allocation processes. Technical assistance, vocational training, mentoring, and business development support will also be provided as enabling complements to investment financing. The sustainable and effective use of productive assets for their intended project purposes will be ensured through Community Stewardship Plans and the engagement of LPAs.

Sub-Component 3.2: Financing Mechanisms and Community-Based Stewardship

Sub-Component 3.2: The objective of this sub-component is to strengthen the institutional and long-term financial sustainability of restoration investments, and to support mechanisms for the maintenance and sustainability of ecosystems restored under Component 2. It does so through two set of activities: building the community stewardship capacity that ensures restored ecosystems are actively managed at the local level and development of the institutional and financial frameworks that can sustain that stewardship beyond the project's lifetime.

(a) Supporting community stewardship. The project will support the implementation of the plans through procurement and distribution of stewardship equipment and materials for LPAs, including tools for replanting and maintenance, monitoring equipment (GPS devices, field data collection tablets), and basic protective gear, allocated to registered

groups against verified stewardship plans. In addition, it will include trainings of community stewards in ecosystem monitoring protocols, restoration maintenance techniques, and use of simple data collection tools. The same framework as sub-component 3.1b will be applied to the distribution and stewardship of equipment and tools, with LPAs and Community Stewardship Plans ensuring their targeted allocation, proper use, and ongoing support to beneficiaries.

(b) Exploring and Enabling Sustainable Ecosystem Financing. Building directly on the stewardship infrastructure established under 3.1 (a). this activity will develop the institutional readiness, analytical foundations, and pilot frameworks needed to mobilize sustainable financing for ecosystem maintenance beyond the project's lifetime. The community stewardship groups and spatial data established under track (a) constitute the primary asset base upon which ecosystem financing approaches will be assessed and piloted.

Activities will include assessment of ecosystem services opportunities associated with watershed protection, carbon sequestration, biodiversity conservation, and pollination services generated through restoration activities, drawing on the Natural Capital Accounting framework and ecosystem valuation tools developed under Component 1. The project will finance feasibility studies for biodiversity finance, carbon finance, and other innovative financing mechanisms, evaluating technical, legal, and institutional prerequisites for each restored landscape under Component 2 of the project. The project will design and consult onselected financing approaches — such as a small-scale watershed PES arrangement between upstream community stewards and downstream water users, or a biodiversity credit methodology linked to monitored restoration outcomes. The support will include the design and methodological preparation of PES and biodiversity credit mechanisms, covering analytical work, technical assistance, monitoring and verification, but will not finance PES payments or biodiversity credit transactions. The project will also finance the assessment of options for integrating restoration maintenance costs into local government budgeting and natural resource management systems, including analysis of fiscal transfer mechanisms and co-financing arrangements with sector agencies.

(c) Supporting stewardship monitoring and adaptive management systems to track restoration maintenance, ecosystem condition, and stewardship outcomes, building upon monitoring and geospatial information systems developed under Component 1 and complementing the project MEL framework.

Component 4: Project Management, Monitoring and Evaluation

The objective of this component is to ensure efficient, compliant, and adaptive implementation of the project through strengthened institutional capacity, robust monitoring, evaluation and learning systems, and continuous improvement of restoration and EbA interventions. This component will include the following activities:

(a) Technical and operational support for the establishment and operation of a Project Implementation Unit (PIU) within NOIEP at the Ministry of Environment (MoE), a project-dedicated unit responsible for overall project coordination, fiduciary management, procurement, environmental and social risk management, and technical supervision of project activities;

(b) Development and operation of an integrated Monitoring, Evaluation and Learning (MEL) system to track project results and inform adaptive management. The MEL system will monitor progress of restoration investments, ecosystem condition indicators (including erosion control, vegetation recovery, and landscape connectivity), and climate resilience outcomes aligned with the project results framework.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

Accredited Entity - Roles and responsibilities of the World Bank

The World Bank (IBRD and IDA, acting as the Accredited Entity for this project), will enter into a Subsidiary Agreement (a GCF Grant Agreement) with the Republic of Moldova. IBRD will enter into a Loan Agreement with the Republic of Moldova for the provision of the Co-financing. The World Bank will provide comprehensive oversight to supervise adherence to fiduciary, environmental, social, and results-management requirements. Project execution will be governed under World Bank policies and procedures applicable to Investment Project Financing operations. The World Bank as AE will supervise project implementation, including regarding compliance with the World Bank Environmental and Social Framework (ESF), procurement regulations, and financial-management requirements, all in alignment with the Funded Activity Agreement (FAA) to be signed with the Green Climate Fund (GCF).

Executing Entity

The Republic of Moldova, represented by the Ministry of Finance, will act through the Ministry of Environment (MoE) as the Executing Entity (EE) and will be responsible for overall project implementation.

The MoE will carry out responsibilities for Project management and implementation through NOIEP, a government agency established and operating within MoE, responsible for implementing projects in environment sector. The MoE, through NOIEP will manage the project's Designated Account (DA) and ensure timely reporting to the World Bank, while maintaining compliance with World Bank procedures.

A **Project Implementation Unit** (PIU) will be established by MoE and will be hosted at the NOIEP. The PIU will oversee fiduciary management, environmental and social risk management, procurement and contract management, monitoring and evaluation (M&E), and the implementation of project activities.

The PIU will be led by a Project Coordinator responsible for overall delivery, including adherence to timelines, budget, and objectives. Core team members will include specialists in financial management, procurement, and M&E. Environmental and social (including gender) specialists will ensure compliance with safeguards and promote inclusive outcomes. The PIU will also be supported by technical experts and administrative staff to ensure effective implementation and coordination. To support implementation on the ground, Service Providers (contractors) will be engaged in project activities related to community engagement and benefits. NOIEP will oversee their work and ensure adherence to applicable procedures and standards.

Project Steering Committee (PSC) will be established to coordinate activities across ministries and agencies. Project oversight and accountability will be provided by the PSC which will include representatives from the following agencies: MoE, Ministry of Finance, Ministry of Agriculture and Food Industry (MAFI), Moldsilva, and NAAM. The PSC will also invite representatives from the local communities, NGOs, and other experts when/if needed for planning and communication of project activities. Chaired by the Minister of MoE (or a designated representative), the PSC is expected to (a) provide strategic guidance and oversight, (b) suggest improvements and recommendations in project operations and coordination, and (c) endorse the progress reports and annual work programs prepared by the PIU before submission to the World Bank, among other issues. The PSC will be set up during the first six months of project implementation and will meet at least once a year. Details of these arrangements will be provided in the Project Operations Manual. The institutional arrangements diagram for the project is presented on Figure 6 below.

Other supporting institutions. Moldsilva, NAAM and other relevant government institutions are technical governmental agencies in forest and water management sectors and will contribute to quality control and supervision of works carried out by State Forest Enterprises (SFEs) and contracted Service Providers. Monitoring of climate and environment related impacts will be supported by the State Hydrometeorological Service (SHS) and the State Environmental Inspectorate (SPI). The role of these institutions will be specified in the Project Operations Manual.

Moldsilva is the national authority responsible for sustainable forest management and implementation of the National Forest Extension and Rehabilitation Programme. Through its network of State Forest Enterprises, it has extensive experience in afforestation, forest rehabilitation and nursery management and will provide technical oversight for Component 2 restoration activities. NAAM is responsible for national water resources management, watershed protection and implementation of river basin management measures. ICAS, also under Moldsilva, provides scientific and technical expertise supporting forest restoration, silviculture and ecosystem management. All above institutions are engaged on the ongoing Re-MAP and Terra-Moldova project with demonstrated capacity to carry out complex projects.

Where implementation services are required, NOIEP will procure contractors and service providers in accordance with World Bank Procurement Regulations. The work of ICAS in preparing FMPs will be subject to independent review by NOIEP appointed experts.

Local Public Authorities (LPAs). Collaboration with Local Public Administrations (LPAs), will be essential for implementation of Component 2 and 3. LPAs will support site identification and prioritization, facilitate stakeholder engagement and participatory planning processes, assist in coordinating restoration activities on communal and public lands, and contribute to long-term stewardship and maintenance of restored areas. A screening and prioritization process will be undertaken in close coordination with LPAs to identify specific project sites based on agreed technical, environmental, and socio-economic criteria. LPAs have extensive experience in local land management, implementation of environmental and rural development initiatives, and engagement with local communities and land users.

Target Communities. Target Communities will participate in implementation of forest restoration, shelterbelt establishment, silvopastoral development, wetland/riparian restoration, and maintenance activities under Component 2 and 3 of the project. Eligible communities will be selected using transparent eligibility criteria detailed in the POM, including proximity to restoration sites, participation in project-supported restoration activities, climate vulnerability, dependence on ecosystem services, willingness to participate in stewardship arrangements and demonstrated commitment to long-term maintenance of restored ecosystems.

NOIEP will also collaborate closely with the academic community and civil society to ensure effective and inclusive project implementation. By engaging with a broad range of stakeholders, the project will benefit from diverse expertise and

perspectives, enhancing both outreach and impact. No project funds will be directly channelled to project partners; NOIEP will maintain full responsibility for overall financial management, including the administration of the DA.

Delivery model for restoration investments

Restoration investments supported under Component 2 will be implemented by the Executing Entity as detailed below. Afforestation and reforestation interventions will focus primarily on degraded public lands administered by local communities (LPAs) and made available for restoration implementation in coordination with national institutions responsible for forest-sector planning and management.

Shelterbelt establishment and restoration of riparian vegetative protection buffers will be implemented in coordination with LPAs, NAAM, and agricultural land users in priority production landscapes exposed to increasing drought and wind-erosion risks.

Forest reproductive material supply systems

Implementation of restoration interventions at scale requires reliable availability of climate-adapted planting material consistent with projected site conditions across southern Moldova.

Planning and technical guidance will be strengthened under Component 1, while operational supply capacity will be supported under Component 2 through establishment of the Southern RFRMC, operated by Moldsilva.

Based on a feasibility study prepared by the MoE and partners, investments will include nursery infrastructure, construction works, and specialized equipment to support both project implementation and future restoration investments under the NFERP and related restoration investments.

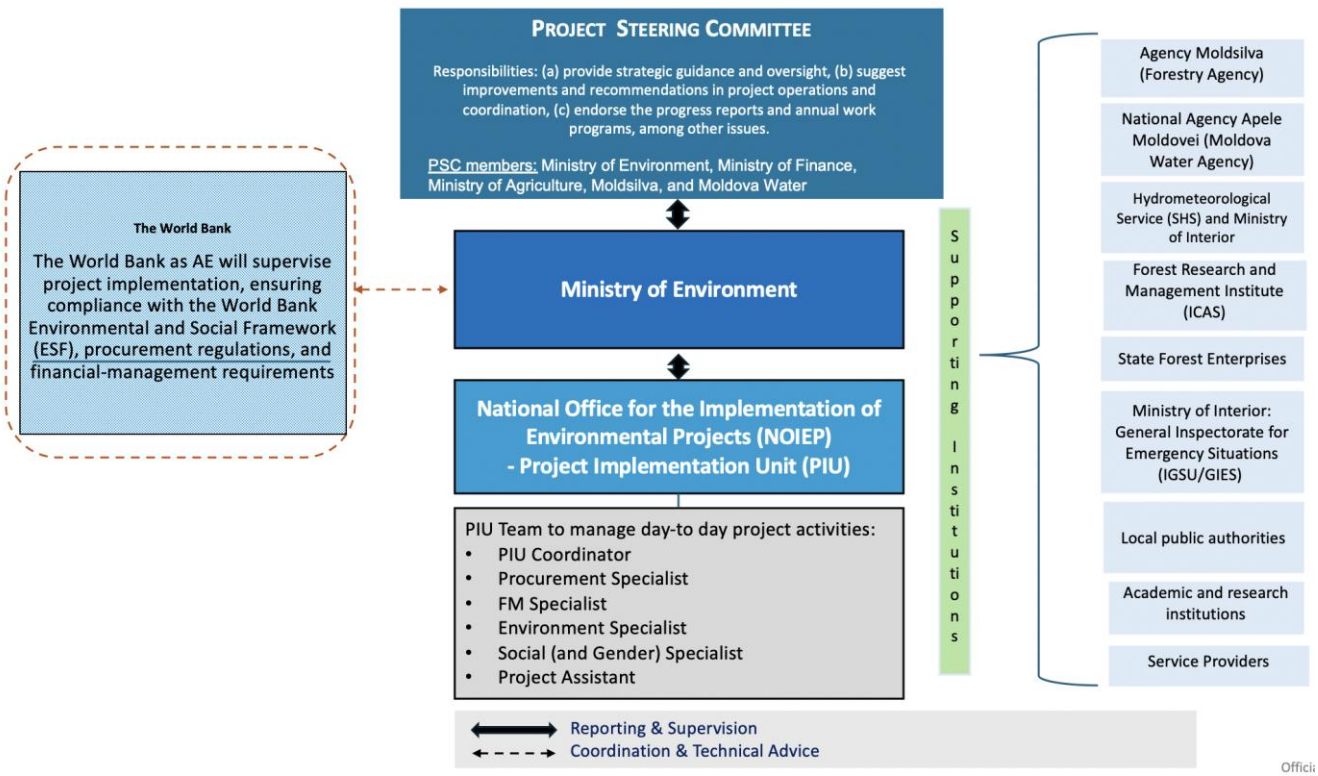
Local-level implementation coordination

LPAs will support dentification of eligible degraded lands, facilitation of community participation, coordination with land users, and integration of restoration priorities into local spatial planning instruments

LPAs will also facilitate local implementation arrangements and cooperation agreement required for restoration activities. Stakeholder engagement processes will support participation of local communities and land users consistent with EbA principles.

Implementing arrangements and role of different stakeholders is summarized on Page 19 below.

Figure 6. Implementation flow diagram



Private-sector participation

Where appropriate, the project will facilitate participation of private land users and agricultural stakeholders in climate resilient land management and assisted natural regeneration measures through provision of technical guidance and coordination arrangements consistent with national policy developments supporting expansion of forest vegetation cover on privately owned degraded lands.

A Project Operations Manual (POM) will be developed to explain details of the processes and procedures, as well as roles and responsibilities of the institutions involved. The POM will include details on institutional and implementation arrangements, technical aspects of all components and activities, guidance related to M&E of the Results Framework, management of environmental and social risks, disbursements and FM aspects, internal arrangements relating to procurement and contract administration, supervision and reporting provisions related to the project between the PIU and other project partners. The POM will be approved by the MoE and will be submitted for the World Bank no-objection.

Safeguards implementation arrangements

Environmental and social risk management will be implemented in accordance with the World Bank's ESF.

The Republic of Moldova, as Executing Entity (EE), acting through the Ministry of Environment and the PIU, will be responsible for preparation, consultation, disclosure, adoption, and implementation of the project's environmental and social instruments, including:

- Environmental and Social Management Framework (ESMF), including a Process Framework
- Stakeholder Engagement Plan (SEP)
- Labour Management Procedures (LMP)
- Environmental and Social Commitment Plan (ESCP)

The World Bank, as AE, will provide implementation support and supervision of environmental and social risk management in accordance with its policies and procedures applicable to Investment Project Financing operations.

Procurement

Procurement will follow World Bank Procurement Regulations for IPF Borrowers with due attention to the principles of economy, efficiency, fairness, transparency, and integrity. As the AE, the World Bank carries out an assessment to confirm that the MoE has the necessary procurement capacity required for the project. Appropriate mitigation measures, including capacity building, implementation support, and strengthened oversight and reporting arrangements, will be incorporated as needed during project design and implementation.

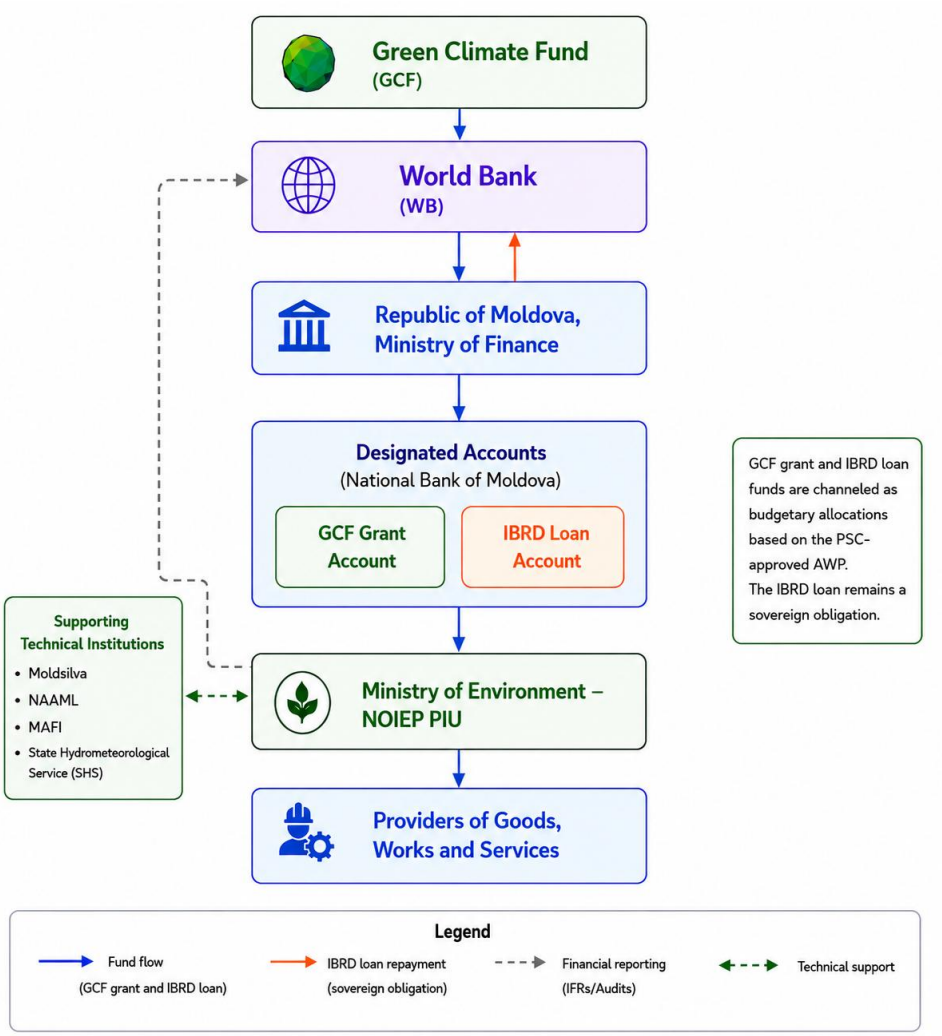
Financial management

Financial management arrangements will be implemented by the Republic of Moldova, as Executing Entity, acting through the MoE and respective PIU, in accordance with World Bank requirements and subject to fiduciary oversight and implementation support as Accredited Entity. Payments will be based upon an approved annual work plan and budget. To ensure transparency and accountability as well as to enhance the level of disbursement under the project, quarterly Interim Financial Reports (IFRs) will follow international reporting standards and will be submitted promptly at the end of each quarter. An external audit of the project will be conducted annually by an accredited audit firm acceptable to the World Bank. To ensure that the equipment and other assets purchased with project proceeds are properly used, the World Bank will request that NOIEP expand the scope of the annual audit and require the auditors to verify the existence and proper use of these assets as part of the audit procedures.

The GCF Proceeds will be channelled through the World Bank and will be made available to the Republic of Moldova. The World Bank will enter into a grant agreement with Republic of Moldova represented by MoF and acting through MoE for the implementation of the GCF Funded Activity. MoE is responsible for overall Project implementation and accountable for the Funded Activity's outcome indicators.

The designated account (DA) will be opened by the State Treasury in the name of NOIEP at the Central Bank of Moldova and managed by the NOIEP. The disbursement requests will be placed by NOIEP through World Bank's online banking platform. Initial advance up to the ceiling specified in the legal documents will be transferred to DA to cover eligible expenditures. State Treasury will make payment transfers from the DA to suppliers based on validated payment orders submitted by NOIEP. NOIEP will regularly report on the use of advances and request further advances by providing the Statement of Expenditures and DA bank statements. For large payments, NOIEP may instruct the World Bank to make direct payments to the suppliers outside the DA.

Figure 7. Financial flow diagram



No.	Institution / Stakeholder	Specific Responsibilities
1	Ministry of Environment (MoE)	Overall Project coordination and strategic guidance;
2	National Office for Implementation of Environmental Projects (NOIEP)	Hosts the Project Implementation Unit. Day-to-day project management; fiduciary management, environment and social Risk Management, safeguards implementation, monitoring and reporting, coordination of key stakeholders
3	Agency Moldsilva	Technical guidance and oversight of forestry-related restoration interventions.
4	Forest Research and Management Institute (ICAS)	Site assessments, ecological mapping, restoration planning, silvopastoral system planning, ecosystem condition assessments
5	State Forest Enterprises (SFEs)	Logistical and technical field implementation support of forest, shelterbelt, riparian, and silvopastoral restoration activities; monitoring and maintenance of restored sites;
6	National Administration Apele Moldovei (NAAM)	Technical guidance and oversight of watershed restoration and hydrological planning
7	State Hydrometeorological Service	Provision of meteorological, hydrological, drought, and climate-risk data; support for climate-informed planning, scenario modelling, and environmental monitoring systems.
8	Ministry of Interior: General Inspectorate for Emergency Situations (IGSU/GIES)	Support for early warning system, emergency preparedness coordination,
9	Ministry of Agriculture and Food Industry (MAFI)	Coordination related to climate-resilient agricultural landscapes, shelterbelt systems, silvopastoral approaches, sustainable land management practices, and engagement of farmers and agricultural stakeholders in restoration and climate adaptation activities.t.
10	Autonomous Territorial Unit of Gagauzia (ATUG), and Local Public Authorities (LPAs)	Identification of local priorities; support for participatory planning; support for local stewardship arrangements; facilitation of land access and local agreements; mobilization of community participation and local labor; integration of restoration priorities into local planning processes.
11	Academic and Research Institutions	Environmental, hydrological and climate-risk analysis, Ecological research, biodiversity assessments, and technical guidance.
12	Service Providers and various Contractors	Provision of technical services related to community engagement and benefits, restoration implementation, nursery development, geospatial analysis, monitoring systems, erosion control works, restoration maintenance, and environmental infrastructure support.

B.5. Justification for GCF Funding request

Southern Moldova is one of the country's most climate-vulnerable regions, experiencing increasingly severe droughts, land degradation, declining forest cover and loss of ecosystem functions that undermine agricultural productivity, water security and rural livelihoods. Addressing these challenges requires investments that restore ecosystems at a landscape scale while strengthening the institutions and communities responsible for their long-term management. Although these investments generate substantial economic benefits, they produce very limited financial returns, creating a financing gap that cannot be addressed through commercial finance or sovereign borrowing alone.

The Government of Moldova has demonstrated its commitment to the proposed investment by securing a USD 10 million IBRD loan as part of the project's financing package. More than 75% percent of this loan will finance

Component 2.1, which includes afforestation, improved forest management and establishment of the Southern Regional Forest Reproductive Material Centre. These investments create long lived natural assets and strengthen the country's capacity to implement future restoration projects, making them the most appropriate activities to finance through sovereign borrowing.

However, even these investments do not generate sufficient revenues to justify additional debt. Their principal value lies in restoring ecosystem functions and increasing resilience to climate change rather than generating financial income. Restored forests, shelterbelts and riparian ecosystems reduce soil erosion, improve water regulation, increase groundwater recharge, moderate local temperatures, strengthen biodiversity, improve pollination, reduce drought impacts on agricultural production and sequester carbon. These ecosystem services benefit farmers, rural communities, downstream water users and society as a whole, but they do not create revenue streams that can be captured by the implementing agencies or used to repay loans.

According to the economic and financial analysis (EFA), the project does not generate positive financial returns in any financing scenario, reflecting the public-goods nature of ecosystem restoration investments. The project generates limited financial revenues through sustainable wood harvesting but not enough to generate a positive financial return. The livestock production benefits and non-wood forest products may accrue to local communities and are captured in the economic analysis as national welfare benefits; they do not constitute financial revenues of the implementing agency. These revenues represent only a small share of the overall benefits. The GCF grant scenario minimizes the financing gap and represents the minimum level of concessionality required to implement the project at the scale needed to address climate risks in southern Moldova.

In contrast, the economic analysis demonstrates strong economic viability, reflecting the substantial value of avoided climate damages, improved ecosystem services, enhanced agricultural resilience, biodiversity conservation, hydrological regulation and greenhouse gas removals generated by the project. The project's economic internal rate of return (EIRR) is nearly 33.3.% and 50.2% with low and high shadow prices of carbon, respectively.

This difference between strong economic returns and absence of financial returns is characteristic of ecosystem restoration and adaptation investments. Many of the project's most important benefits are public goods. They are shared across landscapes and communities, extend well beyond the project intervention areas and continue to accumulate over decades. These include reduced vulnerability of agricultural production to drought, improved watershed functions, healthier soils, enhanced habitat connectivity, reduced sedimentation, improved water quality and increased resilience of both natural and production landscapes. Because these benefits cannot be fully monetized or captured by individual beneficiaries, they remain systematically underinvested despite their high value in society.

The remaining project components strengthen the enabling conditions needed to ensure that restoration investments deliver lasting climate resilience. They support climate informed planning, environmental monitoring, geospatial information systems, institutional capacity development, community stewardship, climate resilient livelihoods and long-term management of restored ecosystems. These activities generate no direct financial return, yet they are essential for ensuring that restored landscapes continue to provide ecosystem services and remain resilient under future climate conditions. Financing these activities entirely through sovereign borrowing would increase public debt without creating corresponding cash flows for repayment.

The proposed GCF grant therefore finances the incremental investments required to achieve transformational climate adaptation while maximizing mitigation results and does not duplicate existing national afforestation programs. Rather, it supports the integration of climate risk into restoration planning, establishment of climate resilient forest reproductive systems, strengthening of environmental monitoring and decision support systems, development of community stewardship mechanisms and restoration approaches that enhance long term ecosystem resilience, elements that are not typically financed through conventional forestry programs. These investments improve the quality, sustainability and climate resilience of restoration activities financed under the project while generating adaptation benefits that extend well beyond the direct project beneficiaries.

The proposed financing structure represents the minimum level of concessionality required to implement the project at the scale needed to address growing climate risks in southern Moldova. The Government has already allocated sovereign borrowing to the most capital intensive restoration investments, while the requested GCF grant finances the adaptation specific activities and public climate goods that cannot reasonably be financed

through additional debt. Without GCF support, the project would need to reduce the scope of climate informed planning, community engagement, long term stewardship and ecosystem resilience measures, significantly diminishing its adaptation impact and the sustainability of restoration investments. The GCF grant is therefore essential to bridge the financing gap and enable a comprehensive landscape restoration program capable of delivering lasting climate resilience, ecosystem recovery and sustainable livelihoods in one of Moldova's most climate vulnerable regions.

B. 6 Exit Strategy

The project has been designed so that responsibility for sustaining its results gradually shifts from project implementation arrangements to national institutions and local stakeholders. By project completion, the systems, capacities and partnerships established through the project will be embedded within existing institutional structures, allowing restoration activities and climate resilient landscape management to continue beyond the period of GCF financing.

The Government of Moldova has already demonstrated its long-term commitment by combining GCF grant resources with sovereign financing from the World Bank and by aligning project investments with national priorities for forest landscape restoration, climate adaptation and sustainable land management. The Ministry of Environment, Moldsilva and the National Office for Environmental Projects Implementation will continue to lead implementation of restoration programs, supported by strengthened institutional capacities, technical guidelines, environmental monitoring systems and climate informed planning tools developed under the project. The Southern Regional Forest Reproductive Material Centre will continue operating under Moldsilva, providing climate resilient planting material for future restoration programs.

Restoration areas established under the project will be governed through formal Forest Management Plans and Community Stewardship Plans prepared during implementation. These planning instruments will define management responsibilities, restoration prescriptions, maintenance requirements, grazing controls, fire management measures, monitoring arrangements and institutional responsibilities over a ten-year period, thereby ensuring continuity of management beyond the lifetime of GCF financing. The pre-existing LPA, mayors office and community council are central to the long-term stewardship of community natural resources through these instruments.

Taken together, these measures ensure that the project leaves behind more than restored landscapes. It leaves institutions with stronger capacities, communities with greater ownership, practical systems for climate informed restoration and healthy ecosystems that will continue to deliver adaptation benefits, ecosystem services and sustainable livelihoods well beyond the lifetime of the project.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	**Total amount**		**Currency**	
	39,280,000		USD	
GCF financial instrument	**Amount**	**Tenor**	**Grace period**	**Pricing**
(i) Senior loans	Enter amount	Enter years	Enter years	Enter %
(ii) Subordinated	Enter amount	Enter years	Enter years	Enter %

loans					
(iii) Equity	Enter amount				Enter % equity return
(iv) Guarantees	Enter amount	Enter years			
(v) Reimbursable grants	Enter amount				
(vi) Grants	39,280,000				
(vii) Results-based payments	Enter amount				

(b) Co-financing information	**Total amount**	**Currency**
	10,000,000	USD

Name of institution	**Financial instrument**	**Amount**	**Currency**	**Tenor & grace**	**Pricing**	**Seniority**
IBRD	Loan	10,000,000	USD	15 years & 5 years	5.14 (nominal) + 0.25% one-off front-end fee3	

(c) Total financing (c) = (a)+(b)	**Amount**	**Currency**
	49,280,000	USD

(d) Other financing arrangements and contributions (max. 250 words, approximately	*Parallel financing supporting complementary landscape restoration investments is being implemented through the World Bank/GEF project "Moldova: Restoring Ecosystems for Marine Pollution Prevention (REMAP)", which focuses on sustainable land management and ecosystem restoration interventions in the Dniester River basin. While the present project targets climate-risk-informed ecological infrastructure strengthening in southern Moldova and the Lower Prut region, coordination between the two operations will support harmonization of restoration prioritization frameworks, monitoring approaches, and institutional implementation capacity. Parallel financing does not support the same outputs or expenditures financed by the GCF project and therefore does not constitute co-financing.*

3 IBRD terms used in the financial analysis are preliminary, and the actual terms will be negotiated with the Moldovan Government during the project's negotiation period.

0.5 page)	

C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	Output	Indicative cost (USD)	GCF financing		Co-financing		
			Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
Component 1	Institutional Capacity Development and Data-Driven Planning	2,890,000	2,890,000	Grants	-		
Component 2	Climate-Resilient Ecological Infrastructure Restoration in Production Landscapes	38,473,500	30,774,500	Grants	7,699,000	Loan	
Component 3	Community Engagement, Climate-Resilient Livelihoods, and Local Stewardship Systems for Ecosystem Restoration	5,450,000	3,650,000	Grants	1,800,000	Loan	
Component 4	4a. Technical and operational support for the establishment and operation of a Project Implementation Unit (PIU)	1,836,500	1,335,500	Grants	501,000	Loan	
	4b. Development and operation of an integrated Monitoring, Evaluation and Learning (MEL) system*	630,000	630,000	Grants	-		
Indicative total cost (USD)		49,280,000	39,280,000		10,000,000		

This table should match the one presented in the term sheet and be consistent with information presented in other annexes including the detailed budget plan and implementation timetable. In case of a multi-country/region programme, specify indicative requested GCF funding amount for each country in annex 17, if available.

** The Component 4b M&E budget of USD 630,000 covers dedicated PIU-led monitoring, evaluation and learning. In addition, monitoring activities are embedded within implementation contracts across Components 1, 2 and 3. The total project M&E budget, including embedded monitoring attributions, amounts to USD 1,062,835, equivalent to 2.16% of total project cost. A full breakdown is provided in the Budget Notes (Annex 4).*

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes ☒ No ☐
C.3.2. Does GCF funding finance technology development/transfer?	Yes ☐ No ☒

The project includes a targeted capacity-strengthening package designed to support effective implementation of EbA interventions in accordance with World Bank requirements. Capacity-strengthening activities are designed to be practical and implementation-oriented, focusing on strengthening institutional and technical capacity for climate-informed ecosystem restoration, safeguards compliance, adaptive landscape management, results monitoring, and delivery coordination rather than generic training programmes.

Support will be provided primarily to the MoE, as the EE, and to selected technical counterparts involved in restoration planning, environmental monitoring, community engagement, and implementation activities at national and local levels. Capacity-strengthening activities will focus on ensuring that project implementation processes remain aligned with applicable requirements under the Funded Activity Agreement (FAA), including application of the World Bank's Environmental and Social Framework (ESF), procurement regulations, fiduciary requirements, and results monitoring obligations.

Targeted support will address the following areas:

- application of World Bank fiduciary procedures, procurement regulations, ESF requirements, grievance redress mechanisms, and gender-responsive implementation procedures consistent with the FAA;
- application of climate-informed restoration planning approaches, including use of restoration prioritization tools, geospatial systems, environmental monitoring frameworks, and hydrological modelling outputs supporting adaptive landscape management;
- results-based monitoring and reporting aligned with the approved Results Framework, including indicator tracking, data collection methodologies, reporting formats, and reporting timelines;
- monitoring and documentation of ecosystem-based adaptation interventions, including restoration outputs, ecosystem resilience and adaptation outcomes, and lessons supporting replication and scaling;
- participatory implementation approaches supporting community engagement, local stewardship systems, safeguards compliance, and inclusive implementation of ecosystem-based adaptation interventions;
- practical coordination procedures supporting safeguards screening, restoration site documentation, implementation sequencing, and monitoring of progress across intervention landscapes.

Capacity-strengthening activities will be delivered through focused technical training sessions, operational guidance, implementation support, and on-the-job technical assistance provided during project implementation. These activities are designed to ensure that implementing counterparts are fully prepared to apply agreed project implementation procedures and climate-informed restoration approaches consistent with World Bank operational requirements and GCF investment criteria.

The GCF grant will finance only direct costs associated with targeted technical support, operational training, implementation guidance, and coordination activities required for effective delivery of project interventions. No long-term academic training programmes or stand-alone institutional overhead costs will be financed under the project.

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's Initial Investment Framework.

D.1. Impact potential (max. 500 words, approximately 1 page)

The proposed project will generate significant climate adaptation impacts by reducing vulnerability of drought-exposed rural production landscapes and strengthening resilience of ecosystems, ecosystem services, and agriculture-dependent livelihoods in southern Moldova. Southern Moldova is among the most climate-exposed regions of the country, where increasing drought frequency, rising temperatures, and hydrological variability are already driving land degradation, declining water availability, and unstable agricultural production systems. In this context, the project addresses both the biophysical drivers of climate vulnerability and the institutional and behavioural constraints that limit effective adaptation responses.

The project's impact pathway is based on restoring ecological infrastructure—forests, shelterbelts, riparian systems, wetlands, and silvopastoral landscapes—combined with strengthening climate-informed planning and decision-support systems. These interventions improve key ecosystem functions, including soil stabilization, water retention, groundwater recharge, and microclimatic regulation. As these ecosystem functions are restored, exposure of agricultural systems to climate shocks is reduced, resulting in more stable production systems, lower climate-related yield losses, and improved resilience of rural livelihoods.

Through these mechanisms, the project is expected to generate direct and indirect adaptation benefits for approximately 185,000 people, including 30,000 direct beneficiaries. These benefits arise through improved drought resilience, reduced soil degradation, strengthened water regulation functions, and enhanced capacity of institutions and communities to anticipate and respond to climate risks. In particular, investments in climate-informed planning systems, environmental monitoring, and early warning services strengthen adaptive capacity by enabling more timely and evidence-based responses to droughts, heatwaves, and hydrological shocks.

At landscape level, the project will bring approximately 13,000 hectares of degraded and climate-sensitive land under improved climate-resilient management, contributing directly to GCF adaptation outcomes for ecosystems and ecosystem services. These restored landscapes will deliver sustained ecosystem services beyond the immediate intervention areas, including improved watershed regulation, reduced erosion and sedimentation, enhanced habitat connectivity, and strengthened resilience of rain-fed agricultural systems. By addressing the underlying degradation of ecological infrastructure, the project reduces long-term climate risks and contributes to avoided economic losses associated with crop failures, land degradation, and water stress.

In addition to adaptation impacts, the project will generate measurable climate mitigation results. Restoration of forests, shelterbelts, and other ecological infrastructure will increase carbon stocks and sequestration capacity across the landscape. Estimated mitigation impacts amount to approximately 3.95 million tCO_2e over a 20-year period, reflecting long-term carbon sequestration associated with afforestation, reforestation, and improved land and ecosystem management. These mitigation outcomes are intrinsically linked to the adaptation pathway, as improved ecosystem functionality enhances both resilience and carbon storage within the LULUCF sector.

Beyond direct biophysical impacts, the project will generate system-level impacts that are critical for sustaining and scaling climate resilience. By strengthening institutional capacity, establishing climate-informed planning systems, and developing integrated data and decision-support tools, the project enables more effective targeting, design, and management of restoration investments. These systems ensure that interventions are aligned with evolving climate risks and ecological conditions, thereby increasing the durability and effectiveness of adaptation outcomes.

The project also strengthens the sustainability of impacts through community engagement and stewardship mechanisms, which support long-term maintenance of restored ecosystems and adoption of climate-resilient practices. By linking restoration investments with local livelihoods and governance systems, the project enhances ownership and creates incentives for continued management of ecosystem assets beyond the project lifecycle.

Overall, the project combines restoration of ecological infrastructure, strengthening of adaptive capacity, and institutionalisation of climate-informed planning systems to deliver integrated, landscape-scale resilience outcomes. The resulting impact is not limited to site-level improvements but extends to broader production landscapes and rural communities, contributing to a systemic reduction in climate vulnerability and supporting Moldova's long-term transition toward climate-resilient development pathways.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

The proposed project contributes to paradigm shift potential by advancing a transition from fragmented, project-based ecosystem restoration toward integrated, climate-risk-informed landscape management systems embedded within national and sub-national planning frameworks in Moldova. While ecosystem restoration activities have been implemented in the past, they have remained largely limited in scale, externally financed, and insufficiently aligned with climate risk patterns or landscape-level priorities. As a result, restoration efforts have not systematically translated into durable resilience outcomes or scalable adaptation pathways.

The project addresses this structural limitation by establishing an integrated approach that combines climate-informed planning systems, large-scale restoration of ecological infrastructure, and community-based stewardship mechanisms. Through this combination, the project not only delivers direct adaptation outcomes but also transforms the way restoration investments are designed, prioritised, and sustained over time.

A key pathway to paradigm shift lies in the institutionalisation of climate-informed restoration planning. The project introduces restoration prioritisation frameworks, geospatial tools, and hydrological and ecosystem modelling systems that integrate climate risk, ecological suitability, and socio-economic factors into decision-making processes. These tools are designed to be embedded within national programmes, particularly the NFERP, and applied by sectoral institutions and local authorities. By strengthening planning systems and aligning restoration investments with climate vulnerability patterns, the project establishes a replicable methodology that can guide future public investment and policy decisions beyond the project's geographic scope.

The project also contributes to paradigm shift by strengthening the technical and operational capacity required to scale EbA. Investments in climate-adapted forest reproductive material systems, including the establishment of the Southern

Regional Forest Reproductive Material Centre, address a critical bottleneck to scaling restoration under changing climatic conditions. By ensuring the availability of locally adapted planting material and strengthening technical standards for restoration, the project enables long-term expansion of restoration efforts aligned with climate resilience objectives.

Another key dimension of paradigm shift is the demonstration of landscape-scale EbA as a viable adaptation model. By implementing integrated restoration interventions across approximately 13,000 hectares of climate-sensitive landscapes—including forests, wetlands, riparian systems, and agricultural protection structures—the project generates practical experience in delivering multi-functional ecosystem restoration under real-world conditions. These interventions demonstrate how restoration of ecological infrastructure can simultaneously enhance water regulation, soil stability, agricultural resilience, and carbon sequestration, thereby providing a model for scaling across other regions of Moldova.

The project further strengthens paradigm shift potential through the development of sustainable institutional and community-based stewardship systems. By establishing participatory planning processes, community stewardship arrangements, and restoration-linked livelihood opportunities, the project supports behavioural change and long-term ownership of restoration outcomes. These mechanisms are critical to ensuring that restored ecosystems are maintained beyond the project lifecycle and that adaptation benefits are sustained over time. In parallel, strengthening climate information systems and early warning capabilities enhances the ability of institutions and communities to anticipate and respond to climate risks, reinforcing adaptive management practices at landscape level. In parallel, the project establishes the institutional foundations for longer-term ecosystem financing by piloting approaches for payments for ecosystem services, biodiversity finance and carbon finance, that support continued maintenance of restored ecosystems after project completion. Although these mechanisms are expected to mature over time, the project creates the institutional readiness and practical experience necessary to mobilise future public and private financing for ecosystem restoration.

A critical enabling factor for paradigm shift is the financing structure underpinning the project, which addresses the structural underinvestment in ecosystem-based adaptation. By combining GCF grant financing with IBRD resources, the project demonstrates a model for financing restoration activities that generate high public climate benefits but limited financial returns. The GCF grant supports adaptation-specific investments, planning systems, and public goods that cannot be financed through debt, while IBRD financing supports capital-intensive restoration activities where appropriate. This blended financing approach provides a replicable framework for mobilising resources for large-scale EbA and highlights the role of concessional finance in unlocking investments that would otherwise not occur. This approach underpins how the paradigm shift lies not in afforestation alone, which is already supported through national programmes, but in embedding climate-risk-informed ecosystem restoration within Moldova's landscape planning, restoration financing, and adaptation systems. The project therefore transforms restoration from a tree-planting programme into a climate resilience strategy based on ecosystem functions, adaptive management, and community stewardship.

A key element of the paradigm shift is the institutionalisation of climate-resilient forest and landscape planning. Through preparation of climate-informed Forest Management Plans and Community Stewardship Plans, restoration investments become embedded within formal planning and management systems rather than remaining stand-alone restoration projects. Collectively, these pathways shift ecosystem restoration from a series of isolated projects to a permanent feature of Moldova's climate adaptation and landscape management system. Rather than financing restoration as a one-off intervention, the project establishes the institutional capacity, planning tools, financing approaches and stewardship mechanisms required for restoration to become an integral part of future public investment, land management and climate resilience strategies.

D.3. Sustainable development (max. 500 words, approximately 1 page)

The project will generate substantial sustainable development co-benefits by addressing the interlinked challenges of land degradation, climate vulnerability, and rural economic fragility in southern Moldova. These challenges are deeply interconnected, with declining ecosystem functionality driving reduced agricultural productivity, increased exposure to climate risks, and limited livelihood opportunities, particularly in rural communities. By restoring ecological infrastructure and strengthening climate-resilient landscape management systems, the project contributes to a more sustainable and resilient development pathway that integrates environmental, social, and economic objectives.

At the environmental level, the project will restore approximately 13,000 hectares of degraded forests, agricultural protection systems, wetlands, and riparian landscapes. These interventions will improve ecosystem functionality and enhance the provision of critical ecosystem services, including water regulation, soil fertility, erosion control, and

biodiversity protection. Strengthened ecological connectivity and improved watershed functioning will contribute to long-term landscape stability and reduced environmental degradation. In addition to these adaptation benefits, restoration interventions will increase carbon sequestration capacity, contributing to the sustainable management of land resources within the LULUCF sector and supporting national climate objectives.

At the economic level, the project will support more stable and productive agricultural systems by reducing climate-related losses and improving the natural resource base on which rural livelihoods depend. Improved microclimatic regulation, reduced soil erosion, and enhanced water retention capacity will contribute to more reliable crop yields and reduced vulnerability to drought. These impacts are particularly important in the Southern Development Region, where agriculture is predominantly rain-fed and highly exposed to climate variability. In addition, the project will support development of restoration-linked livelihoods—including agroforestry, silvopastoral systems, and sustainable use of forest and non-timber resources—which provide opportunities for income diversification and increased resilience of rural households.

The project will also generate social benefits by strengthening community participation, enhancing skills and capacity, and promoting inclusive access to climate-resilient livelihood opportunities. Through participatory planning processes, training programmes, and community-based stewardship mechanisms, local populations will be actively engaged in the design, implementation, and maintenance of restoration interventions. This approach strengthens local ownership and fosters long-term behavioural change, increasing the likelihood that restoration outcomes will be sustained beyond the project lifecycle. Particular attention is given to the inclusion of women, elderly populations, and other vulnerable groups, who are disproportionately affected by climate impacts and often have limited access to economic opportunities.

A further dimension of sustainable development potential lies in the strengthening of institutional systems that underpin long-term environmental management and climate resilience. By improving climate-informed planning, environmental monitoring, and decision-support systems, the project enhances the capacity of national and local institutions to manage natural resources more effectively and to integrate climate considerations into development planning. These improvements contribute not only to the sustainability of project investments but also to broader governance outcomes, including better coordination across sectors and more efficient allocation of public resources.

The project also contributes to sustainable development by generating knowledge, data, and practical experience that can inform future policy and investment decisions. The integration of geospatial tools, climate modelling, and environmental monitoring systems enables more evidence-based planning and supports the valuation of ecosystem services. This, in turn, strengthens the economic case for ecosystem restoration and promotes more sustainable land-use decisions across sectors.

Importantly, the project's development benefits extend beyond the immediate intervention areas. By improving ecosystem functionality at landscape scale, strengthening institutional capacity, and supporting adoption of climate-resilient practices, the project creates spillover effects that benefit surrounding communities and production systems. Over time, these effects contribute to broader regional development outcomes, including improved food security, enhanced water resource management, and greater resilience of rural economies to climate shocks.

Overall, the project delivers integrated sustainable development benefits by combining ecosystem restoration, climate resilience, livelihood support, and institutional strengthening. By addressing both the environmental and socio-economic drivers of vulnerability, the project supports a transition toward more sustainable, resilient, and inclusive rural development pathways in Moldova

D.4. Needs of recipient (max. 500 words, approximately 1 page)

A central constraint underlying Moldova's climate vulnerability is the structural inability to finance ecosystem-based adaptation investments, particularly in relation to ecosystem degradation, water stress, and vulnerability of agriculture-dependent livelihoods. This constraint is most pronounced in the Southern Development Region, where increasing climate exposure driven by more frequent droughts, rising temperatures, and hydrological variability interacts with degraded landscapes and limited adaptive capacity to create persistent vulnerability.

A central challenge is limited fiscal space to finance large-scale EbA and restoration. While Moldova has established strong policy frameworks, including the NCCAP 2030 and NFERP 2023–2032, implementation requires substantial upfront investment in ecological infrastructure, climate-informed planning systems, and institutional capacity. These investments generate significant public benefits, including improved water regulation, reduced land degradation, and enhanced climate resilience. However, they provide limited direct financial returns and therefore cannot be financed through commercial investment or sustained through sovereign borrowing alone.

This creates a structural adaptation financing gap, particularly for landscape-scale restoration of forests, wetlands, shelterbelts, and watershed systems. These interventions generate public goods—such as reduced drought risk, improved agricultural stability, and enhanced ecosystem services, but their benefits are largely non-market and accrue

over long time horizons. Consequently, private sector incentives are limited, and public budgets remain insufficient given competing development priorities.

In addition to financing constraints, Moldova faces institutional and technical capacity gaps that limit effective implementation of climate-resilient restoration. Planning systems do not yet fully integrate climate risk, hydrological processes, and ecosystem dynamics into investment decisions at landscape scale. Environmental monitoring and geospatial data systems remain fragmented, and coordination across forestry, agriculture, and water sectors is often insufficient to support integrated approaches. These constraints reduce the effectiveness, targeting, and sustainability of existing interventions.

A further bottleneck relates to the availability of climate-adapted forest reproductive material (FRM) and associated technical systems required for scaling restoration under changing climatic conditions. Without adequate supply of locally adapted planting material and strengthened technical standards, restoration outcomes risk lower survival rates and reduced long-term resilience.

At the local level, rural communities face limited adaptive capacity and constrained livelihood options, particularly in rain-fed agricultural systems highly exposed to climate variability. Smallholder farmers and vulnerable groups, including women and the elderly, are disproportionately affected by climate-related income shocks and have limited access to climate information, training, and alternative income opportunities. This reduces incentives and capacity to adopt climate-resilient practices and engage in long-term stewardship of restored ecosystems.

Existing national restoration programmes have demonstrated strong government commitment but remain insufficient to address the scale and complexity of climate risks emerging across southern Moldova. In particular, current programmes focus primarily on increasing tree cover and restoring forest assets, while limited financing is available for climate-risk-informed landscape planning, restoration of multifunctional ecological infrastructure, community stewardship systems, climate information services, and adaptive management arrangements required to sustain resilience outcomes under future climate scenarios.

In this context, concessional financing from the Green Climate Fund is essential to address Moldova's needs. GCF support enables investments in ecosystem restoration, climate-informed planning systems, environmental data infrastructure, and community-based adaptation mechanisms that would not otherwise be financed. By overcoming structural financial and institutional barriers, the project enables implementation of national climate priorities and supports Moldova's transition toward a more resilient and sustainable development pathway in the face of increasing climate risks.

D.5. Country ownership (max. 500 words, approximately 1 page)

The proposed project demonstrates strong country ownership through its close alignment with national climate and development priorities, its integration within existing institutional frameworks, and the active leadership of the Government of Moldova in both preparation and implementation. Ecosystem restoration and ecosystem-based adaptation are central pillars of Moldova's climate strategy. The project directly supports the operationalisation of these national priorities by translating policy commitments into climate-informed, landscape-scale interventions.

Government ownership is reflected in both the design and implementation arrangements of the project. The Executing Entity is the Republic of Moldova, represented by the Ministry of Finance, acting through the Ministry of Environment, which has overall responsibility for coordination and implementation. Key national institutions, including Moldsilva and relevant technical agencies, are actively engaged in project design and will play central roles in implementation of restoration, planning, and monitoring activities. This institutional structure ensures that project activities are embedded within government systems and aligned with existing mandates and operational responsibilities.

The project is further grounded in national systems through its integration with existing programmes and planning frameworks. In particular, investments in restoration are aligned with NFERP targets, while the development of climate-informed planning tools, environmental monitoring systems, and decision-support frameworks is designed to be incorporated into national and sub-national planning processes. This approach ensures that project outputs—such as integrated planning systems, technical standards, and climate information services—are not stand-alone deliverables but form part of a broader national system for managing climate risks and land resources.

During project preparation, consultations were carried out with national and local stakeholders, including relevant ministries, technical agencies, local public authorities, and community representatives in the Southern Development Region. These consultations informed the design of project components, particularly with regard to restoration priorities,

livelihood support activities, and community engagement mechanisms. As a result, the project reflects locally identified needs and priorities and builds on existing implementation experience in restoration and land management.

Country ownership is also demonstrated through the government's financial commitment and its role in mobilising complementary resources. The inclusion of IBRD financing alongside GCF grant funding reflects the government's willingness to co-finance restoration investments and to integrate climate resilience into broader development financing programmes. At the same time, the use of concessional GCF finance enables the government to implement activities—such as ecosystem-based adaptation, climate-informed planning systems, and public environmental data infrastructure—that would not otherwise be feasible under standard financing conditions.

Importantly, the project strengthens long-term ownership by building institutional capacity, establishing operational systems, and supporting community-based stewardship mechanisms. By embedding climate-informed planning tools, technical standards, and monitoring systems within government institutions, the project ensures that these systems continue to be used and further developed beyond the project lifecycle. In parallel, community engagement and participatory management approaches foster local ownership and contribute to sustained management of restored ecosystems.

Overall, the project reflects a strong alignment with national priorities, active government leadership, and integration within existing institutional and policy frameworks. By combining government ownership with capacity strengthening and system development, the project establishes a solid foundation for sustained impact and long-term climate resilience in Moldova.

D.6. Efficiency and effectiveness (max`. 500 words, approximately 1 page)

The proposed project demonstrates strong efficiency and effectiveness by combining large-scale EbA implementation with targeted enabling investments that strengthen long-term restoration planning capacity and technical decision-support systems in climate-sensitive regions of southern Moldova.

The project will restore or maintain approximately 13,000 hectares of degraded and climate-sensitive production landscapes through afforestation, rehabilitation of degraded forest ecosystems, establishment of shelterbelts and riparian vegetative protection buffers, and stabilization of silvopastoral systems. These interventions represent cost-effective adaptation measures that generate multiple ecosystem service benefits simultaneously, including improved soil stability, enhanced moisture retention, reduced wind exposure of agricultural lands, and strengthened ecological connectivity across fragmented landscapes. Compared with infrastructure-based adaptation options, restoration of ecological infrastructure provides durable resilience benefits with lower long-term maintenance costs and higher co-benefit potential.

The proposed investment envelope of USD 49.28 million enables implementation of restoration interventions at a scale sufficient to generate landscape-level resilience benefits rather than isolated site-level improvements. Concentrating investments within climate-vulnerable regions of southern Moldova further improves effectiveness by ensuring that restoration activities target areas where EbA measures produce the greatest resilience gains.

Efficiency is strengthened through alignment of project interventions with the NFERP, allowing restoration activities supported by the project to build on existing national implementation frameworks and technical systems. Strengthening availability of climate-resilient forest reproductive material will further improve implementation efficiency by supporting reliable supply of site-adapted planting material required for restoration activities.

The project also generates measurable mitigation results through carbon sequestration associated with restoration interventions. Preliminary carbon accounting estimates important net GHG removals over the accounting period, contributing to Moldova's mitigation objectives under its NDC while reinforcing adaptation outcomes through improved ecosystem resilience.

Additional efficiency gains are achieved through development of hydrological and ecosystem modelling tools supporting identification of feasible adaptation pathways in the Prut River Catchment. These tools provide a technical foundation for prioritizing future restoration investments and reduce uncertainty associated with planning interventions in climate-sensitive landscapes affected by hydrological variability.

Implementation through existing national institutions with experience managing externally financed environmental investment programmes further strengthens delivery efficiency and reduces transaction costs. By combining

landscape-scale restoration implementation with strengthening of planning systems and technical enabling conditions for scaling EbA interventions, the project ensures that GCF resources generate sustained resilience benefits beyond the duration of the project while supporting long-term expansion of climate-resilient ecological infrastructure across southern Moldova.

According to the economic and financial analysis (EFA), the project is not financially viable over the 20-year lifespan in any scenario4. The GCF Grant scenario yields the least-negative FNPV, making it the most appropriate financing option. This is further justified by the fact that the project is economically viable. The project's economic internal rate of return (EIRR) is nearly 33.3% and 50.2% with low and high shadow prices of carbon5, respectively. Each dollar invested in the Project will bring an economic return of nearly 5.4 and 9.2 dollars, respectively, in the two scenarios mentioned above.

4 Of the total US$ 49.28 million (nominal) committed for the project, 79.3% (US$ 39.28 million) is expected to be provided as a grant by the Green Climate Fund (GCF) and the remaining 20.29% (US$ 10 million) is expected to be provided as a loan from the International Bank for Reconstruction and Development (IBRD) of the World Bank Group. Nevertheless, the financial analysis is done in three scenarios corresponding to three main financial instruments used by GCF, i.e., grants, concessional loan and commercial loan through a financial institution. In all scenarios , the revenues to be generated over the lifespan of the project will not be sufficient to pay back the loan and thus will result in a negative financial net present value, FNPV.

5 For deriving the economic value of GHG removal, high and low shadow prices of carbon of US$ 119.3/tCO_2e and US$ 60.3/tCO_2e, respectively, – following the World Bank's 2024 Guidance Note on Shadow Price of Carbon in Economic Analysis and World Bank's GHG Accounting Template for FY2026 - are used for the first year of analysis. The high and low shadow prices of carbon rise to US$ 183.5/tCO_2e and US$ 91.8/tCO_2e, respectively, in year 20. The high and low shadow prices of carbon are converted to 2025 constant US$ from 2023 CPI-adjusted prices that are given in the World Bank's Greenhouse Gas Accounting Template for FY2026.

C. LOGICAL FRAMEWORK

E.1. Project/Programme Focus

☒ Reduced emissions (mitigation)
☒ Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	EbA implementation in Moldova remains largely pilot-based and externally financed, with limited integration into national restoration programming and landscape planning systems. Ecological infrastructure across production landscapes (forests, shelterbelts, connectivity structures) remains insufficient to buffer increasing drought frequency, soil degradation and hydrological variability. Availability of climate-adapted FRM and technical decision-support tools remains constrained, particularly in southern regions.	Low	EbA is implemented at landscape scale across climate-vulnerable regions of southern Moldova through coordinated restoration of ecological infrastructure, supported by climate-informed restoration prioritisation frameworks aligned with the NFERP, strengthened regional FRM supply systems, and modelling-based adaptation pathways for hydrologically sensitive landscapes such as the Prut River floodplain.	The project operationalizes climate-informed restoration prioritisation frameworks and supports implementation of integrated restoration measures across approximately 13,000 ha of climate-sensitive production landscapes. It strengthens availability of climate-adapted planting material through regional FRM system support and develops hydrological and ecosystem-response modelling tools into a Climate-Informed Planning System, enabling transition from pilot-scale interventions toward coordinated landscape-scale EbA implementation with ability of local community to lead and manage future activities.
Replicability	EbA initiatives in Moldova remain geographically fragmented and largely dependent on externally financed pilot interventions. Restoration	Low	Climate-informed restoration prioritization frameworks establish a replicable methodological approach for integrating EbA into national restoration	The project operationalizes restoration prioritization tools aligned with climate-vulnerability patterns and national restoration objectives and demonstrates integrated ecological infrastructure

	methodologies are not systematically integrated into climate-risk-informed land-use planning processes, and operational guidance linking restoration investments with adaptation outcomes remains limited. Decision-support tools for identifying adaptation pathways in hydrologically sensitive landscapes are still under development.		programming and local land-use planning processes under the NFERP platform. Modelling-based decision-support tools developed for the Prut River Catchment provide transferable approaches for adaptation planning in hydrologically sensitive river-basin systems.	restoration models across priority districts in the southern Moldova. The Prut River Catchment modelling framework establishes a transferable technical approach for integrating hydrological and ecosystem-response analysis into restoration planning applicable to other climate-sensitive river-basin landscapes.
Sustainability	Landscape restoration and EbA investments in Moldova remain largely dependent on externally supported project cycles and are not yet systematically embedded within climate-risk-informed restoration planning processes. Limited availability of climate-resilient FRM and insufficient integration of restoration prioritization tools into planning systems constrain long-term sustainability of ecological infrastructure expansion. Decision-support capacity for hydrologically-sensitive landscapes remains uneven across southern districts.	Low	EbA approaches are embedded within Moldova's long-term forest expansion and landscape restoration framework through alignment with the NFERP and integration of climate-risk-informed prioritization tools into restoration planning processes. Strengthened FRM supply systems support sustained implementation of afforestation, forest rehabilitation, restoration and ANR beyond the project duration. Modelling-based decision-support tools developed for the Prut River Catchment region strengthen institutional capacity for climate-informed adaptation planning in hydrologically sensitive landscapes.	The project aligns restoration interventions directly with implementation priorities under the NFERP, ensuring continuity of ecological infrastructure expansion beyond the project lifetime. Strengthening nursery production capacity in southern Moldova will support long-term availability of climate-resilient planting material required for scaling restoration investments. Integration of Climate-Informed Planning System into restoration planning processes and development of modelling-based decision-support systems for the Prut River Catchment region supports institutionalization of EbA approaches within national and local landscape planning frameworks.

E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

GCF Result Area	IRMF		Baseline	Target	Assumptions / Note

	Indicator	**Means of Verification (MoV)**		**Mid-term**	**Final**[6]	
ARA1 Most vulnerable people and communities	Core 2: Direct and indirect beneficiaries reached	Primary data: Beneficiary registration database Attendance records Stewardship Plans Livelihood beneficiary records Community surveys Secondary data: Project monitoring and evaluation reports Independent interim and final evaluation carried out on the project Primary data: collected through SC 3.2	0 Total 0 direct 0 indirect *0 male* *0 female*	55,000 Total 9,000 direct 46,500 indirect *4,320 male* *4,680female* *22,320 male* *24,180 female*	185,000 Total 30,000 direct 155,000 indirect *14,400 male direct* *15,600 female direct* *74,400 male indirect* *80,600 female indirect*	Areas with highest climate risks have been identified Executing Entity will collect data on direct project beneficiaries during project implementation. Note: 30% mid-term target reflects initial setup time, gradual adoption of new practices, and longer timelines for infrastructure improvements. Accelerated progress expected in later years as systems are established and adoption rates increase
ARA1 Most vulnerable people and communities	Supplementary 2.1: Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options	Primary data: Beneficiary adoption surveys Livelihood monitoring questionnaires Stewardship plans monitoring records	0 Total *0 male* *0 female*	3,000 Total 1,440 male 1,560 female	10,000 Total 4,800 male 5,200 female	Local communities will be interested in being part of the project. Note: 30% mid-term target reflects initial setup time, gradual adoption of new practices, and longer timelines for infrastructure

[6] The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

		Secondary data: Project monitoring and evaluation reports Independent interim and final evaluation carried out on the project Field surveys Primary data through SC 3.2				improvements. Accelerated progress expected in later years as systems are established and adoption rates increase.
ARA1 Most vulnerable people and communities	Supplementary 2.4: Beneficiaries (female/male) covered by new or improved early warning systems	Primary data: EWS user registration records (where applicable) Mobile/SMS dissemination records Platform analytics Community-level coverage assessments SHS operational reports Secondary data: EWS platform statistics Independent evaluation Primary data: SC 1.3		35,700 total 5,700 direct 30,000 indirect *2,036 male* *2,964 female* *22,320 male* *24,180 female*	119,000 total 19,000 direct 100,000 indirect *9,120 male direct* *9,880 female direct* *48,000 male indirect* *52,000 female indirect*	Note: 30% mid-term target reflects initial setup time, gradual adoption of new practices, and longer timelines for infrastructure improvements. Accelerated progress expected in later years as systems are established and adoption rates increase. The figure represents a subset of the project's total beneficiaries, covering those specifically reached by the system and climate information activities

ARA4 Ecosystems and ecosystem services	Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice	Primary data: GIS mapping Field verification surveys Restoration site inspections Secondary data: Project monitoring and evaluation reports Independent interim and final evaluation carried out on the project National forest inventory Carbon emissions assessment and forest inventory report covering the project area and scope of activities Primary data: SC 2.1	0	3,900 ha	13,000 ha	Institutional and technical capacity is sufficient Stakeholders are interested in the effective management of natural resources Project implementation is uninterrupted
ARA4 Ecosystems and ecosystem services	Supplementary 4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under resoration and/or improved ecosystems	Restoration site inventories Field surveys Ecological monitoring plots GIS analysis Satellite imagery National forest inventory Protected area monitoring reports (if project covers protected	0	3,900 ha	13,000 ha	Optimal planting and restoration seasons are utilized each year without disruptions, especially in the autumn periods. The required 13,000 of land are available, accessible, and appropriately zoned for restoration activities by the start of the project For forest-related operations, the assumed seedling survival rate is at least 70% by both project midpoint and end,

		areas and protected wetland zones)				accounting for losses due to frost, pests, disease, and drought. Adequate resources for watering (where needed), grazing control, pest management, and ongoing maintenance are available for all land types throughout the 5-year period. Note: At least 30% of total restoration targets will be achieved by the project's mid-term review
MRA4 Forestry and land use	Core 1: GHG emissions reduced, avoided or removed/sequestered	Project monitoring and evaluation reports Independent interim and final evaluation carried out on the project National forest inventory MoE / Moldsilva Field measurement, GIS and lab analysis, calculations using location-specific emission factors and other parameter values	0	0.197 million tCO_2e	3.95 million tCO_2e	Same as above The methodology for calculating GHG emissions sequestration is provided in Annex 22A Project lifetime: 20 years Lifetime emission sequestered: 3 953 084 tCO2e

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)					
Core Indicator	**Baseline context (description)**	**Rating for current state (baseline)**	**Target scenario (description)**	**How the project will contribute**	**Coverage**

Core Indicator 5: Degree to which GCF investments contribute to strengthening institutional and regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner	Moldova's institutional and regulatory frameworks are gradually aligning with EU accession requirements and global climate commitments. However, EbA is not yet systematically integrated into national or regional planning. Coordination among institutions remains limited, and many relevant agencies lack sufficient qualified staff and technical capacity to implement and monitor climate-resilient policies and ecosystem management strategies effectively.	medium	EbAs are fully operationalized across national, regional and local planning and implementation frameworks. Institutions have sufficient staff and technical expertise to deliver climate-resilient, low-emission development through coordinated and well-resourced actions, aligned with EU environmental acquis and national climate commitments.	The project will support operationalization of EbA by strengthening institutional capacity (including staffing of forest maintenance, training for NOIEP, Moldsilva and NAAM) and demonstrating effective models that inform national policies and scale-up, contributing to further roll-out of climate-resilient initiatives for ecosystems restoration.	National level (one country)
Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation	Deployment of climate-resilient ecosystem restoration technologies in Moldova remains limited and largely project-based. Climate-informed restoration prioritisation tools, provenance-based FRM deployment systems and hydrological decision-support approaches for floodplain adaptation planning are not yet systematically integrated into restoration planning	low	Climate-informed restoration prioritisation frameworks, provenance-based FRM deployment systems and modelling-supported restoration planning tools are operationalized across climate-vulnerable districts in southern Moldova. These tools support coordinated implementation of afforestation, ANR, shelterbelt restoration and riparian protection measures aligned with	The project supports deployment of restoration prioritization tools integrating climate-risk exposure and ecological suitability criteria into planning processes, strengthens coordination of forest genetic resources and climate-adapted planting material deployment through regional FRM supply systems including the Southern RFRMC, and develops hydrological and ecosystem-response	Single sub-national area within a country

	processes at district and landscape scale		national restoration programming under the NFERP platform.	modelling tools supporting restoration pathway identification in the Prut River Catchment floodplain landscape. Together, these measures support institutional uptake of climate-informed restoration technologies within national and local planning systems.	
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	Moldova currently lacks formal institutional frameworks for systematically sharing knowledge and lessons learned on EbA. The documentation and dissemination of best practices are irregular, and no centralized platform exists for storing or distributing training materials. Furthermore, collaboration between communities, farmers, and educational institutions around climate adaptation learning remains limited.	low	A structured knowledge management system is in place, enabling systematic collection, storage, and dissemination of best practices, tools, and methodologies. Training is widely accessible, with ongoing peer-to-peer learning networks among farmers and communities. Strong partnerships with local and central public authorities, academic and research institutions, as well as the private sector, foster continuous innovation and capacity development.	The project will provide regular training programs for local stakeholders, systematically document and archive all materials on an accessible online platform, and foster peer learning networks among communities. It will partner with educational institutions to incorporate EbA concept into curricula, enhancing knowledge exchange across multiple levels and linking with other ongoing initiatives. Restoration activities across all ecosystems will be closely monitored, with results being shared regularly with national institutions to support future decision-making.	National level (one country)

E.5. Project/programme specific indicators (project outcomes and outputs)

*This section should list out project/programme-specific performance indicators (outcomes and outputs) that are not covered in sections above (E.1-E.4). List down tailored indicators to monitor /track progress against relevant project/programme results (outcomes/outputs). AEs have the freedom to decide against which outcomes they would like to set project/programme specific indicators. If any co-benefits are identified in sections B.2(a)(b), and D.3, AEs are encouraged to add and monitor co-benefit indicators under the "**Project/programme co-benefit indicators**" section in table below. Add rows as needed.*

Please number each outcome and output as shown below to indicate association of outputs to the contributing outcome. The numbering for outputs under this section should correspond to the output numbering in annex 4 (detailed budget plan).

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
Output 1. Climate-informed ecosystem restoration	% of targeted institutions with improved capacity for climate-informed ecosystem restoration and EbA planning	Pre/post capacity assessments	a) 0	b) 30%	c) 70%	Assumes sustained political commitment from MoE, Moldsilva, and LPAs; staff turnover may affect results
SC 1.1 - Technical Guidance and Standards	Number of technical guidance documents (guidelines, standards, manuals) officially adopted	Official adoption records; PIU documentation	a) 0	b) 2	c) 4	Assumes timely inter-institutional review and endorsement processes
SC 1.2 - Integrated Hydrological and Ecosystem Planning System	Integrated hydrological and ecosystem planning system operational and informing restoration investment decisions	System calibration reports; technical documentation Not operational	Not operational	System developed and piloted	Fully operational; informing all restoration sub-components	Assumes availability of quality baseline hydrological and geospatial data; requires inter-agency data sharing agreements

SC 1.3 - Multi-Hazard Early Warning Platform	Climate-services operational with automated monitoring network in southern districts	Platform status reports; installation records	Not operational	Platform in testing; 50% of stations installed	Fully operational; real-time data from all planned stations	Assumes cloud infrastructure procurement and data-sharing agreements with international meteorological services; requires maintenance budget and trained operators
SC 2.1 - Forest Restoration and Ecological Connectivity	Survival rate of planted trees at 3 years post-planting across forest restoration sites	Field survival surveys; Moldsilva monitoring records	TBD	70%	75%	Assumes adequate maintenance (grazing control, fire prevention, pest management); climate variability may affect outcomes
SC 3.2 - Community Stewardship Plans	Number of climate-resilient Forest Management Plans and Community Stewardship Plans prepared and adopted.	Signed agreements; PIU records	a) 0	15	40	Assumes legal framework supports community stewardship; requires sustained engagement from LPAs and Moldsilva
Project/programme co-benefit indicators						
Co-benefit 2 – Biodiversity conservation	Area (ha) of restored ecological connectivity corridors supporting habitat continuity	GIS monitoring reports	0	3,500 ha	7,000 ha	Native species prioritized
Co-benefit 1 – Improved interoperability of environmental and climate information systems	Number of national institutions exchanging data through interoperable project-supported digital platforms	Planning documents produced Institutional reports	0	2	4	Assumes that climate-informed planning tools, modelling outputs, and decision-support systems are operational, accessible, and formally integrated into institutional planning and restoration

						processes. Continued institutional commitment and staff capacity are maintained throughout project implementation.
Co-benefit 3 – Gender-responsive participation integrated	Share (%) of women participating in restoration planning, vocational training and livelihood	Participation records	0	30%	40%	Inclusive participation maintained Refers to active participation in planning and livelihood activities

E.6. Project/programme activities and deliverables

Activities/Outputs	Description	Sub-activities	Deliverables
Outcome 1: Improved institutional capacity for ecosystem-based adaptation and enhanced access to early warning systems and climate information services for farmers and communities			
Sub-Component 1.1: Institutional Strengthening, Implementation Capacity Building and Knowledge Platforms	Enhances institutional coordination, technical implementation capacity, and operational effectiveness of national and local actors responsible for ecosystem restoration and EbA interventions in Moldova. Establishes institutional, technical, and operational foundations for Component 2 investments, including climate-informed planning, inter-sectoral coordination, technical guidance systems, and implementation support mechanisms.	1. Capacity development for national and local institutions on ecosystem restoration techniques, climate-resilient forestry, silvopastoral systems, riparian buffer restoration, wetland rehabilitation, and adaptive management. The sub-component will place particular emphasis on strengthening Moldsilva territorial enterprises and LPAs as primary implementation entities responsible for on-the-ground execution and long-term stewardship of restored landscapes. The sub-component will also finance the overall capacity development of NOIEP, enabling it to become an effective and efficient environmental project implementation agency for the Republic of Moldova 2. Development of operational guidelines, intervention typology, technical standards, and implementation manuals for ecosystem restoration under climate-stressed conditions 3. Development of a climate-resilient landscape knowledge	- Capacity development plans and training completion records for national and local institutions including NOIEPI - Operational guidelines, technical standards, and implementation manuals for ecosystem restoration - Climate-resilient landscape knowledge platform (operational) - Knowledge products, communication materials

		platform integrating restoration prioritization outputs, modelling results, and implementation experience	
Sub-Component 1.2: Integrated Data Systems and Climate-Informed Ecosystem Planning for the Prut River Catchment and Southern Landscapes	Establishes a robust, integrated, and climate-informed decision-support system to guide ecosystem restoration and EbA planning across southern Moldova, with a focus on the Prut River basin, degraded forest-steppe zones, and climate-vulnerable agricultural production systems.	1. Develop integrated climate, hydro-ecological and ecosystem planning system: the focus will be placed on the Prut River Catchment of interconnected floodplain and adjacent production landscapes. The integrated hydrological and ecosystem planning systems coupled hydrological, hydraulic, sediment transport, and ecosystem models; assessment of climate-resilient development and restoration scenarios (ecosystem succession, hydrological shifts, floodplain dynamics, vegetation transitions, sedimentation); 2. Scenario-based climate modelling for drought risk, flood exposure, hydrological variability, and land degradation dynamics; 3. Conduct scenario-based climate and ecosystem modelling to assess drought risk, flood exposure, hydrological variability, habitat connectivity, ecosystem service provision, and land degradation dynamics, particularly in climate-vulnerable southern districts. The outputs will directly inform spatial prioritization of ecosystem restoration investments under the NFERP and related national programs; 4. Modernization of environmental monitoring and geospatial data infrastructure: including standardized systems for sharing and presenting data on hydrology, land use, vegetation cover, soil degradation, forest condition, and ecosystem health indicators. Accessing diverse datasets via data exchange protocols transforms resource management by replacing static maps with near-real-time, predictive monitoring of environmental changes and ecological threats in alignment with the EU Inspire Directive. This continuous data flow democratizes complex spatial statistics, allowing stakeholders across multiple institutions to dynamically quantify ecosystem services and make immediate, evidence-based conservation decisions.	- Integrated hydrological and ecosystem planning system (operational, calibrated) - Climate-resilient restoration scenario assessment report for the Prut River Catchment - Scenario-based climate modelling outputs (drought, flood, land degradation) for southern districts - Modern spatial decision-support tools

		5. Conduct Natural Capital Accounting through mapping and economic valuation of ecosystem services, including pollination, soil fertility, water regulation, and carbon sequestration, to strengthen climate-informed national and local planning.	
Sub-Component 1.3: Climate-Resilient Digitalization and Modernization of the Early Warning System	Strengthens climate resilience in Moldova by modernizing and enhancing early warning, climate information services and decision-support systems that build on the national hydrometeorological and early warning system to deliver timely, impact-based, and climate-informed alerts, with a focus on droughts, heatwaves, and other extreme weather events affecting ecosystem restoration, agriculture and vulnerable communities. Hosted by Meteorology and Environmental Monitoring Authority (MEMA) and linked with the National Crisis Management Center	1. Enhancing of integrated digital multi-hazard early warning platform with real-time integration of meteorological, hydrological, and climate data including climate projections and risk layers 2. Modernization of climate and hydrometeorological data systems through centralized cloud-based infrastructure, improved interoperability, and digitization of historical records. 3. Strengthening of multi-channel warning dissemination (SMS, mobile applications, media) with geo-targeted alerts for farmers and rural communities in southern Moldova 4. Development of digital climate services including local dashboards, farmer advisory tools, and last mile delivery	- Integrated digital multi-hazard early warning platform (operational), including automated monitoring network with priority coverage in southern districts and digital climate services and farmer advisory tools
Component/Outcome 2a: Increased hectares of natural resource areas brought under climate-resilient management practices **Outcome 2b. GHG emissions removed through landscape-scale ecosystem restoration**			
Sub-Component 2.1: Climate-Resilient Forest Restoration and Ecological Connectivity Enhancement (~8,500 ha)	Restores and enhances the resilience, structural diversity, and ecological functionality of forest ecosystems in southern Moldova through	1. Afforestation and ecological restoration of degraded communal lands, erosion-prone slopes, and fragmented forest-steppe zones, prioritizing ecological corridors and landscape connectivity. Assisted natural regeneration on	- Afforestation and reforestation works completed (ha by landscape type) - ANR and forest rehabilitation works completed (ha)

	integrated afforestation, reforestation, assisted natural regeneration (ANR), and forest rehabilitation, supported by strengthened forest reproductive material (FRM) systems.	forest-adjacent landscapes and natural regeneration areas, particularly near Codrii Tigheciului 2. Rehabilitation of degraded forest stands through selective silvicultural interventions. Restoration approaches will promote structurally diverse, mixed-species, climate-resilient forests based on site-specific ecological assessment and climate projections, improving soil moisture retention, groundwater recharge, biodiversity and drought resilience 3. Establishment of the Southern Regional Forest Reproductive Material Centre (RFRMC), including modernization and upgrade of nursery systems, improved local seed sourcing, provenance selection, and genetic diversity management	- Southern Regional RFRMC established and operational - Nursery modernization and seed sourcing systems in place
Sub-Component 2.2: Climate-Resilient Watershed and Floodplain Restoration - Prut River Catchment (~2,000ha)	Restores hydrological functionality, wetlands, sediment regulation, and water retention capacity across southern Moldova's river basins, with a focus on the Prut river system.	1.Establishment and rehabilitation of riparian buffer systems along rivers and tributaries to stabilize banks, reduce sediment and nutrient inflows, and improve water quality supported by the Integration of modelling outputs from Sub-Component 1.2 into adaptive floodplain management and restoration design; rehabilitation of wetlands and floodplains, enhancement of water storage, including hydrologically connected systems; Catchment-scale interventions, including using nature-based solutions, to reduce upstream erosion, sediment transport, and siltation affecting downstream ecosystems, improve water availability	- Riparian buffer systems established and rehabilitated (ha) - Wetland and floodplain rehabilitation works completed (ha) - Water retention capacity improved - Restoration design documentation supported by Sub-Component 1.2 modelling outputs - Hydrological and ecological condition monitoring records
Sub-Component 2.3: Climate-Resilient Agricultural Landscapes, Shelterbelts, and Silvopastoral Systems (~2,500 ha)	Reduces climate exposure and enhances resilience of agricultural and pasture systems through restoration and expansion of tree-based ecological infrastructure. Integrates trees into grazing systems to improve soil moisture, reduce erosion,	1. Restoration and establishment of shelterbelts in wind-exposed agricultural landscapes, including enrichment planting, structural restoration, and multi-species systems adapted to local ecological conditions and projected climate variability 2. Development of climate-resilient silvopastoral systems including in the Bugeac Steppe region, integrating trees into grazing systems	- Shelterbelt restoration and establishment works completed (ha) - Silvopastoral systems established (ha, including Bugeac Steppe)

	stabilize soils, and enhance pasture productivity.		
Component/Outcome 3: Community stewardship strengthened to sustain restoration outcomes and with access to improved climate-resilient livelihood options			
Sub-Component 3.1: Inclusive Community Engagement, Capacity Development, and Green Rural Livelihoods	Strengthen local ownership, governance capacity and long-term stewardship through participatory planning, climate-resilient forest and landscape management, community capacity development, and restoration-linked livelihood opportunities	1. Supporting participatory landscape planning and strengthening local governance systems through community-led mapping of degraded forests, grazing lands, wetlands, erosion hotspots, and biodiversity-sensitive areas and the preparation and implementation of climate-resilient Forest Management Plans (FMPs) and Community Stewardship Plans for targeted restoration landscapes supported under Component 2 2. Establishment and strengthening of stewardship structures in LPAs and incorporation of plans into local development plans and strategies to enhance sustainability beyond project completion. 3. Improving women's empowerment, and green livelihoods through a. Support for women-led restoration cooperatives and youth initiatives b. Vocational training in nursery management, restoration techniques, beekeeping, climate-smart agriculture, eco-tourism, and sustainable forestry practices c. Support ecosystems' rehabilitation through supporting activities including beekeeping, non-timber forest products, medicinal plants, agroforestry, and climate-resilient fodder production 4. Training and technical assistance on forest bylaws, wildfire prevention, sustainable grazing, ecosystem protection, participatory governance and enterprise development	- Participatory landscape planning processes completed in target communities - Stewardship structures established and operational in LPAs - Community members trained in sustainable ecosystem management and stewardship practices - Women-led and community-based green livelihood initiatives supported - Vocational training programs delivered in target communities

Sub-component 3.2: Ecosystem Financing Mechanisms and Community Based, Stewardship	Support development of longer-term ecosystem financing approaches and establish stewardship systems to strengthen adaptive management and sustainability of restored landscapes	1. Feasibility assessments of PES, biodiversity financing, and carbon finance mechanisms 2. Development of community-level stewardship and ecosystem monitoring systems through procurement and distribution of stewardship equipment and materials for LPAs, including tools for replanting and maintenance, monitoring equipment (GPS devices, field data collection tablets), and basic protective gear, allocated to registered groups against verified stewardship plans. 3. Trainings of community stewards in ecosystem monitoring protocols, restoration maintenance techniques, and use of simple data collection tools.	- Feasibility assessments and methodologies for ecosystem financing completed - Stewardship and ecosystem monitoring system established and operational
Component 4./Outcome 4. Adaptive project implementation and monitoring systems operational			
Project Management and Monitoring and Evaluation	Ensures efficient, compliant, and adaptive implementation of the project through strengthened institutional capacity, robust MEL systems, and effective knowledge management and communication. Finances the establishment and operation of the PIU within NOIEP at the Ministry of Environment, responsible for overall project coordination, fiduciary management, procurement, ESF compliance, and technical supervision.	1. Establishment and operation of the PIU within NOIEP, covering project coordination, fiduciary management, procurement, ESF compliance, and technical supervision 2. Coordination with national technical partners on restoration planning, modelling, and implementation sequencing 3. Procurement of consulting services, ICT solutions, and supervision activities for project delivery 4. Development and operation of an integrated MEL system tracking restoration investment progress, ecosystem condition indicators (erosion control, vegetation recovery, landscape connectivity), and climate resilience outcomes 5. Integration of environmental and social safeguards monitoring into the MEL system with feedback loops for real-time adjustments 6. Baseline data collection, periodic monitoring, and reporting for evidence-based decision-making and compliance with World Bank and climate finance reporting requirements	- PIU established and operational within NOIEP - Project coordination, fiduciary, and procurement records - ESF compliance documentation and safeguards monitoring reports - Integrated MEL system operational with results framework tracking - Ecosystem condition monitoring reports (erosion control, vegetation recovery, landscape connectivity) - Baseline data collection report - Periodic progress and results reports aligned with World Bank and climate finance requirements

E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

Monitoring, reporting and evaluation (M&E) arrangements for the project will be implemented in accordance with the World Bank's policies and procedures in a manner consistent with the GCF Integrated Results Management Framework (IRMF) as specified in the Funded Activity Agreement between the GCF and the World Bank as the Accredited Entity.

The Republic of Moldova Executing Entity), represented by the Ministry of Finance, and through a functional PIU structure through the Ministry of Environment, will be responsible for day-to-day monitoring of project implementation progress and results. Monitoring activities will be coordinated through the PIU and will follow procedures consistent with World Bank operational requirements.

Project monitoring will focus primarily on tracking progress toward restoration of ecological infrastructure across approximately 13,000 hectares of climate-sensitive production landscapes and on implementation of climate-informed restoration planning frameworks and decision-support systems. Monitoring will combine spatial tracking of restoration interventions with technical verification of implementation progress using field-based monitoring, geographic information system (GIS) tools, and remote sensing data where appropriate.

Progress toward achievement of project outcomes will be assessed using indicators defined in the approved Results Framework, including indicators related to restoration area coverage, strengthening of restoration planning systems, and development of modelling-based decision-support tools supporting adaptation planning in the Prut River Catchment.

The Executing Entity will prepare periodic implementation progress reports documenting technical progress, safeguards compliance, and financial performance. These reports will be submitted to the Accredited Entity in accordance with agreed reporting schedules and will form the basis for consolidated reporting to the GCF.

Environmental and social safeguards monitoring will be implemented in accordance with the World Bank ESF. Safeguards monitoring will include screening of restoration intervention areas, monitoring of implementation-related risks, and operation of grievance redress mechanisms consistent with project safeguards instruments.

Evaluation activities will include a mid-term review and a final independent evaluation to assess progress toward achievement of project objectives and outcomes. The mid-term review will support identification of implementation adjustments where necessary, while the final evaluation will assess effectiveness of restoration interventions and performance of climate-informed planning tools developed under the project.

Monitoring arrangements will also support documentation of mitigation results associated with restoration interventions through application of carbon accounting approaches. These assessments will contribute to tracking the contribution of restoration interventions to Moldova's long-term low-emission development pathway.

Together, these monitoring, reporting and evaluation arrangements ensure that implementation progress, safeguards performance, and results delivery are tracked systematically throughout the project lifecycle and that lessons learned from restoration interventions and modelling activities are captured to support scaling of EbA approaches beyond the project intervention areas.

D. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Selected Risk Factor 1: Impacts of climate change on forest growth and survival

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Increasing frequency of droughts, extreme temperatures, irregular rainfall patterns and episodic flood events pose risks to establishment success and early-stage survival of restoration interventions across climate-sensitive production landscapes in southern Moldova. These risks are particularly relevant for afforestation areas on degraded lands, shelterbelt restoration sites and riparian vegetation buffers, where soil moisture limitations and climatic variability may affect vegetation establishment during initial implementation phases. Without climate-informed restoration planning and deployment of site-adapted planting material, such conditions could reduce effectiveness of ecosystem-based adaptation measures supported under the project.

Mitigation Measure(s)

Mitigation measures are embedded in the project's climate-informed restoration design and implementation approach and include:

- application of restoration prioritisation frameworks integrating climate exposure patterns, ecological suitability criteria and land-degradation risk to guide selection of intervention sites;
- deployment of site-adapted planting material based on strengthened coordination of forest genetic resources and provenance suitability planning, supported by regional FRM supply systems including the Southern RFRMC;
- use of diversified species composition and ANR approaches where ecological conditions support natural recovery processes, reducing dependence on plantation establishment in climate-sensitive locations;
- integration of shelterbelt restoration and silvopastoral planning instruments improving microclimatic stability and reducing wind erosion across exposed agricultural landscapes;
- adaptive implementation sequencing aligned with seasonal establishment windows and site-specific ecological conditions;
- application of modelling-based decision-support tools in the Prut River Catchment landscape supporting identification of restoration pathways consistent with hydrological variability and conservation objectives.

Selected Risk Factor 2: Insufficient institutional capacity for sustainable ecosystems management

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Institutions responsible for forest management, agricultural land management and water-resource planning face capacity constraints affecting coordination and implementation of climate-informed restoration interventions at landscape scale. While agencies such as Moldsilva, SFEs/ICAS and LPAs play key roles in restoration implementation under the NFERP framework, technical capacity for applying restoration prioritization tools, coordinating deployment of climate-adapted FRM and integrating EbA approaches into spatial planning processes remains uneven across districts. These constraints could affect the pace and consistency of implementation during early project stages.

Mitigation Measure(s)

Mitigation measures are embedded in the project's institutional strengthening and restoration planning support functions and include:

- development and operationalisation of climate-informed restoration prioritisation frameworks supporting coordinated targeting of interventions across implementing institutions;
- strengthening coordination between forest genetic-resource management functions, technical institutions and regional FRM supply systems, including support to establishment of the Southern RFRMC;
- preparation of silvopastoral planning instruments supporting integration of tree-based protection structures into agricultural land-use systems at local level;
- strengthening technical capacity of national agencies and LPAs to apply restoration planning tools and implement EbA interventions under the NFERP framework;

- development of modelling-based decision-support tools for the Prut River Catchment floodplain landscape supporting coordinated adaptation planning in hydrologically sensitive areas;
- integration of stakeholder engagement processes supporting participation of local institutions and land users in restoration planning and implementation.

Selected Risk Factor 3: Local stakeholders are not sufficiently organised, engaged and interested in participating in the project

Category	Probability	Impact
Technical and operational	Low	Medium

Description

Participation of local stakeholders in restoration planning and implementation may vary across districts due to differences in awareness of EbA benefits, competing land-use priorities and limited prior experience with climate-informed restoration approaches. Insufficient engagement of LPAs, land users and local institutions could affect implementation readiness during early project stages.

Mitigation Measure(s)

Mitigation measures include:

- Assessment of NOIEP capacity to carry out long-term project activities
- integration of stakeholder consultations into restoration prioritisation processes at district and community levels;
- continued application of structured stakeholder engagement mechanisms through the project SEP;
- preparation of silvopastoral planning instruments supporting participation of pasture users in restoration design;
- involvement of LPAs in identification of restoration sites on communal lands;
- strengthening cooperation with civil society organizations supporting outreach and participation across target districts;
- integration of locally relevant knowledge into restoration planning to strengthen ownership and long-term sustainability.

Selected Risk Factor 4: Risk of maladaptation due to inappropriate species selection or planting material deployment

Category	Probability	Impact
Technical and operational	Medium	SelectMedium

Description

Risk related to inappropriate species selection, insufficient provenance matching and limited availability of climate-adapted FRM could affect establishment success of afforestation, ANR support measures and shelterbelt restoration interventions. Increasing drought frequency and soil-moisture variability in southern Moldova may further affect early vegetation establishment if restoration interventions are not aligned with climate-informed site-selection frameworks.

Mitigation Measure(s)

Mitigation measures include:

- application of restoration prioritization frameworks integrating ecological suitability and climate-risk exposure;
- strengthening coordination of forest genetic resources and provenance suitability planning;
- deployment of climate-adapted planting material through regional FRM supply systems including the Southern RFRMC;
- integration of ANR approaches where ecological conditions support natural recovery processes;
- environmental screening of restoration sites prior to implementation;
- adaptive implementation sequencing aligned with seasonal establishment windows.

Selected Risk Factor 5: Coordination challenges between multiple implementing partners

Category	Probability	Impact
Governance	Medium	Low

Description

Implementation involves multiple national institutions responsible for forest management, agricultural land use and water-resources planning across several districts of the SDR. Differences in institutional mandates, planning procedures and technical approaches could affect coordination efficiency during early implementation stages.

Mitigation Measure(s)
Mitigation measures include: • strategic oversight through the Project Steering Committee (chaired by the MoE); • technical coordination between implementing agencies supported through structured planning processes; • regular coordination meetings facilitated by the PIU; • joint field verification of restoration priority areas; • integration of restoration prioritization tools supporting alignment across sectoral planning processes.

Selected Risk Factor 6: Regulatory updates affecting implementation of EbA measures		
Category	**Probability**	**Impact**
Legal	Medium	Low
Description		
Moldova's forest and land-use and environmental policy frameworks continue to evolve, including implementation of the revised Forest Code and alignment with EU-compatible regulatory standards. Changes affecting land designation procedures, restoration implementation arrangements or forest reproductive material regulations could influence implementation modalities during the project period.		
Mitigation Measure(s)		
Mitigation measures include: • continuous coordination with the MoE and relevant regulatory institutions; • alignment of restoration interventions with implementation mechanisms under the NFERP; • integration of adaptive implementation planning allowing adjustment to regulatory updates; • support to institutional coordination on FRM system strengthening consistent with national regulatory developments.		

Selected Risk Factor 7: Risk of continuity due to political instability		
Category	**Probability**	**Impact**
Governance	High	Medium
Description		
Changes in the institutional environment, including political turnover or shifting sectoral priorities, could affect continuity of restoration planning and implementation processes. These risks may influence coordination across national and local institutions responsible for EbA implementation.		
Mitigation Measure(s)		
Mitigation measures include: • continued engagement of the World Bank as Accredited Entity supporting implementation oversight; • alignment of project interventions with national restoration priorities under the NFERP; • coordination with national and local authorities through the Project Steering Committee; • cooperation with civil society and development partners supporting continuity of restoration activities.		

Selected Risk Factor 8: Combat action near Moldova's borders		
Category	**Probability**	**Impact**
Other	Medium	Medium
Description		
Regional security developments related to the Russia's invasion of Ukraine may affect environmental conditions in transboundary river basins connected to project landscapes and could influence implementation logistics in southern Moldova		
Mitigation Measure(s)		
Mitigation measures include: • monitoring of regional environmental risks affecting project landscapes; • adaptive implementation planning allowing adjustment of activity sequencing if required; • coordination with national authorities responsible for environmental monitoring; • integration of EbA supporting resilience of affected landscapes.		

Selected Risk Factor 9: Risk of financing delay		
Category	Probability	Impact
Governance	Medium	Medium
Description		
Delays in mobilization of parallel co-financing or national in-kind contributions could affect restoration activities beyond optimal seasonal planting establishment windows. Broader economic pressures, including inflation and fiscal constraints, may further affect implementation schedules and costs.		
Mitigation Measure(s)		
Mitigation measures include: • phased implementation sequencing aligned with restoration prioritization frameworks; • integration of restoration planning activities during early implementation stages; • coordination with national institutions supporting mobilization of complementary investments under the NFERP; • adaptive planning of field interventions to maintain alignment with seasonal implementation windows. Coordination mechanisms with parallel financing initiatives, including the REMAP project, will ensure clear geographic targeting and separation of financed outputs to avoid duplication of restoration investments and results attribution.		

Selected Risk Factor 10: Fiduciary and integrity risks affecting project		
Category	Probability	Impact
Governance	Medium	Medium
Description		
The project will involve different organizations to implement the project, procurement of goods and services, small construction works. Weaknesses in fiduciary controls, procurement processes, financial management arrangements or institutional capacity could increase the risk of fraud, corruption, conflict of interest or other prohibited practices potentially affecting efficient use of project resources and timely implementation		
Mitigation measures. • Apply the World Bank's Procurement Regulations, Financial Management requirements, and Anti-Corruption Guidelines throughout project implementation. • Maintain qualified financial management and procurement specialists within the Project Implementation Unit (PIU). • Implement robust internal controls, including segregation of duties, documented approval procedures, and regular reconciliation of financial records. • Ensure transparent procurement processes, including appropriate market competition, disclosure requirements, contract awards, and contract management procedures, as applicable. • Ensure that all procurement activities are duly recorded, updated, and monitored through the World Bank's Systematic Tracking and Exchanges in Procurement, to be used for the Prior Review submission and Post review missions. • Conduct regular financial management and procurement supervision missions, with fiduciary risk ratings reviewed and updated periodically. • Maintain complete supporting documentation, fixed asset registers, and undertake periodic inventory verification. • Submit timely financial reports and ensure annual external audits in accordance with World Bank requirements. • Provide fiduciary and procurement training to implementing agencies and relevant project staff, as needed. • Establish and implement procedures for identification, declaration, and management of conflict of interest by all personnel involved in procurement, contract management and financial decision-making. • Establish accessible grievance and complaints mechanisms, including channels for reporting allegations of fraud, corruption, or misconduct.		

- Promptly investigate suspected cases of fraud or corruption and implement corrective measures in accordance with World Bank integrity procedures and applicable legal requirements.

Review implementation performance regularly and strengthen mitigation measures where fiduciary risks or capacity gaps are identified.

Selected Risk Factor 10a: 10a: Money Laundering / Terrorist Financing (ML/TF)

Category	Probability	Impact
Governance	Low	Low

In accordance with Section 9.03 of the AMA, the World Bank applies its own institutional AML/CFT policies and procedures to this project.

At the corporate level, the World Bank's systems automatically screen all counterparties upon registration and all payments before execution, covering major international sanctions lists (UN, OFAC, EU, UK) and internal WBG debarment and risk lists. Any alert is escalated for resolution before a transaction proceeds.

This institutional screening covers counterparties that the World Bank directly transacts with — including the Designated Account bank and any direct payment recipients. For downstream payments executed by the PIU from the Treasury operating account, oversight is provided through the World Bank's fiduciary supervision framework, including regular supervision missions, financial reporting, and external audit. The World Bank's AML/CFT controls are applied in accordance with the Bank's own policies and procedures.

Selected Risk Factor 10b: Other Prohibited Practices (Bribery, Corruption, Collusion, Fraud)

Category	Probability	Impact
Governance	Medium	Medium

Mitigation Measures

- Apply the World Bank's Procurement Regulations, Financial Management requirements, and Anti-Corruption Guidelines throughout project implementation.
- Maintain qualified financial management and procurement specialists within the Project Implementation Unit (PIU).
- Implement robust internal controls, including segregation of duties, documented approval procedures, and regular reconciliation of financial records.
- Ensure transparent procurement processes, including appropriate market competition, disclosure requirements, contract award publication, and contract management procedures.
- Ensure that all procurement activities are duly recorded, updated, and monitored through the World Bank's Systematic Tracking and Exchanges in Procurement (STEP), used for Prior Review submissions and Post Review missions.
- Conduct regular financial management and procurement supervision missions, with fiduciary risk ratings reviewed and updated periodically.
- Maintain complete supporting documentation, fixed asset registers, and undertake periodic inventory verification.
- Submit timely financial reports and ensure annual external audits in accordance with World Bank requirements.
- Provide fiduciary and procurement training to implementing agencies and relevant project staff, as needed.
- Establish accessible grievance and complaints mechanisms, including confidential channels for reporting allegations of fraud, corruption, or misconduct, accessible to all project participants and beneficiaries.
- Promptly investigate suspected cases of fraud or corruption and implement corrective measures in accordance with World Bank integrity procedures and applicable legal requirements.
- Review implementation performance regularly and strengthen mitigation measures where fiduciary risks or capacity gaps are identified.

Sub-Risk 10c: Sanctions

Category	Probability	Impact
Governance	Low	High
Mitigation Measures ● All procurement packages include the World Bank's fraud and corruption, audit, inspection, sanctions, and record-retention provisions in accordance with World Bank Procurement Regulations. ● All firms and individuals engaged under the project are subject to World Bank sanctions screening prior to contract award. No debarred or ineligible firms or individuals are eligible to participate in the project, and eligibility checks extend to affiliates of debarred firms where applicable. ● All procurement actions are recorded and monitored through STEP, which supports sanctions compliance and prior and post review. ● Any sanctions alerts are escalated through the World Bank's institutional clearance process before further action is taken.		
Sub-Risk 10d: Conflict of Interest		
Category	Probability	Impact
Governance	Medium	High
Mitigation Measures ● Establish and implement procedures for the identification, declaration, and management of conflict of interest applicable to all personnel involved in procurement, contract management, and financial decision-making, in accordance with World Bank institutional policies. ● All relevant project staff and PIU members are required to complete conflict of interest declarations prior to taking up their roles and to update these declarations upon any change in circumstances. ● Identified conflicts of interest are documented and managed through mandatory recusal from relevant decision-making processes, with records retained throughout the project. ● Fiduciary supervision missions will include review of COI declaration procedures and compliance as part of regular oversight activities.		

E. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

Risk category and rationale

The project is screened as GCF Category B, with a Substantial Environmental and Social Risk Rating under the World Bank's ESF. The project's Environmental Risk is rated Substantial due to the large scale and cumulative nature of proposed ecosystem restoration activities, combined with uncertainty over final site selection and ecological sensitivities. Interventions such as afforestation, forest rehabilitation, shelterbelts, and riparian restoration may affect soils, hydrology, biodiversity, and habitat connectivity, particularly in sensitive areas like the Prut River Catchment basin. Risks are further increased by the potential presence of high-value biodiversity areas and the possibility of inappropriate species selection or restoration design under ESS6.

The Social Risk is rated Substantial due to land-based interventions that may affect vulnerable rural communities dependent on land and natural resources, combined with uncertainty around land use arrangements at Concept stage. Activities such as afforestation, shelterbelts, and riparian restoration may temporarily restrict access to land and grazing areas, potentially impacting smallholder farmers and poorer households. Risks are heightened by limited adaptive capacity in southern Moldova and possible stakeholder concerns over site selection and benefit distribution. Additional risks relate to weak stakeholder engagement capacity and uncertainty regarding land tenure and access restrictions, which will be addressed through screening measures and a Process Framework under the ESMF.

Environmental and Social instruments

Environmental risks are largely reversible and manageable but require a framework-level approach through preparation and implementation of an Environmental and Social Management Framework (ESMF) which includes a Process Framework consistent with the environmental and social framework (ESF) of the World Bank. The project's Social Risk is also assessed as Substantial due to land-based interventions affecting vulnerable, nature-dependent rural populations. Project interventions may result in temporary or localized restrictions on access to shared land or natural resources, triggering ESS5 considerations to be managed through a Process Framework. Social risk is further influenced by the cumulative effects of landscape-level interventions, the high vulnerability of target populations to climate shocks, and the need for sustained and inclusive stakeholder engagement in areas with regional sensitivities. Project has prepared ESMF including Process Framework, consistent with ESS5, to manage risks related to restrictions on land use and access to natural resources. The Process Framework defines procedures for identifying affected users, establishing participatory decision-making processes, mitigating livelihood impacts associated with access restrictions, and providing accessible grievance redress. In addition, Stakeholder Engagement Plan, Labor Management Procedures, and draft Environmental and Social Commitment Plan were prepared. Project Implementing Agency-NOIEP has limited prior experience in implementing World Bank–financed projects under ESF and is currently undergoing management changes and institutional restructuring to strengthen its implementation capacity.

Executing Entity (EE), due diligence, oversight & capacity

There is no financial intermediation under the project. Republic of Moldova, represented by the Ministry of Finance, acting through the Ministry of Environment, is the Executing Entity (EE). Project implementation will be carried out under the technical oversight of the Ministry of Environment (MoE) through a Project Implementation Unit (PIU) established within and building on existing institutional arrangements currently used for donor-financed environmental projects.

The World Bank, as the Accredited Entity (AE) to the GCF, will provide implementation support and oversight in accordance with its ESF, including review and supervision of environmental and social risk management instruments such as the ESMF and site-specific ESMPs, and consolidation of safeguards monitoring and reporting to the GCF.

Relevant national and local authorities will support permitting, technical validation, stakeholder engagement, and field-level supervision. Contractors will be required to implement ESMP measures, comply with Labor Management Procedures (LMP) and SEAH risk mitigation requirements, and report regularly on safeguards compliance. Targeted capacity strengthening will support effective implementation of environmental and social requirements through the PIU safeguards function.

Grievance Redress Mechanism (GRM)

A multi-tier Grievance Redress Mechanism (GRM) has been established in accordance with ESS10 to provide accessible, transparent, confidential, and non-retaliatory channels for project-affected parties to raise concerns and seek resolution of grievances related to project activities. The GRM operates through community, project/PIU, and

Ministry of Environment levels and accepts verbal, written, anonymous, online, telephone, SMS, and suggestion-box submissions in Romanian, Russian, and Gagauz where feasible. Grievances will be acknowledged within 2 working days and resolved within 30 working days, with escalation options available through the World Bank GRS. A separate confidential SEA/SH pathway managed by a designated GBV Focal Point will apply survivor-centered procedures and referral mechanisms consistent with World Bank Good Practice Note requirements.

Consultations, continued engagement & disclosure

Stakeholder engagement was conducted during ESMF preparation (online interviews with MoE/local authorities; CSO/community consultations; field visits; youth/farmer feedback). Engagement will continue through site screening, ESMPs, construction oversight, GRM, and community-based monitoring, with documented logs submitted semi-annually. The Executing Entity will ensure in-country disclosure of the ESMF and site-specific ESMPs in accordance with World Bank requirements, while the World Bank, as the Accredited Entity, will disclose the relevant environmental and social instruments through its applicable external disclosure procedures; the existence of the GRM will be disclosed widely in local languages and via participatory meetings and local communication channels. All environmental and social instruments will be disclosed in advance of the Accredited Entity's appraisal decision. Following received feedback, revised and final documents will be disclosed and publicly available.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

A comprehensive Gender Assessment and project-level Gender Action Plan (GAP) have been developed in accordance with the World Bank ESF and aligned with the GCF Gender Policy (2023), with the objective of ensuring gender-responsive, inclusive, and equitable implementation of ecosystem-based adaptation (EbA) interventions under the project. The assessment applied a mixed-methods approach combining literature review, policy analysis, sex-disaggregated data analysis, stakeholder consultations, and local workshops conducted in target districts including Cimislia, Basarabeasca, Cahul, Leova, Cantemir, and Gagauzia. The GAP operationalizes assessment findings through targeted activities, participation measures, monitoring indicators, institutional responsibilities, and budget allocations integrated across all project components.

The assessment identifies rural women, elderly women, women-headed households, Roma women, women with disabilities, and women engaged in informal agricultural livelihoods as among the most climate-vulnerable population groups in southern Moldova. Women constitute approximately 51% of rural residents in the project area, while female-headed households account for more than 25% of households nationally and face significantly higher poverty rates. Rural women experience higher poverty rates (15.6% compared to 4.8% for urban women), lower access to formal credit services (15% compared to 25% for men), and lower levels of internet access and digital connectivity. Women manage only approximately 20% of agricultural land holdings and remain underrepresented in local governance and technical sectors related to forestry and climate adaptation.

Gender-differentiated vulnerabilities are linked to disproportionate dependence on climate-sensitive livelihoods, limited access to land ownership, financial services, agricultural extension, climate information, and decision-making processes, as well as high levels of unpaid care work and persistent gender norms. These vulnerabilities are further exacerbated by high rates of male out-migration, which have left many women as de facto heads of households responsible for agricultural production, household resource management, and caregiving responsibilities. Women in rural areas spend almost twice as much time on unpaid domestic and care work compared to men, limiting participation in training, public consultations, and climate adaptation activities. Additional intersectional vulnerabilities affect Roma women, elderly women, and women with disabilities who face compounded barriers related to discrimination, mobility limitations, poverty, and reduced access to institutional services.

The assessment also identifies important adaptive capacities and opportunities for strengthening women's participation in ecosystem restoration and climate resilience planning. Women in target districts already play significant roles in local governance, community organization, biodiversity conservation, non-timber forest product management, and informal natural resource stewardship. Consultations confirmed that women possess extensive Traditional Ecological Knowledge (TEK) related to seasonal water availability, pasture conditions, medicinal plants, biodiversity changes, and local ecosystem degradation trends that can support more sustainable and locally embedded adaptation planning processes.

The GAP integrates gender-responsive measures across all project components, including gender-responsive consultation processes, flexible participation arrangements, targeted outreach to vulnerable women, vocational training, support for women's participation in restoration planning and stewardship activities, gender-sensitive monitoring systems, and gender-responsive communication approaches. Specific measures include integration of sex-disaggregated indicators into MEL systems, mandatory gender and SEA/SH training for project staff and implementing

partners, establishment of confidential SEA/SH reporting and referral mechanisms, and designation of a Gender Specialist/Focal Point within the PIU responsible for implementation support, monitoring, reporting, and coordination with implementing partners.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

The Fiduciary risk is assessed as Moderate. This is because the World Bank has working knowledge about the current capacities of the National Office for Environmental Implementation Programs (NOIEP) and their capability to undertake fiduciary role for the WB financed project. Under the ongoing GEF-financed operation (REMAP) under which a formal capacity assessment was conducted, NOIEP took the required mitigation measures, including recruiting professional staff with relevant Wolrd Bank experience operating through risk-based procurement oversight through prior and post reviews using the World Bank's STEP systems. For Green Shield, the World Bank will build on this framework and lessons from REMAP to calibrate the procurement support arrangements required, with specifics to be confirmed during project preparation. This risk might be revised following a comprehensive assessment of NOIEP's systems and institutional capacities during the project preparation stage to determine whether FM and procurement arrangements provide reasonable assurance that project funds will be used for the intended purposes of the project. Any related mitigation measures will be proposed at that time. Procurement under the proposed operation will be carried out in accordance with applicable World Bank Procurement Regulations for IPF Borrowers with due attention to the principles of economy, efficiency, fairness, transparency, and integrity. Appropriate mitigation measures, including capacity building, implementation support, and strengthened oversight and reporting arrangements, will be incorporated as needed during project design and implementation.

Financial management and procurement arrangements for the project will be implemented in accordance with the fiduciary standards and operational procedures applicable to projects implemented by the World Bank as an Accredited Entity of the GCF.

The World Bank, acting as the Accredited Entity (AE), will enter into a Funded Activity Agreement with the GCF and will exercise its responsibilities through fiduciary oversight, implementation support, and results monitoring in accordance with its policies and procedures, consistent with the provisions of that agreement. The Accredited Entity will not be responsible for implementation of project activities, which will remain under the responsibility of the Republic of Moldova, acting as the Executing Entity (EE) through the Ministry of Environment, including its PIU.GCF resources will be transferred from the Accredited Entity to the Executing Entity under a Subsidiary Agreement to be concluded between the World Bank and the Republic of Moldova, represented by the Ministry of Finance. The Executing Entity will be responsible for managing financial resources, maintaining project accounts, preparing financial reports, contracting the project auditor and implementing procurement processes in accordance with agreed procedures and applicable World Bank requirements.

Financial management arrangements will follow World Bank policies and procedures applicable to investment project financing operations implemented through national executing entities. These arrangements include budgeting, accounting, internal controls, funds flow management, financial reporting, and external audit requirements consistent with internationally accepted standards. The PIU established within the MoE will support preparation of annual work plans and budgets, maintenance of accounting records, preparation of interim financial reports, and coordination of independent annual external audits in accordance with agreed arrangements.

Procurement under the project will be carried out in accordance with the World Bank Procurement Regulations for Investment Project Financing Borrowers and associated guidance applicable at the time of implementation. Procurement activities will support implementation of restoration interventions across approximately 13,000 hectares of climate-sensitive production landscapes and development of technical decision-support systems supporting climate-informed adaptation planning.

The Accredited Entity will provide fiduciary oversight and prior review of selected procurement processes in accordance with World Bank procedures. Procurement planning will be guided by approved annual work plans and budgets and will follow procedures designed to ensure transparency, efficiency in the use of GCF resources.

Financial management and procurement arrangements will also support implementation of environmental and social risk management requirements consistent with the World Bank's ESF. These arrangements ensure that fiduciary responsibilities are clearly defined and that implementation risks are managed effectively throughout the project lifecycle.

Through application of established World Bank fiduciary procedures and implementation through a national executing entity operating under the mandate of the Ministry of Environment, the project provides a robust framework for transparent and effective management of GCF resources.

G.4. Disclosure of funding proposal

☐ No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

☒ With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

F. ANNEXES

H.1. Mandatory annexes

☒	Annex 1	NDA no-objection letter(s) **(template provided)**
☒	Annex 2	Feasibility study - and a market study, if applicable
☒	Annex 3	Economic and/or financial analyses in spreadsheet format
☒	Annex 4	Detailed budget plan **(template provided)**
☒	Annex 5	Implementation timetable including key project/programme milestones **(template provided)**
☒	Annex 6	E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3): **(ESS disclosure form provided)** ☐ Environmental and Social Impact Assessment (ESIA) or ☐ Environmental and Social Management Plan (ESMP) or ☐ Environmental and Social Management System (ESMS) ☐ Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People's Plan, Land Acquisition Plan, etc.)
☒	Annex 7	Summary of consultations and stakeholder engagement plan
☒	Annex 8	Gender assessment and project/programme-level action plan **(template provided)**
☒	Annex 9	Legal due diligence (regulation, taxation and insurance)
☒	Annex 10	Procurement plan **(template provided)**
☒	Annex 11	Monitoring and evaluation plan **(template provided)**
☒	Annex 12	AE fee request **(template provided)**
☒	Annex 13	Co-financing commitment letter, if applicable **(template provided)**
☒	Annex 14	Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

☐	Annex 15	Evidence of internal approval **(template provided)**
☒	Annex 16	Map(s) indicating the location of proposed interventions
☐	Annex 17	Multi-country project/programme information **(template provided)**
☐	Annex 18	Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
☐	Annex 19	Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
☐	Annex 20	First level AML/CFT (KYC) assessment
☐	Annex 21	Operations manual (Operations and maintenance)
☒	Annex 22	Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)[7]
☐	Annex X	Other references

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

[7] Annex 22 is mandatory for mitigation and cross-cutting projects.