Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 02-May-2024 | Report No: PIDDC00573

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Operation ID	Operation Name	
Moldova	P505546	GEF Wetlands and Terrestrial Ecosystem Restoration for Marine Pollution Management in Moldova	
Region	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
EUROPE AND CENTRAL ASIA	20-Nov-2024	30-Apr-2025	Environment, Natural Resources & the Blue Economy
Financing Instrument	Borrower(s)	Implementing Agency	GEF Focal Area
Investment Project Financing (IPF)	Republic of Moldova	Ministry of Environment	Multi-focal areas

Proposed Development Objective(s)

The Project Development Objective is to promote the adoption of nature-based solutions for better management of nutrient pollution in the Dniester River Basin in Moldova.

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	No
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	**7.90**
Total Financing	**7.90**
Financing Gap	**0.00**

DETAILS

Non-World Bank Group Financing

Trust Funds	7.90
Global Environment Facility (GEF)	7.90

Environmental and Social Risk Classification	Concept Review Decision
Moderate	The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Moldova's two decades of economic growth has improved its living standards, but the energy crisis and Russia's invasion of Ukraine pose risks for the country's short-term recovery and long-term prospects.** Moldova's per capita gross domestic product (GDP) expanded at an average annual pace of 4.9 percent between the late 1990s and 2019, which resulted in strong poverty reduction[1]. Poverty fell from close to 90 percent in the late 1990s to 13 percent by 2018[2]. The economy contracted by 7.3 percent in 2020 because of the COVID-19 pandemic, but it made a remarkable recovery to 13.9 percent growth in 2021. However, the current energy crisis and Russia's invasion of Ukraine resulted in a recession in 2022 and sluggish growth in 2023.

2. **Vulnerability of Moldova to recurring climate shocks necessitates advancing adaptation and resilience building.** Moldova has witnessed an average of one major natural disaster every three years over the last 20 years, including flooding and droughts, which are disastrous for Moldova's primarily rain-fed agriculture; this is being exacerbated by climate change. The updated National Determined Contribution (NDC) of Moldova promotes forest resilience and adaptability to climate change and calls for the creation of protective forest buffers to shield agricultural land and water sources, as well as to prevent soil erosion, and the establishment of new forests designed to withstand climate impacts while enhancing carbon capture and biodiversity. Additionally, it underscores the need to safeguard existing forest ecosystems and to encourage the ecological adaptation of forests through an ecosystem-based approach. The NDC promotes more efforts to restore degraded land (including pastures) and recommends more adjustments to ensure continuity in forest regeneration practices.

3. **Moldova's natural features (landscapes) influence its hydrographic network of more than 3,000 rivers and rivulets, with two main rivers, Dniester (Nistru) and Prut, of high transboundary interest.** Dniester River Basin covers more than 70,000 km^2 (about the area of South Carolina) and its waters are affected by pollution and altered hydrologic regime, including environmental and economic challenges posed by the Dniester Hydro energetic Complex (DHC) (in Ukraine) and unsolved Transnistrian conflict (in Moldova). Although agriculture dominates, wetland remnants (along Dniester's mouth section and within its tributaries) and riverbank forests represent an important feature of the country. Due to a combined complex-factors over the last decades, Moldova has encountered steady decreases in wetland areas (associated with sharp reduction in the quality and quantity of fish stock) and natural forest composition[3].

4. **The Dniester River Basin faces pressing environmental challenges.** The Dniester River serves as the primary source of drinking water for Moldova and for a significant portion of Ukraine. It also plays a pivotal role in sustaining Moldova's substantial agricultural sector, accounting for 10 percent of its GDP. However, the Dniester

[1] World Bank, 2021
[2] ibid
[3] Bacal et al. 2022

Basin faces pressing environmental challenges that have far-reaching implications for both Moldova and Ukraine[4]. Within this basin, a staggering 94 percent of water bodies have been assessed as at risk of "not achieving good ecological status" according to EU standards, with none classified as "no risk" [5]. The most severely impacted are Dniester's network of streams, including the many tributaries, on the brink of drying up and requiring urgent revitalization efforts[6]. Without any action, Moldova (and parts of Ukraine) will face increased costs to maintaining safe water quality, thus hindering development[7].

5. **Nutrient pollution represents one of the most critical environmental issues plaguing the Dniester River, leading to eutrophication, hypoxia, acidification, and toxicity.** This problem has complex root causes, primarily arising from (a) the discharge of household and urban wastewater and stormwater directly into natural waterways, ponds, and, eventually, the Dniester River and Black Sea; (b) disturbances in upstream ecosystems that permit discharges from the agricultural sector, resulting in downstream nutrient pollution from the use of mineral fertilizers and animal waste; and (c) inadequate treatment or the complete lack thereof in the discharge of industrial and power sector effluents into the river. According to the latest data[8], the whole area segment from Soroca district in the middle sector of the Dniester River up to its mouth, as well as its inner system of smaller streams (e.g., Raut, Botna, Ichel, Bac), are considered highly vulnerable to nitrogen pollution.

Sectoral and Institutional Context

6. **Spanning over nearly 60 percent of Moldova's territory, the Dniester River basin is crucial for Moldova and its economic development.** The Dniester feeds into the Black Sea, an area already experiencing environmental degradation, with only 30 percent of its waters originating within Moldova's network of tributaries, including contributions from the Transnistrian region. Within the expansive Dniester River basin, there are 19 administrative-territorial units (ATUs) located in Moldova that are part of the Dniester River basin, encompassing 2 municipalities and 41 towns on both sides of the river, which will be actively engaged in the project's activities.

7. **The main source of nitrogen emissions in the Dniester River basin, then transported toward coastal Black Sea systems, is agriculture.** A pressing environmental concern in this context is the elevated levels of nitrogen pollution in the lower reaches of the Dniester River. The upper forest-based ecosystems surrounding the river serve as natural purifiers, aiding in mitigating this issue. The absence of robust riverbank ecosystems or constructed filters for discharges in the upstream regions exacerbates coastal pollution downstream. This is not only having detrimental effects on the health of ecosystems (and their biodiversity) but also compromises soil and water quality, underlining the urgent need for comprehensive interventions and restoration efforts to safeguard vital natural resources.

8. **Moldova focuses on curbing nutrient pollution and hypoxia originating from the Dniester River Basin.** Nature-based solutions (NbS) such as ecological restoration and climate smart agriculture could curb nutrient pollution and hypoxia originating from agricultural activities. The pollution stems from agricultural, industrial, and municipal sources. The pollution affects the livelihood of about seven million people who depend on the Dniester River in both Moldova and Ukraine and who will benefit from these efforts.

9. **Numerous policies and strategies underscore the national commitment to addressing marine pollution and hypoxia, cutting across various sectors.** These include the Dniester River Basin District Management Plan

[4] World Bank. (Forthcoming, 2023). Blueing the Black Sea: Turning the Tide of Pollution Volume 2: Country Marine Pollution Diagnostics
[5] OECD. (2020). Developing a Water Policy Outlook for Georgia, the Republic of Moldova and Ukraine
[6] Ministry of Environment, 2021
[7] Popa, 2013
[8] Ministry of Environment, 2024

(submitted to the GoM for approval), European Moldova 2030 National Development Strategy, the National Environment Strategy 2024-2030 (under consultations now), the Water Supply and Sanitation Strategy 2014-2030, the National Program for the Implementation of the Protocol on Water and Health for 2016-2025, and the National Forest Extension and Rehabilitation Program 2023-2032 (NFERP). Moreover, Moldova and Ukraine have jointly established the Dniester Commission and the Strategic Action Program (SAP) for the Dniester River Basin, demonstrating regional cooperation.

10. **Restoration as a response to ecosystem degradation is on the European Union (EU) agenda and Moldova must take immediate steps to maximize its nutrient removals in the Dniester River and the Black Sea.** Tracing from the soviet past, Moldova's ecosystems have been highly modified through non-environmentally but agriculture-expansionist practices. Restoring damaged ecosystems based on a landscape approach can be critical to reducing levels of both nitrogen and phosphorus pollution. With the European Commission decision to open accession negotiations, Moldova is now shaping up its eco-restoration vision to remove excess nutrients and restore the agricultural ecosystem balance in the Dniester River basin. This is in line with the UN Decade on Ecosystem Restoration that aims to prevent, halt, and reverse the degradation of ecosystems on every continent and in every ocean. At the EU level, member states will have to put in place effective restoration measures to cover at least 20 percent of its land and sea areas by 2030, while by 2050 measures should be in place for all ecosystems in need of restoration (EU Nature Restoration Law, 2024).

11. **The proposed project intends to manage nutrient pollution in the Dniester River Basin through Nature-based Solutions (NbS).** NbS are defined as use of resources and processes already found in nature to restore ecosystems, support communities, and contribute to healthy and resilient economies. NbS for nutrient pollution management leverage, inter alia, the natural filtering and absorption capacities of ecosystems such as wetlands, forests to capture, retain, and remove nutrients like nitrogen and phosphorus from runoff, surface water, or groundwater. The proposed project focuses on restoring ecosystem processes directly, it will result in expanded areas of healthier ecosystems (restored functionality) and broader range of generated ecosystem services (benefits). All this will ultimately improve landscape/habitat conditions and water quality through reanimated synergies between upstream and downstream ecosystems.

Relationship to CPF

12. **The proposed project is fully aligned with the Moldova Country Partnership Framework (CPF)[9] FY2023-27**, the overarching objective of which is to support green, resilient, and inclusive development and competitiveness in Moldova. In particular, the proposed project will contribute to the two CPF's broad areas: (i) increased opportunities for formal employment; and (ii) increased resilience to climate change and crises, as well as to a cross-cutting theme of strengthening systems and institutions, and capacity-building. Proactive management of environmental and natural resources, encompassing marine ecosystems and nutrient-rich areas, lays the groundwork for fostering long-term inclusive growth. The proposed project, with its focus on the implementation of NbS for marine pollution prevention, will not only support safeguarding of vital ecosystems but also ensure the long-term viability of sectors such as agriculture and forestry. Additionally, these measures serve as a buffer against the adverse impacts of climate change, reinforcing resilience and promoting ecosystem health.

13. **Through afforestation/reforestation activities, the proposed project can contribute to Moldova's National Forest Extension and Rehabilitation Program (NFERP) for 2023-2032.** It can have direct contributions to sustainable generation of ecosystem services (ES) through the protection of water and soil resources, combating

[9] Report # 177939, discussed by the Board on March 14, 2023

climate disruptive factors and providing forest products and services to the national economy and population. By expanding new forest lands (on nearly 110,000 ha) and reconstructing existing degraded forests (on at least 35,000 ha), Moldovan authorities want to ensure the country's needs in forest products/services are met and its resilience to climate change in the long term through conservation and development of forest resources is significantly improved. In nutrient vulnerable areas, enhanced forest ecosystems through restoration activities could improve water quality outcomes. Eventually, ecosystems will act as true eco-buffers where increased tree/vegetation growth means increased nutrient demand.

14. **The project supports "European Moldova 2030" Strategy which focuses on sustainable improvement of the quality of life in Moldova by 2030, in line with the Association Agreement between the EU and the Republic of Moldova**. It will contribute to the increase of restored ecosystems and reduced levels of pollution at national and regional levels, according to the national Sustainable Development Goals (SDGs) and the NDC by following the imperative of European standards. The SFG's objective 15 – "protect, restore and promote sustainable use of terrestrial ecosystems, sustainable forest management, combating desertification, halting and restoring soil degradation and halting biodiversity loss" is exactly what the project design aims directly at.

15. **The proposed project directly aligns with three GEF-8 Focal Areas outlined in GEF-8 Strategic Positioning and Programming Directions (April 6, 2021).** These include a) Biodiversity Focal Area, b) Climate Change Focal Area and c) Land Degradation Focal Area.

C. Proposed Development Objective(s)

16. The Project Development Objective is to promote the adoption of nature-based solutions for better management of nutrient pollution in the Dniester River Basin in Moldova.

Key Results (From PCN)

17. The following are the indicators to measure the achievement of the PDO and the project's key results.

    (a) Area of ecosystems restored within the Dniester River Basin (hectares)
    (b) Area of landscape under improved nutrient management practices (hectares)
    (c) People benefitting from NbS targeted to reduce nutrient pollution and marine hypoxia (number)

D. Concept Description

18. The project addresses marine pollution through enhanced adaptive capacity for river basin ecosystem restoration (at landscape level), all following the EU directives and the Dniester Commission. The proposed Project's design consists of three components: (i) Component 1: Institutional Capacity Development and Community Engagement; (ii) Component 2: Landscape Restoration and Watershed Management and (iii) Component 3: Project Management, Monitoring and Communication.

Component 1: Institutional Capacity Development and Community Engagement

19. **Subcomponent 1.1: Policy Development and Harmonization.** This component will focus on developing and harmonizing policy framework and enforcement mechanisms for effective nutrient pollution reduction in Dniester River Basin through promoting NbS. The project will finance analysis and revisions of existing policy, legal, frameworks for marine pollution management, forest and wetland restoration, afforestation/reforestation, ecological reconstruction, and watershed management to help align these with European Union and international obligations including NDC commitments. These could include a) review overlaps, duplications and contradictions

between the major institutions involved in the management and landscape restoration activities of Dniester River Basin; and b) developing regulatory and operational guidelines required for marine pollution management and private forest plantations.

20. **Subcomponent 1.2: Building capacity for improved marine pollution management through NbS.** The project will finance capacity development activities such as on-the-job training for operational and technical staff, including community representatives through workshops, seminars, and so on, on a range of topics, related to marine Pollution Management, NbS, Landscape Restoration, Watershed Management, Forest/Wetland Conservation, etc. The developed training modules will be formalized and provided to the suitable departments and structural units of the Ministry of Environment, and the appropriate personnel of the Ministry will be trained as well. Thus, the necessary potential of the trainers will be secured, increasing sustainability of the project results during and especially beyond the project implementation. In addition, the project will finance the purchase and installation of necessary tools, software, and equipment.

21. **Subcomponent 1.3: Community Benefits and Engagement.** This project supports local communities in implementing sustainable agricultural practices and restoration activities that improve downstream marine pollution management through NbS in the upstream Dniester River Basin. Community engagement includes involvement in the design and implementation of the river restoration activities including in tree planting, wetland revitalization, habitat restoration, and clean-up efforts. The communities will benefit economically from increased agroforestry products, and resilient and sustainable food production. They will also benefit from better and more ecosystem services, clean water, and enhanced protected area system.

Component 2: Landscape Restoration and Watershed Management

22. **Subcomponent 2.1: Restoration (forest and wetland) and conservation activities.** The expected outcome from this subcomponent is the removal of different pollutants (nutrients, sediment, coliforms, pesticides, heavy metals to in at least 2,000 hectares of restored landscape (key nutrient-vulnerable ecosystems) within the Dniester River Basin. These could be achieved through proper planning and implementation of activities such as wetland restoration (return degraded wet-areas to natural functioning, including Lower Dniester Ramsar sites and the National Park Nistrul de Jos), riverbank revegetation (trap excessive nutrients and sedimentation), afforestation (newly created plantations in key areas, including addressing socio-economic needs), reforestation (restoring once-natural forested lands), sustaining natural regeneration, shelterbelt rehabilitation (improved conditions/quality), and small river revitalization (reinstate natural retention processes). The sub-component will also include other activities such as sustainable forest management and development of comprehensive landscape restoration plans (LRPs) based on NbS principles, including testing multiple restoration strategies aimed to target critical pollution source areas.

23. **Subcomponent 2.2: Agroforestry systems and Silvopastoral practices.** This sub-component targets the improvement of nearly 25,000 hectares of landscapes through sustainable agroforestry systems (integrated tree/shrub with crops) and silvopastoral practices (combining trees/shrubs with grazing). These two practices are believed to be important measures to reduce nutrient runoff and enhance erosion control, as well as to lower local budget inputs for flood mitigation (thus improving local public administrations' effective response). The sub-component also includes demonstration of integrated nutrient management plans and the implementation of landscape restoration strategies focusing on agroforestry/silvopastoral practices and other innovative Nature Based Solution for nutrient pollution reduction.

Component 3: Project Management, Monitoring and Communication

24. **Project Management**: This component will finance the operating costs of the Project Implementation Unit (PIU) in the Ministry of Environment to carry out project management functions. Support will be provided for procurement, financial management (FM), technical support, environmental and social risk management, and coordination. The PIU will be responsible for (a) coordinating closely with the project partners in forestry, pasture, and protected areas, as well as with other stakeholders and (b) ensuring project compliance with environmental and social standards (ESS), gender aspects, grievance redress mechanism (GRM), and citizen engagement. An important addition to the monitoring approach (which was performed by PIU before, in frames of implementation of the similar projects), will be introduction of the bioindicators, which will demonstrate the impact of the project on the ecosystems and biodiversity during implementation of the project and beyond it.

25. **Monitoring and Evaluation**: This component will finance the reporting and monitoring and evaluation (M&E) functions. It includes the Implementation of a robust monitoring and evaluation system to track the effectiveness of Nature Based Solution in reducing nutrient pollution and enhancing ecosystem health.

26. **Communication:** The project also involves communication activities to promote interactions through policy consultation, dissemination of information, and outreach activities on marine pollution management through nature-based solution in the Dniester River Basin.

Legal Operational Policies

	Triggered?	
	Last approved	**Current**
Projects on International Waterways OP 7.50	No	
Projects in Disputed Area OP 7.60	No	

Summary of Screening of Environmental and Social Risks and Impacts

27. **The project will be implemented in the Dniester watershed, with various measures intended upstream in order to reduce marine pollution carried by the Dniester River**. No significant environmental risks are expected neither at the construction or operation stages of the project. The envisaged environmental and social risks are related to minor civil works for wetland restoration, rehabilitation of small rivers beds and afforestation/ reforestation activities. By Appraisal, it will be decided if the areas of intervention will tackle also special conservation zones as the Ramsar sites or not . Mitigation measures will be proposed for addressing environmental risks associated with small civil works described above. Social risks are considered moderate. Project interventions are expected to take place on public land and no additional land acquisition is expected to be required. However, this will be further confirmed during preparation, and any impacts of the project on restrictions to land use will be further assessed. Labor and working conditions and health and safety risks are relevant for contracted and community workers and will require mitigation and monitoring measures. Child labor risks are also prevalent in the agricultural sector in Moldova. Other social tensions and exclusion risks may arise from site selection processes and beneficiaries having access to project benefits (including jobs and value chain development opportunities), if the criteria are not

sufficiently consulted and disseminated with a wide range of stakeholders and beneficiaries in rural areas that are more likely to be poor, and women and youth who are considered disadvantaged in terms of engagement and access to economic opportunities in the agricultural sector. The project design includes activities to strengthen community capacity for conservation and offer opportunities for stakeholder engagement and benefit sharing including developing landscape restoration plans. PIU will prepare the ESMF which will guide risk screening and application of mitigation measures at the sub-project level under Component 2 of the project. It will also include procedures, criteria, and responsibilities for defining a need for and type of environmental and social instruments to be prepared for individual sub-projects that may include Environmental and Social Impact Assessment (ESIA) and/or an ESMP. ESMF will provide an outline of ESIA report and a checklist template of ESMPs for small and medium scale construction and rehabilitation works. Once the areas of intervention are identified, a thorough screening of potential risks will be undertaken and relevant mitigation measures will be put in place and monitored for all project interventions.

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APPROVAL

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