



**GREEN  
CLIMATE  
FUND**

**Meeting of the Board**

26 – 29 October 2026

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Provisional agenda item 10

**GCF/B.46/02/Add.14**

**5 October 2026**

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# Consideration of funding proposals – Addendum XIV

## Funding proposal package for FP321

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### **Summary**

This addendum contains the following seven parts:

- a) A funding proposal titled "Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation";
- b) No-objection letter issued by the national designated authority(ies) or focal point(s);
- c) Environmental and social report(s) disclosure;
- d) Secretariat's assessment;
- e) Independent Technical Advisory Panel's assessment;
- f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
- g) Gender documentation.

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**Disclaimer:**

*The designations and the presentation of the materials used in this document, including their respective citations, maps and references, have been included by the relevant Accredited Entity and do not imply the expression of any opinion whatsoever on the part of the Green Climate Fund concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Also, the boundaries and names shown, and the designations used in this document have been included by the relevant Accredited Entity and do not imply official endorsement or acceptance by the Green Climate Fund.*

*The documents are presented as submitted by the Accredited Entity.*

# Funding Proposal

|                            |                                                                               |
|----------------------------|-------------------------------------------------------------------------------|
| Project/Programme title:   | Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation |
| Country(ies):              | Republic of Moldova                                                           |
| Accredited Entity:         | World Bank                                                                    |
| Date of first submission:  | <u>[YYYY/MM/DD]</u>                                                           |
| Date of current submission | <u>[2026/09/30]</u>                                                           |
| Version number             | V.6 – September 30, 2026                                                      |



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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](mailto: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)                                                                                                 | <p>Check the applicable <a href="#">GCF result area(s)</a> that the overall proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of <b>GCF and Co-financers' contribution</b> devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.</p> |                                                                                                       |                                                                                                                                    |                                                                                                                                             |
|                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                       | GCF contribution                                                                                      | Co-financers' contribution <sup>1</sup>                                                                                            |                                                                                                                                             |
|                                                                                                                     | Mitigation total                                                                                                                                                                                                                                                                                                                                                      | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
|                                                                                                                     | <input type="checkbox"/> Energy generation and access                                                                                                                                                                                                                                                                                                                 | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
|                                                                                                                     | <input type="checkbox"/> Low-emission transport                                                                                                                                                                                                                                                                                                                       | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
|                                                                                                                     | <input type="checkbox"/> Buildings, cities, industries and appliances                                                                                                                                                                                                                                                                                                 | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
|                                                                                                                     | <input checked="" type="checkbox"/> Forestry and land use                                                                                                                                                                                                                                                                                                             | 50%                                                                                                   | 50 %                                                                                                                               |                                                                                                                                             |
|                                                                                                                     | Adaptation total                                                                                                                                                                                                                                                                                                                                                      | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
|                                                                                                                     | <input checked="" type="checkbox"/> Most vulnerable people and communities                                                                                                                                                                                                                                                                                            | Enter number 27%                                                                                      | 27 %                                                                                                                               |                                                                                                                                             |
|                                                                                                                     | <input type="checkbox"/> Health and well-being, and food and water security                                                                                                                                                                                                                                                                                           | Enter number                                                                                          | Enter number                                                                                                                       |                                                                                                                                             |
|                                                                                                                     | <input type="checkbox"/> Infrastructure and built environment                                                                                                                                                                                                                                                                                                         | Enter number %                                                                                        | Enter number %                                                                                                                     |                                                                                                                                             |
| <input checked="" type="checkbox"/> Ecosystems and ecosystem services                                               | Enter number 23%                                                                                                                                                                                                                                                                                                                                                      | 23%                                                                                                   |                                                                                                                                    |                                                                                                                                             |
| A.5. Expected mitigation outcome<br><br>(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered) | 3.95 million tCO <sub>2</sub> e GHG removal in 20 years lifetime of mitigation activities (i.e., 197 654 tCO <sub>2</sub> e per year)                                                                                                                                                                                                                                 | A.6. Expected adaptation outcome<br><br>(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%)<br>% of total population: 7% | Indirect beneficiaries: 155,000 persons -80,600 women (52%) % of total population: 36.2%<br>-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 <sup>2</sup> )                                                               | 49,280,000 USD                                                                                                                                                                                                                                                                                                                                                        | A.9. Project size                                                                                     | Small (Upto USD 50 million)                                                                                                        |                                                                                                                                             |
| A.8. Total GCF funding requested                                                                                    | 39,280,000 USD                                                                                                                                                                                                                                                                                                                                                        |                                                                                                       |                                                                                                                                    |                                                                                                                                             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                         |                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>A.10. Financial instrument(s) requested for the GCF funding</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><i>Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.</i></p> <div> <input checked="" type="checkbox"/> Grant <u>39,280,000 USD</u> <input type="checkbox"/> Equity <u>Enter number</u> </div> <div> <input type="checkbox"/> Loan <u>Enter number</u> <input type="checkbox"/> Results-based payment <u>Enter number</u> </div> <div> <input type="checkbox"/> Guarantee <u>Enter number</u> </div> |                                                                         |                                                                     |
| <b>A.11. Implementation period</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <u>5 years</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>A.12. Total lifespan</b>                                             | <u>20 years</u>                                                     |
| <b>A.13. Expected date of AE internal approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><i>This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/ programme, if available.</i></p> <p><u>30/10/2026</u><br/><i>Click or tap to enter a date.</i></p>                                                                                                                                                                                                                                            |                                                                         |                                                                     |
| <b>A.15. Has this FP been submitted as a CN before?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                             | <b>A.16. Has Readiness or PPF support been used to prepare this FP?</b> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| <b>A.17. Is this FP included in the entity work programme?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                             | <b>A.18. Is this FP included in the country programme?</b>              | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| <b>A.19. Complementarity and coherence</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                             |                                                                         |                                                                     |
| <b>A.20. Executing Entity information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Executing Entity (EE):</b> is the Republic of Moldova, represented by the Ministry of Finance, acting through the Ministry of Environment.</p>                                                                                                                                                                                                                                                                                                            |                                                                         |                                                                     |
| <b>A.21. Executive summary (max. 750 words, approximately 1.5 pages)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                         |                                                                     |
| <p>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,</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                         |                                                                     |

<sup>1</sup> 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.

<sup>2</sup> 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<sub>2</sub>e 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.

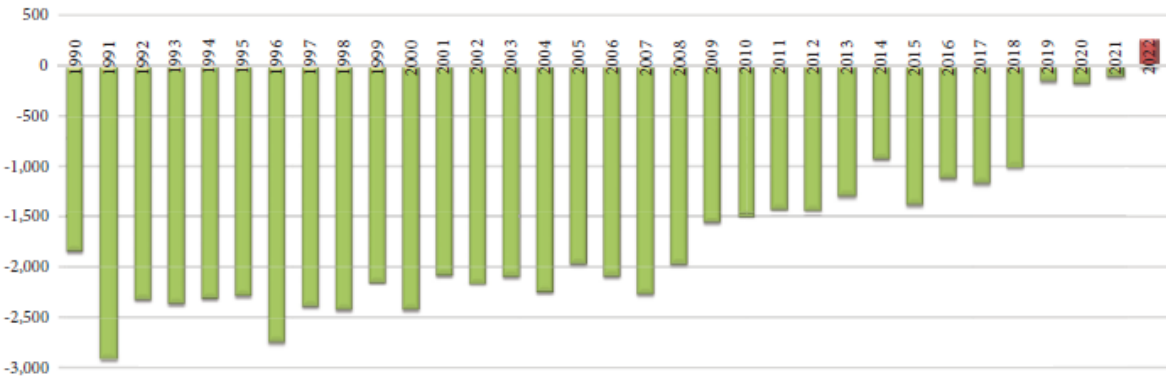
B.1. Climate context (max. 1000 words, approximately 2 pages)



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



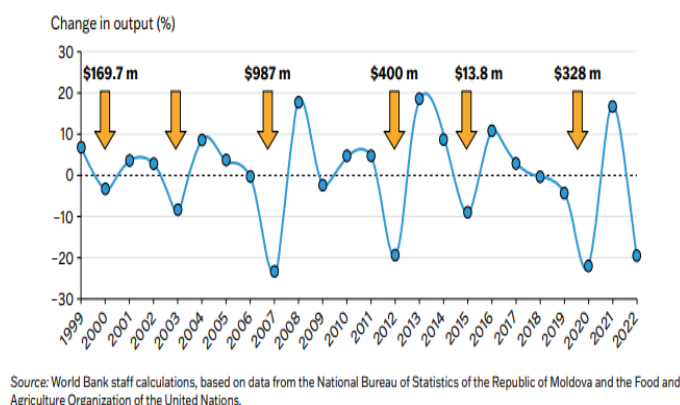
Source: Moldova’s National Inventory Report 1990-2022

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.

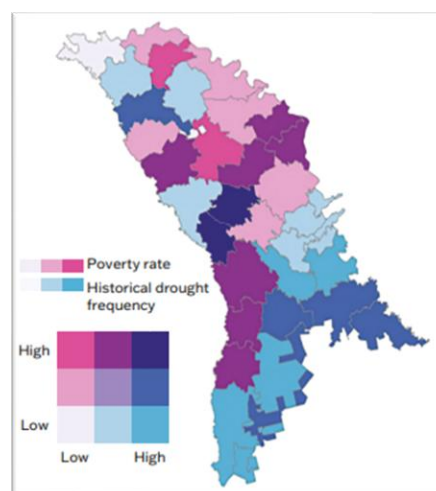
The increased occurrence of droughts and floods is having an increasingly large impact, in particular on agricultural output and incomes of small farmers and poor communities whose livelihoods are directly dependent on climate-sensitive natural resources. NCCAP 2030 is expecting that agricultural productivity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



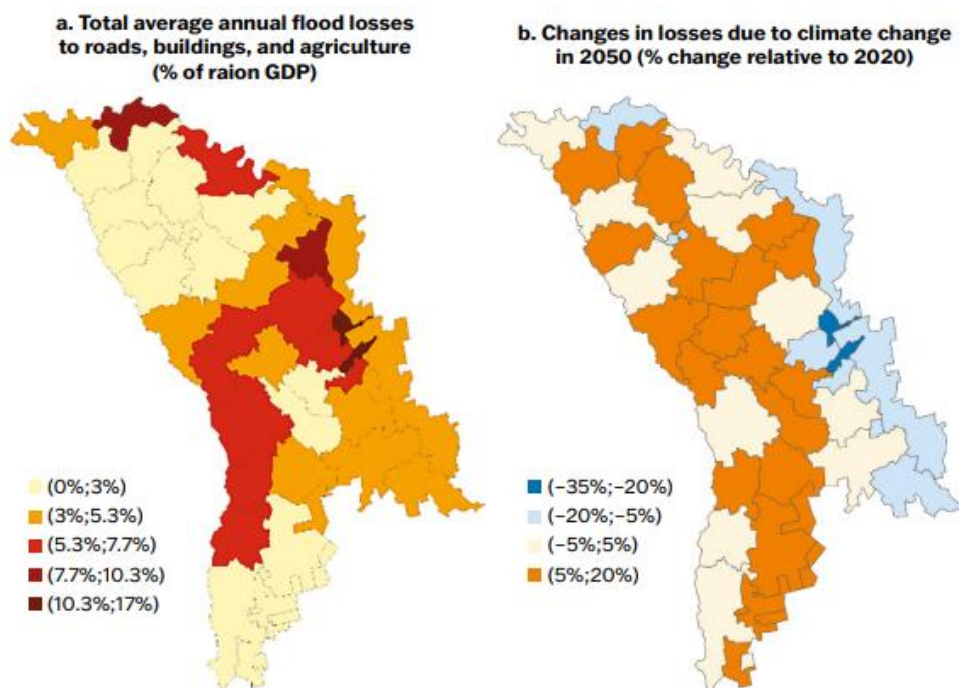
**Figure 3: Poverty rate and historical drought frequency, by raion**



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 km<sup>2</sup> 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                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Increase in frequency and intensity of droughts and water stress</b></p> <p>.</p> | <p>Agriculture relies heavily on rainfall due to limited irrigation coverage. Drought and soil moisture deficits lead to decreased agricultural output.</p> | <p>Decline in the value of output for individual farmers decreases income. Increased reliance on buying food in combination with upward pressure on food price exacerbates poverty in rural areas</p> |

**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.

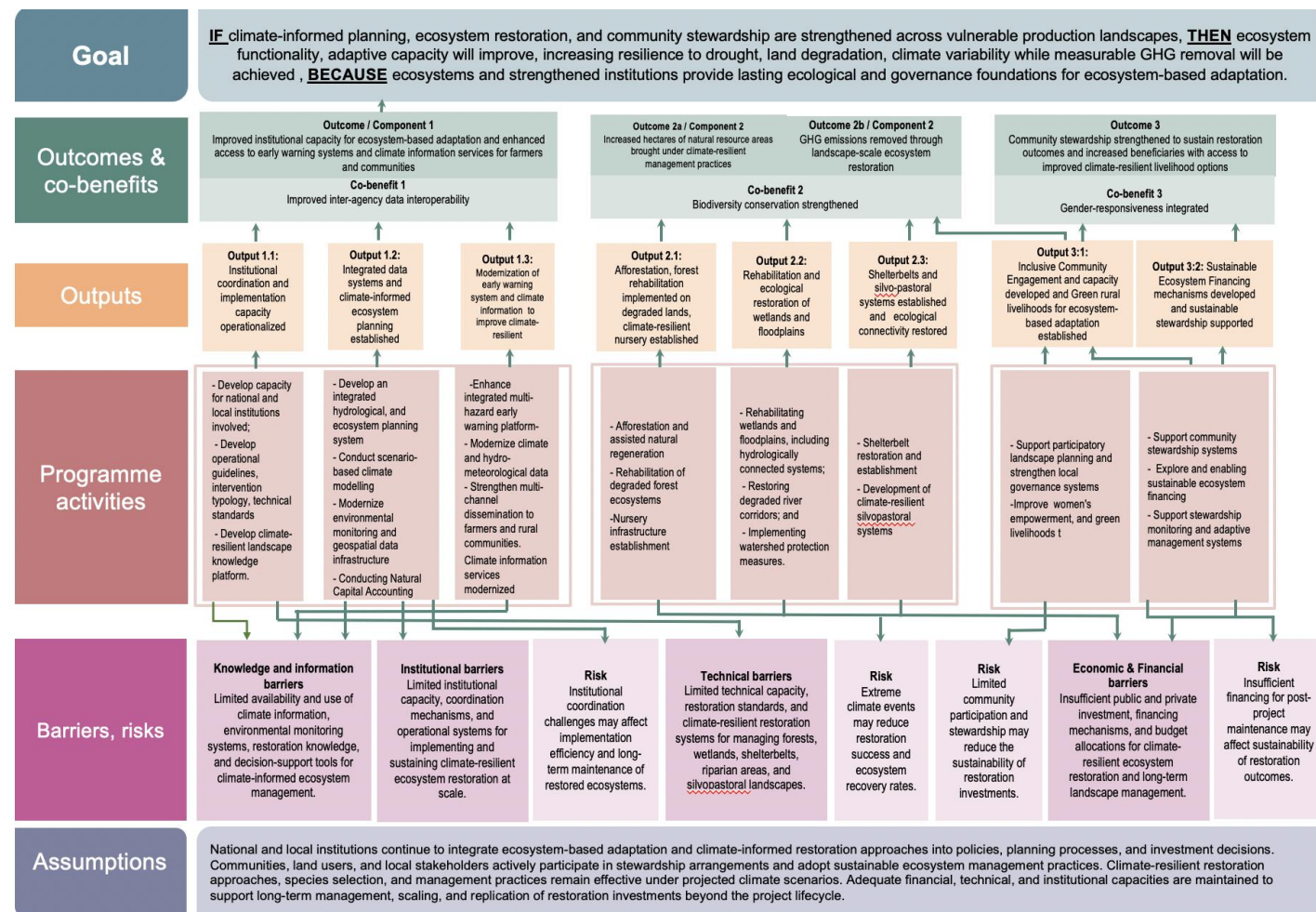
Second, the project restores ecological infrastructure across degraded and climate-exposed production landscapes through afforestation, reforestation, assisted natural regeneration, forest rehabilitation, restoration of shelterbelts and riparian vegetation, wetland and floodplain restoration, and implementation 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 tCO<sub>2</sub>e 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<br>Energy generation and access | MRA 2<br>Low-emission transport | MRA 3<br>Building, cities, industries, appliances | MRA 4<br>Forestry and land use      | ARA 1<br>Most vulnerable people and communities | ARA 2<br>Health, well-being, food and water security | ARA 3<br>Infrastructure and built environment | ARA 4<br>Ecosystems and ecosystem services |
| Outcome 1 – Institutional capacity, climate-informed planning, and decision-support systems strengthened for ecosystem-based adaptation | <input type="checkbox"/>              | <input type="checkbox"/>        | <input type="checkbox"/>                          | <input type="checkbox"/>            | <input checked="" type="checkbox"/>             | <input type="checkbox"/>                             | <input type="checkbox"/>                      | <input checked="" type="checkbox"/>        |
| Outcome 2a –                                                                                                                            | <input type="checkbox"/>              | <input type="checkbox"/>        | <input type="checkbox"/>                          | <input checked="" type="checkbox"/> | <input type="checkbox"/>                        | <input type="checkbox"/>                             | <input type="checkbox"/>                      | <input checked="" type="checkbox"/>        |

|                                                                                                                                            |                          |                          |                          |                                     |                                     |                          |                          |                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|
| Climate-resilient ecological infrastructure restored across vulnerable in production landscapes                                            |                          |                          |                          |                                     |                                     |                          |                          |                                     |
| Outcome 2b - GHG emissions reduced, avoided or removed/sequestered                                                                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Outcome 3 – Community stewardship, climate-resilient livelihoods, and local adaptive capacity strengthened to sustain restoration outcomes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| Co-benefit number                                                                                | Co-benefit                          |                                     |                          |                                     |                                     |                                     |
|--------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                                                                                  | Environmental                       | Social                              | Economic                 | Gender                              | Adaptation                          | Mitigation                          |
| Co-benefit 2 – <b>Biodiversity conservation strengthened</b>                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Co-benefit 1 – <b>Improved interoperability of environmental and climate information systems</b> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Co-benefit 3 – <b>Gender-responsiveness integrated in EbA and landscape management</b>           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

### 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 on selected 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.

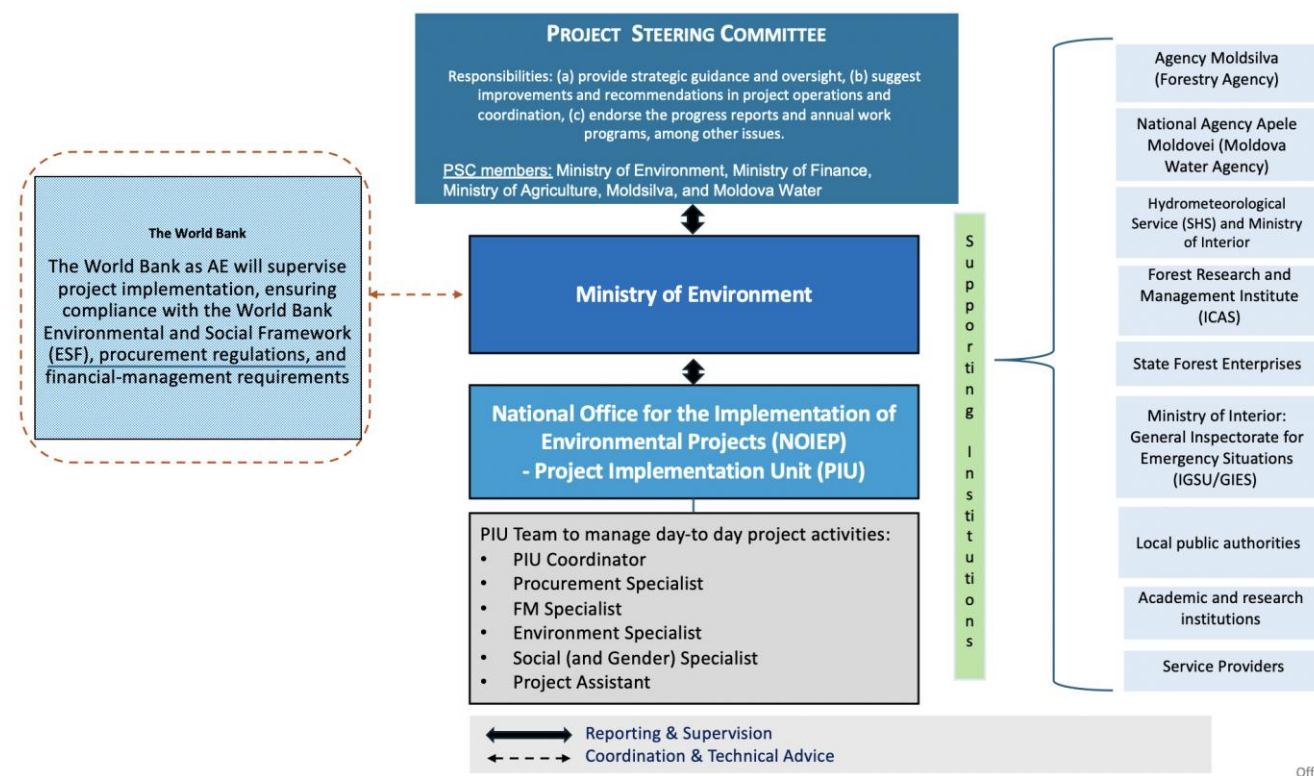
### Local-level implementation coordination

LPAs will support identification 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.

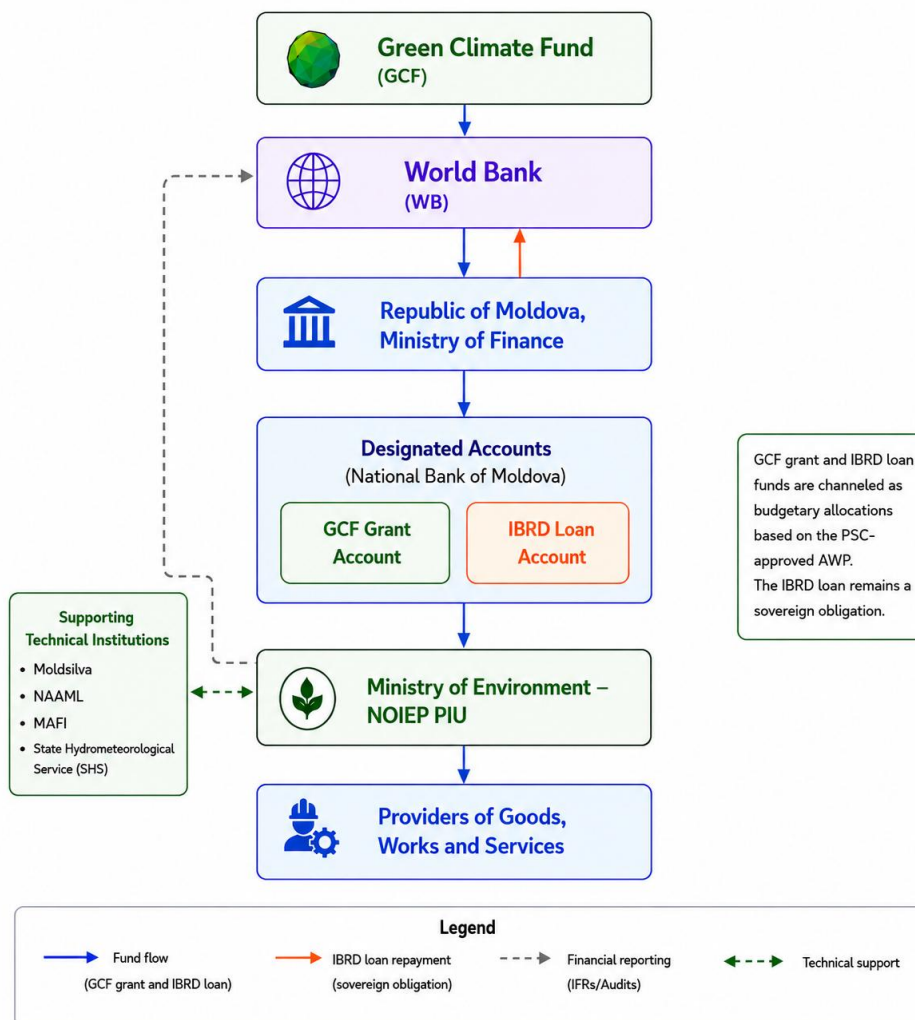
### **Financial management**

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 <u>Moldsilva</u>                                                                    | Technical guidance and oversight of forestry-related restoration interventions.                                                                                                                                                                                                                     |
| 4   | Forest Research and Management Institute (ICAS)                                            | Site assessments, ecological mapping, restoration planning, <u>silvopastoral</u> system planning, ecosystem condition assessments                                                                                                                                                                   |
| 5   | State Forest Enterprises (SFEs)                                                            | Logistical and technical field implementation support of forest, shelterbelt, riparian, and <u>silvopastoral</u> restoration activities; monitoring and maintenance of restored sites;                                                                                                              |
| 6   | National Administration <u>Apele Moldovei</u> (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, <u>silvopastoral</u> approaches, sustainable land management practices, and engagement of farmers and agricultural stakeholders in restoration and climate adaptation activities.t.                         |
| 10  | Autonomous Territorial Unit of <u>Gagauzia</u> (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)<br>Reques<br>ted<br>GCF<br>funding<br>(i + ii +<br>iii + iv +<br>v + vi +<br>vii) | Total amount        |                    | Currency           |                |
|                                                                                       | 39,280,000          |                    | USD                |                |
| GCF<br>financial<br>instrume<br>nt                                                    | Amount              | Tenor              | Grace period       | Pricing        |
| (i) Senior<br>loans                                                                   | <u>Enter amount</u> | <u>Enter years</u> | <u>Enter years</u> | <u>Enter %</u> |
| (ii)<br>Subordin<br>ated                                                              | <u>Enter amount</u> | <u>Enter years</u> | <u>Enter years</u> | <u>Enter %</u> |

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                    |                          |                                                           |                  |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|--------------------------|-----------------------------------------------------------|------------------|
| loans                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                    |                          |                                                           |                  |
| (iii) Equity                                                                       | <u>Enter amount</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                    |                          | <u>Enter % equity return</u>                              |                  |
| (iv) Guarantees                                                                    | <u>Enter amount</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | <u>Enter years</u> |                          |                                                           |                  |
| (v) Reimbursable grants                                                            | <u>Enter amount</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                    |                          |                                                           |                  |
| (vi) Grants                                                                        | 39,280,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                    |                          |                                                           |                  |
| (vii) Results-based payments                                                       | <u>Enter amount</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                    |                          |                                                           |                  |
| (b) Co-financing information                                                       | <b>Total amount</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                    | <b>Currency</b>          |                                                           |                  |
|                                                                                    | 10,000,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                    | USD                      |                                                           |                  |
| <b>Name of institution</b>                                                         | <b>Financial instrument</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Amount</b> | <b>Currency</b>    | <b>Tenor &amp; grace</b> | <b>Pricing</b>                                            | <b>Seniority</b> |
| IBRD                                                                               | Loan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10,000,000    | USD                | 15 years & 5 years       | 5.14 (nominal) + 0.25% one-off front-end fee <sup>3</sup> |                  |
| (c) Total financing                                                                | <b>Amount</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                    | <b>Currency</b>          |                                                           |                  |
| (c) = (a)+(b)                                                                      | 49,280,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                    | USD                      |                                                           |                  |
| (d) Other financing arrangements and contributions (max. 250 words, approximately) | <p>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.</p> |               |                    |                          |                                                           |                  |

<sup>3</sup> 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)                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                  |                       |               |                                                                     |              |                      |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|---------------------------------------------------------------------|--------------|----------------------|----------------------|
| <b>C.2. Financing by component</b>                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                  |                       |               |                                                                     |              |                      |                      |
| 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                                                              | -            |                      |                      |
| <b>Indicative total cost (USD)</b>                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                  | 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). |                                                                                                                  |                       |               |                                                                     |              |                      |                      |
| <b>C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)</b>                                                                                                                                                                                                                                                                                                                           |                                                                                                                  |                       |               |                                                                     |              |                      |                      |
| C.3.1 Does GCF funding finance capacity building activities?                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                  |                       |               | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |              |                      |                      |
| C.3.2. Does GCF funding finance technology development/transfer?                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                  |                       |               | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |              |                      |                      |

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<sub>2</sub>e 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 scenario<sup>4</sup>. 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 carbon<sup>5</sup>, 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.

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<sup>4</sup> 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.

<sup>5</sup> For deriving the economic value of GHG removal, high and low shadow prices of carbon of US\$ 119.3/tCO<sub>2</sub>e and US\$ 60.3/tCO<sub>2</sub>e, 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<sub>2</sub>e and US\$ 91.8/tCO<sub>2</sub>e, 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                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <input checked="" type="checkbox"/> Reduced emissions (mitigation)<br><input checked="" type="checkbox"/> 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                                                                                                                                                                                                                                                                                                                                                                                                                         |

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|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|                                                                                                                        | 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) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |
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| GCF Result Area                                                                                                        | IRMF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     | Baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Target                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Assumptions / Note |

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

<sup>6</sup> 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.

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

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

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|                                   |                                                                      | areas and protected wetland zones)                                                                                                                                                                                                                                                                            |   |                                  |                                 | <p>accounting for losses due to frost, pests, disease, and drought.</p> <p>Adequate resources for watering (where needed), grazing control, pest management, and ongoing maintenance are available for all land types throughout the 5-year period.</p> <p>Note: At least 30% of total restoration targets will be achieved by the project's mid-term review</p> |
| <u>MRA4 Forestry and land use</u> | <u>Core 1: GHG emissions reduced, avoided or removed/sequestered</u> | <p>Project monitoring and evaluation reports</p> <p>Independent interim and final evaluation carried out on the project</p> <p>National forest inventory MoE / Moldsilva</p> <p>Field measurement, GIS and lab analysis, calculations using location-specific emission factors and other parameter values</p> | 0 | 0.197 million tCO <sub>2</sub> e | 3.95 million tCO <sub>2</sub> e | <p>Same as above</p> <p>The methodology for calculating GHG emissions sequestration is provided in Annex 22A</p> <p>Project lifetime: 20 years</p> <p>Lifetime emission sequestered: 3 953 084 tCO<sub>2</sub>e</p>                                                                                                                                              |

**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 |
|----------------|--------------------------------|-------------------------------------|-------------------------------|---------------------------------|----------|
|----------------|--------------------------------|-------------------------------------|-------------------------------|---------------------------------|----------|

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| <p><u>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</u></p> | <p>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.</p> | <p><u>medium</u></p> | <p>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.</p>                         | <p>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.</p>                                  | <p><u>National level (one country)</u></p>              |
| <p><u>Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation</u></p>                                                             | <p>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</p>                                                                                                   | <p><u>low</u></p>    | <p>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</p> | <p>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</p> | <p><u>Single sub-national area within a country</u></p> |

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|                                                                                                                                                                                      | 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.                                                                                                                                                                                                                                                                                                                                |                                     |
| <u>Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards</u> | <p>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.</p> <p>Furthermore, collaboration between communities, farmers, and educational institutions around climate adaptation learning remains limited.</p> | <u>low</u> | <p>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.</p> | <p>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.</p> | <u>National level (one country)</u> |

| E.5. Project/programme specific indicators (project outcomes and outputs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                  |                                                                        |                 |                              |                                                             |                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------|------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <p><i>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 “<b>Project/programme co-benefit indicators</b>” section in table below. Add rows as needed.</i></p> <p><i>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).</i></p> |                                                                                                                  |                                                                        |                 |                              |                                                             |                                                                                                                          |
| 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                  |
| <b>SC 1.1 - Technical Guidance and Standards</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 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                                                      |
| <b>SC 1.2 - Integrated Hydrological and Ecosystem Planning System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Integrated hydrological and ecosystem planning system operational and informing restoration investment decisions | System calibration reports; technical documentation<br>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 |

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| <b>SC 1.3 - Multi-Hazard Early Warning Platform</b>                                       | 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                             |
| <b>SC 2.1 - Forest Restoration and Ecological Connectivity</b>                            | 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                                                                      |
| <b>SC 3.2 - Community Stewardship Plans</b>                                               | 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                                                                                  |
| <b>Project/programme co-benefit indicators</b>                                            |                                                                                                           |                                                      |                 |                                                |                                                             |                                                                                                                                                                                                |
| 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<br>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. |
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| 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<br>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 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |     |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                    |
| <b>Sub-Component 1.1:</b><br>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<br>2. Development of operational guidelines, intervention typology, technical standards, and implementation manuals for ecosystem restoration under climate-stressed conditions<br>3. Development of a climate-resilient landscape knowledge |   |     | - Capacity development plans and training completion records for national and local institutions including NOIEPI<br>- Operational guidelines, technical standards, and implementation manuals for ecosystem restoration<br>- Climate-resilient landscape knowledge platform (operational)<br>- Knowledge products, communication materials |                                                                                                                    |

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|                                                                                                                                                   |                                                                                                                                                                                                                                                                                     | platform integrating restoration prioritization outputs, modelling results, and implementation experience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Sub-Component 1.2:</b><br>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. | <ol style="list-style-type: none"> <li>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);</li> <li>2. Scenario-based climate modelling for drought risk, flood exposure, hydrological variability, and land degradation dynamics;</li> <li>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;</li> <li>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.</li> </ol> | <ul style="list-style-type: none"> <li>- Integrated hydrological and ecosystem planning system (operational, calibrated)</li> <li>- Climate-resilient restoration scenario assessment report for the Prut River Catchment</li> <li>- Scenario-based climate modelling outputs (drought, flood, land degradation) for southern districts</li> <li>- Modern spatial decision-support tools</li> </ul> |

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|                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                    |
| <b>Sub-Component 1.3:</b><br>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 | <ol style="list-style-type: none"> <li>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</li> <li>2. Modernization of climate and hydrometeorological data systems through centralized cloud-based infrastructure, improved interoperability, and digitization of historical records.</li> <li>3. Strengthening of multi-channel warning dissemination (SMS, mobile applications, media) with geo-targeted alerts for farmers and rural communities in southern Moldova</li> <li>4. Development of digital climate services including local dashboards, farmer advisory tools, and last mile delivery</li> </ol> | - 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 |
| <b>Component/Outcome 2a: Increased hectares of natural resource areas brought under climate-resilient management practices</b><br><br><b>Outcome 2b. GHG emissions removed through landscape-scale ecosystem restoration</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                    |
| <b>Sub-Component 2.1:</b><br>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)<br>- ANR and forest rehabilitation works completed (ha)                                                                                   |

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|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                             | 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<br>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<br>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 | <ul style="list-style-type: none"> <li>- Southern Regional RFRMC established and operational</li> <li>- Nursery modernization and seed sourcing systems in place</li> </ul>                                                                                                                                                                                                                        |
| <b>Sub-Component 2.2:</b><br>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                                                                 | <ul style="list-style-type: none"> <li>- Riparian buffer systems established and rehabilitated (ha)</li> <li>- Wetland and floodplain rehabilitation works completed (ha)</li> <li>- Water retention capacity improved</li> <li>- Restoration design documentation supported by Sub-Component 1.2 modelling outputs</li> <li>- Hydrological and ecological condition monitoring records</li> </ul> |
| <b>Sub-Component 2.3:</b><br>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<br>2. Development of climate-resilient silvopastoral systems including in the Bugeac Steppe region, integrating trees into grazing systems                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>- Shelterbelt restoration and establishment works completed (ha)</li> <li>- Silvopastoral systems established (ha, including Bugeac Steppe)</li> </ul>                                                                                                                                                                                                      |

|                                                                                                                                                                 |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                 | stabilize soils, and enhance pasture productivity.                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Component/Outcome 3: Community stewardship strengthened to sustain restoration outcomes and with access to improved climate-resilient livelihood options</b> |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Sub-Component 3.1:</b><br>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 | <ol style="list-style-type: none"> <li>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</li> <li>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.</li> <li>3. Improving women's empowerment, and green livelihoods through <ol style="list-style-type: none"> <li>a. Support for women-led restoration cooperatives and youth initiatives</li> <li>b. Vocational training in nursery management, restoration techniques, beekeeping, climate-smart agriculture, eco-tourism, and sustainable forestry practices</li> <li>c. Support ecosystems' rehabilitation through supporting activities including beekeeping, non-timber forest products, medicinal plants, agroforestry, and climate-resilient fodder production</li> </ol> </li> <li>4. Training and technical assistance on forest bylaws, wildfire prevention, sustainable grazing, ecosystem protection, participatory governance and enterprise development</li> </ol> | <ul style="list-style-type: none"> <li>- Participatory landscape planning processes completed in target communities</li> <li>- Stewardship structures established and operational in LPAs</li> <li>- Community members trained in sustainable ecosystem management and stewardship practices</li> <li>- Women-led and community-based green livelihood initiatives supported</li> <li>- Vocational training programs delivered in target communities</li> </ul> |

|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sub-component 3.2:</b><br>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                                                                                                                                                                                                                                              | <ol style="list-style-type: none"> <li>1. Feasibility assessments of PES, biodiversity financing, and carbon finance mechanisms</li> <li>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.</li> <li>3. Trainings of community stewards in ecosystem monitoring protocols, restoration maintenance techniques, and use of simple data collection tools.</li> </ol>                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>- Feasibility assessments and methodologies for ecosystem financing completed</li> <li>- Stewardship and ecosystem monitoring system established and operational</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Component 4./Outcome 4. Adaptive project implementation and monitoring systems operational</b> |                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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. | <ol style="list-style-type: none"> <li>1. Establishment and operation of the PIU within NOIEP, covering project coordination, fiduciary management, procurement, ESF compliance, and technical supervision</li> <li>2. Coordination with national technical partners on restoration planning, modelling, and implementation sequencing</li> <li>3. Procurement of consulting services, ICT solutions, and supervision activities for project delivery</li> <li>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</li> <li>5. Integration of environmental and social safeguards monitoring into the MEL system with feedback loops for real-time adjustments</li> <li>6. Baseline data collection, periodic monitoring, and reporting for evidence-based decision-making and compliance with World Bank and climate finance reporting requirements</li> </ol> | <ul style="list-style-type: none"> <li>- PIU established and operational within NOIEP</li> <li>- Project coordination, fiduciary, and procurement records</li> <li>- ESF compliance documentation and safeguards monitoring reports</li> <li>- Integrated MEL system operational with results framework tracking</li> <li>- Ecosystem condition monitoring reports (erosion control, vegetation recovery, landscape connectivity)</li> <li>- Baseline data collection report</li> <li>- Periodic progress and results reports aligned with World Bank and climate finance requirements</li> </ul> |

#### 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        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| <u>Technical and operational</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u>Medium</u> | <u>Medium</u> |
| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |               |
| <p>Mitigation measures are embedded in the project's climate-informed restoration design and implementation approach and include:</p> <ul style="list-style-type: none"> <li>• application of restoration prioritisation frameworks integrating climate exposure patterns, ecological suitability criteria and land-degradation risk to guide selection of intervention sites;</li> <li>• 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;</li> <li>• use of diversified species composition and ANR approaches where ecological conditions support natural recovery processes, reducing dependence on plantation establishment in climate-sensitive locations;</li> <li>• integration of shelterbelt restoration and silvopastoral planning instruments improving microclimatic stability and reducing wind erosion across exposed agricultural landscapes;</li> <li>• adaptive implementation sequencing aligned with seasonal establishment windows and site-specific ecological conditions;</li> <li>• 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.</li> </ul> |               |               |

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

| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Probability   | Impact        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| <u>Technical and operational</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <u>Medium</u> | <u>Medium</u> |
| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |               |
| <p>Mitigation measures are embedded in the project's institutional strengthening and restoration planning support functions and include:</p> <ul style="list-style-type: none"> <li>• development and operationalisation of climate-informed restoration prioritisation frameworks supporting coordinated targeting of interventions across implementing institutions;</li> <li>• strengthening coordination between forest genetic-resource management functions, technical institutions and regional FRM supply systems, including support to establishment of the Southern RFRMC;</li> <li>• preparation of silvopastoral planning instruments supporting integration of tree-based protection structures into agricultural land-use systems at local level;</li> <li>• strengthening technical capacity of national agencies and LPAs to apply restoration planning tools and implement EbA interventions under the NFERP framework;</li> </ul> |               |               |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|
| <ul style="list-style-type: none"> <li>development of modelling-based decision-support tools for the Prut River Catchment floodplain landscape supporting coordinated adaptation planning in hydrologically sensitive areas;</li> <li>integration of stakeholder engagement processes supporting participation of local institutions and land users in restoration planning and implementation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                     |
| <b>Selected Risk Factor 3: Local stakeholders are not sufficiently organised, engaged and interested in participating in the project</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                     |
| <b>Category</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Probability</b> | <b>Impact</b>       |
| <u>Technical and operational</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>Low</u>         | <u>Medium</u>       |
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                     |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                     |
| <b>Mitigation Measure(s)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                     |
| Mitigation measures include: <ul style="list-style-type: none"> <li>Assessment of NOIEP capacity to carry out long-term project activities</li> <li>integration of stakeholder consultations into restoration prioritisation processes at district and community levels;</li> <li>continued application of structured stakeholder engagement mechanisms through the project SEP;</li> <li>preparation of silvopastoral planning instruments supporting participation of pasture users in restoration design;</li> <li>involvement of LPAs in identification of restoration sites on communal lands;</li> <li>strengthening cooperation with civil society organizations supporting outreach and participation across target districts;</li> <li>integration of locally relevant knowledge into restoration planning to strengthen ownership and long-term sustainability.</li> </ul> |                    |                     |
| <b>Selected Risk Factor 4: Risk of maladaptation due to inappropriate species selection or planting material deployment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                     |
| <b>Category</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Probability</b> | <b>Impact</b>       |
| <u>Technical and operational</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>Medium</u>      | <u>SelectMedium</u> |
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                     |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                |                    |                     |
| <b>Mitigation Measure(s)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                     |
| Mitigation measures include: <ul style="list-style-type: none"> <li>application of restoration prioritization frameworks integrating ecological suitability and climate-risk exposure;</li> <li>strengthening coordination of forest genetic resources and provenance suitability planning;</li> <li>deployment of climate-adapted planting material through regional FRM supply systems including the Southern RFRMC;</li> <li>integration of ANR approaches where ecological conditions support natural recovery processes;</li> <li>environmental screening of restoration sites prior to implementation;</li> <li>adaptive implementation sequencing aligned with seasonal establishment windows.</li> </ul>                                                                                                                                                                     |                    |                     |
| <b>Selected Risk Factor 5: Coordination challenges between multiple implementing partners</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |                     |
| <b>Category</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Probability</b> | <b>Impact</b>       |
| <u>Governance</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <u>Medium</u>      | <u>Low</u>          |
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                     |
| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |
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| <p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• strategic oversight through the Project Steering Committee (chaired by the MoE);</li> <li>• technical coordination between implementing agencies supported through structured planning processes;</li> <li>• regular coordination meetings facilitated by the PIU;</li> <li>• joint field verification of restoration priority areas;</li> <li>• integration of restoration prioritization tools supporting alignment across sectoral planning processes.</li> </ul> |               |               |
| Selected Risk Factor 6: Regulatory updates affecting implementation of EbA measures                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |               |
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Probability   | Impact        |
| <u>Legal</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <u>Medium</u> | <u>Low</u>    |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |
| <p>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.</p>                                                                                                                                   |               |               |
| Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |
| <p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• continuous coordination with the MoE and relevant regulatory institutions;</li> <li>• alignment of restoration interventions with implementation mechanisms under the NFERP;</li> <li>• integration of adaptive implementation planning allowing adjustment to regulatory updates;</li> <li>• support to institutional coordination on FRM system strengthening consistent with national regulatory developments.</li> </ul>                                         |               |               |
| Selected Risk Factor 7: Risk of continuity due to political instability                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |               |
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Probability   | Impact        |
| <u>Governance</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u>High</u>   | <u>Medium</u> |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |
| <p>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.</p>                                                                                                                                                                                                                                    |               |               |
| Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |
| <p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• continued engagement of the World Bank as Accredited Entity supporting implementation oversight;</li> <li>• alignment of project interventions with national restoration priorities under the NFERP;</li> <li>• coordination with national and local authorities through the Project Steering Committee;</li> <li>• cooperation with civil society and development partners supporting continuity of restoration activities.</li> </ul>                              |               |               |
| Selected Risk Factor 8: Combat action near Moldova's borders                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |               |
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Probability   | Impact        |
| <u>Other</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <u>Medium</u> | <u>Medium</u> |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |
| <p>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</p>                                                                                                                                                                                                                                                                                              |               |               |
| Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |
| <p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• monitoring of regional environmental risks affecting project landscapes;</li> <li>• adaptive implementation planning allowing adjustment of activity sequencing if required;</li> <li>• coordination with national authorities responsible for environmental monitoring;</li> <li>• integration of EbA supporting resilience of affected landscapes.</li> </ul>                                                                                                      |               |               |

| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |        |
| <p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>phased implementation sequencing aligned with restoration prioritization frameworks;</li> <li>integration of restoration planning activities during early implementation stages;</li> <li>coordination with national institutions supporting mobilization of complementary investments under the NFERP;</li> <li>adaptive planning of field interventions to maintain alignment with seasonal implementation windows.</li> </ul> <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |        |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |
| <p>Mitigation measures.</p> <ul style="list-style-type: none"> <li>Apply the World Bank's Procurement Regulations, Financial Management requirements, and Anti-Corruption Guidelines throughout project implementation.</li> <li>Maintain qualified financial management and procurement specialists within the Project Implementation Unit (PIU).</li> <li>Implement robust internal controls, including segregation of duties, documented approval procedures, and regular reconciliation of financial records.</li> <li>Ensure transparent procurement processes, including appropriate market competition, disclosure requirements, contract awards, and contract management procedures, as applicable.</li> <li>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.</li> <li>Conduct regular financial management and procurement supervision missions, with fiduciary risk ratings reviewed and updated periodically.</li> <li>Maintain complete supporting documentation, fixed asset registers, and undertake periodic inventory verification.</li> <li>Submit timely financial reports and ensure annual external audits in accordance with World Bank requirements.</li> <li>Provide fiduciary and procurement training to implementing agencies and relevant project staff, as needed.</li> <li>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.</li> <li>Establish accessible grievance and complaints mechanisms, including channels for reporting allegations of fraud, corruption, or misconduct.</li> </ul> |             |        |

- 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   |
| <b>Mitigation Measures</b> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• All procurement actions are recorded and monitored through STEP, which supports sanctions compliance and prior and post review.</li> <li>• Any sanctions alerts are escalated through the World Bank's institutional clearance process before further action is taken.</li> </ul>                                              |             |        |
| Sub-Risk 10d: Conflict of Interest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |        |
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Probability | Impact |
| Governance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Medium      | High   |
| <b>Mitigation Measures</b> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Identified conflicts of interest are documented and managed through mandatory recusal from relevant decision-making processes, with records retained throughout the project.</li> <li>• Fiduciary supervision missions will include review of COI declaration procedures and compliance as part of regular oversight activities.</li> </ul> |             |        |

## 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 World 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)<sup>7</sup>
- ☐ Annex X Other references

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

<sup>7</sup> Annex 22 is mandatory for mitigation and cross-cutting projects.

**No-objection letter issued by the national designated authority(ies) or focal point(s)**

**MINISTERUL  
MEDIULUI  
AL REPUBLICII MOLDOVA**



**MINISTRY  
OF ENVIRONMENT  
OF THE REPUBLIC OF MOLDOVA**

MD 2004, mun. Chișinău, bd Ștefan cel Mare și Sfânt, 162, tel. 022 20 45 87, e-mail: [cancelaria@mediu.gov.md](mailto:cancelaria@mediu.gov.md)

01-08/3431 Nr. December 16<sup>th</sup> 2025

*To: Mr. Thomas Erickson, Regional Director of the The Green Climate Fund ("GCF")*

**Dear Mr. Erickson,**

We refer to the funding proposal titled "*Moldova Green Shield: Enhancing Moldova's Resilience through Ecosystem-based Adaptation – GREEN Shield*" (the "Proposal") for implementation in the Republic of Moldova, submitted to the Green Climate Fund by the World Bank as the proposed Implementing Entity. The Proposal was developed with the support of the Austrian Development Agency (ADA) and transmitted to the World Bank on 3 December 2025.

Pursuant to GCF Decisions B.08/10, B.37/22, and B.41/02, the contents of which we acknowledge having reviewed, including by the National Designated Authority, Mrs. Aliona Rusnac, State Secretary, we hereby communicate the no-objection of the Republic of Moldova to the Proposal (attached no-objection letter to GCF, dated 28<sup>th</sup> November, 2025).

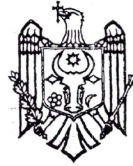
Notwithstanding the foregoing, we expect the World Bank, as Implementing Entity, to take all necessary measures to ensure that the project, as described in the Proposal, is implemented in full compliance with applicable national laws and regulations of the Republic of Moldova.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

**Minister**

**Gheorghe Hajder**



MD 2004, mun.Chișinău, bd Ștefan cel Mare și Sfânt, 162, tel. 022 20 45 87, e-mail: [cancelaria@mmediu.gov.md](mailto:cancelaria@mmediu.gov.md)

01-08/3228 Nr. \_\_ November 28<sup>th</sup> 2025

To: The Green Climate Fund ("GCF")  
Email: "Aliz Crowley" <[acrowley@gcfund.org](mailto:acrowley@gcfund.org)>; "Thomas Eriksson" <[teriksson@gcfund.org](mailto:teriksson@gcfund.org)>;  
"Maksim Surkov" <[msurkov@gcfund.org](mailto:msurkov@gcfund.org)>; "Jinjoo Kim, consultant" <[jinjookim@gcfund.org](mailto:jinjookim@gcfund.org)>;  
CC: "Fisseha Tessema Abissa" <[fabissa@worldbank.org](mailto:fabissa@worldbank.org)>;

**Re: No-objection letter in respect of the funding proposal titled "Moldova Green Shield: Enhancing Moldova Resilience through ecosystem-based Adaptation- GREEN Shield" submitted by World Bank**

Dear Madam, Sir,

We refer to the funding proposal titled "Moldova Green Shield: Enhancing Moldova Resilience through ecosystem-based Adaptation- GREEN Shield

" in Republic of Moldova submitted by World Bank to us on developed by ADA and transmitted to World Bank on December 3<sup>rd</sup> 2025 (the "**Proposal**").

The undersigned is the duly authorized representative of Aliona Rusnac, the national designated authority of Republic of Moldova.

Pursuant to GCF Decisions B.08/10, B.37/22, and B.41/02, the content of which we acknowledge to have reviewed, in my capacity as representative of the national designated authority, we hereby communicate our no-objection to the Proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Republic of Moldova has no-objection to the Proposal; and
- (b) The Proposal in conformity with the national priorities, strategies and plans of Republic of Moldova.

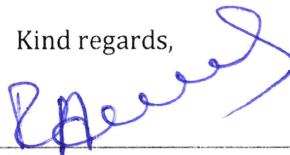
We also confirm that our national process for ascertaining no-objection to the Proposal has been duly followed.

Notwithstanding the foregoing, we expect World Bank to take the necessary measures to ensure that the project as described in the Proposal is implemented in a manner consistent with applicable national laws.

We further confirm that our no-objection to the Proposal also applies to any project preparation facility application made by World Bank after the submission of the Proposal to the GCF Secretariat.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,



---

Aliona Rusnac  
State Secretary  
NDA

Republic of Moldova

## Environmental and Social Safeguards (ESS) Report Disclosure Form

| Basic project or programme information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project or programme title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Potential sub-project(s) anticipated after GCF Board approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sector (public or private)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Public                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Accredited entity/Project-specific Assessment Approach (PSAA) applicant                                                                                                                                                                                                                                                                                                                                                                                                                                                          | International Bank for Reconstruction and Development and International Development Association (World Bank)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Environmental and social safeguards (ESS) category                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Category B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Location – specific location(s) of project or target country or location(s) of programme                                                                                                                                                                                                                                                                                                                                                                                                                                         | Republic of Moldova                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Safeguard Documents:</b> Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plans (ESMPs), Environmental and Social Management System (ESMS), Environmental and Social Management Framework (ESMF), Environmental and Social Due-Diligence (ESDD) report, Land Acquisition and/or Resettlement Action Plan (LARAP), Indigenous Peoples Plan (IPP), Indigenous Peoples Planning Framework (IPPF), Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF) etc. (as applicable) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Date of disclosure on entity's website                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Thursday, September 24, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Language(s) of disclosure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | English and Romanian                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Explanation on language                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Romanian is an official language in the Republic of Moldova and understood by the stakeholders in the project area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Link(s) to disclosure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Environmental and Social Management Framework (ESMF)</b><br>English:<br><a href="https://documents1.worldbank.org/curated/en/099092426010011800/pdf/P516908-8347445b-872e-42de-b659-1e0715d1dcd3.pdf">https://documents1.worldbank.org/curated/en/099092426010011800/pdf/P516908-8347445b-872e-42de-b659-1e0715d1dcd3.pdf</a><br>Romanian:<br><a href="https://documents1.worldbank.org/curated/en/099092426060019409/pdf/P516908-b739cd99-8cb1-4a15-bd05-41e65a2edbaef.pdf">https://documents1.worldbank.org/curated/en/099092426060019409/pdf/P516908-b739cd99-8cb1-4a15-bd05-41e65a2edbaef.pdf</a> |
| Other link(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <a href="https://onipm.gov.md/ro/anunturi/moldova-green-shield-consolidarea-rezilientei-prin-adaptare-bazata-pe-ecosisteme-p516908">https://onipm.gov.md/ro/anunturi/moldova-green-shield-consolidarea-rezilientei-prin-adaptare-bazata-pe-ecosisteme-p516908</a><br>Link to ESMF and SEP disclosure on the National Office for Implementation of Environmental Projects website                                                                                                                                                                                                                         |
| Remarks on compliance with GCF policies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ESS reports consistent with the requirements for a Category B project are contained in the documents above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Disclosure in locations convenient to affected peoples (stakeholders)                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Date(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Thursday, September 24, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Place(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ministry of Environment, Republica Moldova, MD-2004 mun.Chişinău, Bd. Ştefan Cel Mare Şi Sfânt 162                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Date of Board meeting in which the FP is intended to be considered                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Date of entity's Board meeting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Thursday, December 10, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Date of GCF's Board meeting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Monday, October 26, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Note:** This form was prepared by the entity stated above.

## Secretariat's assessment of FP321

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| Proposal name:          | Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation                                |
| Accredited entity:      | International Bank for Reconstruction and Development and International Development Association (World Bank) |
| Country/(ies):          | Moldova                                                                                                      |
| Project/programme size: | Small                                                                                                        |

### I. Overall assessment of the Secretariat

- The funding proposal is presented to the Board for consideration with the following remarks:

| Strengths                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Points of caution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The project focuses efforts on adaptation to climate change in the southern area of the country where vulnerable agricultural communities are present and exposed to climate change processes. For example, the proposal identifies that the southern area is extremely vulnerable to drought, land degradation, hydrological variability and rural livelihood risks. The current focus on the Southern Development Region and Lower Prut area gives the project a strong vulnerability-based targeting logic. It has a strong strategic alignment with national priorities and responds to climate change induced challenges such as prolonged droughts using ecosystem-based adaptation. | In terms of its design, the funding proposal package aims to institutionalize ecosystem-based adaptation as a scalable model. The nature-based solutions have great potential to deploy biodiversity and ecosystem services to increase long-term resilience and reduce the vulnerability of ecosystems and nearby communities to climate change processes. However, the replication pathways may be broad and this should be taken into consideration during the implementation of the project regarding which budgetary, institutional/policy mechanisms can sustain this approach. National institutions should aim to build capacities to demonstrate that they can operate and maintain the model beyond the GCF-funded period. |
| The project emphasizes working with public institutions and communities involved in silvopastoral systems, sustainable forest management and agroforestry. The project combines institutional reform, geospatial systems, hydrological modelling, early warning systems, nursery infrastructure, afforestation, wetland restoration and community engagement. well as providing support to isolated restoration sites, the proposal adopts a community stewardship approach regarding forests, agricultural landscapes, and watersheds and                                                                                                                                                 | The project results are expected in the long-term (e.g. resilience through stability of ecosystems being reached over 16–17 years or longer), so the government's capacity for maintaining and monitoring results is essential for long-term sustainability. The project aims to establish the capacity of the government, which is an essential requirement for the gradual exit from the project's investments. Performance beyond the project timeline should receive due attention during implementation of the project. The ambition of the plans should be                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| wetlands/floodplains. This provides a strong assurance that the project can generate landscape-level resilience benefits. The project can be positioned as helping Moldova to gain capacity and practically deploy ecosystem restoration approaches that respond to climate risks. The proposed planning tools could be replicated in other regions.                                                                                                               | balanced with the practical side of the approach. |
| The World Bank is a long-term partner of the GCF and, as the accredited entity that will be accessing GCF funding, it brings strengths of in-country (political, line ministerial, municipal and community levels) coordination as well as strong fiduciary, safeguards, procurement and implementation experience. These aspects taken together increase the degree of confidence in delivery, especially for a public-sector project with multiple stakeholders. |                                                   |

2. The Board may wish to consider approving this funding proposal in accordance with the term sheet agreed between the Secretariat and the accredited entity (AE) and, if considered appropriate, subject to the conditions set out in annex II of document GCF/B.46/02.

## II. Summary of the Secretariat's assessment

### 2.1 Project background

#### 2.1.1. Background/history of the project that helps Board members assess the funding proposal

3. The funding proposal was initially developed by the Austrian Development Agency (ADA), as its first proposal following its accreditation with the GCF, in partnership with the Government of Moldova. ADA had received support from the Project Preparation Facility, which assisted with many aspects of the process, including country visits by ADA and the GCF Secretariat in 2025.

4. While the funding proposal was being prepared for submission to the GCF, several institutional changes occurred in the Government of Austria and ADA could no longer continue with the submission of the proposal. After internal governmental consultations, the national designated authority (the Ministry of Environment of the Government of Moldova) informed the Secretariat of a change in the AE to the International Bank for Reconstruction and Development (IBRD) and the International Development Association (hereinafter referred to as the World Bank). From late 2025 to early 2026 the World Bank worked closely with the Government of Moldova on updating the funding proposal package and agreeing on co-financing as being appropriate for climate adaptation finance.

5. The Moldovan National Forest Extension and Rehabilitation Programme (NFERP) 2023–2032 and the National Climate Change Adaptation Programme (NCCAP 2030) emphasize the needs for adaptation to climate change processes, with ecosystem-based adaptation (EbA) is the

strategic priority. EbA was confirmed as a priority for climate investments in the country programme for cooperation with the GCF for 2024–2027, which was approved in 2024 with this project listed as the main priority.

6. The country is one of the most vulnerable to climate change processes: climate-sensitive agriculture, degraded ecological infrastructure, intensifying droughts and floods combined with hydrological variability affect agricultural productivity, ecosystem stability and water availability. These impacts are felt much stronger in the south of the country, and its rural population is exposed to these impacts. A drought in 2022 resulted in losses estimated at USD 200 million while, taken together, the droughts in 2020 and 2022 reduced agricultural output by nearly 30 per cent in some regions.

7. The southern development region (SDR), which is the focus of the project, covers some 9,200 km<sup>2</sup> and its nine (9) rural districts are the most degraded areas in Moldova, comprising semi-arid steppe and forest-steppe ecosystems, low forest cover, fragmented shelterbelts, degraded soils and declining water-retention capacity. The area depends on rainfall, with limited irrigation network at use (e.g. 11 per cent of arable land). The proposed project therefore focuses on the current challenges by deploying an EbA approach in order to improve the resilience of climate-vulnerable landscapes and rural livelihoods in that region, and to support the national capacity for climate-informed planning.

8. The project consists of four (4) integrated areas of investments:

- (a) Area 1 addresses planning measures, including restoration planning, geospatial/hydrological modelling systems through a climate lens, early warning systems and associated decision-making frameworks supporting climate adaptive landscape management;
- (b) Area 2 moves into investments to support the actual restoration through assisted natural regeneration, forest rehabilitation, the restoration of shelterbelts, wetlands and riparian systems, and the development of silvopastoral systems – all proposed to improve long-term ecosystem stability and long-term recovery, water retention/soil moisture functions and the climate resilience of ecological systems;
- (c) Area 3 improves engagement with local authorities and community-based action groups, by nurturing a stewardship approach over ecosystems and participatory planning processes to ensure long-term sustainability of restoration investments;
- (d) Area 4 focuses on project management, monitoring and evaluation, safeguards implementation and knowledge management.

9. Overall, the project will produce long-term adaptation benefits for an estimated 30,000 beneficiaries in the target communities, while indirectly assisting to improve the livelihoods of around 155,000 people, through measures to fight intensifying drought and soil degradation and to support long-term ecosystem rehabilitation and stability, while improving water and soil moisture functions and the resilience of agricultural systems.

#### 2.1.2. Climate objective

10. Moldova is exposed to climate change processes, such as repeating droughts, rising temperatures and heat waves, and increasing rainfall variability, which result in both acute and chronic risks as well as economic and social impacts. Climate projections indicate ongoing increases in temperature, evapotranspiration and seasonal water stress across southern Moldova, further intensifying risks to agricultural systems, ecosystems and vulnerable rural communities.

11. Severe flooding has become frequent, with the 2008 flood alone causing damage estimated at USD 120 million, and nearly 10 per cent of Moldova's population – approximately 400,000 individuals – resides in high-risk flood zones. Meanwhile, droughts have become more widespread and intense over the past twenty years, with six major droughts between 2000 and 2020 significantly diminishing agricultural production and household livelihoods. The drought of late 2020 is estimated to have caused a 22 per cent decline in the value of output for individual farmers and put upward pressure on food prices. This impact was heightened by insufficient infrastructure, with only 0.2 per cent of agricultural land being adequately irrigated, increasing dependence on rainfall and illustrating the importance of landscape-scale water retention and climate-resilient land management approaches.
12. Agriculture, which covers over 70 per cent of the land, is highly vulnerable, with climate-related economic losses estimated at USD 164 million annually. Structural economic vulnerabilities are increasingly aggravated by escalating climatic risks, which highlight the urgent need for adaptive measures. Limited application of climate-resilient land management practices and insufficient landscape-scale water-retention capacity increase the vulnerability of agricultural production systems to drought and hydrological variability.
13. Climate vulnerability in southern Moldova is further exacerbated by severe land degradation, declining ecosystem functionality and insufficient ecological infrastructure capable of buffering climate extremes. Nationally, degraded lands increased from 27.6 per cent of the total land surface in 2000 to 31.3 per cent in 2015, while soil erosion, overgrazing, pasture degradation and the fragmentation of forests, wetlands and riparian systems continue to reduce the resilience of rural production landscapes.
14. Further, the implementation of climate-resilient restoration interventions at the landscape scale remains constrained by limited financing for adaptation-oriented restoration, fragmented institutional coordination, insufficient climate-informed planning systems, the limited availability of climate-adapted forest reproductive material and the weak integration of restoration priorities, climate-resilient land management approaches, and watershed-scale ecosystem and water-resource considerations into local planning processes.
15. Climate-related risks are closely linked to poverty, particularly in rural areas of the southern region, where communities face high poverty rates and depend heavily on agriculture for their livelihoods. Southern Moldova is on the front line of the country's climate impacts, experiencing more frequent and prolonged droughts, rising temperatures and greater rainfall variability. These trends have accelerated land degradation, with some districts recording among the highest soil erosion rates in the country and repeated crop failures during extremely dry years (e.g. 2012, 2015 and 2019).
16. Limited forest cover and the near absence of shelterbelts further reduce the landscape's ability to buffer climate extremes, and therefore result in increasing erosion, lower soil moisture retention and intensifying heat stress on crops. At the same time, the degradation and fragmentation of wetlands and small river systems have weakened natural water regulation. In addition, limited forest cover is contributing to declining groundwater levels, increased run-off and erosion, reduced soil moisture retention and lower resilience of farming systems.
17. The degradation of ecological infrastructure has also weakened natural water regulation and retention functions at the watershed scale, reducing infiltration capacity, groundwater recharge, erosion control and the resilience of climate-sensitive agricultural systems. Moldova's forest cover remains among the lowest in Europe, at approximately 11 per cent, significantly limiting the capacity of landscapes to regulate water, stabilize soils and moderate microclimatic conditions. Rural communities, particularly women, older people and smallholder farmers, are disproportionately exposed to climate-related income losses and declining adaptive capacity.

18. At the same time, the degradation and fragmentation of wetlands and small river systems have weakened natural water regulation, contributing to declining groundwater levels, constrained wetlands connectivity, vegetation-encroached waterways, reduced soil moisture retention and lower resilience of farming systems. If Moldova does not reverse climate trends and implement climate adaptation actions, annual GDP losses could exceed 2.8 per cent by 2050, with the southern region particularly vulnerable and the near absence of shelterbelts further reduce the landscape's ability to buffer climate extremes, increase erosion, lower soil moisture retention, and intensifying heat stress on crops.

19. Moldova, with support from the proposed project, will intensify efforts to reverse climate trends and reduce impacts through a dual strategy that both cuts and removes greenhouse gas emissions.

### 2.1.3. Financing information

20. Moldova's climate vulnerability is compounded by its limited capacity to finance EbA at the necessary scale. This challenge is most acute where degraded ecosystems, water stress and agriculture-dependent livelihoods overlap.

21. Moldova has adopted strong policy frameworks, including the NCCAP 2030 and NFERP 2023–2032, but implementation depends on significant upfront investment in ecological infrastructure, climate-informed planning systems and institutional capacity-building. These investments would deliver broad public benefits, including better water regulation and less exposure to floods, lower drought risk, reduced wind erosion, improved microclimatic conditions, reduced losses to agricultural production, reduced land degradation and stronger climate resilience.

22. However, because these public goods are largely non-market-based and materialize over long periods, it is difficult to attract private investment. Public budgets also remain constrained by competing development priorities, although in this project country ownership is demonstrated through the government's financial commitment and its active role in mobilizing complementary resources, as follows:

- (a) Co-financing and alignment: The inclusion of IBRD financing alongside GCF grant funding reflects the government's willingness to co-finance restoration investments and integrate climate resilience into broader development financing programmes.
- (b) Use of concessional finance: GCF concessional funding enables the government to implement activities that would not otherwise be feasible under standard financing conditions, including EbA, climate-informed planning systems, and public environmental data infrastructure.

23. In terms of environmental and social safeguards (ESS) assessment, the project is categorized as ESS level B.

## 2.2 Component-by-component analysis

*Component 1: Institutional capacity development and data-driven planning (total cost: USD 2.89 million; GCF cost: USD 2.89 million)*

24. Component 1 supports strengthening the capacities of national and local institutions involved in field implementation by formulating operational guidelines, restoration typologies, technical standards, site-selection and prioritization approaches, specific site-species, land condition criteria, and implementation manuals for ecosystem restoration under climate-stressed conditions. It will develop (i) a climate-resilient landscape knowledge platform to support data sharing, communication and institutional learning; (ii) integrated climate, hydro-

ecological and ecosystem planning systems; and (iii) scenario-based climate and ecosystem modelling. The project will engage with modernizing environmental monitoring and geospatial data infrastructure and conducting natural capital accounting.

*Component 2: Climate-resilient ecological infrastructure restoration in production landscapes (total cost: USD 38.47 million; GCF cost: USD 30.78 million)*

25. This main component comprises afforestation and ecological restoration of degraded communal lands, erosion-prone slopes and fragmented forest-steppe landscape. It looks into rehabilitating degraded forest stands through selective silvicultural interventions and establishing the Southern Regional Forest Reproductive Material Centre which will become the centre of expertise in the Lower Prut area. The project takes an integrated approach to (i) afforestation and assisted natural regeneration; (ii) rehabilitating and restoring wetlands and floodplains, restoring degraded river corridors and wetlands connectivity, implementing watershed protection and enhancement measures; and (iii) restoring and establishing shelterbelts in wind-exposed agricultural landscapes, and developing climate-resilient silvopastoral systems in the SDR.

*Component 3: Community engagement, climate-resilient livelihoods, and local stewardship systems for ecosystem restoration (total cost: USD 5.45 million; GCF cost: USD 3.65 million)*

26. This part of the project aims to support community stewardship by: (i) providing tools and equipment to local public authorities and communities (particularly, women- and youth-led associations and cooperatives) for the implementation of stewardship plans and to support ecosystem services; (ii) delivering training to communities on ecosystem monitoring protocols, restoration maintenance techniques and the use of simple data collection tools; and (iii) exploration of opportunities for practical ecosystem financing options, which are often difficult to design (e.g. local governance systems, potential for green entrepreneurship). Adjacent communities/rural dwellers play an important role in making ecosystems services more resilient through cross-pollination support, and by providing technical and operational support for the stewardship monitoring and adaptive management systems this component supports that work.

*Gender, environmental and social management framework, and monitoring and evaluation components (total cost: USD 0.63 million; GCF cost: USD 0.63 million)*

27. These components are detailed and adequately resourced for developing and operating an integrated monitoring, evaluation and learning system to track project results and inform adaptive management, as well as for developing and operating an environmental and social management framework (ESMF) to work with safeguards and a gender action plan.

*Project management (total cost: USD 1.84 million; GCF cost: USD 1.34 million)*

28. The component provides technical and operational support for the establishment and operation of a project implementation unit (PIU), including project coordination, financial management, procurement, environmental and social risk and impact management, and monitoring and evaluation.

### **III. Assessment against investment criteria**

#### **3.1 Impact potential**

*Scale: N/A*

29. The project, with the primary objective of public works/expenditure, is expected to deliver significant climate benefits in southern Moldova. It will reduce the vulnerability of drought-exposed rural production landscapes. It will also strengthen the resilience of

ecosystems, ecosystem services and agriculture-dependent livelihoods. The project is expected to achieve greenhouse gas emission reductions and removals of approximately 4.16 million tonnes of carbon dioxide equivalent (Mt CO<sub>2</sub> eq) over a 20-year period, through afforestation, reforestation, and improved land and ecosystem management. It will generate direct and indirect adaptation benefits for approximately 185,000 people. This includes 30,000 direct beneficiaries engaged in restoration investments and capacity-building activities. Broader ecosystem service benefits will extend beyond the immediate intervention areas to rural production landscapes across the wider region. The project will bring approximately 13,000 hectares of degraded and climate-sensitive land under improved climate-resilient management. This includes forests, shelterbelts, riparian systems, wetlands and silvopastoral landscapes. Long-term sustainability will be promoted through community engagement, ecosystem stewardship approach and institutionalization of climate-informed planning systems.

30. The project's impact pathway is based on supporting the long-term climate resilience of ecosystems (ecological infrastructure). This is combined with strengthening climate-informed planning and decision-support systems. The project's adaptation impact relies on the successful restoration of key ecosystem functions, including soil stabilization, water retention, groundwater recharge and microclimatic regulation. These functions reduce the exposure of agricultural systems to climate shocks. This results in avoided economic losses associated with crop failures, land degradation and water stress. The project's mitigation impact is estimated at approximately 4.16 Mt CO<sub>2</sub> eq over 20 years. This impact is intrinsically linked to the adaptation pathway, because improved ecosystem functionality simultaneously enhances resilience and increases carbon storage within the land use, land-use change and forestry sector. The methodology and impact estimates will be subject to further validation as part of the Secretariat's review.

31. The project will contribute directly to the GCF adaptation results areas (ARAs) on most vulnerable people and communities (ARA 1), health and well-being, and food and water security (ARA 2), and ecosystems and ecosystem services (ARA 4). It will also contribute to mitigation results area four on forestry and land use.

32. The project's overall mitigation and adaptation impact potential is assessed as High.

## 3.2 Paradigm shift potential

*Scale: N/A*

33. The project will transform ecosystem restoration in Moldova from a fragmented, target-driven approach into integrated, climate-risk-informed landscape management which brings innovation to the current practice. It embeds EbA as a scalable adaptation mechanism. This approach is aligned with the NFERP 2023–2032 and the NCCAP 2030. The project introduces restoration prioritization frameworks, geospatial tools, and hydrological and ecosystem modelling systems for the Lower Prut region. These tools integrate climate risk, ecological suitability and socioeconomic factors into decision-making. They are designed to be embedded within national programmes and applied by sectoral institutions and local authorities.

34. The project will strengthen technical and operational capacity to scale EbA, including through the establishment of the Southern Regional Forest Reproductive Material Centre. This addresses a significant bottleneck in the availability of climate-adapted forest reproductive material. The project also demonstrates landscape-scale EbA as a viable adaptation model, through integrated restoration across approximately 13,000 hectares of forests, wetlands, riparian systems and agricultural protection structures. In parallel, the project pilots approaches for strengthening local administrations and adjacent communities' stewardship over ecosystems. It combines GCF grant financing with IBRD resources, demonstrating a blended financing model for restoration activities that generate high public climate benefits but limited financial returns.

35. The project's paradigm shift potential is contingent on the institutionalization of climate-informed planning tools and restoration standards within national programmes, particularly the NFERP. It also depends on the adoption of participatory stewardship arrangements by local institutions and communities to sustain restored ecosystems beyond the project's lifecycle. While the project establishes the institutional readiness and practical experience for future ecosystem financing, the maturation of these financing mechanisms and their uptake by public and private sector actors may extend beyond the project's timeframe. Continuous coordination across sectoral institutions and local authorities will be needed to ensure durable adoption of climate-informed restoration planning.

36. With its integrated approach combining climate-informed planning systems, large-scale ecological restoration for climate resilience and community-based stewardship, and its potential for replication across other climate-vulnerable regions of Moldova, the project's paradigm shift potential is assessed as Medium to high.

### 3.3 Sustainable development potential

*Scale: N/A*

37. The project has high sustainable development potential and delivers economic, social, environmental and institutional co-benefits, advancing Sustainable Development Goals (SDGs) 2, 5, 8, 13 and 15 through afforestation, shelterbelt expansion, riparian buffer restoration and silvopastoral systems in drought-exposed southern Moldova. These interventions will improve soil protection, biodiversity resilience, agricultural stability, and rural livelihoods, while promoting a gender-responsive participation approach in EbA planning that ensures inclusive engagement of women and vulnerable groups in restoration design, training and stewardship activities.

38. The project will generate economic co-benefits by supporting more stable and productive agricultural systems and diversifying rural livelihoods through restoration-linked activities, including agroforestry, silvopastoral systems and sustainable use of forest and non-timber resources. It will deliver environmental co-benefits such as improved soil fertility, water regulation, erosion control and biodiversity protection across approximately 13,000 hectares of restored forests, agricultural protection systems, wetlands and riparian landscapes, while also increasing carbon sequestration capacity in support of national climate objectives.

39. The project supports poverty reduction and rural economic resilience in line with SDG 1, enhances the resilience of ecosystems to support food security through the rehabilitation of degraded agricultural landscapes (SDG 2), promotes gender equality through inclusive participation and benefit-sharing in restoration and stewardship activities (SDG 5), generates green employment and income diversification opportunities (SDG 8), undertakes investments for combating climate change (SDG 13), and promotes the sustainable use of terrestrial ecosystems and the reversal of land degradation (SDG 15).

40. The project also strengthens institutional capacity for climate-informed landscape management, including through hydrological and ecosystem modelling tools developed for the Lower Prut region, contributing to more effective natural resource governance and evidence-based planning beyond the project's geographic scope. Through improved ecosystem functionality and strengthened rural livelihoods, the project supports Moldova's broader development priorities and helps build long-term resilience of agriculture-dependent communities to climate shocks.

41. The sustainable development potential of the project is assessed as High.

### 3.4 Needs of the recipient

*Scale: N/A*

42. Moldova faces significant needs that justify GCF support, driven by structural fiscal constraints that limit the country's ability to finance EbA at the landscape scale. The SDR is characterized by degraded land, declining ecosystem functionality, increasing water scarcity and limited adaptive capacity among rural communities, particularly among smallholder farmers and vulnerable groups such as women and older people, who are disproportionately exposed to climate-related income shocks. While Moldova has established strong policy frameworks, including NCCAP 2030 and NFERP 2023–2032, implementation requires substantial upfront investment in ecological infrastructure, climate-informed planning systems, and institutional capacity that competes with other pressing fiscal priorities.
43. Existing national mechanisms are insufficient to finance EbA at the scale required. Current programmes support only conventional afforestation and do not finance climate-risk-informed restoration planning, ecological connectivity, or climate-adapted forest reproductive material systems. This gap is compounded by limited private sector participation, as smaller businesses and rural households face persistent constraints in accessing finance. As these investment types generate largely non-market, long-horizon public benefits, they are structurally unlikely to attract commercial financing, reinforcing the case for concessional public support.
44. The GCF investment is essential to bridge this financing and institutional gap and to enable measurable resilience outcomes across southern Moldova. By providing concessional resources for climate-informed planning systems, ecological restoration, environmental data infrastructure and climate-adapted forest reproductive material systems, the project addresses needs that would not otherwise be met through domestic fiscal resources or private capital, given the constrained fiscal space, high debt-servicing obligations and underdeveloped rural financial markets described above.
45. The needs of the recipient are assessed as Medium to high.

### 3.5 Country ownership

*Scale: N/A*

46. This is the first, priority national project for Moldova, and it was planned from 2023 and registered as such in Moldova's country programme for 2024–2027. The country programme was approved with the GCF.
47. The Ministry of Environment, as Moldova's national designated authority, has confirmed the project as a high priority and issued a no-objection letter. Moldova has a well-developed climate policy framework centred on key strategies such as NCCAP 2030, its updated nationally determined contribution, the National Development Strategy, and NFERP 2023–2032, which position ecosystem restoration and EbA as central pillars of the country's climate and land management priorities. The project aligns closely with these national priorities, translating policy commitments on forestry, land degradation, and climate resilience into holistic climate-resilient ecosystem-based approach to landscape-scale interventions, with institutional implementation led by the national designated authority to ensure consistency with national environmental strategies and climate policy commitments throughout project design and implementation.
48. The project was developed through an inclusive and participatory preparation process, with consultations spanning local public authorities, civil society organizations, farmers' associations and technical experts in the SDR. These consultations informed restoration priorities, as well as the design of livelihood support activities and community engagement mechanisms, ensuring the project reflects locally identified needs. Key national institutions, including Moldsilva and relevant technical government agencies, local administrations and communities were actively engaged in project design and are expected to play central roles in implementation.

49. The project is strongly supported by the Ministry of Environment as the national designated authority, which has played an active role not only in endorsing the project but also in driving its preparation forward, including engaging closely with the World Bank as the AE. This level of engagement reflects a high degree of government commitment to seeing the project through to approval and implementation. The government's willingness to co-finance restoration investments through IBRD resources alongside the GCF grant further demonstrates ownership and a commitment to integrating climate resilience into broader development financing.
50. The country ownership is assessed as High.

### 3.6 Efficiency and effectiveness

*Scale: N/A*

51. The project demonstrates strong efficiency and effectiveness by combining large-scale EbA implementation with targeted enabling investments that strengthen 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 as well as by rehabilitating degraded forest ecosystems, establishing shelterbelts, restoring wetland and riparian protection buffers and stabilizing silvopastoral systems. Restoring ecological infrastructure is an effective approach that delivers durable resilience benefits with lower long-term maintenance costs and higher co-benefit potential, including improved soil stability, enhanced moisture retention and strengthened ecological connectivity.
52. The proposed investment envelope of USD 49.28 million enables implementation 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 with the NFERP strategy, enabling project-supported restoration activities to be built on existing national implementation frameworks rather than by establishing parallel systems, while investment in climate-resilient forest reproductive material supports a reliable, site-adapted planting material supply chain.
53. The project generates measurable mitigation co-benefits through carbon sequestration associated with restoration interventions, contributing to Moldova's mitigation objectives under its nationally determined contribution while reinforcing adaptation outcomes through improved ecosystem resilience. Additional efficiency gains are achieved through the development of hydrological and ecosystem modelling tools for the Lower Prut region, which are intended to provide a technical foundation for prioritizing future restoration investments and reduce planning uncertainty in landscapes affected by hydrological variability.
54. Implementation through existing national institutions that have experience of managing externally financed environmental investment programmes further strengthens delivery efficiency and reduces transaction costs. By combining landscape-scale restoration with strengthening planning systems and technical enabling conditions for scaling EbA, the project is designed to ensure that GCF resources generate resilience benefits which extend beyond the project's duration, supporting long-term expansion of climate-resilient ecological infrastructure across southern Moldova.
55. The overall efficiency and effectiveness of the project is assessed as Medium to high.

## IV. Assessment of consistency with GCF safeguards and policies

## 4.1 Environmental and social safeguards

56. **Project overview.** The Moldova Green Shield project targets southern Moldova (i.e. the SDR), characterized by semi-arid steppe/forest-steppe ecosystems and highly climate-vulnerable rural landscapes. The project aims to strengthen climate resilience of production landscapes and rural livelihoods affected by drought, land degradation, and weak ecological infrastructure using EbA. It combines landscape-scale restoration, climate-informed planning and community-based approaches to improve water regulation, soil stability and agricultural resilience. It also focuses particularly on climate-sensitive areas such as the Lower Prut basin and degraded agricultural and forest-steppe systems in southern Moldova. The environmental benefits of the project include restoration of forests, wetlands and ecological infrastructure to improve biodiversity, soil stability and water regulation, while delivering social benefits by strengthening climate resilience, livelihoods and inclusive participation of vulnerable rural communities, including women, in southern Moldova.

57. **Environmental and social risk category and safeguard instrument.** The proposed project is categorized by the AE as “substantial” under its risk classification system and deemed equivalent to environmental and social risk category B as per the Revised Environmental and Social Policy of the GCF. The project will involve large-scale ecosystem restoration interventions across geographically dispersed and ecologically sensitive landscapes, including areas near Ramsar wetlands and Emerald Network sites, with cumulative impacts on biodiversity, hydrology, and land use. Restoration activities may restrict access to communal grazing and natural resources on which vulnerable rural communities depend on. The AE confirms that the anticipated adverse impacts are expected to be limited, site-specific, reversible, and readily mitigated through the Environmental and Social Management Framework (ESMF), exclusion list, site-specific Environmental and Social Management Plans (ESMPs), Biodiversity Management Plans, and Process Framework implementation. The project will not support any activity that presents significant, irreversible, or unprecedented environmental and social risks or equivalent to environmental and social risk category A. An ESMF has been prepared and was considered appropriate, given that the exact locations and designs of restoration and interventions cannot be fully defined at appraisal stage. While land acquisition and physical displacement are not anticipated, restoration activities may result in temporary or longer-term restrictions on access to communal pastures, riparian corridors or other shared natural resources. As such, the ESMF also includes a process framework to provide guidance on identification, assessment and mitigation of impacts and risks during implementation. The ESMF outlines the applicable regulatory and policy framework; procedures for environmental and social risk screening, assessment, mitigation and management plans; and institutional arrangements, monitoring and reporting arrangements, grievance redress mechanisms and stakeholder engagement, and information disclosure requirements.

58. **Compliance with GCF ESS standards.** The paragraphs below describe how the proposed project complies with the environmental and social safeguards (ESS) standards and recommendations from the Secretariat to ensure alignment with GCF policies:

59. **ESS1: Assessment and management of environmental and social risks and impacts.** The project’s ESMF provides guidance on procedures for screening, assessing, mitigating, monitoring and reporting environmental and social risks and impacts associated with the ecosystem restoration activities, ensuring compliance with national environmental and social regulations and the World Bank’s Environmental and Social Framework. The ESMF includes measures for biodiversity conservation, labour management, stakeholder engagement, grievance redress and management of potential land access restrictions. The stakeholder engagement plan is further detailed in Annex 7 to the funding proposal package.

60. **ESS2: Labour and working conditions.** Labour risks are assessed as moderate, potentially affecting JPIU staff, contractors, seasonal workers, supply chain workers and government workers. The ESMF includes measures for labour management and worker welfare, with clear requirements for written contracts, non-discrimination, fair working conditions, worker rights, occupational health and safety, worker grievance redress mechanism including gender-responsive and survivor-centred measures, prevention of child and forced labour, and contractor oversight. While no significant labour influx is expected, labour-related risks will be mitigated and managed through the implementation of labour management procedures, grievance redress mechanism, and occupational health and safety management plans, as described in the ESMF. The Exclusion List also outrightly excludes activities that may cause or lead to forced labour, child labour exploitation, or human trafficking, or that engage persons under 18 in hazardous work.
61. **ESS3: Resource efficiency and pollution control.** Although the project is intended to be beneficial to the environment, ecological restoration activities such as afforestation, nursery operations, riparian and wetland restoration, reservoir rehabilitation/desiltation, and use of machinery, fuels, lubricants, herbicides, pesticides and construction materials may pose resource efficiency and pollution risks. The potential key risks include soil disturbance and erosion, temporary increase in sediment run-off, localized water quality degradation, fuel and lubricant spills from machineries, hazardous and non-hazardous waste generation, contamination from agrochemicals, air emission from equipment, and dust generation. The risks are however anticipated to be localized, reversible and manageable through good international practice. The site-specific ESMPs to be developed during implementation will identify appropriate mitigation measures such as implementation of erosion and sediment control measures, seasonal scheduling of earthworks, immediate revegetation of disturbed areas, proper waste management procedures, safe storage and handling of hazardous materials, and implementing water-efficiency measures in nurseries. Pesticide use will be tightly controlled through the exclusions and integrated pest management approaches will be preferred.
62. **ESS4: Community health, safety and security.** On-the-ground restoration activities are likely to pose community, health, safety and security risks. The activities may expose nearby communities to risks related to the use of equipment and machinery, vehicular accidents, dust and noise from earthworks. Potential mitigation measures include community health and safety-related provisions such as access control, provision of signages, traffic management, dust and noise control, and proper scheduling of works. During implementation, potential risks to communities related to exposure to diseases and animal bites (i.e. snakes, bees, ticks) can be assessed further. Site-specific ESMPs are expected to identify appropriate mitigation measures. Community consultations and participatory planning will be adopted in identifying local risks and in agreeing with the mitigation measures.
63. **ESS5: Land acquisition and involuntary resettlement.** While the project does not anticipate any involuntary land acquisition, physical displacement or use of eminent domain as they are outrightly excluded from project financing, land acquisition and displacement cannot be completely ruled out at project appraisal stage as the exact locations for on-the-ground activities have not been identified yet. Afforestation and reforestation activities on degraded communal lands may restrict access to customary grazing areas and non-timber forest products used by smallholder farmers and livestock-keepers. Riparian buffer and wetland restoration may limit access to fishing areas, watering points, and seasonal cultivation zones. Shelterbelt restoration may temporarily reduce access to pasturelands and agricultural areas. A Process Framework has been prepared to avoid, minimize and mitigate impacts through participatory planning, alternative access arrangements, livelihood restoration, compensation (as necessary), grievance redress, and support for vulnerable households. For any activity where restrictions are confirmed, site-specific Plan of Action will be prepared to restore the livelihoods to at least pre-project levels.

64. **ESS6: Biodiversity conservation and sustainable management of living natural resources.** Although the project aims to restore natural habitats, restoration activities may also pose environmental risks to the project's general target areas which includes include ecologically-sensitive sites such as Ramsar wetlands and Emerald network sites. Potential risks and impacts include habitat disturbance, invasive species introduction, and alteration of hydrological processes. The ESMF covers a biodiversity management framework which includes critical habitat screening and assessments, and guidance on the preparation of biodiversity management plans to ensure no net loss of biodiversity and support eco-systems. Potential mitigation measures include native species restoration, invasive species prohibition and control, habitat connectivity measures, and ecological monitoring. Any activity in legally protected areas will be permitted if it is explicitly aligned with area management objectives, authorized by the competent authority, and appropriate critical habitat assessments and biodiversity management plans have been prepared in compliance with national regulations and AE's standards.
65. **ESS8: Cultural heritage.** Activities affecting physical cultural heritage such as graves, temples, churches, historical relics, archeological sites or other cultural sites will be outrightly excluded from project financing as per the project's Exclusion List. While there is an outright exclusion, the excavation activities may present risks of encountering unknown cultural heritage. As such, chance find procedures will be required to be included in all activities involving earthworks.
66. **Implementation arrangements.** The NOIEP Project Implementation Unit (PIU) will be primarily responsible for ESMF implementation and environmental and social (E&S) risk management. The PIU will be supported by dedicated Environmental and Social Specialists who will undertake E&S screening, prepare and supervise site-specific ESMPs, oversee stakeholder engagement and grievance redress, monitor compliance with E&S plans developed during implementation. The PIU will also be responsible for implementing and monitoring SEAH prevention and response measures, including management of the confidential SEAH reporting pathway, oversight of Codes of Conduct, worker training, referral of survivors to support services. At the Accredited Entity level, the World Bank will provide oversight support through supervision missions, review of E&S performance reports, verification of Environmental and Social Commitment Plan (ESCP) and ESMF compliance, assessment of safeguards performance, clearance of key risk management instruments, review of serious incidents, and support for corrective actions and adaptive management where environmental or social risks emerge during implementation.
67. **Stakeholder engagement and information disclosure.** Multiple stakeholder consultations were undertaken from 2022 to 2026 involving government agencies, local government offices, rural communities, farmers, pastoralists, NGOs/CSOs, academic and research institutions, development partners. The key issues raised included water scarcity, degraded pastures, biodiversity conservation, species selection, wetland and forest restoration, land availability, livelihood impacts, climate resilience, and institutional capacity. These consultations directly shaped project design by identifying the project's geographical scope, adoption of nature-based approaches, incorporation of climate-resilient and biodiversity-sensitive species selection, strengthening of biodiversity and hydrological assessment requirements, establishment of community stewardship and equipment-sharing arrangements, upgrading of the nursery, and inclusion of integrated silvopastoral and landscape approaches. Vulnerable groups, including women, women-headed households, Roma, Gagauz communities, elderly persons, youth, and persons with disabilities, were specifically identified and consulted through targeted outreach, and their concerns informed dedicated Gagauz-language engagement, gender-responsive participation measures, livelihood support targeting, accessible consultation approaches, women-focused employment and enterprise opportunities, and strengthened SEAH prevention and reporting arrangements for remote project sites.

Stakeholder engagement activities are expected to continue through the PIU's Social Specialist who will have the primary responsibility for day-to-day implementation of the SEP. The SEP includes community outreach, vulnerable group engagement, GRM management, monitoring of stakeholder participation and preparation of progress reports.

68. The ESMF is the core environmental and social safeguards instrument for the project pursuant to which the ESCP for the project will be developed. The AE is required to provide the Fund with a copy of the ESCP after it has been finalized with by the Executing Entity. As the specific locations and exact scope of works will be identified during implementation, site-specific Environmental and Social Impact Assessments (ESIAs) and/or Environmental and Social Management Plans (ESMPs) are to be prepared in accordance with the ESMF and ESCP. The AE has informed the Fund that the site specific ESIA and/or ESMPs will be disclosed to potentially affected communities and appropriate consultations on site-specific impacts and risks will be undertaken in accordance with the AE's applicable policies and procedures, the ESMF and the ESCP. The legal agreements for the project will require the AE to monitor the implementation of the site-specific ESMPs and report to GCF annually on their implementation. The Secretariat considers that the commitments provided by the AE, which have been reflected in the term sheet, are adequate to support compliance with the applicable requirements of the Revised Environmental and Social Policy, including with respect to the preparation, disclosure, consultation, monitoring and reporting of the site-specific interventions.

69. **Grievance redress mechanism.**

70. A project-level grievance redress mechanism will be established to allow communities and stakeholders to submit complaints through local public authority grievance focal points, the PIU, and the Ministry of Environment. The project-level GRM will be designed to be accessible at community level through the local public authority focal points, free of charge, confidential, multilingual, and accessible through verbal, written, online, and anonymous channels. The GRM includes dedicated procedures for grievances related to access restrictions under ESS5 and a separate survivor-centred SEA/SH grievance pathway. At the Accredited Entity (AE) level, complainants who are dissatisfied with project-level resolution may access the World Bank Grievance Redress Service (GRS), which provides an independent mechanism for receiving and reviewing complaints and serves as an additional grievance channel. The World Bank, as the Accredited Entity, will also oversee GRM performance through supervision missions, review of quarterly safeguards reports, monitoring of grievances, and follow-up on significant environmental, social, and SEA/SH incidents.

71. **GCF Indigenous Peoples Policy and ESS7 (Indigenous Peoples).** The AE has confirmed that the project area does not contain any Indigenous Peoples, nor will they be affected by the project's activities.

72. **Sexual exploitation, sexual abuse, and sexual harassment (SEAH).** The revised GCF Environmental and Social Policy adopted by decision B.BM-2021/18 requires safeguarding from SEAH in GCF-financed activities. SEAH risks are likely to arise during community-facing, field-based activities – especially in remote rural sites where workers and beneficiaries interact. However, given the nature, scale and modality of interventions, SEAH risks are assessed to be low. The ESMF and the gender action plan incorporate SEAH mitigation measures such as inclusion of codes of conduct among workers, mandatory SEAH training and awareness sessions for workers and communities, the establishment of a survivor-centred grievance redress mechanism and confidential SEAH reporting pathway, and immediate referral to support services. The project proposal acknowledges that some project sites may be in isolated or remote rural locations and as such, tailored measures such as mobile outreach, designating community focal points and communication channels will be ensured. Measures will be consistent with the World Bank "Good Practice Notes on Prevention of SEA/SH".

## 4.2 Gender policy

73. The AE has prepared a gender assessment and action plan in compliance with the GCF Updated Gender Policy. The gender assessment and action plan was prepared through a combination of desk reviews, field observations and stakeholder consultations. The gender action plan is underpinned by a comprehensive gender analysis that reflects quantitative and qualitative information, including sex-disaggregated indicators and evidence on structural inequalities affecting women and vulnerable groups in the key sectors. The key gender barriers relate to the structural inequalities in access to resources, services and decision-making. Social norms and gender stereotypes further restrict participation in leadership, technical sectors and climate-related planning, while time poverty, mobility constraints and lack of childcare limit women's engagement in project activities and consultations. Other barriers include digital and information gaps, weak access to extension and social services, and intersectional discrimination affecting vulnerable groups such as Roma women and women with disabilities. These constraints collectively reduce women's participation in ecosystem restoration, community governance and climate resilience planning.

74. The project's gender action plan aims to address the gender barriers through targeted gender-responsive participation, capacity-building and economic empowerment measures embedded across all project components. Cross-cutting actions include flexible consultation formats, establishing SEAH prevention and response mechanisms, sex-disaggregated monitoring, childcare support, accessible communication strategies and participation targets (e.g. 30–40 per cent women) to enhance women's inclusion in planning, training and restoration activities. The project also strengthens women's access to resources and opportunities through vocational training, support for women-led enterprises, targeted outreach to female-headed households, and integration of women's traditional ecological knowledge into planning processes. Collectively, these actions aim to reduce structural inequalities, enhance women's participation and leadership, and ensure equitable access to climate adaptation benefits.

75. Monitoring and reporting on the progress of implementing the gender action plan will be embedded within the project's integrated monitoring, evaluation and learning system under component 4, and will rely on systematic collection and use of sex-disaggregated data across all activities. The gender focal/specialist in the PIU will be responsible for day-to-day implementation of the gender action plan, with strategic oversight from the Ministry of Environment and supervision and technical guidance from the AE.

## 4.3 Risks

### 4.3.1. Overall project assessment (low to medium risk)

76. The project's overall risk is assessed as low to medium. The capacity of the EE is assessed as medium risk, given the limited prior experience of the National Office for Environmental Implementation Programs (NOIEP) in administering a World Bank/GCF-financed operation of this scale, although capacity-building measures under the ongoing REMAP operation partially mitigate this. Project-specific execution risks, including maladaptation, institutional turnover and heavy reliance on direct selection, are rated medium-high but are covered by clear mitigation and monitoring measures from both the AE and the Secretariat. Compliance risk is medium, supported by the AE's established fiduciary, anti-corruption and procurement controls. Portfolio concentration risk is low, given the AE's large and diversified project base across multiple regions.

### 4.3.2. Executing entity capability to execute the current project (medium risk)

77. The capacity of the executing entity (EE) to execute the project is assessed as medium risk. The Government of Moldova, represented by the Ministry of Finance and acting through the Ministry of Environment, is the EE, with day-to-day implementation carried out by a PIU hosted within the NOIEP. NOIEP has limited prior experience of directly administering a World Bank/GCF-financed operation of this scale. This could result in procurement delays, ineligible expenditure or misuse of funds if fiduciary controls are not adequately applied. The EE must also coordinate closely with multiple implementing partners, including Moldsilva, NAAM, ICAS, SFEs and LPAs, each with distinct mandates, planning procedures and reporting lines; weak coordination on the part of the EE could lead to duplication or gaps in restoration coverage, inconsistent technical standards across districts, and delayed or fragmented decision-making. In addition, the EE's technical capacity to apply climate-informed restoration prioritization tools and to coordinate climate-adapted forest resource management with EbA approaches in spatial planning is uneven across districts, which could affect the pace and consistency of implementation during early project stages. Under the ongoing REMAP operation, a formal capacity assessment of the NOIEP was conducted, and the NOIEP has since taken mitigation measures, including recruiting professional staff with relevant World Bank experience and applying risk-based procurement oversight through prior and post reviews using the World Bank's system; these measures will be built upon and further strengthened under Green Shield, with specifics to be confirmed during project preparation. As such, the risk in terms of the EE's capacity to execute the project is viewed as Moderate.

#### **4.3.3. Project-specific execution risks (medium risk)**

78. Approximately USD 32.47 million of ecological restoration activities are proposed through direct selection, including afforestation, forest rehabilitation, riparian restoration, shelterbelt restoration and silvopastoral systems. These activities represent a significant portion of the project's implementation budget. Extensive reliance on direct selection for high-value restoration contracts may increase fiduciary, value-for-money and implementation risks if contract justification, cost benchmarking, performance monitoring and oversight arrangements are not sufficiently robust. The AE has indicated that all contracts will be procured in accordance with the "World Bank Procurement Regulations for IPF Borrowers" and will be subject to World Bank fiduciary oversight. The AE further notes that the proposed use of direct selection is limited to entities with a legal mandate and exclusive responsibility for forest management activities. Cost benchmarking, standardized technical specifications, independent monitoring and evaluation

#### **4.3.4. Compliance risk (medium risk)**

79. The inherent integrity risks posed by many of the proposed project elements are relatively low. These include institutional capacity-building (component 1), community engagement (component 3) and project management and monitoring and evaluation activities (component 4). However, the ecological infrastructure restoration and expansion activities set out under component 2, which will involve construction and extensive third-party procurement, present higher inherent integrity risks.

80. The AE has assessed the inherent risks of money laundering/terrorist financing as medium and other prohibited practices as high, respectively. Mitigation measures which the AE has determined will reduce the residual risk of money laundering/terrorist financing to low and the residual risk of other prohibited practices to medium include application of the World Bank's procurement, financial management and anti-corruption policies and procedures; regular financial management and procurement supervision missions; annual external audits; and fiduciary management and procurement training provided to implementing partners.

81. Moreover, the AE's capacity assessment of the EE (NOIEP) identified no material integrity risk-related issues. Any risks or deficiencies identified during project preparation will be addressed through appropriate mitigation measures and further monitored during project implementation. Further risk mitigants include risk-based due diligence of beneficiaries to identify and verify eligibility, as well as training sessions on anti-money-laundering and countering the financing of terrorism and prohibited practices prevention, which will be outlined in the project operational manual.

82. On the basis of the AE's established controls and mitigation measures that will be applied throughout project implementation and which will reduce elevated risks associated with certain project activities, the overall compliance risk is determined to be Medium.

#### **4.3.5. GCF portfolio concentration risk (low risk)**

83. The AE's portfolio consists of fourteen (14) projects in forty-seven (47) countries, covering four (4) regions. Overall, GCF financing has reached around USD 1.5 billion with USD 1.5 billion in co-finance provided. Based on these statistics, the concentration risk is comparatively low. Further, most of the projects have been multi-country programmes, which the current submission is a single-country approach.

#### **4.3.6. Recommendation**

84. It is recommended that the Board consider the above factors in its decision.

| <b>Summary risk assessment</b>                          |                 |
|---------------------------------------------------------|-----------------|
| Overall project                                         | Low-medium risk |
| Accredited entity (AE)/executing entity (EE) capability | Medium risk     |
| Project-specific execution                              | Medium risk     |
| Compliance                                              | Medium risk     |
| GCF portfolio concentration                             | Low risk        |

## **4.4 Fiduciary**

85. The World Bank, as the AE, will provide project oversight to ensure adherence to fiduciary, environmental, social and results-management requirements. Project execution will be governed by 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, procurement regulations and financial management requirements. The Government of Moldova, represented by the Ministry of Finance, will act through the Ministry of Environment as the EE and will be responsible for overall project implementation. A PIU will be established by the Ministry of Environment 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.

86. Technical and operational support for the establishment and operation of a PIU at the Ministry of Environment, responsible for overall project coordination, fiduciary management, procurement, environmental and social risk management, and technical supervision of project activities. The PIU will oversee implementation of project activities, ensure compliance with World Bank fiduciary requirements and the environmental and social framework, and coordinate with national technical partners involved in restoration planning, modelling and implementation sequencing. Operational support will include (i) procurement of consulting

services, ICT solutions and supervision activities required for effective project delivery; and (ii) development and operation of an integrated monitoring, evaluation and learning system to track project results and inform adaptive management. Activities will include baseline data collection, periodic monitoring, and reporting to support evidence-based decision-making and compliance with the World Bank and climate finance reporting requirements.

## 4.5 Results monitoring and reporting

87. The AE provided a detailed theory of change, a logical framework and a budgeted set of M&E activities set out in an M&E plan. These tools comply with the requirements of the GCF Evaluation Policy and the GCF Integrated Results Management Framework.

88. The theory of change sets out how the three mutually reinforcing components of the project, which combine improving the capacity of national and local institutions on climate-informed planning and modelling, environmental monitoring, decision-support systems and restoration governance as well as restoration of ecological infrastructure and community-level ecosystems management, can strengthen ecosystem and individual resilience and increase greenhouse gas removals. The theory of change also expounds on the key barriers and risks to the success of the project.

89. The changes and results set out in the theory of change are to be monitored using the project logical framework. It includes adaptation and mitigation indicators consistent with the requirements of the Integrated Results Management Framework, namely core indicators 1, 2 and 4, and supplementary indicators 2.1, 2.4 and 4.1. The means of verification include primary and secondary sources and qualitative and quantitative data, as also reflected in the M&E plan.

90. The overall M&E budget is around 2 per cent of the total project budget, consistent with the range recommended by the GCF Evaluation Policy, and therefore provides confidence that the project will be able to meet the requirements of the monitoring and accountability framework. It is important to note that although there is a stand-alone budget line for M&E activities in the project budget, and some provisions for the interim and final evaluations within the AE fee, some of the project activities have a specific M&E component in them. The AE provided a breakdown of the costs associated with these activities as well as the associated M&E-specific budget as part of its submission.

## 4.6 Legal assessment

91. The legal arrangements for the project will be based on the accreditation master agreement (AMA) between GCF and the AE which has been signed and is effective. Consequently, they will consist of a project-specific funded activity agreement which incorporates the AMA.

92. The AE has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

93. The proposed project will be implemented in the Republic of Moldova (the “Host Country”), a country in which GCF is not provided with privileges and immunities. This means that, among other things, GCF is not protected against litigation or expropriation in this Host Country, which risks need to be further assessed. Moreover, the ability of GCF to undertake redress activities and/or investigations in the Host Country may be hindered due to the absence of privileges and immunities for relevant GCF personnel.

94. Therefore, it is recommended that the Board considers whether disbursements of GCF proceeds should only be made after GCF has obtained satisfactory protection against litigation

and expropriation in the Host Country, or has been provided with appropriate privileges and immunities for GCF and its personnel.

95. GCF does not hold intellectual property protection for its combined logo (sphere with the words “Green Climate Fund”) in the Host Country. This means that, while intellectual property protection is pending, (i) the GCF combined logo could be used by other entities or individuals (including those seeking to impersonate GCF) and (ii) there could be legal claims by entities or individuals asserting their protected trademark, opposing GCF using its combined logo in the country. In both cases, this may lead to reputational risk.

96. To address the matters raised in this section and facilitate prompt implementation of the project, it is recommended that any approval by the Board is made subject to the following conditions:

- (a) Submission by the AE to GCF of a certificate or legal opinion, in form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed project;
- (b) Signature of the funded activity agreement in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the AE has provided a certificate or legal opinion confirming that it has obtained all final internal approvals, whichever is later; and
- (c) Completion of the legal due diligence to the satisfaction of the GCF Secretariat prior to the signature of the funded activity agreement.

## Independent Technical Advisory Panel's assessment of FP321

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| Proposal name:          | Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation                                |
| Accredited entity:      | International Bank for Reconstruction and Development and International Development Association (World Bank) |
| Country(ies):           | Moldova                                                                                                      |
| Project/programme size: | Small                                                                                                        |

### I. Assessment of the independent Technical Advisory Panel

#### 1.1 Overview

1. This funding proposal<sup>1</sup> for a small-sized public sector project in environmental and social risk Category B is submitted under the standard proposal approval process by the World Bank as the GCF accredited entity (AE), which will provide oversight of the project on behalf of GCF. The executing entity (EE) is the Republic of Moldova, represented by the Ministry of Finance, acting through the Ministry of Environment. The national designated authority for GCF, the Ministry of Environment, has signed a no-objection letter for the project, also authorizing a change in AE from the Austrian Development Agency, which accessed the Project Preparation Fund, to the World Bank.
2. The total size of the proposed “Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation” project is USD 48.29 million, including a requested GCF grant of USD 39.28 million, and an anticipated USD 10 million sovereign loan by the International Bank for Reconstruction and Development (IBRD) to the Government of Moldova, for which an unsigned co-finance letter has been provided.<sup>2</sup> The project will be implemented over a 5-year period, with benefits expected to accrue over a lifespan of 20 years.
3. The project applies an integrated, landscape-scale ecosystem-based adaptation (EbA) approach aimed at strengthening the resilience of ecosystems and rural livelihoods in southern Moldova to the impact of climate hazards including rainfall variability, temperature increase, drought and flood. The semi-arid Southern Development Region (SDR) of the country is dominated by small-scale rain-fed agriculture, with high exposure to climate hazards compounded by non-climate drivers of ecosystem degradation that are driven by poverty and a lack of overall adaptive capacity. The project objective is “to improve climate resilience of targeted landscapes in southern Moldova and strengthen institutional capacity for climate-informed planning”.<sup>3</sup> Section B.2 states that “In parallel, landscape-scale ecosystem

<sup>1</sup> This assessment is based on the funding proposal package received by the independent Technical Advisory Panel on 12 August 2026.

<sup>2</sup> Annex 13 in the funding proposal package received by the independent Technical Advisory Panel on 12 August 2026.

<sup>3</sup> Section A.21 of the funding proposal.

restoration delivers significant carbon sequestration and greenhouse gas (GHG) removal, constituting a primary mitigation outcome of the project alongside its adaptation results.”<sup>4</sup>

4. The project focuses on the Prut River Basin and the broader SDR – encompassing approximately 9,200 square kilometres across eight districts, namely Basarabeasca, Cahul, Cantemir, Căuşeni, Cimişlia, Leova, Ştefan Vodă, Taraclia, and the Autonomous Territorial Unit of Găgăuzia. These districts and Unit straddle both the Prut and broader southern watersheds, such that restoration interventions have relevance for multiple hydrological catchments in southern Moldova.

5. The project is structured into three technical components, shown in the table below, as well as a fourth component on Project Management, Monitoring and Evaluation. The biggest share (57 per cent) of the project funding, (USD 30.78 million in GCF funding and USD 7.9 million in IBRD loan co-finance) will go to Component 2 (for a full breakdown, see table C.2 in the funding proposal).

**Table 1: Components, outcomes and sub-components**

| Components                                                                                                                          | Outcomes                                                                                                                                                                                                                      | Sub-components                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Component 1:</b><br>Institutional capacity development and data-driven planning                                                  | <u>Outcome 1:</u> Improved institutional capacity for ecosystem-based adaptation and enhanced access to early warning systems and climate information services for farmers and communities                                    | 1.1 Institutional strengthening, implementation capacity-building and knowledge platforms                                |
|                                                                                                                                     |                                                                                                                                                                                                                               | 1.2 Integrated data systems and climate-informed ecosystem planning for the Prut River catchment and southern landscapes |
|                                                                                                                                     |                                                                                                                                                                                                                               | 1.3 Climate-resilient digitalization and modernization of the early warning system                                       |
| <b>Component 2:</b><br>Climate-resilient ecological infrastructure restoration in production landscapes                             | <u>Outcome 2a:</u> Increased hectares of natural resource areas brought under climate-resilient management practices<br><br><u>Outcome 2b:</u> Greenhouse gas emissions removed through landscape-scale ecosystem restoration | 2.1 Climate-resilient forest restoration and ecological connectivity enhancement (8,500 hectares)                        |
|                                                                                                                                     |                                                                                                                                                                                                                               | 2.2 Climate-resilient watershed and floodplain restoration - Prut River Catchment (2,000 hectares)                       |
|                                                                                                                                     |                                                                                                                                                                                                                               | 2.3 Climate-resilient agricultural landscapes, shelterbelts, and silvopastoral systems (2,500 hectares)                  |
| <b>Component 3:</b><br>Community engagement, climate-resilient livelihoods, and local stewardship systems for ecosystem restoration | <u>Outcome 3:</u> Community stewardship strengthened to sustain restoration outcomes and improved climate-resilient livelihood options                                                                                        | 3.1 Inclusive community engagement, capacity development, and green rural livelihoods                                    |
|                                                                                                                                     |                                                                                                                                                                                                                               | 3.2 Ecosystem financing mechanisms and community based stewardship                                                       |

## 1.2 Impact potential

*Scale: N/A*

6. The project is cross-cutting, with both adaptation and mitigation goals. It aims to reduce emissions from forestry and land use (mitigation results area 4), with 50 per cent of the GCF

<sup>4</sup> Section D.1 of the funding proposal describes the mitigation results as ‘co-benefits’, but this does not correspond to the rest of the package.

contribution allocated to this results area.<sup>5</sup> Simultaneously, the project aims to enhance the resilience of the most vulnerable people and communities (adaptation results area 1: 27 per cent) as well as the resilience of ecosystems and ecosystem services (adaptation results area 4: 23 per cent).

7. **Mitigation impact.** The project makes a significant contribution to the targets for GHG removals in Moldova from the land use, land use change and forestry (LULUCF) sector, as set out in its nationally determined contribution 3.0, through carbon sequestration associated with restoration interventions. The funding proposal cites historic time series data which show that for a long period, the LULUCF sector was a significant net carbon sink, but that with changes in land and forest use causing a continuous decline in sequestration, the sector became a net source by 2022 (funding proposal section B.1). The project aims to reverse this trend.

8. Undertaking the project activities to restore natural ecosystems, when compared with a scenario without those activities, is expected to lead to a total mitigation impact of 3,953,084 tonnes of carbon dioxide equivalent (CO<sub>2</sub> eq) GHG removal over the 20-year project lifespan, (i.e. 197,654 t CO<sub>2</sub> eq per year). Annex 22 to the funding proposal sets out the methodology and calculations, including assumptions made in the without-project scenario on continued ecosystem degradation. In the with-project scenario, a total of 13,000 hectares (ha) of land is brought under restoration activities as follows: (i) afforestation for ecological restoration of degraded land; (ii) afforestation to restore shelterbelts in agricultural areas; (iii) improved forest management to rehabilitate degraded forests through enrichment planting and assisted natural regeneration; (iv) restoration of wetlands and river corridors; and (v) converting grasslands to silvopastoral systems. It is expected that gains through carbon removals will be negatively offset by ongoing emissions from fuelwood harvesting from forests, and also by emissions from increased livestock numbers under improved productivity of silvopastoral systems, and these emissions are factored in. The modelling would have benefitted from a more accurate phased plantation schedule.

9. **Climate impact and risk.** Many of the project activities highlighted above for their mitigation impact are also designed to support adaptation of Moldova to the negative impacts of global climate change, in line with the country's National Climate Change Adaptation Programme.<sup>6</sup> Southern Moldova faces an accelerating convergence of climate hazards: increasing drought frequency and intensity, rising temperatures with heatwaves, and heavy downpours causing flash floods and soil erosion. Climate scenario analysis by the World Bank projects that these trends will continue and that by 2050, Moldova is likely to experience an increase in temperature of between 1.9 °C and 2.8 °C, relative to the 1995–2020 average. The impact on precipitation is less clear, but it is expected that changing precipitation patterns will result in an increased frequency and intensity of extreme events, including droughts and floods.<sup>7</sup>

10. These hazards are already generating serious 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. Impacts are particularly severe for small-scale farmers and poor communities of the SDR, whose livelihoods are dependent on largely rain-fed agriculture. The 2007 drought, affecting 80 per cent of the country's territory, caused a 23 per cent decline in agricultural production and an estimated USD 1 billion in economic losses, and the 2020 drought a 22 per cent decline in the

<sup>5</sup> Several references to mitigation 'co-benefits' throughout the funding proposal should be disregarded, as this is an error – these are, in fact, intended to be core project results.

<sup>6</sup> [https://unfccc.int/sites/default/files/resource/NAP\\_Moldova\\_2024.pdf](https://unfccc.int/sites/default/files/resource/NAP_Moldova_2024.pdf).

<sup>7</sup> [World Bank Moldova Country Climate and Development Report](#).

value of farm output.<sup>8</sup> The NAP projects ongoing declines in agricultural productivity due to increased water stress, even without considering the impact of extreme weather events.<sup>9</sup>

11. Floods already cause substantial damage, and their frequency and intensity is expected to increase because of climate change, including both pluvial and fluvial flooding caused by intense downpours. Flood impacts on roads, buildings and agricultural land currently cost Moldova about 0.8 per cent of gross domestic product (GDP) annually in asset damages alone, primarily to roads, followed by buildings, with costs distributed unevenly across the country. In the south-west, where the proposed project focuses, several raions (districts) face a combination of above-average flood exposure and poverty, and significant risk of crop losses to flooding. World Bank analysis 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 has experienced 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.<sup>10</sup>

12. Forests and other natural ecosystems in Moldova are also expected to be severely affected by climate change. The NAP identifies significant risks to forests including changing sensitivity of forest species to water scarcity and increasing damage caused by fires, windstorms, floods and droughts.

13. Climate impacts are exacerbated by ongoing and extensive land degradation caused by non-climate drivers including land fragmentation; inadequate practices that affect soil health (especially tillage); overgrazing of pasture lands; and poor forestland management (including illegal logging of protective forest belts).<sup>11</sup> Degraded soils, erosion-prone slopes, fragmented forest systems, and diminished wetland and riparian ecosystems reduce 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 negative feedback loop in which ecosystem degradation increases exposure to climate risks, while climate change accelerates further environmental degradation. Rural communities, particularly women and other vulnerable groups, face increased livelihood insecurity as these systems fail, with vulnerability deepened by weak institutions and lack of access to information and finance.

14. **Adaptation impact.** The Moldova Green Shield project aims to 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. The project addresses both the biophysical drivers of climate vulnerability and the institutional and behavioural constraints that limit effective adaptation responses, by 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. The adaptation logic is that 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.

15. The key EbA/restoration interventions to be undertaken in the landscape, under Component 2, are in three clusters, each with further subtypes of intervention:

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<sup>8</sup> [World Bank, 2021.](#)

<sup>9</sup> [Republic of Moldova National Climate Change Adaptation Programme until 2030.](#)

<sup>10</sup> [World Bank Moldova Country Climate and Development Report.](#)

<sup>11</sup> [World Bank and International Center for Tropical Agriculture \(CIAT\) 2016.](#)

- (a) Sub-component 2.1 will employ contractors to work across 5,000 ha on afforestation and ecological restoration of degraded public lands administered by local public authorities (which are closely connected to the communities) and across 3,500 ha on rehabilitation of degraded forest stands in state-owned natural forests. Planting material will be supplied through the construction and equipping of a regional nursery<sup>12</sup> for the project and beyond, and interventions will build on extensive in-country expertise on forest management and restoration.
- (b) Sub-component 2.2 will work across 2,000 ha of the Prut River Catchment (in state land under the national water authority and local public authority (LPA)-administered riparian zones) with three elements: first, restoration of degraded river corridors (well described and budgeted for in annex 4);<sup>13</sup> second, rehabilitation and ecological restoration of wetlands and floodplains (clearly intended, though not budgeted for in annex 4);<sup>14</sup> and third, described as “watershed protection and enhancement measures”, although the only activity actually budgeted for is grey infrastructure (reservoir desilting) rather than nature-based EbA measures. An apparent lack of technical expertise and rigour in restoration design in relation to this sub-component is discussed below.
- (c) Sub-component 2.3 will employ contractors (advised by an international consultant) to undertake work across 500 ha of primarily LPA-managed agricultural lands and field boundaries (with some private farmland through voluntary agreements) on the establishment of shelterbelts to protect farmland from wind erosion. This sub-component also foresees the restoration and development of silvopastoral systems across 2,000 ha of primarily LPA-managed communal pasture land (with some private pasture through voluntary agreements). Forestry expertise from Moldsilva and other local actors is relevant here, as both interventions involve tree planting.

16. These interventions are combined with community engagement, climate-resilient livelihoods, and local stewardship systems for ecosystem restoration through Component 3. Overall, the project is expected to generate direct and indirect adaptation benefits for approximately 185,000 people, including 30,000 direct beneficiaries. Direct beneficiaries include green jobs recipients, silvopastoral system adopters, community stewardship participants (through Forest User Groups and community-orientated LPAs) and adopters of diversified livelihoods, for example, beekeeping, non-timber forest products and ecotourism, as well as members of their households.<sup>15</sup> Indirect benefits arise through improved drought resilience, reduced soil degradation, strengthened water regulation, and enhanced capacity of institutions and communities to anticipate and respond to climate risks, through climate-informed planning systems, environmental monitoring, and early warning services for droughts, heatwaves and hydrological shocks.

17. At landscape level, the project will bring approximately 13,000 ha of degraded and climate-sensitive land under improved climate-resilient management, contributing to Target 5 of the GCF Strategic Plan for 2024–2027. 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

<sup>12</sup> The nursery will be the “Southern Regional Forest Reproductive Material Centre”.

<sup>13</sup> USD 2.45 million from GCF grant and USD 1.95 million from IBRD loan.

<sup>14</sup> The budget goes from activity 2.2.1 (riparian) to activity 2.2.3 (watersheds), with no activity 2.2.2 shown, and no funding indicated for wetland and floodplain restoration. See annex 4 to the funding proposal.

<sup>15</sup> Based on an average household size of three people. See annex 23 to the funding proposal for methodology and calculations.

contributes to avoided economic losses associated with crop failures, land degradation and water stress.

18. Such a truly ecosystem-based approach to adaptation, working at landscape scale on rewetting, regreening and stabilizing natural systems against climate hazards is welcomed by the independent Technical Advisory Panel (iTAP). Beyond direct biophysical impacts, the project aims to 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 in future. These systems ensure that interventions can remain aligned with evolving climate risks and ecological conditions, a feature which is essential to avoid maladaptation.

19. **Lack of clarity on watershed interventions.** In response to a question on inconsistencies in the way “watershed protection” interventions are described between (i) the component outline in the funding proposal, (ii) the logical framework section E.6, and (iii) the budget (annex 4 to the funding proposal), the AE confirmed that this intervention stream focuses on “catchment-scale erosion and sediment management: interventions targeting upstream agricultural and degraded land areas to reduce erosion, sediment transport, and reservoir siltation — particularly affecting Lake Manta and Lake Beleu. This includes the desilting and stabilization of reservoirs and, where feasible, infrastructure for groundwater recharge. In the logical framework, the description of ‘catchment-scale interventions to reduce upstream erosion, sediment transport, and siltation’ captures this element accurately”. No detail is provided in the funding proposal package, however, (including the feasibility study) on upstream ‘green’ measures that would prevent erosion, and the relevant part of the budget (see annex 4 to the funding proposal) applies the USD 3 million of the IBRD loan all to ‘grey’ construction – presumably for desilting of small reservoirs, which will restore water storage capacity with some positive benefits for drought amelioration and flood avoidance.

20. Similarly, no detail is provided on what “infrastructure for groundwater recharge” might entail, although this will be critical to future EbA efforts nationwide, including in the Moldovan part of the transboundary Danube River basin. That basin has experienced severe, record low water levels and extreme drought conditions through the summer of 2026 – due to prolonged heatwaves and unusually low rainfall – causing severe soil moisture deficits and exceptionally low river flows, with serious impacts on water resources, agriculture, energy, navigation and ecosystems.<sup>16</sup> Although this may represent an oversight that can be corrected, there appears to be no provision in the budget for floodplain restoration, where natural or managed aquifer recharge might be expected to occur.

21. The iTAP asked the AE about why the feasibility study includes no technical discussion of lessons learned from past EbA projects in Eastern or Western Europe, including the experience of the European Investment Bank and European Union organizations supporting Moldovan forestry management, and how these were applied in selecting approaches for the Green Shield project. The AE asserted that the intervention “builds directly upon the extensive catalogues of technical protocols, guidelines, and standards being established through major in-country initiatives, specifically the World Bank’s REMAP and TerraMoldova projects”, which are “mapped against international benchmarks, including the Society for Ecological Restoration standards, IUCN [International Union for Conservation of Nature] Nature-based Solutions frameworks, and global EbA best practices”.<sup>17</sup> Given the extensive expertise in EbA across the World Bank Group, for example through the Pilot Program for Climate Resilience funded

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<sup>16</sup> <https://interreg-danube.eu/projects/danube-water-balance/news/drought-in-the-danube-basin-simulation-analysis-of-the-2026-extreme-event>.

<sup>17</sup> Written responses by the World Bank to iTAP questions, 31 August 2026.

through the Climate Investment Funds from 2008 through 2025,<sup>18</sup> it is disappointing that this was not reflected in any detail in the feasibility study.

22. **Lack of enforcement.** Section B.1 of the funding proposal notes that the share of forested land in Moldova is among the lowest in the Europe and Central Asia region, with highly fragmented forest cover, and that “forest dependency in Moldova remains high, including as a source of firewood, which contributes to deforestation and indoor air pollution”. The shift of the LULUCF sector from carbon sink to carbon source in the national inventory is ascribed partially to “a significant increase in illegal logging”, which is also dismantling protective forest belts in farmland.<sup>19</sup> Since 2022, the Russia-Ukraine conflict has significantly raised the cost of gas, driving more residents of the Southern region of Moldova to rely on wood for heating in freezing winters.<sup>20</sup> The project aims to reverse this trend by planting and restoring forests, and planting trees in shelterbelts and pastures. Sustainable wood harvesting from these sites for fuel and other purposes is not discussed in the funding proposal but is included in the financial analysis as a revenue stream from project interventions (see annex 3a). Assumptions are made on growth rates, but there is no discussion of the risk that newly planted trees will be harvested before growing to maturity – which would reverse mitigation benefits and compromise adaptation efforts. The proposal contains no discussion of policy for affordable, clean energy in rural areas, or ongoing government and LPA efforts to enforce legislation against illegal logging, and there is no government co-finance for the project to tackle this key non-climate driver of ecosystem degradation.

23. The iTAP assesses the impact potential (for both adaptation and mitigation) of the project as medium.

### 1.3 Paradigm shift potential

*Scale: N/A*

24. The Moldova Green Shield project aims to contribute to a paradigm shift involving a “transition from fragmented, project-based ecosystem restoration towards integrated, climate-risk-informed landscape management systems embedded within national and subnational planning frameworks in Moldova”.<sup>21</sup> Past ecosystem restoration activities have been limited in scale, and insufficiently aligned with landscape-level priorities and clear pathways to climate resilience, and have remained dependent on external funding sources. The project promotes a new way of thinking about interventions in the landscape, transforming the way restoration investments are designed, prioritized and sustained over time – taking an integrated approach that combines climate-informed planning systems, large-scale restoration of ecological infrastructure, and community-based stewardship mechanisms.

25. **Enhanced enabling environment.** The project’s Component 1 on “Institutional capacity development and data-driven planning” aims to enhance the enabling environment through improved institutional capacity for EbA, as well as enhanced access to early warning systems and climate information services for farmers and communities. Sub-component 1.1 will: develop government capacity for scenario-based climate and ecosystem modelling; modernize the environmental monitoring and geospatial data infrastructure; and develop the architecture for an integrated planning system for climate, hydrology and ecosystems. Sub-component 1.2 will build capacity development for national and local institutions on integrated data systems and climate-informed ecosystem planning for the Prut River catchment and

<sup>18</sup> See the recent World Bank publication [Key Lessons from the Pilot Program on Climate Resilience](#).

<sup>19</sup> Section B.1 of the funding proposal.

<sup>20</sup> <https://thedocs.worldbank.org/en/doc/9a4979b9cb56380179fbe177ed17dc66-0080012024/original/Moldova-MEU-English.pdf>.

<sup>21</sup> Section D.2 in funding proposal.

southern landscapes, with operational guidelines and a climate-resilient landscape knowledge platform to support data sharing, communication and institutional learning.

26. **Early warning system upgrading.** The project sub-component 1.3 will: enhance a nascent integrated, digital multi-hazard early warning platform; modernize climate and hydrometeorological data systems; and strengthen multichannel warning dissemination with user-oriented climate information services. The feasibility study (section 6.4) explains that this sub-component will complement and not overlap with the World Bank-financed “Strengthening Moldova’s Disaster Risk Management and Resilience” (SMORE) project,<sup>22</sup> that also supports modernization of national hydrometeorological monitoring, forecasting and public-warning infrastructure. The Green Shield project will use and complement these national systems, without duplicating observation infrastructure, forecasting systems or the cell-broadcast public-warning platform financed under SMORE, focusing instead on improving the interoperability and practical application of and access to meteorological, hydrological and climate information for ecosystem restoration and local adaptation planning.<sup>23</sup>

27. **Sustainability of restoration efforts.** Component 3 aims to strengthen the institutional and long-term financial sustainability of restoration investments, and to support mechanisms for long-term management of ecosystems restored under Component 2. It does so through two sets of activities: building the community stewardship capacity that ensures restored ecosystems are actively managed at the local level; and developing the institutional and financial frameworks that can sustain stewardship beyond the project's lifetime, beginning the process of enabling scale-up. Sub-component 3.1 will support the implementation of Community Stewardship Plans through procurement and distribution of stewardship equipment and materials for LPAs, including tools for replanting and maintenance, monitoring equipment (global positioning system devices, field data collection tablets), and basic protective gear, allocated to registered groups against verified stewardship plans. Community stewards will be trained in ecosystem monitoring protocols, restoration maintenance techniques, and use of simple data collection tools.

28. **Replication and scaling.** The project takes the first step in upscaling by providing a demonstration of large landscape-scale EbA as a viable adaptation model. By implementing integrated restoration interventions across approximately 13,000 ha of climate-sensitive landscapes, the project will generate practical experience and lessons. It will also generate data showing how restoration of ecological infrastructure can simultaneously enhance water regulation, soil stability, agricultural resilience, and carbon sequestration, providing a model for scaling across other regions of Moldova. Lessons, methodologies and institutional capacities developed in the SDR will inform future EbA investments nationally, including in Danube Basin areas, currently severely affected by drought. Human resource capacity for national and local planning and data management will be built in Component 1, to prepare for upscaling, once sufficient financial resources are available.

29. **National financial mechanisms.** The project work in sub-component 3.2 to explore and enable sustainable financing mechanisms for upscaling is a good start. The project will investigate a range of mechanisms, and pilot design of two selected approaches: a small-scale watershed payment-for-ecosystem-services (PES) arrangement between upstream community stewards and downstream water users; and a biodiversity credit methodology linked to monitored restoration outcomes. In response to a question from the iTAP, the AE confirmed that potential downstream water users who could be ‘buyers’ of the ecosystem services could include: (i) municipal water utilities serving the SDR districts, which rely on surface and groundwater sources that are directly affected by the quality of upstream land management,

<sup>22</sup> [Strengthening Moldova’s Disaster Risk Management and Resilience \(SMORE\) Project](#).

<sup>23</sup> Where justified and not covered by SMORE, targeted improvements in data systems or monitoring coverage will be supported in climate-vulnerable southern landscapes.

particularly with respect to sedimentation, filtration capacity, and groundwater recharge; (ii) irrigation associations and agricultural water-user groups that depend on reservoir water volumes and quality for agricultural irrigation – volumes that are directly impacted by upstream erosion and sediment loads; (iii) industrial water users, including agro-processing facilities and food manufacturers in the SDR that require reliable, clean water supply; and (iv) the national government as a beneficiary of avoided disaster costs from reduced flood damage and avoided costs of water treatment.<sup>24</sup> The iTAP believes this is a promising avenue and encourages the AE to draw on experience across the World Bank Group and partners in designing watershed investment programmes and water funds.

30. Biodiversity credits seems a less promising solution, given that the global market remains small and fragmented, hampered by the absence of a single key metric (the equivalent of t CO<sub>2</sub> eq in carbon credits). The funding proposal briefly mentions an area that may be most important: “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.” For PES and biodiversity credits, the proposal does not elaborate on the legal aspects related to the ownership of these services and the challenges associated with attribution during the implementation phase.

31. **Lack of engagement with the global Biodiversity Finance Initiative (BIOFIN).** The iTAP was surprised to see no mention in the funding proposal of the work of Moldova on biodiversity financing, closely related to restoration/EbA financing. Moldova recently joined BIOFIN under an umbrella programme financed by the Global Environment Facility through the United Nations Development Programme. An assessment of biodiversity costs from 2021 to 2025 has been launched by the Ministry of Finance, covering the environment, biodiversity conservation, forest and land management, in alignment with the Natura 2000 network, and aiming to develop a Biodiversity Financing Plan for Moldova.<sup>25</sup> This includes potential restructuring of the National Environmental Fund portfolio, and possible PES mechanisms in the Lower Dniester and Prut river basins. Because of the overlap between this initiative and the proposed GCF project work, integration of these workstreams will be important to ensure synergy and avoid duplication, also to promote GCF-Global Environment Facility complementarity and coherence.

32. **Limitations of Natural Capital Accounting approach.** Under sub-component 1.2, the project aims to use 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... [to] 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”. This is welcomed as the basis for work on sustainable financing mechanisms in sub-component 3.2, and the mention of biodiversity finance is in line with the points above. However, the iTAP notes that systemic work on NCA, whereby the country establishes a permanent statistics system, in parallel with measuring gross domestic product, to track the stocks and flows of natural resources and the ecosystem services they provide, is much more demanding, and will not result from one-off valuation efforts.

33. **Cross-cutting technical coordination.** Sub-component 1.2 will establish a climate-resilient landscape knowledge platform to support data sharing, communication and

<sup>24</sup> Written responses by the World Bank to iTAP questions, 31 August 2026.

<sup>25</sup> At a workshop in August 2026 participants identified a wide range of potential financing options including PES, biodiversity offsets, ecotourism taxes, budgetary allocations and reform of agricultural subsidies. See <https://logos-pres.md/en/news/authorities-have-estimated-the-costs-of-biodiversity/>.

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”<sup>26</sup> to support future restoration investment planning, which is welcomed. Given the enormous task of achieving a mindset shift among a range of government ministries and agencies that tend to operate separately, however, the iTAP believes that an in-person interagency technical forum could also be useful. At least in the short term, in order to guide the work of Component 1, it would seem advantageous to have a cross-cutting technical structure under the project steering committee, something which is currently absent from the project implementation arrangements.

34. Based on the above, the iTAP assesses the project’s paradigm shift potential as medium.

## 1.4 Sustainable development potential

*Scale: N/A*

35. The funding proposal does not comment on the project’s contribution to the Sustainable Development Goals, but identifies specific environmental, economic and social co-benefits that are expected to result from project activities, in addition to the core adaptation and mitigation results.

36. **Environmental co-benefits.** Closely related to the project’s ecosystem-based adaptation benefits are environmental benefits arising from the project interventions to restore 13,000 ha of degraded forests, agricultural protection systems, wetlands and riparian landscapes. The funding proposal (section D.3) indicates that this work “will improve ecosystem functionality and enhance the provision of ecosystem services, including water regulation, soil fertility, erosion control, and biodiversity protection”. Examples of specific biodiversity benefits are from sub-components 2.1 where “restoration approaches will promote structurally diverse, mixed-species, climate-resilient forests”; 2.2 where wetland rehabilitation will include “recovery of native wetland/meadow vegetation”; and 2.3 where shelterbelts will include “enrichment planting, structural restoration and multi-species systems”, taking into account pollinator habitat.<sup>27</sup>

37. **Economic co-benefits.** The project aims to 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, enhancing rural prosperity and boosting farm incomes. The project will support development of restoration-linked livelihoods, including agroforestry, silvopastoral systems, and sustainable use of forest and non-timber forest products, providing opportunities for income diversification. Market-related vocational training will be provided in: nursery management, restoration techniques, beekeeping, climate-smart agriculture, ecotourism, and sustainable forestry practices. It is hoped that the project will create spillover effects that benefit surrounding communities and production systems, contributing to broader rural development outcomes, including improved food security.

38. **Social and gender co-benefits.** The project will generate social benefits by strengthening community participation, enhancing skills and capacity, and promoting inclusive access to climate-resilient livelihood opportunities. Particular attention is given to the inclusion of women, elderly populations and other vulnerable groups, with a specific target of 40 per cent women participating in restoration planning, vocational training and livelihoods. Livelihoods support will focus on women-led and youth-led cooperatives and/or enterprises – providing technical training, business development support and asset packages such as beehives and honey extraction equipment, processing units for forest products, seedling production

<sup>26</sup> Section B.3 of funding proposal.

<sup>27</sup> Section B.3 of funding proposal.

infrastructure, drip irrigation systems for agroforestry plots, and cold storage or drying facilities for medicinal and aromatic plant value chains.

39. **Market access.** In response to a question from the iTAP on whether lack of market access is a barrier to commercialization of non-timber forest products and how this would be addressed (since it is not explicitly mentioned in sub-component 3.1), the AE confirmed that lack of reliable buyer off-take agreements is a real constraint, since “smallholders and community groups face: (i) inability to meet buyer volume requirements individually; (ii) lack of aggregation and processing infrastructure; (iii) limited market information and price transparency; and (iv) absence of quality certification for higher-value markets including EU [European Union] export markets”.<sup>28</sup> The first two gaps will be addressed through physical asset packages to overcome the aggregation, processing and storage infrastructure bottleneck; and through promoting and strengthening women- and youth-led cooperatives and enterprises and Forest User Groups as the primary beneficiary structures (for scale, legal identity and collective bargaining capacity). The project will not, however, provide direct support to engage buyers and negotiate supply agreements with fair prices.

40. **Fuel-wood replacement.** Although most households in southern Moldova are connected to the electricity grid, both electricity from gas-fired power plants and liquified petroleum gas have become prohibitively expensive for many, especially since 2022 due to the Russia-Ukraine conflict.<sup>29</sup> Many households still rely on biomass for cooking and heating, sometimes using agricultural residues, but often harvesting wood from forests, both legally and illegally. This has negative impacts on indoor air pollution and respiratory health, especially of children. Although the financial analysis (annex 3 to the funding proposal) highlights wood harvesting opportunities from restored forests, this is not discussed in the funding proposal beyond a brief reference to this analysis (in section B.5 of the funding proposal). There is no discussion of enforcement of legislation against illegal fuelwood extraction, and the impacts this could have in reducing forest degradation but also restricting affordable energy access.

41. The iTAP assesses the sustainable development potential of the project as medium to high.

## 1.5 Needs of the recipient

*Scale: N/A*

42. In terms of adaptation, Moldova is considered as one of the most climate-vulnerable nations in Europe, according to the Notre Dame Global Adaptation Initiative vulnerability assessment methodology.<sup>30</sup> While the country has experienced droughts on a regular basis throughout its history, these 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.<sup>31</sup> At the same time, increasing rainfall variability and episodic heavy rainfall events have contributed 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.

43. 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. The project focuses on the Prut River Basin and the broader SDR, covering approximately 9,200

<sup>28</sup> Written responses by the World Bank to iTAP questions, 31 August 2026.

<sup>29</sup> <https://carnegieendowment.org/europe/strategic-europe/2025/01/moldovas-gas-crisis-is-europes-headache>.

<sup>30</sup> Notre Dame Global Adaptation Initiative (ND-GAIN) Index.

<sup>31</sup> [World Bank. Moldova - Country Climate and Development Report.](#)

square kilometres across eight districts and the Autonomous Territorial Unit of Găgăuzia because this area represents the highest concentration of compounding climate vulnerabilities in Moldova: the lowest forest cover (~6 per cent), most severe land degradation, greatest agricultural exposure to drought, and highest flood risk along the Lower Prut floodplain.

44. The country has a low debt to GDP ratio of 37.8 per cent,<sup>32</sup> and the Government of Moldova has indicated willingness to increase the country's debt-servicing obligations by taking a sovereign loan of USD 10 million from IBRD (loan at 5.14 per cent interest rate, with 15-year tenor and 5-year grace period), forming co-finance to the proposed GCF project. The loan will enable capital-intensive activities in afforestation and development of a plant nursery that is essential to the country's future plans for EbA and restoration. Based on the economic analysis (see annex 3 to the funding proposal) it can be expected that project investments will enhance productivity of forestry and grazing, and avoid crop losses, but will not generate significant direct or indirect financial revenue for the state. Beyond the sovereign loan, there is a need for additional grant finance from GCF, given the public goods nature of the investments, whose benefits accrue to rural society in general, as well as to poor, small-scale farmers.

45. The iTAP thus assesses the needs of the recipients as high.

## 1.6 Country ownership

*Scale: N/A*

46. The proposed project, brought by World Bank as the AE, will be executed by the Government of Moldova, which has signed a no-objection letter, and whose central role in project development and implementation is outlined below.

47. **World Bank as AE.** The World Bank (IBRD and International Development Association, acting as the AE to GCF) will provide comprehensive oversight to supervise adherence to fiduciary, environmental, social and results-management requirements. The World Bank as AE will supervise project implementation, including regarding compliance with the World Bank Environmental and Social Framework, procurement regulations, and financial-management requirements, all in alignment with the funded activity agreement to be signed with GCF. The World Bank has a clear track record as a GCF AE, with 12 projects under implementation.<sup>33</sup> Although the World Bank Group has extensive expertise in supporting countries on EbA and disaster risk reduction, particularly through the Pilot Program on Climate Resilience, this expertise was not drawn on extensively in developing the project, representing a missed opportunity.

48. **Government as EE.** According to section D.4 of the funding proposal, the project is characterized by the active leadership of the Government of Moldova in both preparation and implementation, and project activities will be integrated within existing institutional and planning frameworks. The government is the sole EE for the project, represented by the Ministry of Finance, acting through the Ministry of Environment, which has overall responsibility for coordination and implementation. Key national institutions, including the forestry agency Moldsilva (responsible for sustainable forest management and implementation of the National Forest Extension and Rehabilitation Programme (NFERP) and relevant technical ministries and agencies (agriculture, water, meteorology) have been 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.

<sup>32</sup> <https://worldpopulationreview.com/country-rankings/debt-to-gdp-ratio-by-country#title>.

<sup>33</sup> [Link to World Bank accredited entity page](#) on GCF website.

49. The Project Implementation Unit will be hosted by the National Office for the Implementation of Environmental Projects, while strategic oversight will be provided through a Project Steering Committee chaired by the Ministry of Environment and including representatives of the Ministry of Environment, Ministry of Finance, Ministry of Agriculture and Food Industry, Moldsilva, and the National Administration 'Apele Moldovei' (NAAM) the state authority responsible for national water resources management, watershed protection and implementation of river basin management measures. Given the need for cross-sectoral coordination in bringing about a new approach to integrated land-use management and planning with climate risk management integrated into it, and the scaling up of EbA and landscape-level restoration, it is somewhat surprising that the Project Steering Committee is not backed up by a technical committee, and this may be something the AE and EE wish to explore.

50. **National implementing partners.** NAAM and Moldsilva will contribute to quality control and supervision of works carried out by State Forest Enterprises and contracted service providers. Monitoring of climate and environment impacts will be supported by the State Hydrometeorological Service and the State Environmental Inspectorate. Through its network of State Forest Enterprises, Moldsilva has extensive experience in afforestation, forest rehabilitation and nursery management and will provide technical oversight for Component 2 activities. NAAM is responsible for national water resources management, watershed protection and implementation of river basin management measures. These institutions are engaged on the ongoing Restoring Ecosystems for Marine Pollution Prevention (Re-MAP) and Terra-Moldova projects with demonstrated capacity to carry out complex projects. Where the iTAP sees a potential gap is in technical expertise on watershed EbA measures, as reflected in the mixed messages about the third part of sub-component 2.2 on "watershed protection and enhancement measures", which involves rehabilitation of grey infrastructure and no green measures. If this area of work is to grow beyond the project in future, there will be a need to draw more systematically on relevant regional and global expertise.

51. **Local implementing partners.** Collaboration with LPAs will be essential for implementation of Components 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. 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 will participate in implementation of forest restoration, shelterbelt establishment, silvopastoral development, wetland/riparian restoration, and maintenance activities under Components 2 and 3 of the project. Eligible communities will be selected using transparent eligibility criteria, including proximity to restoration sites, participation in restoration activities, climate vulnerability, dependence on ecosystem services, willingness to participate in stewardship arrangements and demonstrated commitment to long-term maintenance of restored ecosystems.

52. **Policy and strategy alignment.** Ecosystem restoration and ecosystem-based adaptation are central pillars of the climate strategy for Moldova. The project directly supports the operationalization of these national priorities by translating policy commitments into climate-informed, landscape-scale interventions. The funding proposal highlights two key documents advocating for EbA and landscape restoration at scale: the NFERP 2023–2032 and the National Climate Change Adaptation Programme 2030), the implementation of which remains constrained, however, by institutional, technical and financial barriers, which this project seeks to address. Project investments in restoration are aligned with and contribute to NFERP targets.

53. The project contributes to the updated nationally determined contribution 3.0 (2025) for Moldova, which targets a 71 per cent reduction in net GHG emissions by 2030 through the landscape interventions discussed above, aiming to remove an estimated 3.95 million t CO<sub>2</sub> eq

from the atmosphere over 20 years, and also to improve institutional capacity for LULUCF-sector measurement, reporting and verification through a system designed to feed into the national LULUCF inventory system for UNFCCC reporting. The feasibility study highlights a number of other policies and strategies with which the project is aligned, including the Environmental Strategy 2024–2030 and the National Development Strategy Moldova 2030 which has objectives related to reforestation of degraded land, forest restoration, and the establishment of ecological corridors. Key legislation provides the legal basis for afforestation and reforestation efforts on public lands, including the Land Code (22/2024), the Forest Code (69/2024), the Law on Improving Degraded Lands through Reforestation (2000), and the recent Law on the Production, Trade and Use of Forest Reproductive Material (44/2022).

54. **Engagement of stakeholders.** The stakeholder engagement plan, annex 7 to the funding proposal, provides a summary of extensive national and local preparation-stage consultations (2022–2026) that were initiated and led by the Government of Moldova, working with the Austrian Development Agency, originally slated as the AE for the project. The World Bank became engaged in the project only in March 2026 but was able to hold two appraisal-stage public consultations in July 2026 – one in Chişinău with scientific and academic institutions, and one with civil society and non-governmental organizations – which together confirmed broad stakeholder support and generated technical recommendations reflected in the final project design. The Gender Assessment and project-level Gender Action Plan (annex 8 to the funding proposal) was based on a mixed-methods approach combining literature review, policy analysis, sex-disaggregated data analysis, stakeholder consultations, and local workshops conducted in target districts including Basarabeasca, Cahul, Cantemir, Cimişlia, Leova, and the Autonomous Territorial Unit of Găgăuzia.

55. Section 4.2 of annex 7 provides a useful summary of how stakeholder feedback helped shape project design. For example, women’s feedback during stakeholder consultations influenced several key design elements: women’s preference for longer-term, stable employment contracts (over short seasonal assignments) informed the design of community stewardship and livelihood support activities under Component 3; women’s identification of barriers to participation – including limited childcare, transport to remote sites, and inflexible scheduling – informed the gender-responsive participation approach in the stakeholder engagement and Gender Action Plan; women foresters’ confirmation of their skills and leadership in restoration work informed the explicit employment targets and capacity-building provisions in the Gender Action Plan; and women’s concerns about risks of sexual exploitation, abuse and harassment (SEAH) in isolated restoration sites informed the adaptation of the SEAH mitigation approach for remote contexts, as reflected in the project safeguards documentation. This good practice is commended by the iTAP.

56. The iTAP assesses country ownership of the project as high.

## 1.7 Efficiency and effectiveness

*Scale: N/A*

57. Of the total USD 49.28 million committed for the project, 79.3 per cent (USD 39.28 million) is expected to be provided as a grant by GCF and the remaining 20.29 per cent (USD 10 million) is expected to be provided as a sovereign loan to the Republic of Moldova by IBRD of the World Bank Group, forming project co-financing. Subject to a positive decision from the GCF Board, the World Bank will consider the project for appraisal/decision and negotiation with Moldova, and subject to a positive decision by the IBRD Board of Executive Directors, will allocate IBRD funding for its implementation.

58. **Financial analysis.** According to the economic and financial analysis, the project activities are not financially viable over the 20-year lifespan in any scenario. The financial analysis was conducted for three scenarios, corresponding to three main financial instruments

used by GCF, namely grant, concessional loan and commercial loan through a financial institution. In all scenarios, the revenues to be generated over the lifespan of the project would not be sufficient to pay back the loan and thus would result in a negative financial net present value. The GCF grant scenario yields the least-negative financial net present value, making it the most appropriate financing option.

59. The fact that the project does not generate positive financial returns in any financing scenario reflects 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 revenue from non-wood forest products may accrue to local communities and are captured in the economic analysis as national welfare benefits, as they do not constitute financial revenues for government as the executing entity.

60. **Economic rate of return.** In contrast, the economic analysis demonstrates strong economic viability. The project's economic internal rate of return (EIRR) is nearly 33.3 per cent and 50.2 per cent with low and high shadow prices of carbon respectively<sup>34</sup>. Each dollar invested in the project will bring an economic return of nearly USD 5.4 and USD 9.2 respectively, in the two scenarios mentioned above. Benefit streams are quantified in relation to avoided crop production loss, increased pasture-based livestock production, wood production for fuel and other purposes, climate change mitigation, and ecosystem services (excluding wood and fodder).

61. The project's EIRR is high, when climate mitigation benefits are included, for two main reasons: the substantial GHG removal potential, and the use of shadow prices of carbon – which are much higher than voluntary market carbon prices – to value the GHG removal. The AE explained in response to an iTAP question that the shadow prices of carbon, rather than voluntary market carbon prices, were used because the project does not generate any commercial carbon credits and the GHG removal it generates is considered an economic benefit only (see annexes 3a and 3b to the funding proposal). Without accounting for the GHG removal, the EIRR of this project is 14.1 per cent.

62. **Cost per t CO<sub>2</sub> eq.** The cost per tonne of the carbon sequestration benefits of the project is reasonable. With anticipated mitigation results of 3,953,084 t CO<sub>2</sub> eq, the cost per tonne, considering the whole project investment including co-finance, is USD 12,47, and USD 9,34 per tonne when taking into account only the GCF investment.

63. The iTAP assesses the project's efficiency and effectiveness as medium to high.

## II. Overall remarks from the independent Technical Advisory Panel

64. The Moldova Green Shield project is an important ecosystem-based adaptation initiative that has the potential to achieve significant climate change adaptation benefits for southern Moldova, reducing the exposure and vulnerability of farming communities to climate change hazards, especially drought and flood, while enhancing national planning capacity. Investments

<sup>34</sup> For deriving the economic value of GHG removal, high and low shadow prices of carbon of USD 119.3/t CO<sub>2</sub> eq and USD 60.3/t CO<sub>2</sub> eq, respectively (following the World Bank 2024 Guidance Note on Shadow Price of Carbon in Economic Analysis and the World Bank GHG Accounting Template for financial year 2026) are used for the first year of analysis, rising to USD 183.5/t CO<sub>2</sub> eq and USD 91.8/t CO<sub>2</sub> eq in year 20. The high and low shadow prices of carbon are converted to 2025 constant United States dollars from 2023 consumer price index -adjusted prices that are given in the World Bank Greenhouse Gas Accounting Template for financial year 2026.

in ecosystem restoration are also expected to make a significant contribution to climate change mitigation by enhancing carbon sequestration.

65. To enhance the project's impact, the iTAP recommends that the AE, in cooperation with the EE, considers doing the following:

- (a) Establish a cross-ministerial and multi-stakeholder technical committee to coordinate between the various line functions involved in ecosystem restoration and management, including those engaged in enforcement of legislation, and to foster learning on EbA;
- (b) Expand the involvement in project capacity-building of relevant regional/global technical expertise in EbA for watershed restoration and management, to enhance future impacts from nature-based solutions for drought and flood; and
- (c) Promote complementarity and coherence between GCF and the Global Environment Facility by linking the Moldova Green Shield and the BIOFIN initiative, aligning the two workstreams on sustainable financing mechanisms for restoration and biodiversity in order to achieve synergies and avoid duplication.

66. The iTAP recommend that the Board approve this funding proposal.

## Response from the accredited entity to the independent Technical Advisory Panel's assessment of FP321

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| Proposal name:          | Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation                                |
| Accredited entity:      | International Bank for Reconstruction and Development and International Development Association (World Bank) |
| Country(ies):           | Moldova                                                                                                      |
| Project/programme size: | Small                                                                                                        |

### Impact potential

The project delivers adaptation benefits to 185,000 people across 13,000 hectares through an integrated Ecosystem-based Adaptation (EbA) approach. On watershed interventions, the component covers rehabilitation of water storage infrastructure using nature-based solutions, representing one element of the broader Sub-component 2.2, which explicitly includes upstream green measures (restoration of degraded river corridors, aquatic and terrestrial habitats, biodiversity and ecosystem connectivity, and watershed protection enhancement measures. The detailed elaboration of all activities, including groundwater recharge infrastructure, will be provided in the Work Plan prepared during inception, drawing on hydrological modelling under Component 1 and the World Bank's technical expertise in watershed management. Forest governance and enforcement are addressed through community stewardship arrangements and climate-resilient forest management plans developed under Sub-component 3.2.

### Paradigm shift potential

The project establishes a cross-ministerial Project Steering Committee (PSC), under which a dedicated technical committee, including technical staff and the scientific community, will be established to ground landscape-scale EbA governance in both institutional authority and scientific expertise. On PES, the feasibility studies under Sub-component 3.2 are specifically designed to assess legal, institutional, and fiscal preconditions for ecosystem service financing mechanisms, ensuring that any instruments pursued are legally operable within Moldova's framework. The project is fully aware of UNDP-led BIOFIN work and ongoing work in the Prut area and has made provisions for close collaboration with both initiatives to ensure complementarity and alignment.

### Sustainable development potential

Sub-component 3.1 supports smallholder livelihoods through equipment for honey extraction, NTFP processing, and medicinal plant value chains linked to restored ecosystems. Complementarity with EU rural development programs, which support broader market linkages, will be actively pursued during implementation. The FP does acknowledge the risk of leakage from illegal wood harvesting and addresses this through several mechanisms. Sub-Component 3.1 formalizes community benefit-sharing arrangements including fuelwood and non-timber forest products through Forest Management and Community Stewardship Plans

that define sustainable use provisions, management responsibilities, and conflict resolution mechanisms, thereby reducing illegal extraction. That said, direct enforcement of legislation against illegal extraction supported by other projects, and the project is designed to complement rather duplicate those efforts.

### **Needs of the recipient**

Moldova's Southern Development Region combines low forest cover, high drought and flood frequency, and heavy reliance on climate-sensitive smallholder agriculture, making ecosystem-based adaptation both a climate imperative and a development priority. Project investments are predominantly public goods - ecological infrastructure, institutional capacity, climate planning systems that generate non-market benefits accruing over long time horizons. This profile justifies grant financing as the appropriate instrument. The GCF grant enables the transformation of fragmented, project-based restoration into an integrated, climate-risk-informed landscape management system - a shift that Moldova's fiscal capacity alone cannot finance at the required scale.

### **Country ownership**

The project's institutional architecture, led by the Ministry of Environment with active engagement of Moldsilva, NAAM, and relevant technical ministries, ensures deep government ownership and alignment with national mandates. The PSC will be complemented by a dedicated technical committee including technical staff and the scientific community, strengthening cross-sectoral coordination for integrated landscape-scale EbA governance. On watershed expertise, the World Bank will draw systematically on its global EbA and disaster risk reduction experience, including through the Climate Investment Funds (CIF)'s Pilot Program for Climate Resilience (PPCR), with regional and global specialists engaged during hydrological modelling and intervention planning under Component 1 and implementation process.

### **Efficiency and effectiveness**

The AE thanks the iTAP for its positive assessment of the project's efficiency and effectiveness. We appreciate the recognition of the project's strong economic viability, cost-effectiveness, and the rationale for grant financing given the public-goods nature of the proposed investments.

### **Overall remarks from the independent Technical Advisory Panel:**

The AE welcomes the iTAP's guidance and the three recommendations, which the project team has carefully considered and will address as follows.

- (i) On cross-ministerial coordination, the project envisages a Project Steering Committee that brings together all participating government bodies, including the Ministries of Environment, Finance, and Agriculture and the national water authority. Building on this foundation, the project will establish a dedicated technical committee under the PSC that expands participation to include research institutions and technical specialists, ensuring that landscape-scale EbA governance is grounded in both institutional authority and scientific expertise.
- (ii) The AE agrees with the recommendation and notes that the project will strengthen national capacity for watershed restoration and management through the engagement of regional and international experts in ecosystem-based

adaptation (EbA). Technical expertise will be mobilized to support hydrological assessments, watershed modelling, intervention design, and knowledge transfer to national institutions and practitioners. This expertise will complement national capacity and help ensure that nature-based solutions for drought and flood resilience are informed by international good practice and adapted to local conditions, supporting longer-term replication and scaling of successful approaches.

- (iii) On BIOFIN complementarity, the project team is well aware of the work conducted under BIOFIN and will continue engagement with UNDP during inception to ensure these workstreams are coordinated and mutually reinforcing rather than parallel tracks.

# **MINISTRY OF ENVIRONMENT**

## **GENDER ASSESSMENT AND ACTION PLAN**

### **Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation**

#### **REPUBLIC OF MOLDOVA**

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## Abbreviations

|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| <b>ADA</b>      | Austrian Development Agency                                                |
| <b>CEDAW</b>    | Convention on the Elimination of All Forms of Discrimination Against Women |
| <b>CSO</b>      | Civil Society Organisation                                                 |
| <b>EbA</b>      | Ecosystem-based Adaptation                                                 |
| <b>ESMF</b>     | Environmental and Social Management Framework                              |
| <b>ESF</b>      | World Bank Environmental and Social Framework                              |
| <b>FAO</b>      | Food and Agriculture Organization                                          |
| <b>GAP</b>      | Gender Action Plan                                                         |
| <b>GBV</b>      | Gender-based Violence                                                      |
| <b>GCF</b>      | Green Climate Fund                                                         |
| <b>GIZ</b>      | Deutsche Gesellschaft für Internationale Zusammenarbeit                    |
| <b>HRBA</b>     | Human Rights-Based Approach                                                |
| <b>ICAS</b>     | Institute for Forest Research and Management                               |
| <b>IDP</b>      | Internally Displaced Persons                                               |
| <b>ILO</b>      | International Labour Organisation                                          |
| <b>IOM</b>      | International Organization for Migration                                   |
| <b>IPU</b>      | Inter-Parliamentary Union                                                  |
| <b>LPA</b>      | Local Public Administration                                                |
| <b>MEL</b>      | Monitoring, Evaluation and Learning                                        |
| <b>MoE</b>      | Ministry of Environment                                                    |
| <b>NAP</b>      | National Adaptation Plan                                                   |
| <b>NBS</b>      | National Bureau of Statistics                                              |
| <b>NCCAP</b>    | National Climate Change Adaptation Plan                                    |
| <b>NOIEP</b>    | National Office for Environmental Projects Implementation                  |
| <b>PIU</b>      | Project Implementation Unit                                                |
| <b>RFRMC</b>    | Southern Regional Forest Reproductive Material Centre                      |
| <b>SDG</b>      | Sustainable Development Goal                                               |
| <b>SEA/SH</b>   | Sexual Exploitation, Abuse and Sexual Harassment                           |
| <b>SEP</b>      | Stakeholder Engagement Plan                                                |
| <b>SFE</b>      | State Forest Enterprise                                                    |
| <b>SPMP</b>     | Silvopastoral Management Planning                                          |
| <b>STEM</b>     | Science, Technology, Engineering, and Mathematics                          |
| <b>TEK</b>      | Traditional Ecological Knowledge                                           |
| <b>UN Women</b> | United Nations Women                                                       |
| <b>UNDP</b>     | United Nations Development Programme                                       |
| <b>UNFCCC</b>   | United Nations Framework Convention on Climate Change                      |
| <b>UNFPA</b>    | United Nations Population Fund                                             |
| <b>UNICEF</b>   | United Nations Children's Fund                                             |
| <b>WHO</b>      | World Health Organization                                                  |
| <b>WBG</b>      | World Bank Group                                                           |

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# PART I: GENDER ASSESSMENT

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## 1. Introduction, Scope, and Methodology

The project "Moldova Green Shield: Enhancing Resilience through Ecosystem-based Adaptation" recognises the critical importance of gender-responsive climate adaptation in a national context shaped by rural poverty, demographic ageing, environmental degradation, and persistent gender inequalities. Women and girls in Moldova, especially in semi-arid and remote areas, are disproportionately affected by climate-related stressors due to entrenched socio-economic disparities, limited access to productive resources and services, and underrepresentation in decision-making processes. These vulnerabilities are compounded by high rates of male out-migration, which have left many women as de facto heads of households, bearing increased responsibility for unpaid care work, agricultural production, and community-level resource management.

The project is expected to directly benefit approximately 30,000 people through participation in restoration planning, ecosystem restoration implementation, and climate-informed landscape decision-making processes, and indirectly benefit approximately 155,000 people through improved ecosystem services, reduced climate exposure, and strengthened ecological infrastructure across targeted districts.

This Gender Assessment focuses on gender-differentiated vulnerabilities and opportunities associated with ecosystem-based adaptation (EbA) interventions implemented under Components 1–3 of the project, including institutional capacity development, data-driven planning, and climate-informed early warning systems (Component 1); climate-resilient ecological infrastructure restoration (Component 2); and community engagement, climate-resilient livelihoods, and local stewardship systems (Component 3).

The Gender Assessment and accompanying Gender Action Plan (GAP) are aligned with the principles of the World Bank Environmental and Social Framework (ESF), in particular ESS1 and ESS10, as well as Moldova's policy framework on gender equality and climate adaptation, including the National Climate Change Adaptation Strategy (NCCAP) 2030. The GAP complements the Environmental and Social Management Framework (ESMF) and Stakeholder Engagement Plan (SEP) by operationalising gender-responsive participation, inclusive restoration planning processes, and equitable access to ecosystem-based adaptation benefits across all project components.

### 1.1 Objectives

The Gender Assessment is guided by the following key objectives:

- To assess gender-differentiated impacts of climate change on access to water resources, land use systems, food security, and adaptive capacity across age and gender groups in climate-vulnerable regions of southern Moldova.
- To identify legal, institutional, and socio-economic barriers affecting women's participation in restoration planning, natural resource governance, and EbA implementation.
- To formulate practical recommendations for integrating gender considerations across all project phases from restoration prioritisation and implementation to institutional coordination, community engagement, and monitoring and evaluation systems.

### 1.2 Methodology

This assessment employs a mixed-methods approach integrating quantitative indicators and qualitative analysis, including:

- Desk review and literature review of national and international gender data, policy frameworks, and relevant project studies.
- Stakeholder consultations: a national workshop in Chisinau and three local-level consultations, including sessions in Cimislia and Basarabeasca (October 2025), covering government counterparts, NGOs, community representatives, and women from targeted communities.
- Field observations and policy mapping across key sectors including water management, agriculture, forestry, and rural livelihoods.

DISCLAIMER: this draft is subject to consultations and design change

- Analysis of sex-disaggregated data to identify gender-specific vulnerabilities, adaptive capacities, and institutional and socio-cultural barriers.

## 2. Gender Context at the National Level

### 2.1 Landscape and Demographic Overview

Moldova is a landlocked country in Eastern Europe (33,846 km<sup>2</sup>) with a temperate continental climate marked by hot summers, cold winters, and increasingly irregular precipitation. Droughts are rising in frequency and intensity, particularly in the southern and southeastern regions, which correspond to the project's primary target area.

As of 2024, Moldova's population stood at approximately 2.6 million, reflecting a steady decline due to one of the highest emigration rates in Europe. More than one million Moldovan citizens are estimated to be living and working abroad. Labour migration has significantly altered household structures: many women, elderly persons, and children remain behind in rural areas. Rural areas are home to about 57% of the total population, predominantly engaged in agriculture, animal husbandry, and small-scale trade.

The rural demographic is aging rapidly. Women constitute the majority of those remaining in villages, taking on multiple roles as caregivers, food producers, and informal community leaders. Elderly women form a growing segment of Moldova's rural poor, often surviving on small pensions and subsistence agriculture. Household sizes in rural Moldova tend to be smaller due to the migration of working-age adults; many households are headed by women who manage both domestic responsibilities and agricultural work.

### 2.2 Key Gender Indicators

| Indicator                                | Data                                                    |
|------------------------------------------|---------------------------------------------------------|
| Maternal mortality ratio (2022)          | ~19 per 100,000 live births (improved from 38 in 2010)  |
| Infant mortality rate (2022)             | 9.8 per 1,000 live births                               |
| Life expectancy at birth (2023)          | 73.3 years overall; 69.3 men / 77.2 women               |
| Adult literacy rate                      | ~99.7% (near-equal between women and men)               |
| Women in higher education                | Women constitute over 60% of HE students                |
| Women in STEM faculties                  | Only ~27% of engineering/technology students are female |
| Gender wage gap                          | ~13–15% (women earn less across all industries)         |
| Women's labour force participation       | 43.2–50.3% (vs. 48.8–59.8% for men)                     |
| Informal employment (women)              | ~30–60% of employed rural women in informal roles       |
| Female-headed households                 | >25% of all households in Moldova                       |
| Parliamentary seats held by women (2023) | 27%                                                     |
| Women in local governance                | ~22% of positions                                       |
| Poverty rate – rural women               | 15.6% vs. 4.8% urban women (EEAS, 2023)                 |
| Access to formal credit – rural women    | 15% vs. 25% for rural men                               |
| Internet use – rural women               | ~40% vs. ~55% for rural men                             |

## 2.3 Life Expectancy and Health

Despite women's longer life expectancy, elderly rural women face poverty, social isolation, and limited access to geriatric care. Many live alone due to widowhood or the migration of younger family members. Climate change further complicates these dynamics: older adults, particularly elderly women, are highly vulnerable to heat-related illnesses, vector-borne diseases, and disruptions to food and water supplies.

Maternal health indicators continue to reflect underlying inequities. Nearly 25% of pregnant women in rural Moldova receive fewer than the recommended four antenatal visits. Roma women experience higher maternal and infant mortality rates due to compounded discrimination, lower literacy, and limited access to culturally appropriate services.

## 2.4 Education and Skills

Despite near-universal literacy and women's over-representation in higher education, gender segregation in academic disciplines persists. Women remain underrepresented in STEM fields (only ~27% of engineering students), which limits their access to higher-paying sectors and to the green and digital economy. The gender pay gap (13–15%) is partly attributable to occupational segregation and discriminatory practices. Labour market data also show that women with advanced education face underemployment or career disruptions from caregiving obligations in environments with inadequate childcare services.

## 2.5 Poverty and Employment

The national poverty rate is approximately 23%, with rural poverty reaching 28%. Women-headed households, constituting over 25% of all households, are especially susceptible to economic disruptions. Rural women dedicate almost twice the number of hours daily to unpaid care work compared to men, which limits their ability to pursue paid employment, vocational training, or participation in public decision-making and climate adaptation programs.

Approximately 60% of employed rural women participate in informal or unregistered work, lacking employment contracts, health insurance, or pension payments. They are disproportionately exposed to climate-related economic insecurity due to their concentration in informal and low-paid sectors, dependence on subsistence agriculture, and limited access to productive resources. Many women rely on remittances from family members working abroad, creating additional economic vulnerability in periods of climate or economic instability. Women's unpaid domestic and caregiving responsibilities further reduce opportunities for paid employment, vocational training, and participation in climate adaptation activities, reinforcing the feminization of poverty in rural areas.

## 2.6 Political Participation

Women held 27% of parliamentary seats as of 2023, with modest improvement following introduction of gender quota law in 2016. At local government level, women hold approximately 22% of positions and are underrepresented in executive roles and in ministries overseeing infrastructure and finance. In the project area specifically, among 23 City Halls, five are led by women — who are noted as effective, inclusive decision-makers.

### 3. Legal and Policy Frameworks on Gender

Moldova has established a comprehensive legal and policy framework for gender equality, underpinned by international commitments and progressively aligned with EU directives. Key frameworks relevant to the project include:

| Framework / Instrument                                                                | Year                         | Key Relevance                                                                                 |
|---------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Law on Ensuring Equal Opportunities for Women and Men (No. 5-XVI)</b>              | 2006 (amended)               | Primary gender equality legislation; mandates sex-disaggregated data and equal treatment      |
| <b>National Strategy on Gender Equality</b>                                           | 2022–2027                    | Strategic roadmap for gender mainstreaming across sectors                                     |
| <b>National Strategy on Gender Equality (predecessor)</b>                             | 2017–2021 (extended to 2027) | Land reform promotion; gender-sensitive agricultural policies                                 |
| <b>National Climate Change Adaptation Plan (NCCAP 2030)</b>                           | 2024                         | Gender-sensitive adaptation; inclusive consultations; capacity-building for planning agencies |
| <b>Law on Preventing and Combating Domestic Violence (No. 45-XVI)</b>                 | 2007                         | GBV prevention and response; restraining orders; local multidisciplinary teams                |
| <b>Istanbul Convention (ratified by Moldova)</b>                                      | 2021                         | Comprehensive framework for preventing violence against women                                 |
| <b>National Programme for Preventing Violence Against Women and Domestic Violence</b> | 2023–2027                    | Improved enforcement, support services, and institutional coordination                        |
| <b>Law on Forests and Forestry</b>                                                    | Current                      | Resource management and land-use frameworks affecting women's access                          |
| <b>CEDAW</b>                                                                          | Acceded                      | International standard for non-discrimination and women's rights                              |
| <b>SDG 5 – Gender Equality</b>                                                        | 2030 Agenda                  | Targets for women's economic participation, decision-making, and GBV elimination              |

The NCCAP 2030 explicitly recognises gendered dimensions of climate vulnerability and mandates inclusive, participatory planning. While the NCCAP lays a solid policy basis, implementation challenges persist, including insufficient institutional capacity, limited localized gender analysis tools, and cultural norms impeding women's participation in formal decision-making.

### 4. Gender Context in the Project Area

#### 4.1 Project Area Profile

The project area encompasses southern Moldova, including districts such as Leova, Basarabeasca, Gagauzia, Cimislia, and the Lower Prut and Lower Dniester regions. These areas are characterised by:

- Low forest coverage (approximately 13% compared to the European average of 30%).
- High agricultural dependence: 67% of land used for agriculture, of which 30% is eroded or heavily eroded.
- Women constitute 51% of rural residents and face heightened vulnerabilities due to limited resource access, traditional gender roles, and underrepresentation in decision-making.

- Rural women's poverty rate stands at 15.6% compared to 4.8% for urban women; female-headed households face a 26.6% poverty rate.
- Semi-arid conditions with increasing drought frequency, water scarcity, and climate-related agricultural stress disproportionately affecting women.

## 4.2 Gender and Forestry

Forestry in the project area is heavily gender-segregated. Men predominantly engage in timber harvesting and formal forest management, while women are primarily involved in collecting non-timber forest products (NTFPs) such as berries, mushrooms, and medicinal plants. This division limits women's economic opportunities and decision-making power in the forestry sector.

Women in Moldova's agricultural sector face structural inequalities affecting their adaptive capacity and resilience to climate change. Women manage only approximately 19% of agricultural land and typically operate smaller plots than men (0.86 ha compared to 1.21 ha), limiting their access to agricultural income and investment opportunities. Women also have lower access to vocational and technical agricultural education, reducing their ability to adopt climate-smart agricultural practices, modern irrigation systems, and sustainable land management approaches. Women's reliance on NTFPs, while ecologically sustainable, typically yields lower incomes than timber-related activities, reinforcing economic disparities. These inequalities increase women's vulnerability to droughts, floods, soil degradation, and other climate-related risks affecting agricultural productivity and rural livelihoods. Strengthening women's access to land, training, climate information, and restoration-related livelihood opportunities is therefore essential for effective ecosystem-based adaptation and long-term landscape resilience.

Recent initiatives demonstrate potential for change. The UNDP project "Sustainable and Resilient Communities through Women Empowerment" (Phase 1, 2020–2024) supported women-led agroforestry businesses in Leova and related semi-arid districts, planting 59,263 trees across 17 hectares of degraded land and enabling sustainable land management on 216 hectares, with gender-mainstreamed local climate adaptation plans developed in 12 localities.

Consultations in the project area confirmed that Moldsilva employs numerous women foresters, noted as skilled workers often performing better at planting and monitoring than men. Women are also dominant in social work, education, and City Council roles, demonstrating existing capacity for leadership in ecosystem management.

## 4.3 Gender and Climate Change Vulnerability

Climate change significantly impacts women in the project area due to their roles in household and agricultural resource management. Key vulnerabilities include:

- **Water scarcity:** Women are typically responsible for water collection; in 2018. Access to safe drinking water and sanitation infrastructure remains uneven across rural areas of Moldova, disproportionately affecting women responsible for household water management and caregiving responsibilities (UNDP Moldova; National Bureau of Statistics, 2024).
- **Agricultural impacts:** Droughts and floods reduce agricultural productivity on which women heavily rely. Women's limited access to land (20% ownership), credit (15% access rate vs. 25% for men), and technology hinders adoption of climate-smart practices.
- **Time poverty:** Women spend nearly twice as long as men on unpaid care work, excluding them from climate adaptation planning and training processes. A 2020 UNDP study found 90% of Moldovans hold at least one bias against women.
- **Digital divide:** Only 40% of rural women regularly use the internet (vs. 55% men), restricting access to climate information, market data, and extension services.
- **Minority women:** Gagauz, Roma, and other minority women face compounded language and discrimination barriers.

Social norms and gender stereotypes continue to shape women's participation in economic activities, community decision-making, and climate adaptation processes in Moldova, particularly in rural areas. Traditional expectations often assign women primary responsibility for unpaid domestic work, caregiving, food preparation, water collection,

and household management, while men are more frequently perceived as primary decision-makers and income earners.

These gender roles significantly affect women's ability to participate in restoration activities, vocational training, local governance processes, and ecosystem-based adaptation planning. Women frequently experience "time poverty" due to unpaid care responsibilities, reducing opportunities for participation in consultations, seasonal employment, and capacity-building activities.

Gender stereotypes also influence educational and employment pathways. Women remain underrepresented in technical and STEM-related fields relevant to climate adaptation and natural resource management, while social norms continue to discourage women's leadership in environmental governance and land management. A 2020 UNDP study found that approximately 90% of Moldovans hold at least one bias against women, highlighting the persistence of restrictive gender norms that may limit women's participation in climate resilience initiatives.

These structural inequalities must be considered throughout project implementation to ensure that ecosystem restoration and adaptation activities are accessible, inclusive, and responsive to the needs and capacities of women and vulnerable groups.

#### 4.4 Gender and Community Resilience Planning

Women's participation in community resilience planning is limited by underrepresentation in local governance (22% of positions) and time constraints from domestic responsibilities. This exclusion means that women's knowledge of local ecosystems and social dynamics is often overlooked, reducing the effectiveness of resilience strategies.

Consultations in Cimislia and Basarabeasca (October 2025) confirmed that women appreciate early involvement in planning: "And of course, we are encouraged by the fact that you invited and listened to women's opinions at the stage of planning, not only implementation." However, a major challenge is the low participation of women in seasonal labour due to competing household and childcare responsibilities, with women preferring longer-term stable employment contracts.

Women's participation is further constrained by unpaid domestic responsibilities, childcare obligations, mobility limitations, and limited availability of flexible employment opportunities. These barriers disproportionately affect rural women, elderly women, and women-headed households, reducing their ability to engage consistently in restoration activities, training programmes, and community consultations. Gender-responsive participation approaches, including flexible scheduling and accessible consultation formats, are therefore essential to ensure meaningful inclusion.

Consultations conducted in Cahul, Causeni, Leova, Comrat, Cimislia, and Cantemir districts identified several operational barriers that may affect women's participation in ecosystem restoration activities. These include limited availability of childcare, lack of transportation to remote restoration sites, seasonal agricultural workloads, insufficient access to technical equipment and protective gear adapted to women workers, and limited flexibility of short-term seasonal employment arrangements. Participants also highlighted institutional capacity constraints within LPAs and local environmental institutions, including shortages of technical staff and limited local financing for community-based adaptation initiatives. These barriers should be considered during implementation to ensure equitable participation and sustainable engagement of women and vulnerable groups in project activities.

#### 4.5 Sexual Exploitation, Abuse, and Harassment (SEA/SH)

GBV remains a significant human rights issue in Moldova. Key data points:

- In 2018, 9.1% of women aged 15–49 reported physical and/or sexual violence by a current or former partner in the previous 12 months.
- A 2011 NBS survey found 63% of women had experienced psychological, physical, or sexual violence from a husband or partner at least once.
- Rural, elderly, and separated/divorced women face the highest rates of multiple types of violence.
- Moldova is identified as one of the primary source countries for sex trafficking and forced labour across Europe.

Climate change exacerbates GBV risks as droughts force rural women to work harder and travel farther to secure resources, increasing exposure to violence. The project must integrate robust SEA/SH prevention and response measures as part of its gender-responsive approach.

The project will establish confidential, survivor-centred SEA/SH reporting and referral procedures aligned with World Bank Good Practice Note requirements. Referral pathways will include available medical, psychosocial, legal, and protection services operating at national and local levels. SEA/SH-related complaints will be managed separately from the standard GRM, with strict confidentiality and informed consent principles applied throughout all reporting and response processes.

Given that some activity sites may be located in isolated or remote areas, SEAH awareness training and GRM access points will be adapted to ensure mitigation effectiveness in such contexts, including through mobile outreach, community-level focal points, and communication channels accessible to women in remote locations.

## 5. Differential Vulnerabilities and Adaptive Capacities

### 5.1 Vulnerabilities

Women's higher participation in the informal economy, particularly in unpaid family labour and subsistence farming, contributes to distinct vulnerabilities:

- Lack of social protection: Informal workers lack health insurance, pensions, maternity benefits, or unemployment support, increasing vulnerability to economic and climate shocks.
- Low earnings and exploitation risk: Roles such as unpaid family labour or subsistence farming yield minimal returns. Women in informal trade face harassment and unstable income.
- Time poverty: Women balance informal work with domestic and caregiving responsibilities, limiting transition to formal employment or skill development.
- Limited asset access: Women own only 20% of agricultural land; only 15% access formal credit vs. 25% of men. Without collateral or financial literacy, investment in climate-resilient practices is severely constrained.

#### 5.1.1. Social inclusion and Intersectionality

Vulnerable groups experience multiple forms of exclusion. Roma women, women with disabilities, and rural women face intersecting discrimination that limits their access to education, employment, and services (UN Women, 2025). For instance, Moldova's rural women are four times more prone to absolute poverty and are particularly vulnerable to climate change impacts due to their reliance on agriculture and limited access to alternative income sources (UNDP, 2024). Persistent gender norms and stereotypes further exacerbate these challenges, as women are often expected to prioritise domestic responsibilities, reducing their ability to engage in economic or community activities (United Nations Population Fund [UNFPA], 2024). Initiatives like the UNDP's "Sustainable and Resilient Communities through Women Empowerment" (Phase 1) have addressed these issues by empowering women in 30 rural communities to practice sustainable agriculture and forestry, demonstrating the potential for targeted interventions to enhance social inclusion (UNDP, 2024).

Intersectionality provides a framework for understanding how multiple social identities intersect to create unique vulnerabilities to climate change. In Moldova, factors such as gender, ethnicity, age, and rural location combine to exacerbate risks for certain groups. As mentioned above, rural Roma women face discrimination based on their gender and ethnicity, which limits their access to land, financial resources, and decision-making opportunities. Climate change impacts, such as water scarcity, droughts, and extreme weather events, disproportionately affect these groups due to their limited adaptive capacity (UNDP, 2024). Women's time poverty, spending nearly twice as long as men on unpaid domestic tasks (UNFPA, 2024), further restricts their ability to participate in income-generating activities or community planning for climate adaptation.

Table. Key vulnerabilities and intersectional factors in Moldova

| Social Group             | Key Vulnerabilities                                                                       | Intersectional Factors                              |
|--------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Rural Women              | Higher poverty rates (15.6%), time poverty, limited access to land and resources          | Gender, location (rural), socio-economic status     |
| Roma Women               | Multiple forms of discrimination, lower employment rates, and limited access to education | Gender, ethnicity, socio-economic status            |
| Women with Disabilities  | Social exclusion, limited access to services, and higher poverty rates                    | Gender, disability, socio-economic status           |
| Female-Headed Households | Higher poverty rate (26.6%), increased domestic responsibilities                          | Gender, household status, and socio-economic status |
| Elderly Women            | Higher poverty rates, limited access to healthcare, and resources                         | Gender, age, socio-economic status                  |

Climate change impacts are not experienced equally across the population. In Moldova, gender intersects with poverty, age, ethnicity, disability, household status, and rural location to create differentiated vulnerabilities and adaptive capacities. Rural women, Roma women, elderly women, women with disabilities, and female-headed households often face overlapping forms of exclusion that reduce access to land, employment, climate information, financial resources, and participation in decision-making processes.

These intersecting vulnerabilities increase exposure to climate-related risks such as droughts, declining agricultural productivity, water scarcity, and economic instability. Women from marginalized groups frequently experience additional barriers related to discrimination, mobility constraints, lower educational attainment, and reduced access to institutional support services.

Understanding these overlapping vulnerabilities is essential for ensuring that ecosystem-based adaptation interventions are inclusive, equitable, and responsive to the needs of vulnerable population groups.

### 5.1.2. Vulnerable Population Groups

Certain population groups face heightened vulnerability to climate change impacts and may experience barriers to participation in ecosystem restoration and adaptation activities.

**Rural women** are particularly vulnerable due to high poverty rates, dependence on climate-sensitive agricultural livelihoods, limited access to productive resources, and significant unpaid care responsibilities. Women-headed households face increased economic insecurity and reduced adaptive capacity.

**Women in agriculture** face structural inequalities in access to land ownership, vocational education, agricultural technology, and climate finance, limiting their ability to adopt climate-resilient agricultural practices.

**Roma women** experience intersecting gender and ethnic discrimination affecting access to education, healthcare, employment, and institutional services. These inequalities increase vulnerability to climate-related economic and environmental shocks.

**Women with disabilities** face mobility barriers, social exclusion, and reduced access to climate information, public services, and livelihood opportunities, particularly in rural areas.

**Elderly women**, especially those living alone in rural communities, face increased vulnerability due to poverty, social isolation, limited mobility, and dependence on climate-sensitive household resources and subsistence agriculture.

These differentiated vulnerabilities should be considered throughout project implementation to ensure inclusive participation and equitable access to project benefits.

## 5.2 Adaptive Capacities

Despite these challenges, women in Moldova demonstrate important adaptive capacities:

- **Entrepreneurship and market engagement:** Many women engage in micro-enterprises, leveraging local networks to generate income, including selling surplus agricultural produce.
- **Community networks:** Informal family or community-based cooperatives provide resources and knowledge-sharing opportunities for coping with economic uncertainties.
- **Traditional Ecological Knowledge (TEK):** Women hold significant TEK related to biodiversity, water sources, medicinal plants, and seasonal patterns, which is directly relevant to EbA planning.
- **Leadership demonstrated:** Consultations confirmed women foresters are skilled restoration workers; women-led City Halls are noted as effective, inclusive decision-makers.

Consultations and stakeholder mapping also identified important opportunities for strengthening women's leadership in ecosystem restoration and local climate governance. Women are already actively involved in local public administration, education, social services, tourism, environmental awareness activities, and community-based initiatives in several target districts. Women-led local administrations and women specialists within forestry and environmental institutions were frequently identified by stakeholders as effective facilitators of participatory planning and community mobilisation processes. These existing leadership capacities provide an important foundation for strengthening gender-responsive ecosystem governance under the project.

Consultations undertaken during project preparation demonstrated that women in rural communities possess extensive practical knowledge related to pasture conditions, seasonal water availability, biodiversity changes, traditional grazing systems, medicinal plants, and local ecosystem degradation trends. Women participants also identified locally appropriate restoration approaches, including rehabilitation of degraded pastures, protection of riparian vegetation, and sustainable management of non-timber forest resources. Integrating this local ecological knowledge into restoration planning and adaptation pathway development can strengthen the sustainability and local ownership of ecosystem-based adaptation interventions.

Despite structural inequalities, women in Moldova demonstrate significant resilience and adaptive potential. Existing women-led community initiatives, local entrepreneurship, informal support networks, and participation in local governance structures create important opportunities for strengthening gender-responsive adaptation pathways. Women's active roles in household resource management, biodiversity conservation, and community organization can support long-term sustainability of restoration interventions when combined with targeted institutional support, technical training, and equitable access to project benefits.

### 5.3 Access to Productive Resources

| Resource       | Key Challenges                                                                                                                                                                                                                                        | Opportunities                                                                                                                                                                                                        |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Land</b>    | <ul style="list-style-type: none"> <li>• Women own only 20% of agricultural land; inheritance laws favour men</li> <li>• Social norms discourage claiming land rights</li> <li>• Women work on land without ownership, limiting security</li> </ul>   | <ul style="list-style-type: none"> <li>• National Strategy (2023–2030) promotes gender-sensitive land reform including joint titling</li> <li>• Community-based management can leverage women's knowledge</li> </ul> |
| <b>Water</b>   | <ul style="list-style-type: none"> <li>• Women depend on surface water impacted by climate change (–15% in a decade)</li> <li>• Low representation in water governance</li> <li>• Time spent collecting water reduces income opportunities</li> </ul> | <ul style="list-style-type: none"> <li>• Include women in water committees for equitable distribution</li> <li>• Promote water-saving technologies (drip irrigation, rainwater harvesting)</li> </ul>                |
| <b>Finance</b> | <ul style="list-style-type: none"> <li>• Only 15% of rural women access credit vs. 25% for men<sup>1</sup></li> <li>• No collateral, low literacy, discrimination as barriers</li> </ul>                                                              | <ul style="list-style-type: none"> <li>• Microfinance tailored to women (low collateral, flexible terms)</li> <li>• Financial literacy training programs</li> </ul>                                                  |

<sup>1</sup> Only approximately 15% of rural women access formal credit services compared to approximately 25% of men, reflecting persistent gender disparities in access to finance and collateral ownership (UN Women and UNDP Moldova, 2025).

| Resource          | Key Challenges                                                                                                                                                                                                            | Opportunities                                                                                                                                                                              |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <ul style="list-style-type: none"> <li>Informal work limits savings and investment capacity</li> </ul>                                                                                                                    |                                                                                                                                                                                            |
| <b>Technology</b> | <ul style="list-style-type: none"> <li>Digital divide: 40% rural women use internet vs. 55% men<sup>2</sup></li> <li>Limited access to modern farming tools</li> <li>Cultural norms reduce technology adoption</li> </ul> | <ul style="list-style-type: none"> <li>Training on digital and farming technology</li> <li>Subsidies and cooperatives for tools</li> <li>Expanded rural internet infrastructure</li> </ul> |

## 6. Barriers to Information and Services

Women in rural Moldova face significant barriers to accessing information and essential services, including:

- Only 40% of rural women regularly use the internet; 10% fewer women than men complete secondary school in rural areas, leaving many without digital skills.
- Women farmers report significantly lower access to agricultural extension services and climate-resilient agricultural information than men (FAO Moldova; UN Women Moldova, 2024).
- Rural women, particularly elderly women and women from remote communities, report greater difficulties in accessing healthcare and social services due to transportation barriers, poverty, and limited rural infrastructure (UN Women Moldova; WHO Europe, 2024).
- Gender-specific services, including maternal care and GBV support, remain underfunded and scarce in rural areas.
- Social and cultural norms discouraging attendance at meetings, combined with caregiving responsibilities, reduce available time to seek information and services.
- Minority women (Gagauz, Roma) face additional language barriers with limited materials available in native languages.

Limited access to climate-related information further constrains women's adaptive capacity in rural areas. Rural women rely more heavily on traditional information channels, including television and informal community networks, while lower levels of digital access and digital literacy reduce access to online climate information, agricultural extension services, and adaptation-related opportunities. These barriers may limit women's participation in ecosystem restoration activities and climate-informed decision-making unless communication and outreach approaches are adapted to local contexts and literacy levels.

Stakeholder consultations conducted during project preparation emphasized the importance of accessible, repeated, and locally adapted communication approaches for effective participation of women and vulnerable groups. Participants highlighted the importance of using local communication channels, including social media platforms, local meetings, schools, community networks, and local public authorities, to disseminate information regarding restoration activities and participation opportunities. Information disclosure strategies should therefore be adapted to local literacy levels, language preferences, and digital accessibility conditions to ensure meaningful and inclusive engagement throughout project implementation.

## 7. Stakeholder Engagement and Consultations

### 7.1 Stakeholders Consulted

The consultation process included national and subnational administration (including municipal-level governance), international agencies, civil society organisations (CSOs), NGOs, and local community stakeholders including local action groups, community leaders, representatives of marginalised groups, and community representatives.

<sup>2</sup> Approximately 40% of rural women regularly use the internet compared to 55% of men, limiting access to digital climate information, agricultural extension services, and online economic opportunities (National Bureau of Statistics of Moldova; UNDP Moldova, 2024–2025).

Key consultation modalities included:

- A national consultation workshop in Chisinau: government counterparts, NDA representatives, line Ministries, environmental and forestry experts.
- Three local-level workshops including Cimislia and Basarabeasca (October 9, 2025), using a mixed-method approach combining face-to-face meetings, virtual calls, and workshop formats.
- Semi-structured consultations guided by a questionnaire adapted to participant numbers and interests.

Consultation activities included participation of women representatives, local authorities, civil society organisations, women foresters, women farmers, and vulnerable groups from target districts. Sex-disaggregated participation data and consultation summaries will be maintained by the PIU as part of project stakeholder engagement documentation.

Approximately 180 participants were engaged through consultation activities, including women representatives, local authorities, civil society organisations, women foresters, women farmers, and representatives of vulnerable groups from target districts.

## 7.2 Key Findings from Consultations

Key findings from local consultations include:

- Awareness and capacity gaps: Low participation of women in seasonal restoration labour due to competing household and childcare responsibilities. Women prefer longer-term employment contracts for financial stability.
- Gender integration opportunities: Women identified flexible scheduling, small-group training workshops in proximity, and accessible formats as critical for meaningful participation.
- Existing women's leadership: Women are already integrated into development structures — Moldsilva employs skilled women foresters; five of 23 City Halls in the area are women-led.
- Access to grants: Women successfully access grants and subsidies; stakeholders recommended creating separate grant categories for women/youth and adding evaluation score points for women-led enterprises.
- Awareness-raising approaches: Women representatives suggested high-visibility, repetitive social media campaigns (Facebook) as effective outreach tools.
- Security and accessibility: Remote and degraded land poses access challenges; provision of gear (rain boots, protective clothing) and specialised machinery was recommended for inclusive participation.

Women's feedback during stakeholder engagements directly shaped key elements of project design. Specifically: women's identification of childcare and time constraints as primary participation barriers informed the inclusion of childcare support provisions and flexible scheduling requirements in the GAP and ESMF; women's recommendations for proximity-based, small-group training formats influenced the design of capacity-building activities under Components 1 and 3; recommendations for separate grant categories and bonus scoring criteria for women-led enterprises were incorporated into the design of Component 3 livelihood support, which under the revised project design is delivered through direct procurement and transfer of assets and tools (superseding the earlier AIPA green grant mechanism); and women's identification of access barriers related to lack of appropriate protective equipment informed the specification of inclusive occupational health and safety measures for restoration activities. These design adaptations are reflected in the corresponding GAP actions and ESMF mitigation measures.

## 8. Gender Considerations for Project Design

### 8.1 Gender Mainstreaming Across All Components

Across all project components, the project will ensure the active and meaningful participation of women, men, youth, and vulnerable groups in consultations, restoration planning processes, and implementation activities through gender-responsive engagement approaches. These will include:

- Flexible scheduling of meetings adapted to women's time constraints from domestic and care responsibilities.
- Accessible consultation formats adapted to literacy levels, language needs, and local cultural contexts.

- Provision of childcare support where appropriate to reduce participation barriers.
- Gender balance targets applied in stakeholder engagement activities and capacity-building events.
- Orientation of all implementing partners on gender-responsive implementation approaches consistent with the GAP and ESMF.
- Grievance redress mechanisms made equally accessible to both women and men across all project areas, including through multi-channel GRM access points (physical, phone, online, and anonymous), confidential SEA/SH reporting pathways, and targeted outreach to ensure women's awareness of available grievance channels.

## 8.2 Component-Specific Considerations

### Component 1: Institutional Capacity Development and Data-Driven Planning

Gender-responsive facilitation approaches will be applied in restoration prioritisation processes, silvopastoral planning instruments, and consultations. Traditional ecological knowledge held by women in target communities will be identified and integrated into restoration prioritisation and participatory planning exercises.

### Component 2: Climate-Resilient Ecological Infrastructure Restoration

Restoration interventions will be implemented using gender-responsive participation approaches to ensure equitable opportunities for women and men to engage in restoration activities and benefit from improved ecosystem services. Women's roles in biodiversity conservation, shelterbelt management, and landscape stewardship will be recognised and strengthened through participation targets and outreach to women-headed households eligible for assisted natural regeneration (ANR) support.

### Component 3: Community Engagement, Climate-Resilient Livelihoods, and Local Stewardship Systems

Gender-responsive community engagement will ensure women's meaningful participation in participatory landscape planning, local governance, and stewardship activities. Particular emphasis will be placed on women's economic empowerment through support for women-led restoration cooperatives, vocational training, and restoration-linked livelihood diversification. Stewardship and incentive mechanisms will include measures to ensure equitable participation of women and vulnerable groups in community co-management structures and local decision-making processes.

### Component 4: Project Management and Monitoring

Gender-responsive implementation will be applied through PIU coordination, safeguards implementation, and MEL systems. Monitoring and evaluation will include sex-disaggregated indicators to track participation and support adaptive management. The PIU will designate a Gender Focal Point and support operationalisation of commitments across all reporting processes.

## 8.3 Knowledge Gaps and Capacity Needs

Key capacity building needs identified include:

- Technical training in climate-smart agriculture, sustainable forest management, and integrated ecosystem-based agroforestry (soil health, water management, agroforestry, biodiversity conservation, and sustainable land use).
- Financial literacy skills for female entrepreneurs and self-employed women (budgeting, cash flow management, financial planning, access to markets).
- Digital literacy and access to digital climate services for rural women.
- Leadership and governance skills to strengthen women's participation in forestry and pasture management decision-making.
- Communication and collaboration with financial institutions to develop gender-responsive tailored financial products and services.

Consultations with LPAs, environmental authorities, and implementing institutions identified important institutional capacity constraints affecting implementation of gender-responsive adaptation activities. Several local institutions reported shortages of technical staff, limited experience with gender-responsive environmental programming, and

insufficient financial and operational resources for sustained community engagement. Strengthening institutional capacity for inclusive stakeholder engagement, gender-responsive monitoring, and participatory restoration planning will therefore be important for effective implementation of the project's ecosystem-based adaptation interventions.

Consultations also identified potential community resistance associated with temporary grazing restrictions, land-use changes, and restoration-related access limitations affecting agricultural and pasture activities. Women from rural households may be disproportionately affected where restoration measures influence household subsistence activities, livestock grazing patterns, or access to natural resources. Continuous consultation, transparent communication, and inclusive decision-making processes will therefore be essential to minimize social tensions and support community acceptance of restoration activities.

Failure to integrate gender-responsive approaches into project implementation may result in unequal access to restoration benefits, exclusion of vulnerable women from adaptation opportunities, reduced effectiveness of ecosystem restoration activities, and reinforcement of existing socio-economic inequalities. Inclusive participation and targeted support measures are therefore critical to ensuring equitable and sustainable climate resilience outcomes.

## PART II: GENDER ACTION PLAN (GAP)

### 9. Introduction to the Gender Action Plan

The Gender Action Plan (GAP) operationalises the results and recommendations of the Gender Assessment presented in Part I. It contains specific gender-responsive elements integrated into the overall project design and lays out concrete activities to be undertaken during project implementation to maximise the development impact and co-benefits of the GCF investment.

The GAP is not a separate component. It mirrors the logical framework of the project and is an integral part of project design, aligned with the World Bank Environmental and Social Framework (ESF), in particular ESS1 (Assessment and Management of Environmental and Social Risks and Impacts), ESS2 (Labor and Working Conditions), ESS4 (Community Health and Safety), and ESS10 (Stakeholder Engagement and Information Disclosure).

The GAP will be implemented by the Executing Entity, the Republic of Moldova acting through the Ministry of Environment within a dedicated Project Implementation Unit (PIU). The World Bank, acting as Accredited Entity, will provide implementation support and supervision in accordance with the World Bank ESF.

#### 9.1 World Bank Approach to Gender

The project aligns with the World Bank Gender Strategy (FY24–30), which emphasises closing gender gaps in human capital, access to economic opportunities, ownership and control over tools and assets, and participation in decision-making. Core principles applied include:

- Gender-transformative approach: Project design aims to address underlying gender gaps rather than reinforce traditional roles.
- Intersectionality and inclusion: Gender analysis considers overlapping vulnerabilities (age, disability, ethnicity, rural location, socio-economic status). Particular attention is given to rural women, elderly women, female-headed households, Roma women, and women in informal livelihoods.
- Human rights-based and ESF-compliant: Gender considerations integrated under ESS1, ESS2, ESS4, and ESS10, ensuring participation, non-discrimination, and protection of vulnerable groups.
- Meaningful participation and leadership: The project promotes women's meaningful participation in local planning, ecosystem management decisions, and implementation structures.
- Prevention of SEA/SH: Dedicated, confidential, survivor-centred reporting and response mechanisms established separately from standard GRM, with clear referral pathways. For detailed provisions on the SEAH-specific GRM, including reporting procedures, ethical documentation of SEAH cases, confidentiality protocols, non-retaliation guarantees, follow-up communication to survivors, and referral pathways, see the ESMF (Section on SEA/SH Prevention and Response).

### 10. Gender Action Plan — Cross-Cutting Activities

The following cross-cutting gender activities apply across all project components:

The Gender Assessment identifies specific vulnerability groups including female-headed households, elderly women, Roma women, women with disabilities, and rural women in remote communities. Where feasible within the current project design, the following vulnerability-specific indicators are incorporated into the GAP:

- % of female-headed households reached through outreach and ANR support activities (target: proportional representation, to be confirmed at baseline; reported annually under Activities 2.1–2.4);
- % of consultation participants from identified vulnerable groups (Roma women, elderly women, women with disabilities) who report that their specific concerns were heard and documented (mid-term and end-of-project qualitative assessment; target: ≥70%);

- number of vulnerable women (by category: female-headed households, Roma women, elderly women) who access project livelihood support or vocational training (reported annually under Activity 3.2; baseline to be established in Y1).

Remaining vulnerability-specific targets that cannot be set at this stage due to absence of baseline data will be confirmed and updated during the first six months of project implementation, consistent with the approach described in GAP Section 15.

| Activity                      | Gender-specific Activity                                                                                                 | Indicators and Targets                                                                                                                                                                                                                                             | Budget                                                                                          | Responsible             | Timeline |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------|----------|
| <b>All project components</b> | Gender mainstreaming embedded across design, implementation, monitoring and reporting                                    | Gender considerations integrated into 100% of work plans, procurement tools and monitoring systems                                                                                                                                                                 | US\$35,000 — Gender Specialist (part-time, Y1–5, PIU)                                           | PIU / Gender Specialist | Y1–5     |
| <b>All project components</b> | Gender-responsive participation formats (flexible timing, accessible communication, childcare support where appropriate) | 100% of major engagement and training activities apply inclusive participation formats                                                                                                                                                                             | US\$6,000 — childcare support (US\$2,000) and accessibility/transport support (US\$4,000)       | Gender Specialist       | Y1–5     |
| <b>All project components</b> | Gender sensitization and GBV/SEA-SH awareness training for project staff and implementing partners                       | 100% of project staff trained on gender responsiveness and SEA/SB prevention by end of Y1                                                                                                                                                                          | US\$8,000 — Y1 training all staff/partners (US\$4,000) + annual refreshers (US\$1,000/yr, Y2–5) | PIU / Gender Specialist | Y1–5     |
| <b>All project components</b> | Designate Gender Focal Point in PIU; integrate gender-responsive M&E with sex-disaggregated data collection              | Gender Focal Point designated; sex-disaggregated data in all progress reports; SEAH awareness training completed by 100% of project staff and workers by end of Y1; referral pathways tested and documented; mechanism adapted for remote/isolated activity sites. | US\$8,000 — gender-responsive M&E and sex-disaggregated data collection (US\$1,600/yr)          | PIU                     | Y1–5     |
| <b>All project components</b> | Establish and operationalise a confidential SEA/SB reporting and response mechanism separate from the standard GRM       | Mechanism operational by end of Y1; clear referral pathways documented                                                                                                                                                                                             | US\$5,000 — mechanism set-up (US\$2,000) and referral pathway operation (US\$3,000)             | PIU / Safeguards team   | Y1       |

Participation targets were established based on local demographic composition, existing representation patterns in environmental governance structures, and realistic implementation assumptions for rural restoration activities.

## Indicative Budget for Gender Action Plan Implementation

| Gender Action                                                                                                                                                           | Component     | Implementation Package       | Indicative Budget (USD) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------|-------------------------|
| Recruit and maintain a Gender Specialist/Gender Focal Point to coordinate GAP implementation, monitoring and reporting.                                                 | Cross-cutting | Gender Coordination          | 35,000                  |
| Provide childcare, transportation and accessibility support to enable women and vulnerable groups to participate in consultations, training and decision-making events. | Cross-cutting | Inclusive Participation      | 8,000                   |
| Deliver mandatory training on gender equality, SEA/SH prevention and gender-responsive implementation for project staff, contractors and partners.                      | Cross-cutting | Capacity Building            | 8,000                   |
| Establish, communicate and maintain a confidential SEA/SH grievance and referral mechanism.                                                                             | Cross-cutting | Safeguards                   | 5,000                   |
| Collect, analyse and report sex-disaggregated data and monitor implementation of GAP indicators.                                                                        | Cross-cutting | Monitoring & Learning        | 6,000                   |
| Conduct gender-responsive stakeholder consultations during climate-informed planning.                                                                                   | Component 1   | Inclusive Participation      | 6,000                   |
| Ensure women's participation in flood risk management planning and community preparedness activities.                                                                   | Component 1   | Inclusive Participation      | 5,000                   |
| Engage women and vulnerable groups in the design, testing and dissemination of early warning services.                                                                  | Component 1   | Inclusive Participation      | 5,000                   |
| Conduct targeted outreach to women landowners, women farmers and female-headed households during restoration planning.                                                  | Component 2   | Inclusive Participation      | 6,000                   |
| Apply gender-responsive recruitment practices and equal opportunity measures in restoration works.                                                                      | Component 2   | Capacity Building            | 7,000                   |
| Facilitate gender-inclusive participatory landscape planning processes.                                                                                                 | Component 3   | Inclusive Participation      | 7,000                   |
| Deliver technical, business and leadership training, mentoring and networking for women's climate-resilient livelihoods.                                                | Component 3   | Women's Economic Empowerment | 10,000                  |
| Support establishment and operation of community stewardship committees with equitable representation of women in leadership and decision-making.                       | Component 3   | Women's Economic Empowerment | 6,000                   |
| Apply gender-responsive recruitment and staffing practices within project implementation units.                                                                         | Component 4   | Gender Coordination          | 3,000                   |
| Build capacity of implementing agencies to integrate gender into project implementation and supervision.                                                                | Component 4   | Capacity Building            | 5,000                   |
| Document and disseminate lessons learned and good practices on gender-responsive climate adaptation.                                                                    | Component 4   | Monitoring & Learning        | 3,000                   |
| Conduct a final assessment of GAP implementation and lessons learned.                                                                                                   | Component 4   | Monitoring & Learning        | 3,000                   |
| TOTAL                                                                                                                                                                   |               |                              | 128,000                 |

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Note: all amounts above are embedded within the project's four component budgets (Components 1–4) and the consolidated E&S management budget set out in the ESMF.

## 11. Component 1: Institutional Capacity Development and Data-Driven Planning

**Impact Statement:** Increased resilience of vulnerable communities, including women and girls, to the negative impacts of climate change through inclusive, gender-responsive ecosystem-based adaptation planning in southern Moldova.

**Outcome Statement:** Improved and equitable participation of women (≥40%) in restoration prioritisation frameworks, FRM planning, silvopastoral management planning, and climate-informed early warning system capacity-building processes across Component 1 activities (Sub-Components 1.1, 1.2, and 1.3).

| Activity                                                                                                | Gender-specific Activity                                                                                                                                                                 | Indicators and Targets                                                                                                                                                                                                                                                                                                                                       | Budget                  | Responsible              | Timeline |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------|----------|
| <b>Activity 1.1: Develop and operationalize climate-informed restoration prioritization frameworks</b>  | Ensure women land users and women-headed households participate in consultations supporting restoration suitability mapping and prioritization; integrate women's TEK                    | <b>Quantitative:</b> ≥40% participation of women in planning consultations; TEK documented from at least 3 communities<br><b>Qualitative:</b> Women participants report that their TEK contributions are meaningfully integrated into restoration prioritization decisions (assessed via post-consultation feedback; target: ≥70% positive rating by Y3).    | US\$3,000 (Component 1) | PIU + technical partners | Y1–3     |
| <b>Activity 1.2: Map and identify priority degraded lands for afforestation, reforestation, and ANR</b> | Include women stakeholders in seed-source planning consultations and nursery-system planning; ensure gender-responsive site screening processes                                          | <b>Quantitative:</b> Women represented in ≥30% of FRM planning consultations<br><b>Qualitative:</b> Women stakeholders report feeling informed and able to contribute to seed-source and nursery planning discussions (qualitative perception survey at mid-term; target: ≥70% positive).                                                                    | US\$2,000 (Component 1) | PIU / Moldsilva / ICAS   | Y1–3     |
| <b>Activity 1.3: Knowledge dissemination and communication</b>                                          | Ensure gender-differentiated lessons captured in knowledge products; use gender-responsive dissemination channels (including social media platforms preferred by women in consultations) | <b>Quantitative:</b> 100% of knowledge products include gender-responsive analysis; at least one dedicated gender knowledge product per year<br><b>Qualitative:</b> Target audiences (women community members, CSOs, LPAs) report that knowledge and communication products are relevant, accessible, and useful for their gender-responsive adaptation work | US\$4,000 (Component 4) | PIU                      | Y2–5     |

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| Activity                                                                                                                        | Gender-specific Activity                                                                                                                                                                                                                                                                           | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Budget                  | Responsible                   | Timeline |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|----------|
|                                                                                                                                 |                                                                                                                                                                                                                                                                                                    | (feedback surveys per product release; target: ≥75% positive).                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |                               |          |
| <b>Activity 1.4: Support integration of restoration priorities into spatial planning instruments</b>                            | Support participation of women representatives from Local Public Administrations (LPAs) and community organisations in restoration planning integration; ensure women's observations documented                                                                                                    | <p><b>Quantitative:</b> Women represented in ≥30% of local planning coordination events</p> <p><b>Qualitative:</b> Women LPA representatives and community members report that their inputs on restoration integration into spatial plans are recorded and acted upon (post-event feedback; target: ≥70% positive by Y2).</p>                                                                                                                                                                  | US\$2,000 (Component 1) | PIU                           | Y1–4     |
| <b>Activity 1.5: Support Gender-Responsive Capacity Building for Climate-Resilient Early Warning System (Sub-Component 1.3)</b> | Ensure women's equitable access to EWS training and digital climate services; design geo-targeted alert communication using channels accessible to rural women (SMS, local radio, community networks); address digital literacy gaps and ensure EWS advisory tools are accessible to women farmers | <p><b>Quantitative:</b> ≥30% women participation in EWS capacity-building training; EWS dissemination channels include formats accessible to rural women; gender-disaggregated reach data collected from EWS pilot activities</p> <p><b>Qualitative:</b> Women farmers and rural women report that EWS advisory tools are understandable and actionable given their literacy levels and communication access (post-training perception survey; target: ≥75% positive by end of EWS pilot).</p> | US\$4,000 (Component 1) | PIU / Gender Specialist / SHM | Y1–4     |

## 12. Component 2: Climate-Resilient Ecological Infrastructure Restoration

**Outcome Statement:** *Equitable access of women (≥30%) to restoration activities, training, and employment in afforestation and ecological restoration (5,000 ha), forest rehabilitation (3,500 ha), riparian restoration and wetland/floodplain rehabilitation (2,000 ha), shelterbelt restoration (500 ha), and silvopastoral systems (2,000 ha) across southern Moldova production landscapes.*

| Activity                                                                                                          | Gender-specific Activity                                                                                                                                                                                                             | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Budget                  | Responsible | Timeline |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------|----------|
| <b>Activity 2.1:</b><br>Afforestation and ecological restoration of degraded communal and state forest lands      | Ensure equal access of women to participation in planting activities and restoration training programmes; provide flexible scheduling and appropriate gear/equipment for women workers                                               | <b>Quantitative:</b> ≥30% women participation in restoration training events; equal employment opportunity policy applied<br><b>Qualitative:</b> Women workers report non-discriminatory working conditions, access to appropriate protective equipment, and flexible scheduling arrangements during restoration activities (end-of-season worker feedback; target: ≥80% positive).                                                                                                                                                                                                                                                                 | US\$3,000 (Component 2) | SFEs / PIU  | Y2–5     |
| <b>Activity 2.2:</b><br>Forest ecosystem rehabilitation on degraded forest lands                                  | Ensure outreach to women land users and women-headed households eligible for ANR support; use accessible, language-appropriate communication tools                                                                                   | <b>Quantitative:</b> Women beneficiaries represented in ANR participation registers; outreach materials gender-responsive; % of outreach materials assessed as gender-responsive (target: ≥80%)<br><b>Qualitative:</b> Women beneficiaries assess outreach materials and ANR support processes as accessible and responsive to their needs as women-headed households (beneficiary feedback after outreach cycle; target: ≥75% positive).                                                                                                                                                                                                           | US\$3,000 (Component 2) | PIU / LPAs  | Y2–5     |
| <b>Activity 2.3:</b><br>Shelterbelt restoration, silvopastoral systems, and ecological connectivity strengthening | Support participation of women, including women livestock keepers, in shelterbelt and silvopastoral rehabilitation planning and maintenance-related capacity-building; address temporary grazing-access restrictions affecting women | <b>Quantitative:</b> ≥30% women participation in rehabilitation-related consultations and training<br>"≥30% women participation in SPMP consultations; women's land use concerns documented in SPMP; women livestock holders report that SPMP tools reflect their grazing and land-use concerns (structured interviews at end of SPMP pilots; target: ≥70% positive rating)<br><b>Qualitative:</b> Women participants in shelterbelt restoration activities report that their roles in biodiversity conservation and landscape stewardship are recognized and supported by implementing teams (qualitative interview at Y3; target: ≥70% positive). | US\$5,000 (Component 2) | SFEs        | Y2–5     |

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| Activity                                                                                                                          | Gender-specific Activity                                                                                                                                                                                                                                                                                                                                                 | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Budget                  | Responsible | Timeline |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------|----------|
|                                                                                                                                   | <p>pastoralists under the ESS5 Process Framework; promote women's roles in biodiversity conservation and landscape stewardship</p> <p>Support participation of women livestock holders in SPMP preparation and grazing-management consultations; include women's perspectives on pasture access and land use impacts in SPMP tools developed under Sub-Component 2.3</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |             |          |
| Activity 2.4: Riparian buffer restoration and wetland/floodplain rehabilitation in priority agricultural and Prut river catchment | Promote participation of women farmers, women-headed households, and women from fishing and riparian communities in riparian buffer, wetland and floodplain rehabilitation planning, consultations, and stewardship arrangements; address access and use restrictions affecting women engaged in fishing, livestock watering, and                                        | <p><b>Quantitative:</b> ≥30% women participation in shelterbelt and riparian planning consultations; number and % of affected women and men whose livelihoods and incomes are restored or improved following access restrictions (target: 100% of affected households meeting pre-project baseline by end of PoA implementation period); number and % of affected women and men consulted over alternative livelihood options (target: 100%); % of women involved in facilitation of community meetings related to access restrictions (target: ≥30%). Note: baseline values to be established in first 6 months of implementation; targets to be updated when baseline data are available, consistent with GAP section 15.</p> <p><b>Qualitative:</b> Women affected by access restrictions report that consultation processes were transparent, their livelihood concerns were heard, and</p> | US\$3,000 (Component 2) | PIU / LPAs  | Y2–5     |

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| Activity                                                                                                                                                                  | Gender-specific Activity                                                                                                                                                                                                                                                                                                                                                                 | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Budget                  | Responsible     | Timeline |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|----------|
|                                                                                                                                                                           | riparian cultivation at Lake Manta, consistent with the ESS5 Process Framework                                                                                                                                                                                                                                                                                                           | alternative options were adequately explained (post-consultation structured interviews; target: ≥80% positive).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |                 |          |
| <b>Activity 2.5:</b><br>Establishment and operationalization of the Southern Regional Forest Reproductive Material Centre (RFRMC) and climate-resilient species selection | Promote equal employment opportunity policies in RFRMC; ensure gender-balanced participation in FRM technical training; provide opportunities for women specialists in nursery management<br>Ensure women specialists are included in FRM technical consultations and species selection processes; use gender-responsive communication materials in FRM system-strengthening activities. | <b>Quantitative:</b> Gender-balanced participation in FRM technical training sessions; equal opportunity policies adopted; % and number of women specialists employed in nursery management roles reported annually (target: ≥30%)<br><b>Qualitative:</b> Women specialists employed in nursery management roles report equitable professional development opportunities, supportive working environment, and absence of gender-based discrimination (annual staff perception survey; target: ≥80% positive from Y2).<br>Women specialists represented in ≥30% of FRM technical events; number of gender-responsive communication materials developed reported annually (target: ≥2 per year); women specialists and community participants assess communication materials as accessible, relevant, and culturally appropriate (focus group feedback; target: positive assessment in ≥80% of feedback received) | US\$4,000 (Component 2) | PIU / Moldsilva | Y2–5     |

### 13. Component 3: Community Engagement, Climate-Resilient Livelihoods, and Local Stewardship Systems

**Outcome Statement:** *Women's meaningful participation, economic empowerment, and equitable access to livelihood opportunities ensured across community engagement, green livelihoods, and local stewardship activities in southern Moldova, with at least 40% women participation in participatory planning processes and targeted support for women-led green enterprises and stewardship structures.*

| Activity                                                                                         | Gender-specific Activity                                                                                                                                                                                                                                                                                                                                               | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Budget                      | Responsible                    | Timeline |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|----------|
| <b>Activity 3.1:</b><br>Participatory Landscape Planning, Governance, and Community Stewardship  | Ensure women's meaningful participation in community-led mapping, participatory planning, and biodiversity monitoring; promote women's leadership in Community Forest User Groups and stewardship structures; use gender-responsive facilitation formats                                                                                                               | <b>Quantitative:</b> ≥40% women participation in participatory planning and community mapping consultations; women represented in Community Forest User Group leadership; % gender responsive-facilitation format applied; % of women represented in Community Forest User Groups (CFUG) reported annually (target: ≥30%); % of community engagement events applying gender-responsive facilitation formats (target: 100%)<br><b>Qualitative:</b> Women CFUG members and planning participants report that their voices are heard and their inputs influence community biodiversity monitoring and governance decisions (mid-term and end-of-project qualitative assessment; target: ≥75% report meaningful agency in decision-making). | US\$7,000<br>(Component 3)  | PIU / Service Providers / LPAs | Y1–4     |
| <b>Activity 3.2:</b><br>Women's Economic Empowerment, Green Livelihoods, and Vocational Training | Support women-led restoration cooperatives, youth green entrepreneurship incubators, and vocational training in nursery management, beekeeping, climate-smart agriculture, eco-tourism, and sustainable forestry; prioritize women for livelihood diversification support, delivered through direct procurement and transfer of tools and assets<br>Component 3 design | <b>Quantitative:</b> Number of women-led green enterprises supported (target: ≥5 per project period); % of women-led green enterprises among all green enterprises supported (target: ≥40%); ≥30% women participation in vocational training activities; at least one women-focused livelihood product/value chain supported per target community<br><b>Qualitative:</b> Women beneficiaries of vocational training and enterprise support report increased confidence, improved business and technical skills, and expanded market linkages (structured beneficiary interviews at Y3 and Y5; target: ≥70% report improvement in at least two of these areas).                                                                          | US\$12,000<br>(Component 3) | PIU                            | Y2–4     |

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| Activity                                                                                                      | Gender-specific Activity                                                                                                                                                                                                                                                                   | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Budget                  | Responsible | Timeline |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------|----------|
| <b>Activity 3.3:</b><br>Community-Based Stewardship                                                           | Ensure equitable participation of women and vulnerable groups in stewardship committees and co-management structures; apply gender-responsive approaches; ensure Forest Management and Community Management plans document women's maintenance roles and rights                            | <b>Quantitative:</b> ≥30% women represented in stewardship committees; gender-equitable incentive mechanisms documented and applied; women's participation tracked in co-management registers<br><b>Qualitative:</b> Women stewardship committee members report equitable access to incentive payments, recognition of their maintenance roles, and absence of exclusionary practices in co-management structures (annual qualitative review of co-management registers and beneficiary interviews; target: ≥75% positive).                                                       | US\$4,000 (Component 3) | PIU         | Y2–5     |
| <b>Activity 3.4:</b><br>Sustainable Ecosystem Financing, Monitoring, and Long-Term Stewardship Sustainability | Ensure gender-disaggregated data collected in stewardship monitoring; explore PES and ecosystem finance opportunities with attention to women's access to payments; integrate gender indicators into community-level stewardship monitoring system built on Component 1 geospatial systems | <b>Quantitative:</b> Gender-disaggregated stewardship monitoring data collected; women's access to ecosystem service payments documented; gender indicators included in community monitoring reports<br><b>Qualitative:</b> Women community monitors and stewardship participants report that gender indicators in monitoring reports reflect real experiences and that PES/ecosystem finance opportunities are communicated and accessible to them (qualitative review of monitoring reports and focus groups; target: positive assessment by ≥70% of women participants at Y4). | US\$3,000 (Component 3) | PIU         | Y3–5     |

## 14. Component 4: Project Management, Monitoring and Evaluation

**Outcome Statement:** *Effective, accountable, and gender-responsive project management and monitoring system, with sex-disaggregated data used for adaptive management and knowledge products reflecting gender-differentiated outcomes.*

| Activity                                                                           | Gender-specific Activity                                                                                                                                             | Indicators and Targets                                                                                                                                                                                                                                                                                                                                                                                                                                   | Budget                  | Responsible             | Timeline |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|----------|
| <b>Activity 4.1:</b><br>Project implementation support and core technical staffing | Maintain gender-balanced staffing in PIU; designate Gender Focal Point; apply equal opportunity practices in all hiring and procurement                              | <b>Quantitative:</b> Gender Focal Point designated and operational by Y1; sex-disaggregated staffing data reported annually/% of women in PIU (reported annually; target; ≥40% women in total PIU staffing by Y2)<br><b>Qualitative:</b> Female PIU staff and the Gender Focal Point report an enabling, non-discriminatory, and professionally supportive working environment (annual internal staff perception survey; target: ≥85% positive from Y1). | US\$2,000 (Component 4) | PIU                     | Y1–5     |
| <b>Activity 4.2:</b><br>MEL system development and operation                       | Ensure GAP monitoring integrated into ESMF/SEP implementation tracking; include gender indicators in monitoring framework; collect and report sex-disaggregated data | <b>Quantitative:</b> Gender indicators included in safeguards monitoring reports; sex-disaggregated data in 100% of progress reports<br><b>Qualitative:</b> PIU safeguards team and implementing partners report that the MEL system adequately captures gender-differentiated outcomes and is practical to use (annual MEL quality review; target: positive assessment by ≥80% of users by Y2).                                                         | US\$3,000 (Component 4) | PIU safeguards team     | Y1–5     |
| <b>Activity 4.3:</b><br>Capacity-building for implementing partners                | Provide gender-responsive capacity-building to NOIEP, LPAs, SFEs, and partner NGOs; include gender analysis tools in training curricula                              | <b>Quantitative:</b> 100% of implementing partners receive gender-responsive orientation by Y1; training completion tracked by sex<br><b>Qualitative:</b> Implementing partner staff (NOIEP, LPAs, SFEs, NGOs) report improved confidence in applying gender-responsive approaches in their field activities following training (post-training feedback; target: ≥75% report improved capacity by end of Y1).                                            | US\$5,000 (Component 4) | PIU / Gender Specialist | Y1–2     |

## 15. Monitoring, Evaluation, and Reporting

The GAP will be monitored through the project's integrated MEL system. Key principles include:

- Sex-disaggregated data collection and reporting across all activities with participation targets.
- Regular GAP progress reviews as part of semi-annual and annual progress reporting.
- Integration of gender indicators into ESMF and SEP implementation tracking.
- Adaptive management: if participation targets are not being met, corrective measures will be developed and documented within 30 days of identification.
- Gender-specific evaluation questions included in the project's mid-term review and final evaluation.
- GAP implementation progress will be reported in the Annual Performance Reports (APRs) submitted under the Funded Activity Agreement. Annual Performance Reports shall include a dedicated section summarising progress against the GAP indicators and targets set out in this document, and shall identify any corrective measures taken where targets were not achieved.

| Key Gender Indicator                                                                                          | Baseline / Target                                                                                | Reporting Frequency |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------|
| % women in restoration planning consultations                                                                 | Baseline: TBD; Target: ≥40% (C1), ≥30% (C2, C3)                                                  | Semi-annual         |
| % women in restoration training and employment activities                                                     | Baseline: TBD; Target: ≥30%                                                                      | Semi-annual         |
| % PIU staff who are women                                                                                     | Baseline: TBD; Target: to be maintained/improved                                                 | Annual              |
| % implementing partners receiving gender-responsive training                                                  | Baseline: 0%; Target: 100% by Y1                                                                 | Annual              |
| Gender-responsive participation formats applied (yes/no)                                                      | Target: 100% of major events                                                                     | Each event          |
| SEA/SH mechanism operationalised (yes/no)                                                                     | Target: Yes by end of Y1                                                                         | Annual              |
| Knowledge products with gender-responsive analysis                                                            | Target: 100%                                                                                     | Per product release |
| Sex-disaggregated data included in progress reports                                                           | Target: 100%                                                                                     | Semi-annual         |
| % of project staff and workers who completed SEAH awareness training                                          | Baseline: 0%; Target: 100% by end of Y1                                                          | Annual              |
| # of SEAH incidents reported through the dedicated confidential mechanism (disaggregated by type and outcome) | Baseline: 0; Target: all reported incidents receive documented follow-up within agreed timeframe | Annual              |

Baseline values for participation, employment, and institutional representation indicators will be established during the first six months of project implementation through baseline stakeholder mapping and sex-disaggregated data collection activities coordinated by the PIU and Gender Specialist.

Where quantitative targets and vulnerability-specific indicators could not be fully specified at appraisal stage due to absence of baseline data, these targets will be confirmed and formally updated in the GAP within six months of project effectiveness, following completion of baseline data collection. This applies in particular to: (i) participation targets for vulnerable women groups (female-headed households, Roma women, elderly women, women with disabilities) under Activities 2.1–2.5 and 3.1–3.3; (ii) the target for % of women-led green enterprises among all enterprises supported (Activity 3.2); and (iii) livelihood restoration targets for households affected by access restrictions (Activity 2.4). The PIU Gender Specialist will be responsible for finalising and documenting all updated targets in the project MEL system and revised GAP by end of Y1.

| Indicator                                                                         | Suggested target |
|-----------------------------------------------------------------------------------|------------------|
| % women reporting improved access to restoration-related livelihood opportunities | ≥25%             |
| % women reporting increased participation in local environmental decision-making  | ≥30%             |
| % women beneficiaries satisfied with participation accessibility measures         | ≥80%             |

## 16. Institutional Arrangements and Responsibilities

The GAP will be implemented within the following institutional framework:

- **Project Implementation Unit (PIU) / NOIEP:** Primary responsibility for overall GAP implementation, monitoring, and reporting; designating a Gender Focal Point; integrating gender considerations into all work plans and procurement.
- **Gender Focal Point:** Day-to-day coordination of gender-responsive activities across all project components; providing technical guidance and capacity-building to implementing partners; ensuring gender-responsive MEL data collection and reporting. This position is established at PIU level within NOIEP and combines coordination responsibilities with specialist technical expertise. Separate gender focal points are not required at LPA or SFE level; community-level gender-responsive implementation will be coordinated through the PIU Gender Focal Point, with support from implementing NGO partners.
- **Ministry of Environment (Executing Entity):** Strategic oversight; ensuring alignment with national gender equality frameworks; coordination with relevant line ministries.
- **World Bank (Accredited Entity):** Implementation support and supervision; review of gender-related progress reports; technical guidance on World Bank gender standards.
- **Local Public Administrations (LPAs) and State Forest Enterprises (SFEs):** Community-level implementation of gender-responsive activities; outreach to women stakeholders; local gender data collection.
- **Implementing NGO partners:** Community-level gender-responsive engagement and outreach; targeted consultations with women and vulnerable groups; support for inclusive stakeholder processes.

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- Statistical information presented in this assessment was compiled from publicly available sources including the National Bureau of Statistics of Moldova, UN Women, UNDP, FAO, ILO, WHO Europe, and World Bank datasets published between 2023 and 2025. In several areas, available gender-disaggregated climate adaptation data for rural Moldova remains limited, and some findings are therefore based on triangulation of national studies, stakeholder consultations, and sectoral assessments.