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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON
PROPOSED

GLOBAL ENVIRONMENT FACILITY GRANT
IN THE AMOUNT OF US\$5.45 MILLION

AND

SUPPORTED BY A
MULTI-DONOR TRUST FUND IN THE AMOUNT OF US\$3.65 MILLION

TO THE

REPUBLIC OF ARMENIA

FOR A

RESILAND: ARMENIA RESILIENT LANDSCAPES PROJECT
(P179988)

April 10, 2024

Environment, Natural Resources & the Blue Economy
Europe and Central Asia

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CURRENCY EQUIVALENTS

(Exchange Rate Effective February 29, 2024)

Currency Unit = Armenian Dram (AMD)

AMD 406.24 = US\$1

US\$0.0025 = AMD 1

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

CE	Citizen Engagement
CPF	Country Partnership Framework
DA	Designated Account
EIRR	Economic Internal Rate of Return
ESCP	Environmental and Social Commitment Plan
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EU	European Union
EPIU	Environmental Project Implementation Unit
FM	Financial Management
GAP	Gender Action Plan
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GP	Global Practice
GRM	Grievance Redress Mechanism
ha	hectares
IFAC	International Federation of Accountants
IFR	Interim Financial Report
IPF	Investment Project Financing
IPSAS	International Public Sector Accounting Standards
M&E	Monitoring and Evaluation
MOE	Ministry of Environment
MTR	Midterm Review
NDC	Nationally Determined Contribution
NGO	Nongovernmental Organization
NPV	Net Present Value
NTFP	Nontimber Forest Product
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
POM	Project Operations Manual
PPG	Project Preparation Grant
PPP	Purchasing Power Parity
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
SEP	Stakeholder Engagement Plan
Sida	Swedish International Development Cooperation Agency
SNCO	State Non-Commercial Organization
SOE	Statement of Expenditures
SPNA	Specially Protected Nature Area
STEP	Systematic Tracking of Exchanges in Procurement
TOR	Terms of Reference
WBG	World Bank Group



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**DATASHEET****BASIC INFORMATION**

Project Beneficiary(ies) Armenia	Operation Name RESILAND: Armenia Resilient Landscapes Project	
Operation ID P179988	Financing Instrument Investment Project Financing (IPF)	Environmental and Social Risk Classification Substantial
GEF Focal Area Multi-focal areas		

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date 02-May-2024	Expected Closing Date 31-Dec-2028
Bank/IFC Collaboration No	

Proposed Development Objective(s)



The Project Development Objectives (PDOs) are (i) to increase the area under sustainable landscape management in selected locations and (ii) to promote sustainable economic activities to communities in targeted landscapes in Armenia.

Components

Component Name	Cost (US\$)
Component 1. Institutional Capacity and Policy Development	1,000,000.00
Component 2. Landscape Restoration	5,500,000.00
Component 3. Promoting Communities' Benefits	1,900,000.00
Component 4. Project Management, Monitoring & Evaluation, and Communication	700,000.00

Organizations

Borrower: The Republic of Armenia
 Implementing Agency: Ministry of Environment, Environmental Project Implementation Unit

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	9.10
Total Financing	9.10
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	9.10
Supporting Armenia Resilient Landscapes Project MDTF	3.65
Global Environment Facility (GEF)	5.45

**Expected Disbursements (US\$, Millions)**

WB Fiscal Year	2024	2025	2026	2027	2028	2029
Annual	0.10	1.50	2.00	2.50	2.00	1.00
Cumulative	0.10	1.60	3.60	6.10	8.10	9.10

PRACTICE AREA(S)**Practice Area (Lead)**

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Urban, Resilience and Land

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	● High
10. Overall	● Substantial

POLICY COMPLIANCE**Policy**

Does the project depart from the CPF in content or in other significant respects?



[] Yes [✓] No

Does the project require any waivers of Bank policies?

[] Yes [✓] No

ENVIRONMENTAL AND SOCIAL

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description

Schedule 2. Section I. A.1.(a): The Recipient through MOE shall be responsible for overall Project implementation; and without limitation to the foregoing shall maintain throughout Project implementation the EPIU to be responsible for performing key Project management functions, including coordination, fiduciary, monitoring and evaluation, social and environmental standards management and reporting functions, with functions, resources and staffing acceptable to the Bank all as further described in the POM



Schedule 2. Section I. A.1.(b): The Recipient, through MOE, shall establish, no later than ninety (90) calendar days after the Effective Date and thereafter maintain, throughout the implementation of the Project, a Project Steering Committee, with membership, functions and terms of reference satisfactory to the Bank, as set forth in the POM.

Conditions

Type	Citation	Description	Financing Source
Effectiveness	Condition-1	Article IV. Section 4.01 (a): The execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified by all necessary governmental action	Trust Funds
Effectiveness	Condition-2	Article IV. Section 4.01 (b): MOE has adopted the POM in form and substance satisfactory to the Bank	Trust Funds



I. STRATEGIC CONTEXT

A. Country Context

1. Armenia had substantial economic progress in 2017–2019, with an average annual economic growth of 6.8 percent. However, the economy was hit hard in late 2020 by the worst military confrontation since the early 1990s and a large second wave of the COVID-19 pandemic. The effects triggered by these twin shocks resulted in a 7.2 percent contraction in gross domestic product (GDP), one of the sharpest in the Europe and Central Asia region. The poverty rate rose from 26.4 percent in 2019 to 27.0 percent in 2020. In Yerevan, the poverty rate increased from 25.7 percent in 2019 to 33.4 percent in 2020.¹ In 2021, growth rebounded by 5.8 percent owing to the recovery of the industry and service sectors. In 2022, growth reached 12.6 percent, fueled by the influx of citizens and money transfers, mainly from the Russia Federation, following Russia's invasion of Ukraine. In 2023, Armenia continued to register growth, driven by services and continued inflows of citizens and money transfers from Russia, and grew by 9.4 percent, surpassing expectations. Due to continued and strong economic growth in 2022–2023, poverty was projected to fall from 51.7 percent in 2021 to 37.6 percent in 2023.² Several risks and vulnerabilities remain with security issues at Armenia's border, a reversal of recent inflows, potential sanction, and a slowdown in trade partner economies. Armenia is also considered to be one of the most vulnerable countries negatively affected by climate change.

B. Sectoral and Institutional Context

2. Forests and wetlands of Armenia are among the most valuable ecosystems. Armenia is a mountainous country located between 375 and 4,090 meters above sea level and is home to a variety of ecosystems, including semideserts, juniper woodlands, deciduous forests, grasslands, and wetlands. It hosts 17,700 species of animals (including over 500 endemic species) and 3,500 species of vascular plants (including 144 endemic species). Armenia is one of 35 global biodiversity hotspots and is part of the Caucasus ecoregion that makes a biogeography bridge between Europe and Asia. Among other ecosystems, wetlands and forests are of highest importance for biodiversity conservation and the mitigation of climate change worldwide.

3. Armenian forests are among the most threatened ecosystems in temperate biomes, with accelerating degradation, largely attributable to overexploitation. Armenia is one of the least forested countries in the region, with 9.3 percent³ forest cover largely concentrated in the northeast and southeast of the country. Deforestation and forest degradation are the major environmental problems in the country. According to FAO FRA (2020),⁴ during 1990–2020 Armenia lost 62,600 hectares (ha) of forests. Moreover, 11,000 ha of naturally regenerated primary forests were degraded into secondary forests during the same period. The proximate drivers of such degradation are overcutting, overgrazing, mining, and infrastructure development. Degraded forests are increasingly exposed to forest fires, pests, and diseases. The key underlying drivers are economic: high costs of gas and electricity and low income of the households. Negative outcomes, which include soil erosion, uncontrolled surface runoff, landslides, disturbance to the hydrological cycle, and flooding, are commonly attributed to deforestation and forest degradation in Armenia. During 1990–2020, forest cover losses resulted in net greenhouse gas (GHG) emissions of about 93,000 tCO₂eq per year. The economic costs of deforestation—in terms of GHG emissions and loss of other ecosystem services—are

¹ US\$5.5 per day 2011 purchasing power parity (PPP).

² As measured by the upper-middle income country poverty line of US\$6.85 per day (2017 PPP).

³ The figure of current forest cover of Armenia varies in different sources. Here we take the figure obtained by FAO. 2010. "Global Forest Resources Assessment." The UN Food and Agriculture Organization.

⁴ FAO FRA (Food and Agriculture Organization Forest Resources Assessment). 2020. *FRA Country Reports – Armenia*. Rome.



estimated to be over US\$8 million per year (in 2021 cost US\$). Overall land degradation in Armenia is estimated to have a total economic cost of US\$111 million per year (in 2021 constant US\$). The situation with the forests is exacerbated by a severe fragmentation of the forests, causing an increase of the forests' edge and decrease in the forest interior. In turn, it results in faster degradation of the forest ecosystems and affects over 80 percent of the forest specialist species, which strongly depend on the forest interior. All this will lead to a deterioration in the regenerative capacity of forests, making them even more vulnerable to climate change.

4. Improved institutional and regulatory frameworks are critical for sustainable forest management. The Ministry of Environment (MOE) and its respective agency and specially protected nature areas (SPNAs) play a crucial role in developing and implementing these frameworks. The forest in Armenia belongs either to Hayantar SNCO⁵ (Armforest - the organization under the MOE that unites the forest economies) or to the system of SPNAs. In the case of MOE, the forest management function belongs to the Hayantar SNCO (the organization under MOE). The development of forest management plans is a function of the MOE, but the implementation is a function of the Hayantar SNCO, and this in return is delegated to the forest economies and their control is implemented by Forest Committee. Forest-dependent communities are not involved in the development of the forest management plans or their approval. For the second case, the forest management function, as a part of SPNA's management plan, is implemented by a specific nature reserve or national park. This complex and at times overlapping arrangement has resulted in a forest management regime that is not functioning optimally and has hindered the adoption of sustainable forest management. Despite some reforms and improvements within the system, there is considerable scope to strengthen capacities at all levels to improve quality and efficiency of forest management in the country.

5. Wetlands are highly productive ecosystems with rich biodiversity. The water bodies of Armenia make up 492,200 ha or 16.5 percent of the country's area (Ramsar Convention 2022) that provide habitat for a diversity of wildlife species; serve as breeding or feeding place for 40 percent of all plant and animal species; and deliver various ecosystem services such as protection and improvement of water quality, provision of habitat for fish and wildlife, storage of floodwaters, maintenance of surface water flow during dry periods, and carbon sequestration.

6. Wetlands have been the subject of purposeful drainage for over a century. Despite their values, wetlands in Armenia have been a subject of overuse and purposeful draining (particularly during the Soviet period). Over 30,000 ha of brackish wetlands of Ararat Plain have been reduced via special drainage systems down to less than 2,000 ha, and about 3,000 ha of the mountain grassy marshes have been reduced by 80 percent through increased water extraction. This has resulted in a strong decline in wetland biodiversity (including number of endemic species, threatened species, and a variety of game birds), water retention capacity, and carbon storage and drying up of springs and other wetland areas that would serve as habitat for many species of flora and fauna. Reduction of the wetlands results in a change of humidity in the lowland semidesert areas and the highland steppes and meadows. This process, exacerbated by climate change, causes increased droughts and decreased productivity of those grasslands and creates additional risks for livestock husbandry. Proper wetland management would reverse this situation and enable forest restoration. Drought has also weakened trees and made them susceptible to insect outbreaks, which have damaged large areas of the forest. The several past episodes of drought have decreased crop yields and led more people to engage in illegal logging and poaching activities.

7. Wetland management. The wetlands of Armenia are either located at the lands of SPNAs or on community lands. Those located within the SPNAs are managed according to the SPNAs' management plans. The wetlands located at

⁵ State non-commercial organization.



the community lands are considered agricultural lands and managed by communities (in the best case for buffalo grazing and worst for reed burning and harvesting).

8. Opportunities in wetlands' restoration. The pilot project on restoration of 1.61 ha of brackish marshes in Khor Virap Sanctuary was performed by BirdLinks Armenia Nongovernmental Organization (NGO) with financial support from the Caucasus Nature Fund, resulting in fast recovery of biodiversity in the restored area. Expansion of wetlands' restoration can support in further development of the nature-based tourism, driven by birdwatching as well as create a reservoir for the game birds, supporting their sustainable harvesting for over 20,000 hunters. However, there is a need for revision of policies related to wetland restoration and maintenance as well as capacity and institutional development.

9. As part of its commitment under the Nationally Determined Contribution (NDC) 2021–2030, Armenia has committed to a mitigation target of 40 percent reduction of its GHG emissions by 2030. The sectors included in the contribution to the mitigation target include forestry and other land use. Restoration of wetlands would help Armenia achieve these targets considering the significant capacity of carbon sequestration of the country's wetlands. The wetland areas covered by the project include the brackish marshes, which are characterized by higher carbon sequestration potential and lower levels of methane and other GHG emissions.

10. The country is exposed to multiple forces of land degradation. Land degradation severely affects people's livelihood by reducing the availability of vital ecosystem services such as food, wood, water, and soil fertility and thus increases the risks of poverty particularly in rural areas of Armenia. Currently, 82 percent of the land area of Armenia is, to varying extents, exposed to desertification; 27 percent of these lands face extremely severe desertification.⁶ Land lost to infrastructure, industry, and similar uses has also increased by 27,230 ha and now represents-about 3.5 percent of the total country area. Chemical pollution occurs on 272,000 ha, with most of the land contaminated by mineral substances used in agriculture and by chemicals in urban areas. Pollution by minerals has increased due to the relative low cost and incorrect application of chemical fertilizers, especially nitrate. Acidification is mainly associated with natural soil properties, but salinization has intensified due partly to poor irrigation practices. The area of overgrazed land now covers about 170,000 ha.

11. Mining causes direct and indirect impacts on forests and biodiversity. At the mining site, land preparation and expansion and waste management change abiotic and biotic conditions and, in some cases, transform natural forests and threaten species and ecosystems. As a result of mining activities, about 8,000 ha of land have been degraded with an additional 1,500 ha used to store tailings dumps. Pollutants from these are commonly leached out, affecting waterways and local biodiversity.⁷ According to recent data (2018) from the Hydrometeorology and Monitoring Center, 16 rivers in Armenia have been identified as having the highest degree of pollution due to mining activities.⁸ There has been an expansion of mining across the country, affecting 34,900 ha of forest land in 2013, mainly in the Lori and Syunik provinces, where primary forested areas of the country are (Syunik constituting 36 percent of all the forests in the country and Lori and Tavush constituting 62 percent of forest cover).

12. Expansion of forests has been one of the main goals for Armenia, not only for their protective role but also to develop forest-related businesses, including the sustainable supply of fuelwood as part of the energy mix in the country. The Forest Code makes the implementation of forest rehabilitation measures a national priority. In particular, the rehabilitation of clear-cut and partially deforested areas and the promotion of afforestation measures to increase

⁶ UNCCD. 2017. "Armenia - Investing in Land Degradation Neutrality: Making the Case." Bonn, Germany.

⁷ See <https://documents1.worldbank.org/curated/en/289051468186845846/pdf/106237-WP-P155900-PUBLIC.pdf>.

⁸ Source: Armenian Ministry of Energy infrastructures and Natural Resources.



the current low forest cover are prioritized. The Draft National Forest Development Policy, Strategy and Action Plan 2021–2030 (NFP 2021–2030) identifies priority tasks, including (a) restoration of degraded forest landscapes, (b) increase of the forest cover; (c) maintenance and development of environmental, social, and economic functions of forests; and (d) continuous and effective use of forest resources.

13. Landscape scale restoration was never implemented by the country. The lack of integrated approach to the landscape restoration led to the following: (a) the landscape scale restoration was never performed in Armenia and (b) the forest restoration mainly resulted in the tree planting without considering the forest ecosystem, the natural succession, and the neighboring ecosystems, which could potentially play a role in forest restoration success. Besides a small-scale pilot project on restoration of brackish marshes in Khor Virap, the wetland restoration was never implemented in Armenia neither as a separate initiative nor as a component of restoration of another complex landscape (for example, forest).

C. Relevance to Higher Level Objectives

14. The project is fully aligned with Armenia Country Partnership Framework (CPF) 2019–2023⁹ and the upcoming CPF 2024–2028. It fits well with the 2019–2023 CPF's Focus Area 3: Sustainable Management of Environmental and Natural Resources, CPF Objective 8: Improved management of natural resources, and CPF Objective 9: Enhanced climate-change resilience, water security, and disaster risk management capacity. Focus Area 3 specifically responds to Armenia's stated goal of protecting the environment, improving the management and governance of natural resources, and managing environmental and climatic risks. The project is also well aligned with the upcoming CPF 2024–2028, where the climate-related aspects are targeted in several objectives, to which the proposed project could strongly contribute. Forward-looking management of environmental and natural resources provides the foundation for sustained inclusive growth through improved performance and citizen engagement (CE) in sectors such as agriculture, mining, tourism, and forestry as well as acts as a buffer against climate change and extreme weather events.

15. The project is aligned with the World Bank's Evolution Roadmap and its mission of ending extreme poverty and boosting prosperity on a livable planet. The project will contribute to the achievement of the World Bank Group (WBG) twin goals on a livable planet as it would restore degraded land, enhance carbon sequestration, and increase the economic benefits of the relatively poor segment of the society of Armenia—forest communities.

16. It aligns with the WBG Climate Change Action Plan (2021–2025) and its Europe and Central Asia Implementation Roadmap. The project will help mitigate climate change and build resilience through (a) reduced vulnerability and enhanced resilience through improved adaptation of landscapes to expected risks posed by climate change as well as (b) climate mitigation by, for example, enhanced carbon sequestration through the project activities such as afforestation, reforestation, joint forest management.¹⁰ The project is also underpinned by the World Bank Green, Resilient, and Inclusive Development (GRID) approach.

17. The RESILAND Armenia is highly relevant to and contributes toward the country's sustainable development aspirations as detailed in the Government of Armenia's Development Strategy 2021–2026. Some of the relevant policy actions included in the government program cover (a) sustainable management of forests: protection, preservation, use, and expansion of forested areas and continuous development of capacities; (b) conservation of biodiversity and increasing of the effectiveness of management regimes of specially protected areas; and (c)

⁹ Report No. 123902 -AM, discussed by the Board of Executive Directors on March 28, 2019.

¹⁰ Joint forest management takes place in government forest reserves, where management responsibilities are shared between local communities and the state.



approximation of the national legislation to the European Union (EU) environmental legislation in accordance to the EU-Armenia Comprehensive and Enhanced Cooperation Agreement. While wetlands are not explicitly mentioned in the program, they are inherently interlinked to sustainable forest management and biodiversity conservation. The program objectives and other national and international commitments Armenia made remain unachievable without due consideration of proper restoration, conservation, and management of forests, wetlands, and protected areas.

18. The project is consistent with Armenia's NDC 2021 update, which seeks to reduce the country's GHG emissions by 40 percent from 1990 emission levels, with the implementation plan covering the increase of the forest cover to 12.9 percent by 2030, corresponding to an increase of 60,000 ha of forests. At the time of adopting the updated NDC, Armenia also adopted a 10-year NDC implementation plan. The project will help further promote climate change mitigation and adaptation by supporting the sustainable use of land and better forestry management.

19. The proposed project directly aligns with three Global Environment Facility 8 (GEF-8) Focal Areas outlined in its 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. Specifically, the project will aim to enhance conservation, sustainability, and restoration of degraded natural resources and their ecosystem functions, with a strong focus on adoption of an integrated approach to manage forests and wetlands and to increase benefits to communities. The project will focus on increasing landscape resilience and providing opportunities to optimize ecosystem goods and services for communities. Importantly, the project will also increase carbon sequestration and improve land management practices to enhance the resilience of ecosystems in the face of climate change challenges.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

20. The Project Development Objectives (PDOs) are (i) to increase the area under sustainable landscape management in selected locations and (ii) to promote sustainable economic activities to communities in targeted landscapes in Armenia.

PDO Level Indicators

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

- Land area under selected sustainable landscape management practices (CRI¹¹, ha)
- People benefiting from sustainable economic activities in targeted landscapes (sex disaggregated) (number)

B. Project Components

22. The project follows an integrated landscapes approach to restore forests and wetlands and will rely on four key issues: (a) reducing forest fragmentation and increasing density of tree cover by restoration of forest land degraded due to mining and forest enrichment planting; (b) improving management of neglected and abandoned wetlands; (c) increasing community economic benefits; and (d) strengthening the institutional foundation for the sustainable management of landscapes, creating green jobs, and increasing community benefits. Project activities are grouped into the following four interrelated components and their respective subcomponents. Under its main three components, the project will finance consulting services, non-consulting services, goods, equipment, training, workshops, and small works.

¹¹ Corporate Results Indicator

**Component 1. Institutional Capacity and Policy Development (estimated budget: US\$1,000,000)**

23. The project supports integrated landscape management such as restoration of degraded wetland and rebuilding of fragmented forests. Integrated landscape management of such kinds of activities requires developing appropriate policies and strengthening institutional capacities.

Subcomponent 1.1: Policy Review and Development

24. **Overview.** The project will finance analysis and revisions of existing policy and legal frameworks for forests, wetlands, and protected areas to help align these with national and international obligations including NDC commitments. The expected outcomes will include a technical report that will describe policy gaps, institutional duplications, and contradictions in the management of forests, wetlands, and protected areas as well as increasing economic opportunities for communities to decrease the pressure on forest and wetland.

25. **Activities.** The major interventions will include (a) providing technical assistance to review overlaps, duplications, and contradictions between the major policies and institutions involved in the management of Armenia's forests; (b) providing technical assistance to review and improve policies and regulatory and operational guidelines required for managing landscape restoration and increasing economic benefits of forest-dependent communities; (c) reviewing guidelines for development and management of ecotourism; and (d) providing technical assistance to review and strengthen regulatory and operational guidelines required for community-based wetland management.

26. **Approach.** The main principles of the subcomponent include stakeholder feedback, monitoring, data collection, and analysis that inform the nature, extent, and outcome of the review and update of policy gaps and institutional overlaps.

Subcomponent 1.2: Institutional Capacity Development

27. **Overview.** The project will finance a range of important and necessary capacity-building activities and awareness raising programs.

28. **Activities.** Capacity development activities will be provided to operational and technical staff as well as to community representatives, through on-the-job training, workshops, seminars, and so on, on a range of topics related to integrated landscape management and alternative livelihood business models. The training modules will be developed for three different levels: (a) policy and decision-makers, (b) local administrations responsible for implementation of landscape management, and (c) communities around restored landscape activities and protected lands. The relevant training, therefore, will be delivered to the suitable departments and structural units of the MOE, forest economies, protected areas, and communities. In addition, the project will finance the purchase and installation of necessary tools, software, and equipment. The project will support awareness activities on the global and local benefits of wetlands and other landscape management issues.

29. **Approach.** The capacity development will follow the process of (a) engaging stakeholders on capacity development, (b) assessing capacity assets and needs, (c) formulating a capacity development response, (d) implementing a capacity development response, and (e) evaluating capacity development.

Component 2: Landscape Restoration (estimated budget: US\$5,500,000)

30. The component describes the main actions and approaches of forest and wetland restoration in Ararat Plain, Lori Plateau Lakes, and in the vicinity of Lake Sevan in Gegharkunik province.

*Subcomponent 2.1: Forest Restoration*

31. Overview. The subcomponent will finance restoration of degraded forests and improvement of forest management. The expected outcome from this subcomponent will include increased forest interior, diversified forest ecosystems, improved conditions for forest biodiversity, and increased resilience of the forest ecosystems toward climatic stresses. The target areas will include fragmented deciduous forests of Lori and Syunik provinces and degraded coniferous plantations around Lake Sevan in Gegharkunik province. The project will not be involved in community land formalization and/or other similar activities.

32. Activities. The subcomponent's actions in Lori and Syunik provinces include planting of indigenous trees and bushes, sowing of seeds of the same species, fencing of critical sites to prevent livestock penetration, and accompanying monitoring of the biodiversity's recovery in the restored ecosystems. In the surroundings of Lake Sevan, the pilot action will include a transformation of the monoculture pine plantation into fully functioning ecosystems, through removing the infected pine trees and planting the deciduous trees and bushes.

33. Approaches. The main approach of the forest restoration will be based on the following principles: (a) maximum use of ecosystem services employing a modeling approach; (b) involvement of the local communities into the restoration process whenever relevant; (c) restoration of fragmented forest areas to increase the forest interior and decrease the forest edge and the negative edge effect; (d) use of indigenous tree species only; and (e) careful planning of the supply of restoration work by saplings. The mentioned approaches will contribute to decrease of the restoration costs and increase of the restoration's efficiency and sustainability.

Subcomponent 2.2: Wetland Restoration

34. Overview. Considering the general principles of water-level management and vegetation management as well as the lessons learned from a pilot project implemented in Khor Virap Sanctuary, this subcomponent would finance activities such as (a) diversification of wetland habitats; (b) restoration of degraded wetlands and transitioning of existing wetlands to closed water use system; (c) decrease of water extraction and ensuring seasonal flooding, where feasible; (d) setting up of food plots to provide additional high-energy food resources for wildlife; (e) controlling of encroachment of non-native plants that are detrimental to functional wetland ecosystems; and (f) monitoring of bioindicators of the state of wetland ecosystems for tracking the efficiency of the conservation efforts during implementation of the project and beyond it. The expected outcomes include restored brackish marshes and developed schemes for restoration of the wetlands.

35. Activities. Specific activities to restore the wetlands will include (a) development of the short-term and long-term goals for the selected sites with regard to biodiversity restoration, that is, the list of indigenous species that are expected to return after restoration of the habitat; (b) design of the wetland to be restored, considering the habitat requirements of the targeted biodiversity, water plants to be sown, and potential for carbon sequestration; (c) revision of the water supply and identification of the sources of seeds of the water plants; (d) modeling of the benefits of the wetlands' restoration including carbon sequestration; (e) construction works and sowing of the selected water plant species; and (f) monitoring of the biodiversity recovery in the restored ecosystems.

36. Approaches. The main approaches to the wetland restoration include (a) community participatory approach; (b) covering of habitat requirements of various specialized species of plants and animals; and (c) use of the most optimal opportunities for water supply. The restoration will be supported by biodiversity monitoring to track the efficiency of the intervention.

*Subcomponent 2.3: Mining Site Restoration*

37. Overview. The project will finance restoration of the forest ecosystems on two targeted abandoned mining sites: (a) a relatively small-scale abandoned open pit in Tandzut (Lori province)—3.1 ha of the ore, which is washed down by rain, contributing in acidification of the streams and rivers below—and (b) an abandoned waste ore disposal site in Northern Kapan (Syunik province)—49 ha of fragmented ore disposal areas, where in some patches the arid scrublands started growing. Also, the project will finance feasibility study of the abandoned mining site Kavart—about 61 ha of open pit and waste ore disposal. The expected outcome includes created conditions, which initiate natural restoration of the forest ecosystem on 52.1 ha, prevention of the soil and water contamination, and better connectivity of the forest ecosystem.

38. Activities. The project activities include restoring abandoned waste ore disposal site in Northern Kapan (Syunik province) and abandoned open pit in Tandzut (Lori province). It will also include conducting feasibility studies for the abandoned Kavart mining site (Syunik province). The initial soil test in Northern Kapan waste ore disposal site and Tandzut open pit mining site indicates that the chemical compositions are within the acceptable range, even though the acid drainage exists in the Tandzut site. Therefore, decontamination may not be needed; however, there will be another round of the soil test. In the Northern Kapan site, the soil is stable, although leveling may be needed followed by the reforestation activities. In addition to the soil test, an assessment will be conducted for both the Northern Kapan and Tandzut mining reclamation sites to determine the scope of the project interventions and the associated costs to reclaim the lands. In the Tandzut site, stability checking could be needed followed by leveling of the soil layers, terracing, and finalizing the actions by reforestation. Feasibility study on the Kavart abandoned mining site will be conducted, including analysis of geomorphology, hydrology, soil analysis, environmental and social analysis, and financial analysis. Considering the high steepness of the Kavart area, reforestation may not be the most optimal scenario for reclamation and alternative scenarios should be investigated.

39. Approach. The main approach for the restoration of natural forest ecosystems on the mining sites will be based on the following principles: (a) simulation of the natural leaching process for development of the proper soil layers, (b) use of indigenous pioneer tree and bush species to secure soil stability, (c) careful engineering planning of the areas' logistics and acid drainage, and (d) monitoring of the whole process. The described principles will contribute to a decrease of the possible risks of forest restoration at the completely destructed sites.

Component 3: Promoting Communities' Benefits (estimated budget: US\$1,900,000)

40. The component describes the major actions directed at increasing community economic benefits through creation of more green jobs and economic benefits from nontimber forest production and ecotourism from restored forests and wetlands landscapes.

Subcomponent 3.1: Improving Community-Based Forestry Management

41. Overview. The expected outcomes of the subcomponent would be decreased pressure from communities on forest and wetlands. The project will finance economic activities that could create green jobs and enhance benefits from landscape restoration activities including agroforestry and commercialization of the traditional use of nontimber forest products (NTFPs). The specific target communities include (a) in Lori province: minority communities such as Molokans and Yazidis as well as other settlements such as Spitak, Vanadzor, Stepanavan, Tashir, Halavan, Shahumyan, Gugark, Vahagni, Vahagnadzor, Yeghegnut, Chkalovka, Fioletovo, Margahovit, Lermontovo, Lernapat, Gargar, Pushkino, Medovka, Kruglaya Shishka, Saratovka, and Urasar and (b) in Syunik province: Kapan, Vanek, Dzorastan, Antarashat, Arachadzor, Verin Khotanan, Yegheg, Shrvenants, and Okhtar.



42. Activities. The project interventions of the subcomponent include (a) providing technical assistance to review and strengthen the legal basis for participation of the forest-dependent communities in landscape management of forestry and/or sanctuary; (b) increasing community economic benefits through the development of agroforestry and commercialization of traditional use of NTFPs such as collection and processing of wild fruits, berries, edible and medicinal herbs, and edible mushrooms; and (c) constructing infrastructure that could reduce pressure on forest resources: this infrastructure will be selected based on certain criteria including cost-effectiveness, level of communities' needs, and impact on reducing pressure on forest. The initial list of activities proposed by communities and local administration includes water points at the buffer zone for the community livestock, livestock access road, and so on.

43. Approach. While the main approach to the revision includes gap analysis, development of suggestions, and discussion with relevant stakeholders, the development of the NTFPs and other alternatives should be based on the principles of sustainability and will be supported by the system of monitoring of wild harvest objects (fruits, berries, herbs, edible mushrooms, and others).

Subcomponent 3.2: Ecotourism Development

44. Overview. The project will support ecotourism activities both in wetlands and forest areas. The expected outcomes will include developed infrastructure for ecotourism and improved knowledge and skills of the local communities in ecotourism and hospitality. The target communities that will benefit from forest-based ecotourism include the following settlements: (a) in Lori province - Spitak, Vanadzor, Stepanavan, Tashir, Halavan, Shahumyan, Gugark, Vahagni, Vahagnadzor, Yeghegnut, Chkalovka, Fioletovo, Margahovit, Lermontovo, Lernapat, Gargar, Puhkino, Medovka, Kruglaya Shishka, Saratovka, and Urasar and (b) in Syunik province - Kapan, Vanek, Dzorastan, Antarashat, Arachadzor, Verin Khotanan, Yegheg, Shrvenants, and Okhtar. The project will give due attention to minority communities.

45. Activities. Development of ecotourism in both forests and wetlands will include (a) construction and renovation of birdwatching and other wildlife watching trails, hiking and horse-riding trails including trail-entry spots with info-materials, info-boards on the trains, watching towers for birds and other wildlife, trail markers for easy navigation, and so on ; (b) market analysis; (c) development of promotion and information infrastructure on the trails (for example, trail entries, info-boards, watching towers, trail markers); and (d) development of benefit sharing framework to enhance the benefits of communities.

46. Approach. The general approach will be strong community engagement; involvement of the private sector; and development of benefit sharing between communities, forestry enterprises, state sanctuaries, and developers.

Component 4. Project Management, Monitoring & Evaluation, and Communication (Estimated budget: US\$700,000)

47. This component will finance the operational costs of the Project Implementation Unit (PIU) in the MOE (Environmental Project Implementation Unit [EPIU]) to carry out project management functions. Support will be provided for procurement, financial management (FM), management of environmental and social standards (ESS), coordination, and communication activities. It will also support the reporting and monitoring and evaluation (M&E) functions. The introduced system of monitoring of bioindicators of forests, grasslands, and wetlands will become an additional tool for the M&E process.



C. Project Beneficiaries

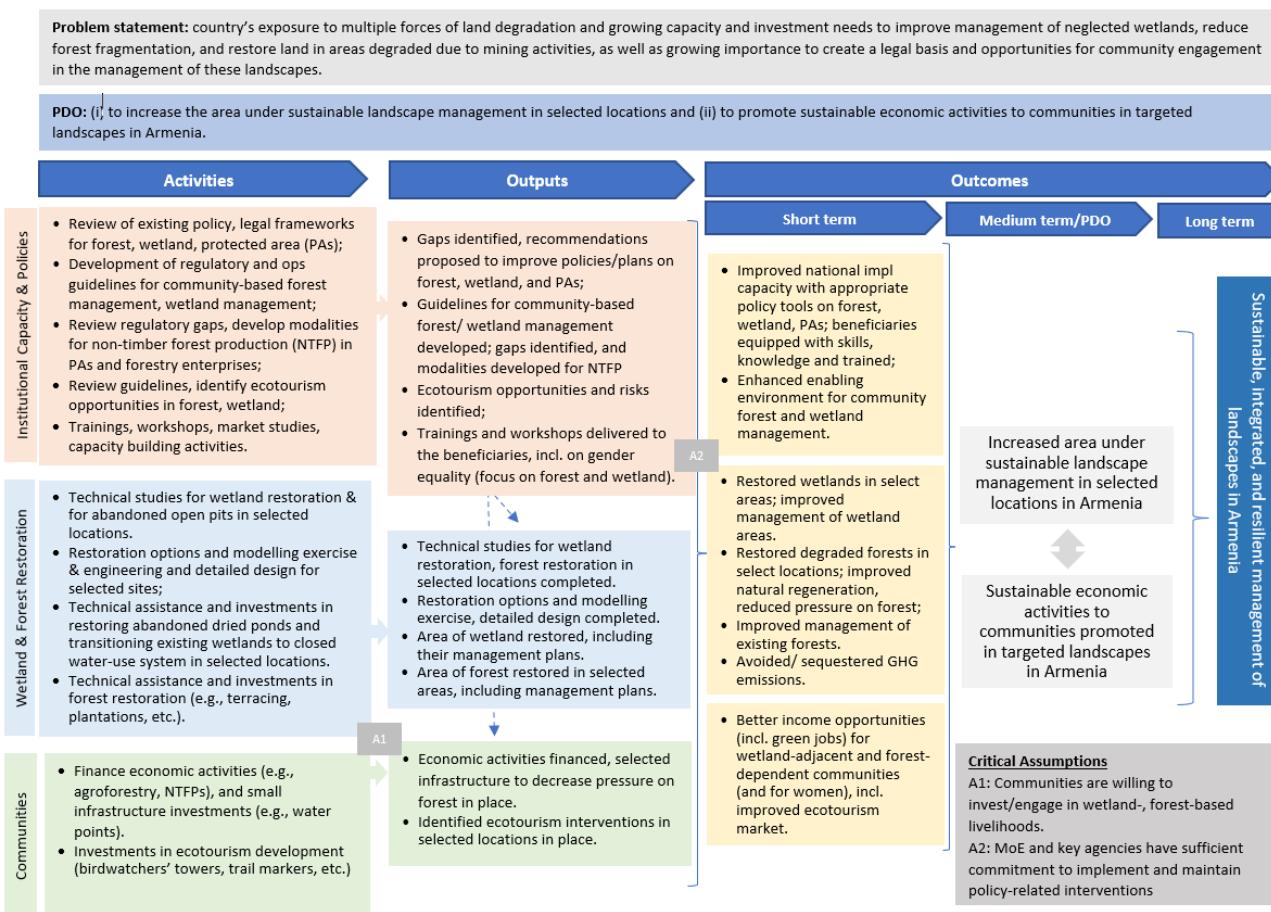
48. **The project will aim to bring benefits to a wide range of stakeholders including the public and private sectors as well as a wider population.** Direct beneficiaries at the national level are the MOE, including its Department of Protected Areas and Biodiversity, Department of Bioresource Management, Department of Forest Policy, Department of Climate Policy, Forest Committee, and Hayantar SNCO, as well as the Ministry of Territorial Administration, Ministry of Economy, and the State Tourism Committee. At the local level, beneficiaries include stakeholders of the Vanadzor, Stepanavan, Tashir, and Kapan Forestry Enterprises as well as Margahovit, Gyulagarak, Caucasian Rose-Bay, Zangezur, and Khustup sanctuaries. Direct beneficiaries also include selected communities that will participate in the project activities, covering the following settlements: (a) Lori province: Spitak, Vanadzor, Stepanavan, Tashir, Halavan, Shahumyan, Gugark, Vahagni, Vahagnadzor, Yeghegnut, Chkalovka, Fioletovo, Margahovit, Lermontovo, Lernapat, Gargar, Puhkino, Medovka, Kruglaya Shishka, Saratovka, and Urasar; (b) Syunik province: Kapan, Vanek, Dzorastan, Antarashat, Arachadzor, Verin Khotanan, Yegheg, Shrvenants, and Okhtar; and (c) Ararat province: Pokr vedi, Lusarat, Surenavan, and Armash. The benefits will have the social and gender dimension considering the vulnerability of the most exposed groups and focus on reducing such vulnerability accordingly. The project interventions will also bring substantial benefits to the private sector, with opportunities in trade, tourism, and hospitality areas.

D. Results Chain

49. **A key challenge the proposed project will address is degradation of natural resources (forests and wetlands).** Their continued degradation and reduced productivity worsen rural livelihoods and aggravate the negative cycle of poverty leading to overexploitation of natural resources and further land degradation. To address this issue, the project follows an integrated approach to restore and sustainably manage these resources with active involvement of local communities. The project will contribute to capacity development through institutional building; address policy gaps in forest and wetlands, trainings, and equipment; and invest in landscape restoration in selected areas by involving local communities as well as in development of alternative resource management models, based on the improved wild harvest and ecotourism. Specific outputs and outcomes that would lead to overall outcome of strengthening community engagement and improving their livelihoods, integrated with the improved management of forests, wetlands, and protected areas, are presented in figure 1.



Figure 1. Theory of Change



E. Rationale for Bank Involvement and Role of Partners

50. The World Bank would convene global experience, financing, and sectors to support the client in leveraging action to enhance the management of integrated landscape for economic benefits, ecosystem services, and public global benefits. In this regard the involvement of the World Bank would add value in four pillars.

- First, the World Bank has strong experience in integrated landscape management in the region and beyond, where Armenia could benefit through the implementation of the project. Similar Integrated Climate Resilient Landscape Projects are being implemented in other countries which will offer opportunities for south-south collaboration and peer learning.
- Second, the World Bank would provide strong technical assistance, enhanced implementation support, and strong operational supervision to the client. This strong support includes modernized environmental and social risk management, high standard FM, and procurement requirements.
- Third, currently the World Bank is leading several advisory services and analytics (ASAs) in Armenia in the areas of forest, natural resource management, climate change, and so on, which will directly support the implementation of the project through analytical evidence, advisory services, and technical assistances.



- In addition, the project will benefit from the complementarities and synergies of other World Bank investment projects in Armenia including a tourism project, climate-smart agriculture, and so on. Fourth, the World Bank long-standing experience in implementing GEF projects and convening power in development finance would help in ensuring additional finance from other donors and the Government's own financing. GEF and MDTF¹² co-financing with a possible blending with IBRD would help enhance local community benefits, increase government economic revenues, and secure multiple global climate and environmental benefits through forest and nonforest products, ecotourism, better-managed wetland and forest landscapes, biodiversity conservation, and better functioning ecosystems due to restored wetlands, reclaimed abandoned mining sites, reduced wetland forest degradation, reduced forest loss, and forest restoration

F. Lessons Learned and Reflected in the Project Design

51. The project design and preparation hugely benefited from the recent World Bank analytical works in Armenia: 'Towards a Green Taxonomy in Armenia', and 'Armenia Forest Landscapes Restoration Note'. The project also builds on the experience gained from integrated landscape projects of the World Bank from other countries in the region such as 'Uzbekistan Resilient Landscapes Restoration Project' (P174135), 'Tajikistan Resilient Landscape Restoration Project' (P171524), and 'Kyrgyz Republic Resilient Landscape Restoration Project' (P177407). It also builds on the World Bank engagement in Armenia in a number of projects in the agriculture, energy, water, and urban global practices (GPs), including 'Second Community Agriculture Resource Management and Competitiveness Project' (P133705) (closed), 'Local Economy and Infrastructure Development Project' (P150327), 'Electricity Transmission Network Improvement Project' (P146199), and 'Armenia - Enabling the Energy Transition Program-For-Results' (P179336). The project preparation also benefited from consultations with colleagues from the abovementioned GPs, who all have pipeline projects and projects under preparation. The project design was informed by the following important lessons drawn from decades of World Bank engagements in Armenia and implementations of integrated landscape projects in the region.

- **Coordination of multiple agencies is essential for multiple wins in landscape projects.** Landscape projects are multisectoral by nature in which strong interagency coordination is a prerequisite for their success and sustainability. However, the integrated landscape projects that were implemented in the regions have indicated that there is weak interagency coordination in most countries of the region which could hinder the success of landscape projects. As a result, it is essential to include project activities that could enhance coordination between agencies to increase the success rate of landscape projects.
- **Maximizing community benefits is essential to ensure the sustainability of landscape restoration activities.** The recently completed analytical works in Armenia indicated that community engagement that can go beyond consultation activities to focus on maximizing community benefits is key to ensure successful implementation of forest rebuilding and wetland restoration activities. The studies indicated that restoration of brackish marshes in Ararat Plain can create significant benefits not only for ecosystems and their biodiversity but also for adjacent communities by creating new economic opportunities. Therefore, it is important to support project activities that build financial security at the community level which could finance income-generating livelihoods activities such as nonforest products, value addition, and alternative livelihoods.
- **The lead time for community-level project activities is significant.** The 'Second Community Agriculture Resource Management and Competitiveness Project' (P133705) demonstrated that project activities that targeted communities and livelihood activities require significant project preparation time to extensively engage communities, identify proper project activities, define the scope of the project activities, and so on. Hence,

¹² MDTF is financed by Sweden, represented by the Swedish International Development Cooperation Agency (Sida).



sufficient time will be needed for good preparation and establishment of sound implementation plans at the province level. Community-level activities, whether related to wetland restoration, reforestation, or ecotourism, should be well integrated and anchored within the local development planning process

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

52. **The key implementing agency would be the EPIU of the MOE, with a dedicated PIU housed inside the EPIU.** The EPIU will coordinate the implementation of the project with Hayantar SNCO and SPNA SNCOs as well as with the respective departments in the MOE, including Specially Protected Areas of Nature and Biodiversity Policy Department and the Department of Forest Policy. The EPIU will also secure cooperation with the Ministry of Territorial Administration and Infrastructure to work with communities where the project will be implemented. Official communication with heads of communities and settlements will be done by the EPIU from Yerevan through the Ministry of Territorial Administration and Infrastructure (MTAI). The EPIU will coordinate the activities on ecotourism with the Tourism Committee of the Ministry of Economy, as further elaborated in annex 2. The EPIU will also contract specialized international and national NGOs, for example, the founding NGOs of the Forest Alliance of Armenia: the Armenia Tree Project, My Forest Armenia, and Shen NGOs. Other relevant NGOs, research, and consulting organizations will also be involved in implementation of the project activities.

53. **A Project Steering Committee (PSC)** will be established to coordinate activities across ministries and agencies. Such high-level coordination has been proven effective in other projects implemented by the EPIU. The PSC will include representatives of the following agencies: MOE, Ministry of Finance, Tourism Committee of Ministry of Economy, and Ministry of Territorial Administration and Infrastructure.

54. **Project Operations Manual (POM)** will be developed and approved to explain details of the processes and procedures as well as roles and responsibilities of the institutions.

B. Results Monitoring and Evaluation Arrangements

55. **The M&E plan** for the project will include a robust monitoring, evaluation, and reporting system that will enable evidence-based decision-making, foster learning, and promote a results-oriented project culture. Information and data will be collected throughout the entire impact pathway, such as inputs, activities, outputs, outcomes, and impacts. The primary objective will be to not only track progress toward targets but also identify unforeseen changes, if any, and facilitate effective learning and adaptive management, leading to successful project implementation. The project monitoring process will be conducted regularly, assessing progress, intermediate outcomes and development results, compliance with safeguards policies and fiduciary regulations, and third-party validation. To monitor the progress of the Results Framework indicators, questionnaire surveys would be considered and administered as needed. In addition, an independent impact evaluation study might be conducted for individual activities to assess the project's results, impacts, and implementation performance at the midterm review (MTR) and completion stages. The midterm evaluation study will provide valuable insight into lessons learned, the progress made toward achieving PDO and respective indicators, and necessary modifications to the targets, if any.

56. **The M&E arrangement** for the project will be overseen by the EPIU, which will be responsible for monitoring and reporting on the project indicators and outcomes specified in the Results Framework. The EPIU Director will provide overall supervision of the M&E function, ensuring that the agreed procedures are being followed as well as enhancing the M&E process as needed. Semiannual progress reports will be prepared and submitted to the World Bank to inform



the project implementation progress. The M&E arrangement, third-party validation, and impact evaluation will be covered within Component 4.

C. Sustainability

57. Summary of the sustainability aspects. The sustainability of the project will be based on three pillars. The first pillar focuses on the development of business opportunities for the local communities, women empowerment, and enhancement of cooperation of the communities with the forestry sector and the sector of protected areas. The second emphasizes the scientifically justified approaches for the project activities that will become a proper foundation for their successful implementation and will secure sustainability due to use of ecosystem services. The third focuses on the improvement of the policies, which will support the project's approaches during implementation of the project and beyond it. Therefore, sustainability of specific investments made by the project is expected to be high but cannot be guaranteed unless strong progress is made on these three pillars. To address this, the project has also included interventions that could improve the economic benefits of the communities, policy and institutional capacity development, and analytical works to ensure project interventions are designed and implemented based on scientific evidence. In addition, initial barriers to adoption will be identified and measures to overcome them will be introduced with the help of participatory planning, incentive systems designed around needs and social systems, and monitoring of participant satisfaction to ensure long-term sustainability of project's interventions. Overcoming initial barriers toward wetland restoration and conservation activities could be relatively challenging because of public perception of wetlands as disease-ridden places. To address this problem, the project has included public awareness program to enhance the public understanding of wetland values that no other ecosystem can offer, including its higher carbon sequestration capacity, natural water quality improvement, flood protection, shoreline erosion control, opportunities for recreation and aesthetic appreciation, and natural products for use at no cost. Project support to ecotourism investments that can generate revenue continuously, even after the project closure, will contribute to enhancing financial sustainability of wetland and forested landscapes.

IV. PROJECT APPRAISAL SUMMARY

A. Economic and Financial Analysis

58. The project will implement innovative measures in integrated forest and wetland restoration including rebuilding of fragmented forests and mining site restoration to the benefit of local communities in Armenia. Project sites in Ararat, Lori, and Syunik provinces as well as in the vicinity of Lake Sevan in Gegharkunik province were selected based on restoration opportunity and relevance to local communities and will jointly contribute to improved land conditions on 25,800 ha of land while acting as a replicable model for scaling up resilient landscape restoration in other vulnerable rural areas in Armenia. Landscape restoration and sustainable land management practices are a core pillar of Armenia's Mitigation, Adaptation, and Disaster Risk Reduction strategies,¹³ with estimates suggesting 0.16 percent of GDP at risk of floods alone that could be reduced by Nature-based solutions (NBS).¹⁴ The project will furthermore implement measures to support and grow nontimber forest production and infrastructure for ecotourism

¹³ See NDC 2021–2030 of the Republic of Armenia (2021); National Adaptation Plan of the Republic of Armenia (2021); Disaster Risk Management National Strategy of the Republic of Armenia (2017)

¹⁴ World Bank. 2021. *Overlooked: Examining the Impact of Disasters and Climate Shocks on Poverty in the Europe and Central Asia region*.

In addition, according to the Disaster Risk Management National Strategy of the Republic of Armenia (2017), one-third of the country's territory is located on landslide-prone area and a total of 470,000 people or 15 percent of the whole population is subject to landslides.



development, generating sustainable employment and income diversification opportunities in vulnerable communities.

59. The economic internal rate of return (EIRR) is calculated at 11.9 percent and the net present value (NPV) at US\$4.87million with a 6 percent discount rate, which proves the project's overall economic viability. The EIRR is estimated higher for the investment of Components 2 and 3 (at 15.3 percent and 13.2 percent, respectively). Direct and indirect economic benefits are expected from multiple sources, of which this analysis quantifies the following direct benefits under conservative assumptions: (a) avoided costs associated with resilience gains (reduced infrastructure damage from mudflows, reduced crop loss from floods, among others); (b) benefits from increased Gross Value Added (GVA) of nontimber forest production and ecotourism; and (c) benefits from increased carbon sinks. This analysis compares the component and total project costs with their estimated economic benefits for the first 25 years, discounted to 2023. Costs are discounted assuming disbursement will take place during 2024–2028. The NPV remains positive under alternative discount rates (11.2 percent, US\$0.37 million) and increases significantly when adding the economic benefits of additional carbon sink from the analysis (NPV is US\$13.35 million at 11.2 percent discount rate and a carbon price of US\$10 per tCO₂, EIRR at 32 percent).

60. Development impact and poverty reduction. The project makes significant effort to address the situation of poverty in forest villages, where income is heavily reliant on forest-dependent sources. By improving agricultural productivity and diversifying incomes away from forest products, the project is projected to increase incomes of direct beneficiaries by generating additional ecosystem services per farming household.

61. Nonquantifiable and indirect benefits. In addition to the quantifiable benefits described above, the project is expected to generate other nonquantifiable benefits that will contribute to improving the resilience and well-being of local communities. These include indirect use values that determine the reduced loss of lives, pollution abatement, and better water resource regulation, while other nonquantifiable benefits include the future use of recreational areas, ecotourism, and bioenergy and also benefits of biodiversity preservation.

Paris Alignment

62. The operation is aligned with the goals of the Paris Agreement on both mitigation and adaptation.

63. Assessment and reduction of adaptation risks. Improved landscape management through the proposed activities, informed by climate risk assessments at the national level, helps reduce landscape vulnerability to climate change impacts and enhance resilience. Reduced vulnerability and enhanced resilience would mean improved adaptation of landscape to expected risks posed by climate change. The project includes capacity enhancement and awareness raising for target beneficiaries. The project also includes support for diversification out of climate-sensitive livelihoods. Combined, these features will reduce the anticipated risk from climate and geophysical hazards.

64. Assessment and reduction of mitigation risks. The project will overall generate significant climate co-benefits by contributing to both climate change mitigation and adaptation. Carbon sequestration will be enhanced through the project activities such as wetland restoration, reforestation, and joint forest management, and agroforestry GHG accounting will be carried out using the FAO EX-ANTE Carbon-Balance Tool (EX-ACT).

B. Fiduciary

65. FM. The EPIU will be responsible for the FM function including planning and budgeting, accounting, financial reporting, internal controls, funds flow, external audit, and staffing and organizational arrangements. EPIU systems and capacities have been reviewed in accordance with the Financial Management Manual for World Bank Investment



Project Financing Operations. Overall, FM arrangements in this entity satisfy the requirements of the World Bank policies and are suitable to implement the proposed project. However, the EPIU and its accounting team (chief accountant and accountant) do not have experience in implementing World Bank-financed projects. Therefore, to strengthen its capacity, the EPIU, using Project Preparation Grant (PPG) funds, will hire a consultant experienced in World Bank-financed projects with terms of reference (ToR) agreed with the World Bank. The World Bank fiduciary team can provide additional training on request. The EPIU will develop a Financial Management Manual as part of the POM that will describe detailed FM arrangements, procedures, and processes. The proposed project's residual FM risk is assessed as Substantial.

66. The EPIU will prepare the project's interim financial reports (IFRs) in accordance with International Public Sector Accounting Standards (IPSAS) 'Financial Reporting Under the Cash Basis of Accounting' issued by the IPSAS Board of the International Federation of Accountants (IFAC). The IFRs, to be prepared on cash basis, will include (a) project sources and uses of funds, (b) uses of funds by project activity, (c) Designated Account (DA) statements, (d) a statement of the financial position, and (e) the Statement of Expenditures (SOE) withdrawal schedule. The EPIU will submit IFRs to the World Bank within 45 days of the end of each calendar semester.

67. An independent, private auditor acceptable to the World Bank, procured by the EPIU, will conduct annual audits of the project on the basis of terms of reference (TOR) acceptable to the World Bank, according to the International Standards on Auditing (ISA) issued by the International Auditing and Assurance Standards Board of the IFAC. The EPIU will disclose the audit reports for the project within one month of their receipt from the auditors and acceptance by the World Bank, posting the reports on its website. Following the World Bank's formal acceptance of these reports, they will be made publicly available according to the World Bank Policy on Access to Information. The cost of the audit will be financed from grant proceeds. Considering the small amount of the PPG, the PPG audit will cover the entire period of the PPG and will be due within six months after the PPG closing date.

68. The EPIU will oversee planning and management of project disbursements, including preparation and submission of withdrawal applications. The project DA for both the PPG and the project will be opened in Treasury Single Account of the Ministry of Finance at the Central Bank of Armenia and will be maintained by the EPIU. The project would use standard disbursement methods: advance, reimbursement, direct payment, and special commitment. The eligible project expenditures will be documented and reported to the World Bank using SOEs. Other details regarding the fund flow, including the ceiling of the DA and the reporting frequency, will be included in the Disbursement and Financial Information Letter.

69. **Procurement.** The implementing agency has no experience in implementing projects according to the World Bank's Procurement Regulations. Although the EPIU has a separate procurement division and the procurement staff have experience in public procurement system, none of them have adequate knowledge of World Bank's procurement rules, as well as skills for processing Systematic Tracking of Exchanges in Procurement (STEP). To mitigate this risk, the experts/consultants for key positions, including procurement, with adequate capacity will be engaged from the very beginning.

70. Procurement under the project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated September 2023; the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, revised in January 2011, and as of July 1, 2016; and other provisions stipulated in the Grant Agreement. The World Bank's Standard Procurement Documents with respective adjustment to particular contract shall be used. Procurement will be conducted according to arrangements defined in the PSD (agreed with the Bank as of February 8, 2024). All the procurement-related information shall be recorded in STEP and Contract management module in a timely manner.



C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

D. Environmental and Social

71. The overall risk is classified as substantial. ESS1, ESS2, ESS3, ESS4, ESS6, ESS8, and ESS10 are considered as relevant.

72. The environmental risk of the project is rated as Substantial. Small-scale infrastructure-related activities, such as the development of birdwatching and wildlife watching trails and hiking and horse-riding trails and the installation of watching towers, trail markers, information boards, and fences, carry low to moderate environmental risks that are typical for small-scale physical works. The reclamation of mining sites presents substantial risks, associated with impacts on air, water, and soil quality and the generation of hazardous waste and acidic leachate that can lead to environmental degradation in nearby forests. Restoration activities near the environmentally sensitive receptors, such as natural forests, wildlife sanctuaries, and wetlands, also pose a substantial risk. Occupational health and safety (OHS) risks related to exposure to hazardous chemicals may arise during the restoration of abandoned mining waste disposal sites.

73. The social risk is classified as Moderate. Social risks relate to potential impacts to livelihoods from the changes to policy, legal, regulatory, and administrative frameworks as well as from potentially limiting activities around wetlands and in forests, through forest restoration and afforestation; community health and safety (from impacts to livelihoods and if ecosystems services are affected); and cultural heritage (traditional practice or use of natural resources including access to them). In Lori, the project will be working with Molokan and Yazidies minorities which will require culturally sensitive engagement informed through a gender lens. There are also risks if those affected and/or benefiting are not engaged to ensure both inclusion and equity and fairness in benefits resulting from the project activities including ecotourism.

74. To manage the risks, draft versions of the Environmental and Social Commitment Plan (ESCP), Labor Management Procedures (LMP), and an initial Stakeholder Engagement Plan (SEP) have been prepared. A draft of site-specific Environmental and Social Management Plan (ESMP) for the abandoned site at Northern Kapan was prepared and disclosed. Armenian and English versions of the SEP and ESCP were disclosed on the EPIU website on December 1, 2023. All documents will be consulted on with key stakeholders at central and site levels. The documents will be revised to incorporate feedback from the consultations and redislosed. The initial SEP will also be further revised following additional consultations at site level including as part of informing the gender assessment and action plan, to reflect a more detailed consideration of stakeholders and methods for engagement for each component. The site-specific ESMPs for the Tandzut and Northern Kapan sites will be prepared based on the available studies and incorporated with the findings of soil and water samples contamination analysis and the baseline assessments of the sites to be conducted under the PPG by a consulting company. As part of implementation, site-specific ESMPs will also be prepared for wetlands and forests including sanctuaries areas proposed for restoration. These ESMPs will be disclosed and consulted on before releasing the bidding documents and commencement of any reclamation works.



Draft TORs, covering environmental and social aspects in line with World Bank requirements, will need to be prepared for financing the feasibility study of the abandoned mining site at Kavart. The POM will include environmental and social screening guidelines for small-scale activities to be selected and designed during project implementation.

E. Corporate Commitments

75. **Gender.** In the past few years, Armenia has been making progress in Global Gender Gap Index developed by the World Economic Forum, from being 102 in 2016 to advancing to 61 in 2023. Armenia is ranked relatively high on educational attainment (35). As for access to economic participation and opportunities, Armenia is ranked 52. Women tend to be out of the labor market in child rearing age and, according to the data of National Statistical Committee, spend more than twice as much time on unpaid domestic work; care for sick, old, or disabled family member; and care for children.¹⁵

76. Overall, Armenia's legislative frameworks support gender equality and advancing women's empowerment. The Women's Global SDG Database scores Armenia to have 83.3 percent of the overall legislative frameworks in place for gender equality and women's empowerment.¹⁶ Although a 25 percent quota is in place in the legislation, women represent only 2 percent of community heads, 12 percent of local council members (data from CY2016), zero governors, and 10 percent of vice-governors.¹⁷

77. **Gender action.** The project, through Components 2 and 3, will have direct impacts on women in the project target areas. Previous efforts have shown that women, particularly young women, have less voice and access in local decision-making. Gender equality will form part of the project implementation, such as (but not limited to) gender sensitive and participatory stakeholder engagement.

78. **Gender indicator.** To measure the effectiveness of the proposed gender actions, the project includes the following indicators: (a) Female-headed new businesses developed/established as a result of project interventions (end target: at least 40 percent) and (b) Percentage of female beneficiaries with improved knowledge and skills on integrated landscape management (end target: at least 50 percent). The PDO-level indicator on 'People benefiting from sustainable economic activities in targeted landscapes' as well as intermediate results indicators (IRIs) on 'People benefitting from selected landscape management practices' and 'Number of green jobs created as a result of project-supported interventions' will also be gender disaggregated.

79. **Citizen engagement.** The project will have extensive interaction with the communities through a comprehensive consultative process. Regular stakeholder consultations and/or community mobilization workshops will not only inform about project activities but also include them in participatory decision-making and monitoring processes. The consultations processed will also be organized through focus groups and surveys and employ monitoring mechanisms such as satisfaction surveys, grievance redress mechanism (GRM), and multistakeholder forums and deploy tools for remote consultations, where appropriate. All relevant project information documents will be made easily available and accessible to the public throughout project implementation. The proposed CE activities will be measured through the following indicator: 'Percentage of beneficiaries reporting improvement in awareness on wetland management and restoration (female participants tracked separately). A communication plan that highlights mechanisms and actions for enhancing multistakeholder dialogue and inclusion throughout the project cycle will also be designed.

V. GRIEVANCE REDRESS SERVICES

¹⁵ https://www.armstat.am/file/article/analysis_of_the_gender_pay_gap_armenia_en.pdf.

¹⁶ <https://data.unwomen.org/country/armenia>.

¹⁷ https://neighbourhood-enlargement.ec.europa.eu/system/files/2020-06/armenia_evaluation_-_2010-2017_annex_9.pdf.



80. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, visit <https://accountability.worldbank.org>.

VI. KEY RISKS

81. **The overall project risk is rated as Substantial** at this stage. The Moderate risk rating is assigned to the categories such as macroeconomic, sector strategies and policies, project design, and stakeholders. The categories with Substantial and High risk and proposed mitigation measures are described in the following paragraphs.

82. **The political and governance risk is assigned a rating of Substantial** due to geopolitical challenges, unresolved security issues, and a fragility context in Armenia. This risk, however, is mitigated, to a certain extent, by an overall strong government commitment to the reform agenda, reflected in the 2021–2026 Government Action Plan and broad public buy-in and support for most of reforms and respective activities, which are also included in this operation.

83. **Institutional capacity for implementation and sustainability is assigned a risk rating of Substantial** due to the technical capacities needed to sustain interventions across scales, regions, stakeholders, and sectors. The risk also arises due to frequent turnover of decision-makers of the relevant agencies; delays in scheduled tree plantings, watering, and other critical activities due to insufficient capacity; and lack of knowledge on ecosystem restoration approaches. The latter is explained by the fact that while the capacity for reforestation may generally exist, a nature-based approach is not commonly applied. This may lead to less sustainable and resilient outcomes, an issue which may arise equally in wetland restoration and abandoned mining reclamation. To address these risks, the project includes capacity building which will entail hiring international experts and providing respective in-time trainings in all stages of the project implementation, which would ensure effective knowledge transfer and strengthening of the institutional capacity at all levels of project implementation. Risks will be further mitigated at the project level through (a) focused capacity development; (b) applying lessons and experience from restoration projects around the world; (c) contracted international expertise; (d) focusing within agreed landscapes with government and donor agencies; and (e) documenting and promoting benefits that arise through project M&E and strategic communication.

84. **The fiduciary risk is assessed as Substantial** and will be revised during implementation based on quality and progress data. This is because the implementing agency, the EPIU, has no experience in implementing the projects according to the World Bank's Procurement Regulations and disbursement and FM rules. The EPIU also lacks FM capacity that are experienced in other donor-financed projects. In addition, no internal audit function is available at the EPIU; it does not undergo external audit; and the Audit Chamber conducts only verification of budget expenditures. Although the EPIU has a separate procurement division and the procurement staff have experience in public procurement system, none of them have adequate knowledge of the World Bank's procurement rules and skills



for processing STEP. To mitigate this risk, the EPIU will hire experts for key positions, such as procurement specialist and FM specialist, with adequate capacity to be involved in the project implementation.

85. The environmental and social risk of the project is rated as Substantial. The environmental risk is rated as Substantial, while the social risk is classified as Moderate. Overall, the project implementation will have a long-term positive environmental impact on the targeted ecosystems. No high, significant, or irreversible impacts are anticipated unless not managed since the project proposes landscape restoration and conservation activities and measures in chosen landscapes of forests, wetlands ecosystems, and abandoned mining sites. Restoration and conservation activities for forest landscapes and wetlands are likely to have negative environmental impacts that are commonly associated with small-scale physical works. The reclamation of abandoned mining waste disposal sites may significantly affect air, water, and soil quality as well as lead to generation of hazardous waste. It may also result in the release of acidic leachate and the loss and disturbance of natural habitat causing environmental degradation. Additionally, the project activities linked to restoration of abandoned mining waste sites may pose OHS risks for the project investigators and workers involved, particularly in terms of exposure to hazardous chemicals. Considering the listed environmental risks and impacts, the project's environmental risk is assessed as Substantial, with the magnitude of potential negative impacts varying significantly across different project interventions. However, all types of impacts can be effectively managed through the implementation of risk screening and customized mitigation measures, including environmental-sensitive project design and diligent project oversight. While the project expects to bring overall benefits to communities' neighboring forests and wetlands in terms of the environment and sustainability of livelihoods, there may be concerns of impacts to livelihoods from the changes to policy, legal, regulatory, and administrative frameworks as well as from limiting activities in forests and to grazing. To manage these risks, environmental and social considerations should be built into any studies, analyses, and resultant changes to policy, legal, regulatory, and administrative frameworks and guidelines.

86. The 'other' risk includes security risk and is assessed as High due to geopolitical challenges and remaining tensions on the borders of Armenia. Some of the project sites and beneficiary communities are located close to border areas, particularly those in Syunik. Subject to escalation of the tensions, the impact on communities could be high as well as the associated security concerns for project implementation in these sites. The risk is being mitigated by the overall strong commitment of the Armenian Government to the peace agenda and continued de-escalation.



VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Increased area under sustainable landscape management in selected locations	
Land area under sustainable landscape management practices (Hectare(Ha))	
Jan/2024	Dec/2028
0.00	25800.00
Sustainable economic activities to communities in targeted landscapes promoted	
People benefiting from sustainable economic activities in targeted landscapes (sex disaggregated) (Number)	
Jan/2024	Dec/2028
0.00	5,000.00

Intermediate Indicators by Components

Baseline	Closing Period
Component 1. Institutional Capacity and Policy Development	
Regulatory and operational guidelines for community-based forest and wetland management developed and submitted for approved (Yes/No)	
Jan/2024	Dec/2028
No	Yes
Guidelines for development and management of ecotourism updated (Yes/No)	
Jan/2024	Dec/2028
No	Yes
Beneficiaries with improved knowledge and skills on integrated landscape management (Number)	
Jan/2024	Dec/2028
0.00	3,000.00
➤ Percentage of female beneficiaries with improved knowledge in skills on integrated landscape management (Percentage)	
0.00	50.00
➤ Percentage of beneficiaries reporting improvement in awareness on wetland management and restoration (Percentage)	
0.00	30.00



Component 2. Landscape Restoration	
Wetland area restored (Hectare(Ha))	
Jan/2024	Dec/2028
0.00	1,200.00
Forest area restored and/or reforested (Hectare(Ha))	
Jan/2024	Dec/2028
0.00	12,500.00
Feasibility package for repurposing of the abandoned Kavart mining site in Kapan developed (Yes/No)	
Jan/2024	Dec/2028
No	Yes
Net greenhouse gas (GHG) emissions (Metric tons/year)	
Jan/2024	Dec/2028
0.00	178000.00
Component 3. Promoting Communities' Benefits	
People benefitting from selected landscape management practices (sex disaggregated) (Number)	
Jan/2024	Dec/2028
0.00	22,500.00
Green jobs created as a result of project-supported interventions (sex disaggregated) (Number)	
Jan/2024	Dec/2028
0.00	800.00
New businesses developed/established as a result of the project (Number)	
Jan/2024	Dec/2028
0.00	20.00
➤ Female-headed new businesses developed/established (Percentage)	
0.00	40.00
Component 4. Project Management, Monitoring & Evaluation, and Communication	
Grievances registered related to delivery of project activities and addressed (Percentage)	
Jan/2024	Dec/2028
0.00	100.00



Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Increased area under sustainable landscape management in selected locations	
Land area under sustainable landscape management practices (Hectare(Ha)) <small>CRI</small>	
Description	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.
Frequency	Annually
Data source	EPIU report on the project implementation progress.
Methodology for Data Collection	Data will be collected through project reports annually, studies that will be carried out at the mid-term review and project completion. Assumptions: The indicator includes an area of land planned to be restored (13,800ha) and improved (wetland, forest) (12,000ha), including protected areas in the project target communities. The reporting should clearly disaggregate data to include the following metrics: (i) Terrestrial protected areas created or under improved management for conservation and sustainable use (Hectares); (ii) Area of landscapes under improved practices (excluding protected areas) (Hectares).
Responsibility for Data Collection	EPIU; Evaluation Team at mid-term and project-end
Sustainable economic activities to communities in targeted landscapes promoted	
People benefiting from sustainable economic activities in targeted landscapes (sex disaggregated) (Number)	
Description	This indicator measures the number of people in the project areas that benefit from the range of sustainable economic activities that the project is able to promote and/or introduce in targeted landscapes. Sustainable economic activities mean economic activities promoted through the activities implemented under the project such as the development of apiculture or beekeeping, agroforestry, and commercialization of traditional use of non-timber forest products (NTFPs) such as collection and processing of wild fruits, berries, edible and medicinal herbs, edible mushrooms, as well as ecotourism activities, etc.
Frequency	Annually
Data source	EPIU report on the project implementation progress; socio-economic baseline study/ beneficiary surveys
Methodology for Data Collection	Data will be collected through project reports annually and studies that will be carried out at the mid-term review and project completion
Responsibility for Data Collection	EPIU; Evaluation Team at mid-term and project-end; consultants

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Component 1. Institutional Capacity and Policy Development	
Regulatory and operational guidelines for community-based forest and wetland management developed and submitted for approved (Yes/No)	
Description	This indicator includes Regulatory and operational guidelines for community-based forest and wetland management
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Ministry of Environment
Guidelines for development and management of ecotourism updated (Yes/No)	
Description	This indicator includes the update of Guidelines for development and management of ecotourism
Frequency	Annually



Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Ministry of Environment
Beneficiaries with improved knowledge and skills on integrated landscape management (Number)	
Description	This indicator will measure number of beneficiaries with improved knowledge and skills on integrated landscape management, which would cover, inter alia, forest conservation, wetland restoration/ conservation, management, development of ecotourism and other alternative livelihood business models, etc. Beneficiaries include:(i) central and local government officials working on forest, wetland, PAs;(ii) communities in the project target areas.
Frequency	Regularly collected, annually compiled
Data source	EPIU report on the project implementation progress, Beneficiary Surveys
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and other materials related to capacity building activities as well as Beneficiary Surveys
Responsibility for Data Collection	EPIU, consultants
Percentage of female beneficiaries with improved knowledge in skills on integrated landscape management (Percentage)	
Description	This sub-indicator will measure percentage of female beneficiaries with improved knowledge and skills on integrated landscape management
Frequency	Regularly collected, annually compiled
Data source	EPIU report on the project implementation progress, Beneficiary Surveys
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and other materials related to capacity building activities as well as Beneficiary Surveys
Responsibility for Data Collection	EPIU, consultants
Percentage of beneficiaries reporting improvement in awareness on wetland management and restoration (Percentage)	
Description	This sub-indicator will measure percentage of beneficiaries with improved knowledge on and awareness of wetland management and restoration, which would cover, inter alia, wetland restoration and conservation, management, development of other alternative economic or ecotourism activities, etc.
Frequency	Regularly collected, annually compiled
Data source	EPIU report on the project implementation progress, Beneficiary Surveys
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and other materials related to capacity building activities as well as Beneficiary Surveys
Responsibility for Data Collection	EPIU, consultants
Component 2. Landscape Restoration	
Wetland area restored (Hectare(Ha))	
Description	This indicator measures the area in hectares that has been restored and brought under integrated wetland management and restoration supported by the project interventions.Assumption: The area includes brackish marshes in Khor Virap and Armash (82ha), salt marshes in Ararat (68ha), area of Lori lakes (1000ha) and a pilot area in Sevan (Masrik) (50ha)
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs.
Responsibility for Data Collection	EPIU, Ministry of Environment
Forest area restored and/or reforested (Hectare(Ha))	
Description	This indicator measures the area in hectares that has been reforested and/or restored and brought under sustainable forest management as a result of the project interventions.This indicator will cover:(i) reforestation of the fragmented forest;(ii) assisted natural regeneration;(iii) restoration of the forest on targeted abandoned mining



	dumpsitesAssumptions: This includes area of forest to be restored and/or reforested in two target marzes (Lori, Syunik) as well as a pilot in Sevan lakes area (120ha)
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Ministry of Environment
Feasibility package for repurposing of the abandoned Kavart mining site in Kapan developed (Yes/No)	
Description	This indicator includes a Feasibility package for repurposing of the abandoned Kavart mining site in Kapan, Syunik Marze. The package will cover analyses, such as of geomorphology, hydrology, soil analysis, environmental and social analysis, as well as financial analysis.
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Ministry of Environment
Net greenhouse gas (GHG) emissions (Metric tons/year) ^{CRI}	
Description	Project net greenhouse gas (GHG) emissions are calculated as an annual average of the difference between project gross (absolute) emissions aggregated over the economic lifetime of the project and the emissions of a baseline (counterfactual) scenario aggregated over the same time horizon. They are reported in metric tons of carbon dioxide equivalent per year.
Frequency	Annually
Data source	EPIU report on the project implementation progress; baseline assessment
Methodology for Data Collection	GHG accounting carried out for forest (mitigation) and wetland (sequestration). Data will be also collected through project reports annually, studies that will be carried out at the mid-term review and project completion
Responsibility for Data Collection	EPIU, Ministry of Environment, consultants
Component 3. Promoting Communities' Benefits	
People benefitting from selected landscape management practices (sex disaggregated) (Number)	
Description	This indicator measures the number of people in the project areas that benefit from the range of sustainable landscape management (SLM) practices that the project is able to implement. Benefits include monetary (employment, income) and non-monetary (changes in aspects of well-being, and improved condition of natural resources, etc). Assumptions: The total number of people in the project communities is around 148,200. The number of beneficiaries is considered with the assumption of respective project interventions (wetland, forest) and the share of total population that would benefit from the project.
Frequency	Annually
Data source	EPIU report on the project implementation progress, Beneficiary Surveys
Methodology for Data Collection	Data will be collected through project reports annually and studies that will be carried out at the mid-term review and project completion
Responsibility for Data Collection	EPIU, consultants
Green jobs created as a result of project-supported interventions (sex disaggregated) (Number)	
Description	This indicator will measure the number of people reached by project interventions that generate income (monetary/in-kind) through 'green' jobs, meaning more/better/inclusive jobs to support forest, wetland, PAs, and ecotourism related interventions or jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources. Beneficiaries are individual, workers, farmers, SME members, other target group members, and their household members.
Frequency	Regularly collected, annually compiled



Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports; aggregated data from communities
Responsibility for Data Collection	EPIU, Communities' Administrations, consultants
New businesses developed/established as a result of the project (Number)	
Description	This indicator measures number of new businesses either developed (with a business plan) and/or established as a result of project interventions. New businesses could include, inter alia, development of apiculture or beekeeping, agroforestry, and commercialization of traditional use of NTFPs such as collection and processing of wild fruits, berries, edible and medicinal herbs, edible mushrooms, etc. These could be individual entrepreneurs, microfirms, small enterprises.
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Communities' Administrations
Female-headed new businesses developed/established (Percentage)	
Description	This sub-indicator will measure percentage of female-headed new businesses developed/ established
Frequency	Annually
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports and activities' deliverables/ outputs
Responsibility for Data Collection	EPIU, Communities' Administrations
Component 4. Project Management, M&E, and Communication	
Grievances registered related to delivery of project activities and addressed (Percentage)	
Description	This indicator will track grievances registered related to delivery of project activities and addressed within the required 30 days period
Frequency	Regularly collected, annually compiled
Data source	EPIU report on the project implementation progress
Methodology for Data Collection	Data for this indicator will be collected through review of project reports
Responsibility for Data Collection	EPIU



ANNEX 1: IMPLEMENTATION ARRANGEMENTS AND SUPPORT PLAN

COUNTRY: Republic of Armenia
RESILAND: Armenia Resilient Landscapes Project

A. Institutional and Implementation Arrangements

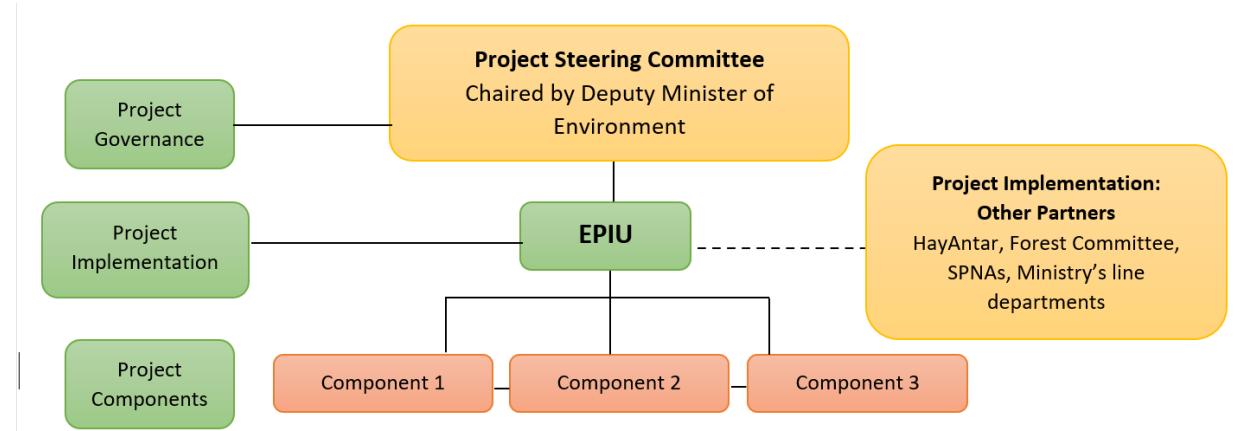
1. **Implementing agency.** The project is implemented by the EPIU of the MOE. The key mandate of the EPIU is to ensure effective implementation of projects in the environmental sector in the Republic of Armenia. The EPIU is mandated to undertake projects in the sectors of subsoil, soil, water resources, atmospheric air, biodiversity, protected areas, and sustainable and efficient management of natural resources. The functions of the EPIU include oversight and coordination of project implementation; procurement procedures; evaluation and analysis of proposals; control over the quality, terms, and execution of activities undertaken within the scope of project implementation; purchasing of goods and services (including consulting) in the scope of project implementation; undertaking and procuring of expert evaluations; payments processing related to project implementation; preparation of TOR for procurement of goods and services within the framework of the project; organizing of tenders; evaluation and analysis of proposal; preparation and signing of contracts related to the implementation of the project; M&E of projects; and other relevant functions.
2. **Project coordination and steering committee.** A PSC will be established no later than three months after the effectiveness date and will include representatives of the MOE, Ministry of Finance, Ministry of Territorial Administration and Infrastructure, and Ministry of Economy. The PSC will coordinate activities across ministries and respective agencies and will provide oversight and guidance on project management. The PSC will be chaired by the Deputy Minister of Environment and will include deputy ministers and heads of respective departments and agencies. Such high-level coordination and oversight have been proven effective in other projects implemented by the EPIU. Through the PSC, the EPIU will coordinate the implementation of the project with Hayantar SNCOS, Forest Committee, SPNA SNCOS, and the Department of Specially Protected Areas of Nature and Biodiversity Policy of the MOE. The EPIU will also ensure coordination with the Ministry of Territorial Administration and Infrastructure to work with communities where the project will be implemented. On ecotourism, the EPIU will coordinate activities with the Tourism Committee of the Ministry of Economy. The EPIU will also contract specialized international and national NGOs to facilitate community engagement activities. Further details of these arrangements will be provided in the POM.
3. **EPIU functions in implementation.** The overall responsibility for project management will be with the implementation team to be set up within the EPIU. The implementation team will comprise a project coordinator, project assistant, environmental specialist, and social specialist, who will be EPIU staff assigned or hired specifically and only for the oversight and implementation of the project. The EPIU's other relevant core staff and hired consultants will be part of the implementation team and will be supporting the project coordinator and the project assistant with project implementation. The EPIU will be responsible for project coordination and will act as the lead agency, given its mandate outlined above. The EPIU will be responsible for and will carry out day-to-day project management, monitoring and reporting, fiduciary and environmental and social risk management, gender mainstreaming, financial reporting, and internal controls. The EPIU will manage the DA (if, when allowed) and will be responsible for overall project reporting to the World Bank.
4. **EPIU central and field support.** The project's implementation team will be based and operate out of the EPIU's central office located in Yerevan. In addition to the project coordinator, project assistant, environmental specialist, social specialist, and EPIU's other core staff who will be supporting the project implementation with respective functions, the



project will finance procurement, FM, M&E, technical (for example, forestry, wetland restoration activities, community engagement, and ecotourism), and gender specialists. Implementation will also be supported through project-financed field-based focal points located in the four marzes where the project will be implemented: Lori, Gegarkunik, Ararat, and Syunik.

5. **Other key project partners.** The EPIU, as the lead implementing agency for the project, will be supported by and work closely with the following agencies and departments: (a) Hayantar SNCOS for the activities related to reforestation; (b) Forest Committee (which is slated to be reformed and turned into Forest Protection Service Agency) for reforestation activities; (c) SPNA SNCOS for activities related to landscape restoration in areas that fall under the SPNA protection; (d) Department of Forest Policy for activities related to policy and institutional reform in forestry sector; (e) Department of Biodiversity and SPNAs for activities related to policy and institutional reform in biodiversity, conservation, specially protected areas, and ecotourism.

Figure 1.1. Implementation Arrangements



6. **Other agencies involved in coordination.** The EPIU will also secure cooperation with the Ministry of Territorial Administration and Infrastructure to work with communities where the project will be implemented. The EPIU will coordinate the activities on ecotourism with the Tourism Committee of the Ministry of Economy. It will also contract specialized international and national NGOs, for example, the founding NGOs of the Forest Alliance of Armenia: the Armenia Tree Project, My Forest Armenia, and Shen NGOs. These national NGOs have extensive experience working with the ministry as well as with communities. Other relevant NGOs, research, and consulting organizations will also be involved in implementation of the project activities.

Table 1.1. Project Institutional Arrangements

Government Ministry/Committee/Agency	Key Functions in Project Implementation
EPIU	<ul style="list-style-type: none">• Reporting to the Chair of the PSC• Overall project coordination and management• Implementation of Components 1, 2, and 3• Reporting to WBG on project implementation progress, including technical, fiduciary, environmental and social, and M&E aspects• Preparation and consolidation of workplan and budget



Government Ministry/Committee/Agency	Key Functions in Project Implementation
Hayantar SNCO	<ul style="list-style-type: none">• Reporting to the EPIU• Performance of Components 2 and 3 according to the TORs• Participating in reporting to the Steering Committee
Forest Committee/Forest Service	<ul style="list-style-type: none">• Reporting to the EPIU• Assistance to the performance of Component 2 according to the TORs• Participating in the reporting to the Steering Committee
SPNA SNCOs	<ul style="list-style-type: none">• Reporting to the EPIU• Assistance to the performance of Components 2 and 3 according to the TORs• Participating in the reporting to the Steering Committee
Department of Forest Policy	<ul style="list-style-type: none">• Reporting to the EPIU• Performance of Component 1 according to the TORs• Participating in the reporting to the Steering Committee
Department of Biodiversity & SPNAs	<ul style="list-style-type: none">• Reporting to the EPIU• Performance of Component 1 according to the TORs• Participating in the reporting to the Steering Committee

7. **POM.** The EPIU will implement the project based on a POM acceptable to the World Bank. The POM will include details on institutional and implementation responsibilities, 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 EPIU and other project partners.

B. Implementation Support Plan

8. **The World Bank will oversee appropriate implementation of the project, in line with World Bank procedures, standards, and requirements.** The World Bank has put in place a task team comprising a diverse skill mix from various GPs including Environment, Natural Resources, and the Blue Economy; Agriculture; Urban; Mining; and Energy. Skill sets required for continuous effective implementation support include project management, landscape restoration, natural resource management, ecotourism, forestry, wetland management, community development, M&E, procurement, FM, communications, CE, environmental and social risks management, and legal. It is expected that implementation support by the World Bank team will be extensive, particularly in the first two years of the project as most of the project activities will initiate simultaneously (for example, wetland restoration and forestry).

9. The Implementation Support Plan aims at (a) providing technical advice to the Government and its implementing agency and bringing international experience and good practices to ensure that the project meets World Bank technical standards; (b) ensuring that the project meets standards and requirements of contract management with regard to supervision of civil works and consulting services; (c) ensuring that the implementing agency measures adequately meet the required fiduciary requirements and Environmental and Social Framework (ESF) standards throughout project implementation; and (d) ensuring that training plans and programs exclusively benefit the main project beneficiaries.

10. **Role of the development partners.** The project will collaborate with international donors active in landscape restoration, reforestation, biodiversity conservation, wetland restoration, ecotourism, community development, and



climate adaptation and mitigation. There are strong synergies with the GCF¹⁸-FAO Project on ‘Forest Resilience of Armenia, Enhancing Adaptation and Rural Green Growth Via Mitigation’; GEF-FAO project ‘Implementation of Armenia’s Land Degradation Neutrality Commitments through Sustainable Land Management and Restoration of Degraded Landscapes’; and the EU-funded projects EU4Sevan, EU4Environment, and EU4Climate. There are many other projects implemented by development partners that have relevant components to forestry, sustainable management of natural resources, and climate mitigation and adaptation including projects implemented and/or financed by Kreditanstalt für Wiederaufbau (KfW), Asian Development Bank (ADB), AFD, European Bank for Reconstruction and Development (EBRD), United Nations Development Programme (UNDP), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Swiss Agency for Development and Cooperation (SDC), and others.

11. **Procurement.** Procurement under the project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated September 2023; the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016; and other provisions stipulated in the Legal Agreements. The World Bank’s Standard Procurement Documents with respective adjustment to particular contract shall be used. Procurement will be conducted according to arrangements defined in the PPSD (agreed with the Bank as of February 8, 2024). All the procurement-related information shall be recorded in STEP and Contract management module in a timely manner.

12. **FM and disbursements.** The EPIU will be responsible for the FM function including planning and budgeting, accounting, financial reporting, internal controls, funds flow, external audit, staffing, and organizational arrangements. Those systems and existing capacities of the EPIU have been assessed in accordance with the Financial Management Manual for World Bank Investment Project Financing Operations. Overall, the project can rely on the existing arrangements, but a few actions are required to strengthen the EPIU capacity such as hiring an experienced FM specialist and developing the FM Manual. The project’s IFRs will be prepared by the EPIU in accordance with the IPSAS ‘Financial Reporting Under the Cash Basis of Accounting’ issued by the IPSAS Board of the IFAC. The IFRs, to be prepared on cash basis, will include (a) project sources and uses of funds, (b) uses of funds by project activity, (c) DA statements, (d) a statement of the financial position, and (e) the SOE withdrawal schedule. The IFRs will be submitted to the World Bank within 45 days of the end of each calendar semester.

13. The audit of the project will be conducted annually (a) by an independent, private auditor acceptable to the World Bank, on the basis of the TOR acceptable to the World Bank and procured by the EPIU and (b) according to the ISA issued by the International Auditing and Assurance Standards Board of the IFAC. The EPIU will disclose the audit reports for the project within one month of their receipt from the auditors and acceptance by the World Bank, by posting the reports on its website. Following the World Bank’s formal acceptance of these reports, they will be made publicly available according to the World Bank Policy on Access to Information. The cost of the audit will be financed from the proceeds of the project. The project DA for the project will be opened in the Single Treasury Account of the Ministry of Finance in the Central Bank and will be maintained by the EPIU. The withdrawal applications will be submitted through the World Bank’s ‘Client Connection’ system by the designated staff with authorized access. Other details regarding the funds flow including the ceiling of the DA, disbursement methods, supporting documentation, and the reporting frequency will be included in the Disbursement and Financial Information Letter.

¹⁸ Green Climate Fund.



ANNEX 2: PROJECT CONTEXT

1. As a small, mountainous, landlocked country, situated between 375 and 4,090 meters above sea level, Armenia has a variety of ecosystems, but their continued degradation and reduced productivity worsen rural livelihoods and aggravate the negative cycle of poverty. As a part of the Caucasus ecoregion that makes a biogeography bridge between Europe and Asia, Armenia is included in one of 35 global biodiversity hotspots. The country is home to a wide variety of ecosystems, including semideserts, juniper woodlands, deciduous forests, grasslands, and wetlands. Many biotopes of Armenia are unique, as they are either relict habitats or a result of unique combination of the soil and climate. It is not an aberration, therefore, that this small country hosts 17,700 species of animals (including over 500 endemic species) and 3,500 species of vascular plants (including 144 endemic species). Among other ecosystems, wetlands and forests have been considered of highest global importance for biodiversity conservation and the mitigation of climate change worldwide. In Armenia too, these ecosystems host the highest level of biodiversity (including over 60 percent of highly specialized species and endemic species), play a crucial role in carbon sequestration, and contribute to regulation of climate at the regional scale. However, due to overexploitation and climate change, they are among the most vulnerable ecosystems. Their continued degradation and reduced productivity worsen rural livelihoods and aggravate the negative cycle of poverty, leading to overexploitation of natural resources and further land degradation.
2. Despite their potential values, Armenian forests are among the most threatened ecosystems in temperate biomes, with accelerating degradation, largely attributable to overexploitation. Armenia is one of the least forested countries in the region, with 9.3 percent forest cover largely concentrated in the northeast and southeast of the country. Deforestation and forest degradation are the major environmental problems in the country. According to FAO FRA (2020) during 1990–2020 Armenia lost 62,600 ha of forests. Moreover, 11,000 ha of naturally regenerated primary forests were degraded into secondary forests during the same period. The proximate drivers of such degradation are overcutting, overgrazing, mining, infrastructure development, forest fires, pests, and diseases. The key underlying drivers are economics that intensify land use competition and high costs of gas and electricity particularly for the low-income households. Such costs are likely to remain high in the foreseeable future, given the current geopolitical situation, leading to continued forest degradation due to fuelwood harvesting at the same rate or faster than before. Soil erosion, uncontrolled surface runoff, landslides, disturbance to the hydrological cycle, and flooding are commonly attributed to deforestation and forest degradation in Armenia. During 1990–2020, forest cover losses resulted in net GHG emissions of about 93,000 tCO₂eq per year. Other vital ecosystem services are also lost due to deforestation and forest degradation. The economic costs of deforestation—in terms of GHG emissions and loss of other ecosystem services—are estimated to be over US\$8 million per year (in 2021 cost US\$). Overall land degradation in Armenia is estimated to have a total economic cost of US\$111 million per year (in 2021 constant US\$).
3. NTFPs are mainly used for domestic consumption, while the ecotourism opportunities in the forests are poorly discovered. The NTFPs—forest fruits, berries, edible herbs, tea herbs, mushrooms, and so on—are mainly collected by the local inhabitants for domestic consumption or for the small-scale trade, for example, in front of the house, on the road, and so on. Even when sold, the value of these products is underestimated, the NTFPs are not marketed, and the selling price is much lower than could be for the wild harvest. The ecotourism opportunities in the forests are barely discovered, the minimum infrastructure elements (marked trails, info-boards) are not placed, the ecotourism products are not developed, and in general, the marketing of ecotourism in the forests is not designed. Meanwhile, development of ecotourism, which can create a flow of the tourists (final consumers of the wild harvest - NTFPs), can significantly improve the livelihood of the local inhabitants, providing them with alternative income opportunities and supporting in diversification of the business in the villages.



4. **Wetlands are highly productive ecosystems that provide habitat for a diversity of wildlife species; serve as breeding or feeding place for 40 percent of all plant and animal species; and deliver various ecosystem services such as protection and improvement of water quality, provision of habitat for fish and wildlife, storage of floodwaters, maintenance of surface water flow during dry periods, and carbon sequestration.** The water bodies of Armenia make up 492,200 ha or 16.5 percent of the country's area (Ramsar Convention 2022) and, by comparison, wetlands cover only around 6 percent of the Earth's land surface. Wetlands in Armenia have been a subject of overuse and purposeful draining (particularly during the Soviet period). Many lakes and rivers that were traditionally considered as a source of water have turned into bogs and marshes and have been considered as useless or even harmful areas. On the other hand, Armenia lacks clear vision and experience on wetland restoration at all levels: policy, technical, and scientific. The most vulnerable type of wetlands are bogs and marshes, which are considered a harmful biotope impeding development of agriculture.

5. **The marshes of Armenia have been a subject of a purposeful and consistent drainage for over a century.** Over 30,000 ha of brackish wetlands of Ararat Plain have been reduced via special drainage systems down to about 2,000 ha, and about 3,000 ha the mountain grassy marshes have been reduced by 80 percent through increased water extraction. This has resulted in a strong decline in wetland biodiversity (including number of endemic species, threatened species, and a variety of game birds), water retention capacity, and carbon storage and drying up of springs and other wetland areas that would serve as habitat for many species of flora and fauna. Reduction of the wetlands results in a change of humidity in the lowland semidesert areas and the highland steppes and meadows. This process, exacerbated by climate change, causes increased droughts and decreased productivity of those grasslands and creates additional risks for livestock husbandry. Proper wetland management would reverse this situation and enable forest restoration.

6. **Wetlands' drainage and climate change create a mutually reinforcing negative effect.** The capacity of wetlands in carbon sequestration and storage is four to ten times higher than the capacity of the forests of the same area. Drainage of wetlands is not only decreasing the capacity of carbon sink but is increasing the GHG emission. Besides its contribution to global climate change, the drained wetland areas are losing their ability to mild the local climate.

7. **Despite the obvious value of the wetlands, their restoration has not been prioritized until recently.** The first feasibility study on restoration of Gilli marshes in the vicinity of Lake Sevan was completed as early as in 1999. After that a number of other studies have been implemented; however, none of the restoration attempts have been performed. Only in 2019, a pilot project on restoration of 1.61 ha of brackish marshes in Khor Virap Sanctuary was performed by BirdLinks Armenia NGO with financial support from the Caucasus Nature Fund. The recovery of biodiversity of the restored area was tracked during 2020–2022, demonstrating success of the restoration, which in turn convinced the RA MOE to support continuation of the restoration initiative.

8. **Wetland restoration can create new opportunities for ecotourism development in Armenia.** Besides intangible (for local rural communities) benefit such as carbon sequestration, the wetlands can support in direct benefits of the local people. The rich biodiversity of the wetlands has a potential to attract wildlife tourists, who are mainly birdwatchers, followed by dragonfly watchers, mammal watchers, flower watchers, and other nature lovers. In 2019, before the COVID pandemic, the number of foreign birdwatchers visiting Armenia exceeded 1,000 people per year. However, the potential of the country in attracting birders is much higher as the market capacity in Europe is about 7 million people and in the US is over 80 million people. A proper marketing of the country can significantly increase the flow of nature lovers to Armenia and specifically to the unique brackish and grassy marshes. The women-driven business opportunities for local communities are obvious: catering, accommodation, and guiding services will be strongly demanded.

9. **Wetlands can become a reservoir for the game birds, supporting their sustainable harvesting.** The restored wetlands can become a breeding spot for many waterbird species, among which there are several game birds. Hunting is



prohibited in Khor Virap Sanctuary and is going to be restricted in Yeghegnut and Armash wetlands (the major public hunting lands in Ararat Plain). Over 20,000 registered hunters would need alternative areas for waterbird hunting and the restored areas can provide those opportunities. The local communities can benefit from the development of the system of entrance fees as well as from catering and accommodation services.

10. **There is a need for revision of policies related to wetland restoration and maintenance as well as institutional development.** Currently, there is a lack of national policies on wetland restoration and management, although the Ramsar convention suggests specific guidelines, which can be adapted by the country, considering the experience, which will be gained as part of the current project. Wetland restoration can also be considered as a part of the filtration system of over 200 trout and sturgeon farms, which generate over 1 billion m³ of outflowing water per year. Development of the policy on effluent control along with adoption of the Danish practice of constructed wetlands for filtering the aquaculture effluents can help in introduction of new, multifunctional use of the restored or constructed wetlands.



ANNEX 3. GENDER ACTION PLAN (GAP)

COUNTRY: Armenia
RESILAND: Armenia Resilient Landscapes Project

Gender-specific indicators below are reflected in the Results Framework. The GAP below is a guiding document.

Component	Gender-Specific Indicators, Reflecting PAD	Preliminary Baseline Information	Target	Activities
Component 1: Institutional capacity and Policy Development	# and % of people capacitated in: Gender equality /mainstreaming in relation to forestry and wetland renaturation (disaggregated by sex, location, types of organization/local communities)	EPIU consists mainly of women (approximately 80%)	80% women, 20% men	Trainings of staff and managers. Include gender focal points from the MOE.
		Local governments in project areas are mainly led by men (approximately 95%), technical staff will likely be men	20% women, 80% men	Training of people in relation to their position. Men should be specifically targeted and the gender trainings should be integrated into other training to ensure men's participation. Include women in nontechnical positions in the municipality (who may be found in human resource management, communication activities, and as secretaries).
		Local communities have mainly men as leaders (more than 90%); however, women carry out majority of work (approximately 80%).	Realistic set target (60% women, 40% men)	Outreach via women's organizations present in the geographical area or with capacity to reach out Outreach via community councils and elderlies Awareness raising of local community representatives to get buy-in and cooperation on the engagement of women
	# and % of people capacitated in: Forestry, including management (disaggregated by sex, location, types of organization/local communities)	Women are likely excluded from such activities due to gender roles and norms.	Indicators as above (differentiated by government 80% / local government 60% / local	Depending on groups: Trainings of staff and managers. Include gender focal points from the MOE.



Component	Gender-Specific Indicators, Reflecting PAD	Preliminary Baseline Information	Target	Activities
	# and % of people capacitated in: Wetlands, including management (disaggregated by sex, age, location, types of organization/local communities)	Unclear if such information exists currently	communities 40%)	Include women in nontechnical positions in the municipality (who may be found in human resource management, communication activities, and as secretaries). Outreach via environmental and women's organizations present in the area Outreach via community councils and elderlies Awareness raising of local community representatives to get buy-in and cooperation on the engagement of women
	# and type of updated forestry/wetland policies and legislation in line with Armenian commitments		TBD	Carry out an overview study of how gender is considered in forestry and wetlands policies and legislation.
	Is gender equality integrated in regulatory and operational guidelines (yes/no)		Yes	Engage gender experts into policy legislation work (as part of overall TORs).
	Are bylaws proceeded by gender analysis? (yes/no)		Yes	
	# and % of PAP with green jobs as a direct effect of the project (disaggregated by sex, age location, types of local communities)	80% men and 20% women are estimated to work in the forest today. How many of these have formal/informal jobs are currently not known.	70% men and 30% women	Outreach to women specifically. Agreement in local communities that women already working in forestry will get access to formal jobs created in the projects (criteria to be developed).
Component 2: Landscape Restoration	# and % of PAP, included in, wetland management planning and decision-making* (disaggregated by sex, location, types of organization/local communities)	Local governments in project areas are mainly led by men (approximately 95%), technical staff will likely be men	20% women, 80% men	Align below activities with the gender trainings. Include women in nontechnical positions in the municipality (who may be found in human resource management, communication activities, and as secretaries).
	* Could be people included in consultations arranged under project	Local communities have mainly men as leaders (approximately 98%); however, women carry out majority of	Realistic set target (60% women, 40% men)	Outreach via women's organizations present in the area



Component	Gender-Specific Indicators, Reflecting PAD	Preliminary Baseline Information	Target	Activities
		<p>forest work (approximately 80%).</p> <p>Forest food products for own consumption/selling are likely collected and processed by women.</p>		<p>Outreach via community councils and elderlies</p> <p>Awareness raising of local community representatives to get buy-in and cooperation on the engagement of women</p> <p>Participatory methods with specific aim of including women and young women</p>
	# and % of people directly benefitting from eco-business support opportunities (such as business planning support, proposal development) (disaggregated by sex, location, types of organization/local communities)	Preliminary findings are that women are excluded from financial opportunities and/or exclude themselves due to persistent gender norms. Likely very few women have received any direct grants or credits. A hinder is lack of land and property tenure.	High target (15% women, and 85% men)	<p>Criteria in place on who can access grants, scoring favoring individual women and/or groups or women as grant applicants</p> <p>Grants application and business development support to women-only groups</p>
Component 3: Promoting Communities' Benefits	# and % of people in project area, included in, forest management planning and decision-making * (disaggregated by sex, location, types of organization/local communities) * Could be people included in consultations arranged under project	<p>Local governments in project areas are mainly led by men (approximately 95%), technical staff will likely be men</p> <p>Local communities have mainly men as leaders (approximately 98%); however, women carry out majority of forest work (approximately 80%).</p> <p>Forest food products for own consumption/selling are likely collected and processed by women.</p>	20% women, 80% men Realistic set target (60% women, 40% men)	<p>Align below activities with the gender trainings.</p> <p>Include women in nontechnical positions in the municipality (who may be found in human resource management, communication activities, and as secretaries).</p> <p>Outreach via women's organizations present in the area</p> <p>Outreach via community councils and elderlies</p> <p>Awareness raising of local community representatives to get buy-in and cooperation on the engagement of women</p>



Component	Gender-Specific Indicators, Reflecting PAD	Preliminary Baseline Information	Target	Activities
	# and % of people directly benefitting from business opportunities created under the project (such as business planning support, proposal development) (disaggregated by sex, location, types of organization/local communities)	Preliminary findings are that women are excluded from financial opportunities and/or exclude themselves due to persistent gender norms. Likely very few women have received any direct grants or credits. A hinder is lack of land and property tenure	High target (15% women, and 85% men)	Participatory methods with specific aim of including women and young women Criteria in place on who can access grants, scoring favoring individual women and/or groups or women as grant applicants Grants application and business development support to women-only groups Equal pay for equal work, work of equal value included in grant contracts. Social insurance paid by local governments.
	# and % of PAP saving for, starting, and operating environmental businesses. ¹⁹ (disaggregated by sex, types of business, types of local communities)	TBD		Specific support to women-led businesses.
	# and % of people with green jobs in project activities (disaggregated by sex, location, types of organization/ local communities)	80% men and 20% women are estimated to work in the forest today. How many of these have formal/informal jobs are currently not known.	70% men and 30% women	Outreach to women on paid/formal work. Use of quotas to ensure formal jobs reach women (to avoid formalized/paid jobs are given to men only)

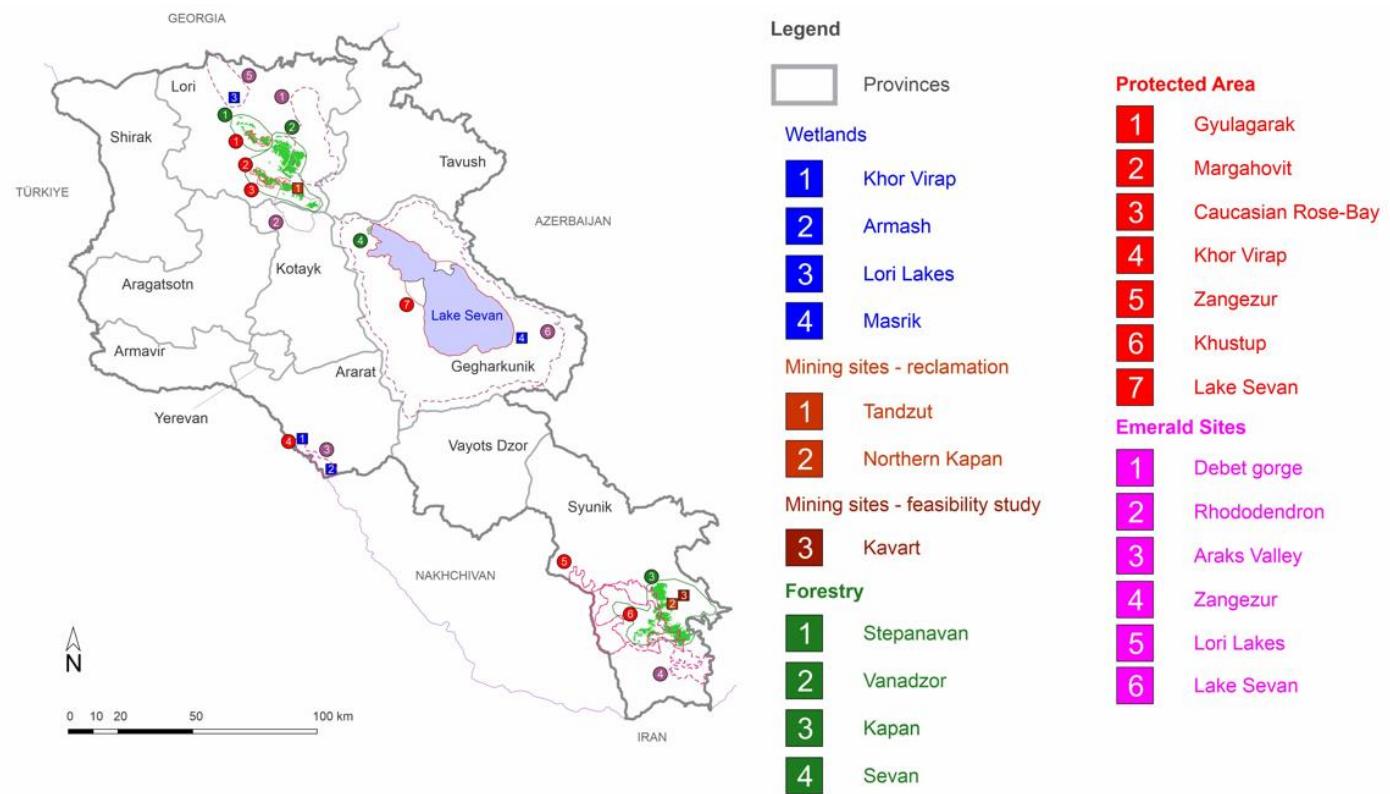
¹⁹ Customized World Bank gender indicator: "Saved to start, operate, or expand a farm or business (% age 15+)"

<https://genderdata.worldbank.org/indicators/>.



ANNEX 4. PROJECT MAP

Figure 4.1. Project Map with Targeted Landscapes



Source: WB compilation