GEF-8 PROJECT IDENTIFICATION FORM (PIF)

TABLE OF CONTENTS

General Project Information

Project Title	
Land Restoration and Ecosystem Service Improvement through Use of Fruit and Nut Tree Biodiversity in Armenia	
Region Armenia	GEF Project ID 11140
Country(ies) Armenia	Type of Project MSP
GEF Agency(ies): UNEP	GEF Agency ID
Executing Partner Forest Committee of the Ministry of Environment	Executing Partner Type Government
GEF Focal Area (s) Multi Focal Area	Submission Date 4/12/2023
Project Sector (CCM Only)	
Taxonomy Focal Areas, Biodiversity, Mainstreaming, Forestry - Including HCVF and REDD+, Species, Crop Wild Relatives, Plant Genetic Resources, Land Degradation, Sustainable Land Management, Ecosystem Approach, Land Degradation Neutrality, Stakeholders, Private Sector, Civil Society, Community Based Organization, Academia, Communications, Strategic Communications, Awareness Raising, Type of Engagement, Gender Equality, Gender results areas, Capacity Development, Gender Mainstreaming, Capacity, Knowledge and Research, Knowledge Exchange, Learning, Knowledge Generation, Workshop, Training	
Type of Trust Fund GET	Project Duration (Months) 36
GEF Project Grant: (a) 1,971,590.00	GEF Project Non-Grant: (b) 0.00
Agency Fee(s) Grant: (c) 187,300.00	Agency Fee(s) Non-Grant (d) 0.00
Total GEF Financing: (a+b+c+d) 2,158,890.00	Total Co-financing 5,000,000.00
PPG Amount: (e) 50,000.00	PPG Agency Fee(s): (f) 4,749.00
PPG total amount: (e+f) 54,749.00	Total GEF Resources: (a+b+c+d+e+f) 2,213,639.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”.(max. 250 words, approximately 1/2 page)

mountain ecosystems and 86% of those ecosystems classified as degraded. Overgrazing and unsustainable harvesting of forest ecosystems have led to serious land erosion, while poor agricultural techniques have resulted in soil salinization and overuse of agricultural chemicals making land restoration difficult. These landscapes are also under increased pressure from climate change, with temperature and precipitation patterns destabilizing, higher-than-average temperature changes predicted, and rapid regional glacier retreat already underway.

The project aims to address landscape degradation and promote ecosystem restoration in Armenia by harnessing the potential of indigenous fruit and nut tree biodiversity. The project objective is to restore the degraded lands, cultivated and wild ecosystems in urban and peri-urban areas in selected regions of Armenia by shifting current unsustainable practices on land and forest management relied on exotic crops and plant species with improved access and utilization of the broad range of intra-specific diversity of indigenous fruit and nut tree crops and their wild relatives which are still available but neglected in the production systems of Armenia. Restoration with locally adapted fruit and nut tree varieties will enhance productivity with reduced needs for inputs (water, energy, pesticides, chemical fertilizers based on substantial evidence that biologically diverse farms can equal and even outperform conventional high-chemical input systems Restored land and forest ecosystems will enhance climate change mitigation and adaptation. Local food security will be improved, and local health will improve as currently nutritionally poor diets will be supplemented with increased availability and uptake of highly nutrient fruits and nuts supplied by restored lands and forest ecosystems.

The project's approach involves strengthening the enabling environment by adopting national strategies and policies supporting the use of local agrobiodiversity. It also focuses on behavioral changes by training policymakers, smallholders, and local communities in sustainable conservation and utilization of fruit and nut tree resources. The project will have a wide range of global environmental benefits, including improved land restoration, enhanced ecosystem services, and increased agrobiodiversity conservation.

Indicative Project Overview

Project Objective

To contribute to landscape restoration by harnessing indigenous fruit and nut tree biodiversity to improve the environment and ecosystem services, support food security and safety, enhance livelihoods in Armenia.

Project Components

1. Policies and institutions to sustainably manage agrobiodiversity for restoration

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
350,000.00	1,000,000.00

Outcome:

Outcome 1.1 National strategies, and policies that support enhancing the use of local agrobiodiversity for land and ecosystem restoration are adopted

Outcome 1.2 Institutional and Financial support at national and regional levels for the use of fruit and nut tree biodiversity for land restoration and mitigating climate change

Output:

Output 1.1.1 National and regional management / development plans and strategies revised to include the use of fruit and nut tree biodiversity to mitigating the risks of climate change, reduce land degradation, and promote soil and water resources conservation, ecosystem services, food security and food safety.

Output 1.1.2 Harvesting standards and other regulatory framework for sustainable management of wild fruit and other high-value forest resources, quality and diverse seedlings supply standards developed and available.

Output 1.1.3 The Forest Committee of the MoE develop and implement a knowledge management system to promote innovation, integration, transformation and scaling up of the use of fruit and nut tree biodiversity

Output 1.2.1 Institutional and financial support for selected regions (marzes) increased for mitigating risks of climate change and land degradation through planting fruit and nut trees and other tree species in deforested areas

Output 1.2.2 Center for Biodiversity and Climate Adaptation Knowledge which is an ecological Hub for various environmental scientific and public awareness programs is established with sustainable financing in peri-urban forest area

2. Agrobiodiversity planting materials, information, and management practices

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)

1,337,355.00	3,290,000.00

Outcome:

Outcome 2.1 Area restored with use of local inter- and intra-specific (varietal) diversity of fruit and nut tree species increased in the pilot sites of Lori, Tavush, Syunik, Shirak, Vayots Dzor, Gegarkunik Regions and Yerevan City

Outcome 2.2 Information system developed and available at local regional and national levels available and used by public and private sectors

Output:

Output 2.1.1 Local governments in Armenia implement sustainable land and forest restoration through indigenous fruit and nut trees in degraded communal areas outside the pilots.

Output 2.1.2 Drought-resistant indigenous fruit and nut trees species and varieties are identified and used for restoration of degraded lands and deforested ecosystems,

Output 2.1.3 Water and soil-saving technologies surrounding fruit and nut trees are used in land and forest ecosystem restoration activities.

Output 2.2.1 A National database and information system on indigenous forest tree and shrub species, high-value non-timber forest resources, fruit and nut tree species recommended for use in land and forest restoration practices is established and available for use by public organizations, private sector and local communities.

Output 2.2.2 Climate change vulnerability and land degradation maps, maps of vulnerable zones and mining sites developed and available for making decisions on combating desertification, biodiversity conservation, climate change mitigation and adaptation

3. Capacity building at all levels to assess manage and benefit from the use of fruit and nut tree diversity

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
50,000.00	80,000.00

Outcome:

Outcome 3.1 Trained policy makers, smallholders and local communities in pilot sites support sustainable conservation and utilization of locally important fruit and nut tree resources in land and ecosystem restoration taking gender and age equity into account

Outcome 3.2 Local communities and farmers benefit from increased availability of nutritionally rich food products (fruits and nuts) and marketing of ecosystem services (eco- and agro-tourism) produced by restored lands and forest ecosystems and supported by national and provincial governments

Output:

Output 3.1.1 Gender and age responsive national capacity building strategy for all stakeholder groups dealing with agrobiodiversity conservation, land and forest ecosystems management.

Output 3.1.2 Age and gender sensitive training programs established for forestry and city gardening workers developed and implemented on resilience and adaptation practices, and the role of high-value forest resources

Output 3.1.3 High Schools, technical colleges, and universities curriculum include courses and club activities to develop and use knowledge and leadership skills in agrobiodiversity conservation, land and ecosystem restoration activities is enhanced through capacity building activities of the project

Output 3.2.1 Farmers and local communities in the project sites have knowledge and skills in value adding, ecosystem services marketing through trainings, round tables and other project activities on building capacity and raising awareness.

Output 3.2.2 Technologies on value addition and creation of new products, and eco-agrotoursim based on local fruit and nut tree species promoted and used to benefit local communities

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
55,000.00	180,000.00

Outcome:

4.1 Integrated and effective monitoring and evaluation system in place

Output:

4.1.1 Project progress reported timely
4.1.2 Mid-Term Review conducted
4.1.3 Terminal Evaluation conducted

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
1. Policies and institutions to sustainably manage agrobiodiversity for restoration	350,000.00	1,000,000.00
2. Agrobiodiversity planting materials, information, and management practices	1,337,355.00	3,290,000.00

3. Capacity building at all levels to assess manage and benefit from the use of fruit and nut tree diversity	50,000.00	80,000.00
M&E	55,000.00	180,000.00
Subtotal	**1,792,355.00**	**4,550,000.00**
Project Management Cost	179,235.00	450,000.00
Total Project Cost ($)	**1,971,590.00**	**5,000,000.00**

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Like many other countries, Armenia faces environmental challenges, including biodiversity loss, habitat degradation, and unsustainable production systems. The country is experiencing the impacts of climate change, with rising temperatures, shrinking glaciers, and unpredictable precipitation patterns. With climate change resulting in air temperature increases of 1.23°C since the last century, the rapid shrinking of glaciers in Armenia's mountain areas (around 8 m per year), air temperature maximums of up to 42°C (Yerevan), an increased unpredictability of the extent and distribution of precipitation and temperature has become the norm. Climate modeling shows that climate warming in Armenia increases air temperature by 2.8°C in an average in 2050 and by 5.8°C in 2090, which is 35-40% more than the global average (Climate Risk Country Profile at https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15765-WB_Armenia%20Country%20Profile-WEB_0.pdf). Over grazing and over harvesting in mountainous regions had led to serious land erosion and forest fragmentation. Land degradation and deforestation are crucial issues in Armenia, where 90% of the territory is represented by fragile mountainous ecosystems and 86% of them are degraded. Within elaboration of Armenia's Second National Communication to UNFCCC, it has been demonstrated that forests are of the most vulnerable ecosystems of Armenia. Even omitting sharply negative anthropogenic impact, if the projected climate change scenarios became reality, forest belts would move 100 to 150 meters up the mountain profile within the next 20 to 30 years, that is, forest areas would diminish by 3 to 4 thousand hectares. Pest and forest fire outbreaks can add to forest covered areas reduction due to climate aridification. The forest and alpine landscapes have been essentially reduced versus expansion of the desert and steppe landscapes. In forest areas (particularly, in the republic's south-east) a slow but persistent expansion of the semideserts at the account of the forest's lower section has been observed.

The drivers of environmental change in Armenia include population growth, economic development, climate change, sociocultural factors, and political influences. The expansion of the human population has led to increased pressure on land for grazing and agriculture, resulting in deforestation and forest clearance. Economic factors like the ore industry have also contributed to soil pollution and degradation. Additionally, unsustainable agricultural practices, water scarcity, and ineffective irrigation systems further exacerbate land and ecosystem degradation. These environmental dynamics are observed in Lori, Tavush, Suynik and Yerevan regions (*marzes*) of Armenia and require urgent interventions. (Forests are one of the most seriously threatened ecosystems in Armenia.

Currently forest covered areas occupy 11.54% (about 459,900 ha) of the country, which is 0.14% less than the coverage in in 2000 (FRA 2020 report: Armenia, https://www.fao.org/3/ca9966en/ca9966en.pdf). The forests are distributed unevenly: 62% are in the north-east, 36% in the south-east and only 2% in the central part of the country. The forests of Armenia are rich in biodiversity and provide supporting and regulating ecosystem services, which are crucial in fragile mountainous ecosystems. The forests of Armenia are home to 274 native tree and shrub species out of which 25 are endemic. 90% of forests in the Republic of Armenia, regardless of their ownership type, are classified as forests of special significance. The expansion of the human population has led to increased pressure on land for grazing and agriculture, resulting in forest clearance. In addition, two intensive periods of deforestation have occurred. Between the 1930s and 1950s, approximately 450,000 m3 of wood was extracted annually from Armenian forests for industrial use. Extensive deforestation for fuelwood

needs also took place from 1992 to 1995, during the period of economic blockade and energy crisis. A combination of poor forest management and illegal felling resulted in damage to some 27,000 ha of forest (more than 8 percent of the total forest area), including the total clearance of approximately 7,000 ha. Today, forests cover at most 10 percent of the land surface of Armenia. Forests are now concentrated mostly in the northeast of the country, with some stands in the south. https://ace.aua.am/files/2019/05/2000-USAID-Chemonics-Biodiversity-Assessment-for-Armenia_eng.pdf)

According to data on soil resources, 44% of lands are exposed to erosion including 94,000 of 464,300 ha (20.3%) of arable lands. The situation with soil erosion is severe in Aragatsotn, Kotayk, and Vayots Dzor regions (*marzes*). These sites spread their unfavorable impact to the project pilot sites of Lori, Tavush, Suyink, Shirak, Gegharkunik and Yerevan *marzes*. Soil erosion resulting in land and ecosystem degradation is hampered with soil pollution due to extensive input of agricultural chemicals.

The agricultural sector is affected by natural disasters including frost, hailstorms, floods, landslides, mudslides, drought and earthquakes. In 2010, US$416 million was lost from potential agricultural output because of natural disasters. The impact of these losses is acute given that agriculture represents 19 percent of GDP and employs 28 percent of the population. In terms of food security, food access and availability can be seriously affected by the natural shocks and stresses (https://docs.wfp.org/api/documents/WFP-0000020456/download/). Agriculture in Armenia is threatened today by many factors – primarily agrobiodiversity loss, lack of water resources for crops watering, and land degradation – all of which intertwine. Many currently grown crops are exotic ones requiring extensive use of water resources and inputs of agricultural chemicals, which lead to local agrobiodiversity shrinking. The irrigation systems in place are also ineffective, leading to water loss enroute and soil salinization, degrading the arable lands and thus limiting crops diversity that can be grown on these lands.

Many globally important agricultural biodiversity species are found in the agricultural landscapes of Armenia. Armenia's floral biodiversity is extremely rich, with 123 endemic species, constituting 3% of all flora species in the country. Armenia's floral biodiversity includes more than 200 edible plant species, 40 edible fungi species, more than 1,000 fodder plants, 120 dye plants, and 60 rubber producing plants. Around 10% of the flora in Armenia is considered to have medicinal properties. According to the study conducted within the framework of the UNEP/GEF project titled "*In-situ conservation of crop wild relatives through enhanced information management and field application*", 2,518 species of the flora of Armenia were evaluated as crop wild relatives, making up around 70% of all plant species native to the country. Due to this abundance of wild relatives of cultivated plants, the country was defined as one of the centers of crops diversity. This diversity of crop wild relatives do not only support rural communities through direct harvest and utilization, but represent a rich gene pool for the development of new crop varieties resistant to diseases and pests, and other characteristics of adaptation to stress factors of environment. Unfortunately, the habitats of these species diversity are rapidly being threatened due to anthropogenic pressure (logging and pollution), while some plant species harvested in the wild are at risk from unsustainable harvesting. Successful conservation of these wild plant species requires a multipronged approach to ensure their long-term availability while continuing support to local community is also needed, where effective project engagement and intervention in those communities is essential.

If the current environmental trends continue unchecked, Armenia could face dire consequences. The baseline in the absence of the project is characterized by ongoing environmental degradation, loss of biodiversity, declining agricultural productivity, and increasing vulnerability to climate change impacts. Climate change scenarios indicate a significant reduction in forest areas. The continued loss of forests and biodiversity

habitats could lead to increased desertification and land degradation. Forest areas would diminish, and the expansion of semideserts and deserts would encroach on the remaining forested regions. Soil erosion and pollution would worsen, impacting agricultural productivity and exacerbating malnutrition and poverty. Natural disasters, including floods, landslides, and droughts, would become more frequent, causing significant losses in agricultural output and food security.

This particular project has been selected to address the drivers of environmental degradation and climate vulnerabilities in Armenia due to its comprehensive approach. By focusing on the restoration of degraded landscapes, promotion of indigenous fruit and nut tree species, and conservation of endemic wild fruit-bearing tree species, the project tackles multiple environmental challenges simultaneously. It aligns with international priority areas such as climate change, land desertification, and biodiversity conservation. Additionally, the project takes into account the unique biodiversity of Armenia and the development dynamics of anthropogenic ecosystems, ensuring the project's relevance and effectiveness in the local context. To achieve the primary goal of this project, ensuring that nut and fruit trees biodiversity is optimally conserved and supports adaptation to environmental challenges in Armenia and provides a sustainable basis for enhanced utilization to improve rural livelihoods of urban and peri urban areas of the project, this project will work to reverse the existing barriers to agricultural biodiversity conservation. These have been identified as:

Barrier 1 - ***Weak policy framework***

The lack of specific policies and regulatory framework is a major barrier for the conservation and sustainable use of the fruit and nut tree biodiversity in Armenia. The legislation does not specially regulate the harvesting of non-wood forest products (NWFPs). The roles and competencies of specific regional governmental, local self-governing agencies and scientific-educational institutions in respect of agrobiodiversity conservation and use are not clearly defined. Actors involved, from local to global, do not fully understand the power dynamics that influence the interactions between these various actors and their ability or mandate to influence and/or control the management of agrobiodiversity.

Barrier 2 – Lack of access to planting materials knowledge and management practices to use the fruit and nut tree agrobiodiversity.

Lack of awareness among the local population including policy and decision-makers, farmers, producers and consumers of the value of fruit and nut species and agrobiodiversity has limited the use of this diversity in development planning. This includes low recognition of adapted fruit and nut species and their products on the market and lack of knowledge on enhancing sustainable agrobiodiversity vs.. agrobiodiversity based agrotourism value chains. Limited access to local seed and planting materials, increasing dependency of national breeders on import of seeds and seedlings and planting materials, lack of special knowledge on the cultivation of local varieties of adapted fruit and nut planting materials; and lack of pilot sites that demonstrate sustainable use of agrobiodiversity fruit and nut species have limited the adoption of local varieties for land restoration. Substantial evidence shows that biologically diverse farms can equal and even outperform conventional high-chemical input systems. Improved access to fruit and nut tree genetic resources in the form of diversified varieties and wild forms, coupled with technical training in agroecological practices has demonstrated that these production systems can rival, if not outperform conventional, agrochemical-dependent commodity farming with less environmental and social impact. Local adaptation of the varieties used will lead to enhanced production and reduced needs for inputs (water, pesticides fertilizer), improving also risk management of unpredictable climatic extremes (e.g., temperature, frost, precipitations). Cultivated and wild

production systems restored with biodiversity of indigenous fruit and nut tree species will enhance ecosystem services, support food security and safety, livelihoods and adaptation to climate change.

Barrier 3 Communities lack capacity to use and benefit from land restoration with local fruit and nut trees

Local communities have limited awareness of the importance of land restoration benefits by local fruit and nut trees. Mass media and school curriculums do not promote the benefits of local fruit and nut trees to communities for land restoration. There is also limited capacity in local communities to assess the diversity they have, and the management practices needed to implement development actions targeted to men and women and different age groups to reap the economic benefits for the communities from local fruit and nut tree diversity.

In addition to the barriers already highlighted, poor policies and lack of coordination also contribute to poor extension support to farmers and local communities. In fact, national policies and by extension practices have been more supportive of modern, high-input agriculture at the cost of agricultural biodiversity and the environment. This focus on the transformation of the agricultural sector has contributed to greater uniformity in farmer fields which in turn contributes to greater vulnerability to a range of biotic and abiotic stresses which will be considerably exacerbated by climate change. Additional barriers include a general lack of capacity at all levels, from policy to practice, and a general market failure that fails to capture adequately the ecosystem services benefits and returns from maintenance of agricultural biodiversity in natural and agricultural landscapes, as well as the potential niche markets that could exist for improved farmer livelihoods and economic development.

-

Land and forest recovery using fruit and nut tree species will provide significant environmental services favoring climate change mitigation and adaptation, will enhance carbon sequestration, increase biodiversity, pollination services, stabilize the soil, mitigate the effects of salinization, increase water quality, benefiting both wild and cultivate forest-based systems supporting climate mitigation and increased ecosystem health and resilience. The project aligns with ongoing investments and lessons learned from previous projects in Armenia and the wider region. It builds on the understanding of the drivers of environmental degradation and climate vulnerabilities in Armenia, incorporating best practices and innovative approaches. The project integrates with existing policies and initiatives related to climate change, land management, and biodiversity conservation.

The relevant stakeholders in the project include government agencies responsible for environmental management and agriculture, local communities, private sector actors, research institutions, and civil society organizations. Government agencies play a crucial role in providing policy support, creating an enabling environment, and mobilizing resources. Local communities are essential for the implementation and maintenance of sustainable land and forest management practices. The private sector can contribute through investments, technology transfer, and value chain development. Research institutions provide scientific expertise and knowledge sharing, while civil society organizations contribute to awareness-raising, capacity building, and advocacy for sustainable practices. The sustainability of the project can be secured by the involvement and empowerment of smallholders in project activities. Smallholders will be the targets of the

awareness-raising and capacity-building programme, and they will be the main beneficiaries of the components of production/processing improvement and the provision of modern technologies. All these key stakeholders will be consulted during the project development plan by involving them in consultation meetings and organizing targeted bilateral meetings with the key stakeholders. Their roles in project implementation will be identified and will be part of the Project stakeholder engagement plan.

B. PROJECT DESCRIPTION

Project description

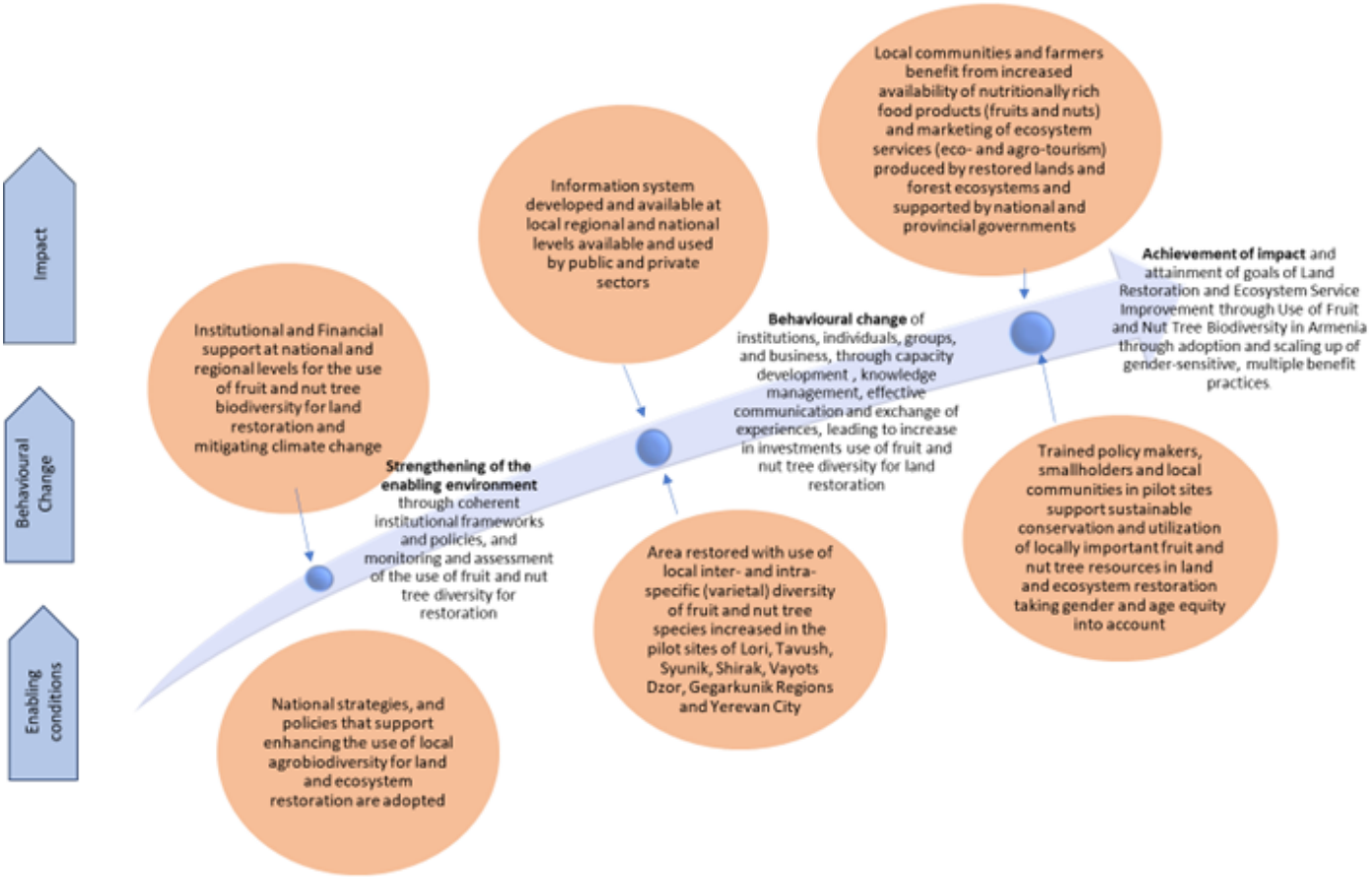
This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

The intervention logic is guided by the 'drivers', 'assumptions', and 'logical pathways' needed to achieve the ultimate objective of the project: to contribute to landscape restoration by harnessing indigenous fruit and nut tree biodiversity to improve the environment and ecosystem services, support food security and safety, enhance livelihoods in communities in Armenia. The project's proposed interventions/activities (drivers) build on the baseline conditions which already exist, and which are described above, and seek to drive those additional steps and processes required to achieve further incremental results. The Project's Theory of Change is based on the premise that indigenous nuts and fruit trees have economic and environmental benefits that by engaging with farmers, agrobiodiversity can be better conserved and restoration needs can be complemented with economic benefits.

The project will follow the proposed Theory of Change and aims at land restoration and ecosystem service improvement through use of fruit and nut tree biodiversity in Armenia through improved national strategies and policies enhancing the use of local agrobiodiversity in land and ecosystem restoration; demonstration and scaling up practices of land and forest ecosystems restoration through use of indigenous fruit and nut tree biodiversity, improved livelihoods of farmers and local communities through application of technologies and approaches on adding value to food products and marketing ecosystem services produced through restoration of degraded and deforested lands.

The Theory of change begins with the strengthening of the enabling environment, which will be done through the development and enhancement of through coherent institutional frameworks and policies, together with the monitoring and assessment of the use of fruit and nut tree diversity for restoration through Outcome 1.1 National strategies, and policies that support enhancing the use of local agrobiodiversity for land and ecosystem restoration are adopted and Outcome 1.2 Institutional and Financial support at national and regional levels for the use of fruit and nut tree biodiversity for land restoration and mitigating climate change. Second, behavioral changes will occur through Outcome 3.1 Trained policy makers, smallholders and local communities in pilot sites support sustainable conservation and utilization of locally important fruit and nut tree resources in land and ecosystem restoration taking gender and age equity into account, and 3.2 Local communities and farmers benefit from increased availability of nutritionally rich food products (fruits and nuts) and marketing of ecosystem services (eco- and agro-tourism) produced by restored lands and forest ecosystems and supported by national and provincial governments. Behavioral change will also be supported through improved knowledge management and effective communication under Outcome 2.2 for Information system developed and available at local regional and national levels available and used by public and private sectors leading to increase in investments use of fruit and nut tree diversity for land restoration. Finally, achievement of impact and the attainment of goals of Land Restoration and Ecosystem Service Improvement through Use of Fruit and Nut Tree Biodiversity in Armenia through adoption and scaling up of gender- targeted practices such as supporting women and

youth in establishment and running tree nurseries to supply quality and diverse planting material for land restoration activities, establishment of fruit and nut crops products processing initiatives, development of eco-agrotourism business will be achieved through a combination of Outcome 2.1 Area restored with use of local inter- and intra-specific (varietal) diversity of fruit and nut tree species increased, together with the institutional and financial support from Outcome 1.2 and the capacity built under outcome 3.1 and 3.2.



The project plans to study the possible directions of restoration of degraded lands and ecosystems in urban and peri-urban areas with specific and intra-specific indigenous diversity of fruit and nut tree species in the pilot sites, exact criteria for which selection will be developed during PPG phase sites. The project will adapt and apply the Diversity for Restoration Tool (D4R) that helps with decision-making in species selection and seed sourcing for tree-based restoration using local site conditions and user-determined restoration objectives (https://cgspace.cgiar.org/handle/10568/121496)

The project will also use DATAR (www.datar-par.org) developed for the GEF Biodiversity tracking tools to build national capacity to identify, assess, analysis, and monitor the availability of indigenous cultivated fruit and nut tree diversity to meet communities social environmental constraints for land restoration.

On the communal lands and forest areas under 'Hayantar' SNCO and Yerevan City, project volumes and schemes on landscape greening and forest parks will be prepared during project preparation stage of the project.

It is planned to organize green afforestation works in Yerevan city forest park zones in Erebuni and Nork Marash Forest Areas. During the implementation of project preparation phase, based on the schemes and final calculations of the above-mentioned works, it will be possible to consider the inclusion of other administrative districts in the project.

A Center for Biodiversity and Climate Adaptation Knowledge will be established in peri-urban forest area, which will be an ecological Hub for different environmental scientific and public awareness programs concerning environmental issues for all regions of Armenia. Corresponding support to the project will also be provided by Botanical Gardens, they will spread the best scientifically approved experience of plant caring and planting trees, shrubs, flowers, climate mitigation for project areas. In cooperation with 'HAYANTAR' SNCO, a nursery will be established in the Shirak region which will spread the best science-based care and planting of trees, shrubs, flowers, as well as climate mitigation, experience in the cities of the Shirak region.

In the urban areas where an irrigation network will be required, the project will support the construction of an irrigation network based on international experience in the use of the latest technologies. Experience has shown that in parallel with forest development processes, it is necessary to develop forest protection infrastructure by choosing innovative, more economically sustainable mechanisms. Within the framework of the project, support will be provided for the introduction of a new forest park protection system in project regions. Smoke and sound-sensitive devices, photovoltaic video cameras/cardboards, and their maintenance equipment will be purchased, as well as system maintenance during the project. The system will be installed in forest areas with high rates of illegal logging, in the future it will be serviced at the expense of the 'HAYANTAR' SNCO (ArmForest SNCO), this system will be managed by the Forest Committee.

The project will enhance the establishment of forest berry collection and processing centres, establishment of two greenhouses and nurseries, seed collection and refrigeration centres, briquettes production centres from forest waste, as well as will enhance planting trees along bordering areas (left and right sides) of intercommunal roads. Project will also identify pilot schools and kindergartens where school children will participate in planting trees and plants.

Civil society structures have a key role to play in overseeing the activities of the state, as well as in raising public awareness. Cooperation with regional environmental NGOs will be ensured for the design, implementation, monitoring, evaluation of the project, as well as for the work carried out with the public. In the forests of the target regions, at least experimental educational-scientific programs will be implemented through NGOs. The NGO programs will include visual materials on forest use and conservation available to the general public.

In Armenia, the National Forest Program includes a plan of action with deadlines. It covers the period from 2005 to 2015, but some activities, such as public communication or professional education are continuous and cannot be performed within fixed time boundaries. The National Forest Program also includes other planned activities that were never carried out (for example development of regulation on Licensing for Forest Use, which is envisaged neither in the Forest Code, nor in the Law on Licensing) (ENPI EAST FLEG II, 2016/7). Armenia did not have National Forest Program covering the period of 2016 to 2022 years. During 2016-2022 all National

Forest Program of 2016-2022 was de facto in use. New national Forest Program that covers the period of 2023 to 2033 is under development and proposed to be finalized till October of 2023.

As one response to this globally prevalent situation, many stakeholders and governments are committed to forest landscape restoration. In particular, the Bonn Challenge is "a global effort to bring 150 million ha of deforested and degraded land into restoration by 2020 and 350 million ha by 2030. It is an implementation vehicle for national priorities such as water and food security and rural development while contributing to the achievement of international climate change, biodiversity and land degradation commitments. The Bonn Challenge was launched in 2011 by the Government of Germany and IUCN, and later endorsed and extended by the New York Declaration on Forests at the 2014 UN Climate Summit. IUCN is the Secretariat of the Challenge." (IUCN, 2018). According to the Bonn Challenge website, "Forest landscape restoration (FLR) is the ongoing process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes. FLR is more than just planting trees – it is restoring a whole landscape to meet present and future needs and to offer multiple benefits and land uses over time. FLR manifests through different processes such as: new tree plantings, managed natural regeneration, agroforestry, or improved land management to accommodate a mosaic of land uses, including agriculture, protected wildlife reserves, managed plantations, riverside plantings and more." (IUCN, 2018).

The GEF project design team will give special consideration to vulnerable women-headed households and youth, organizing consultation processes to select a menu of awareness raising, training and investment-support interventions suited for their specific needs. The project will provide preferential access to women heads of households and youth for training. The aim will be to help the most vulnerable farmers develop an improved resilience of their agricultural production systems to soil erosion and regular fluctuations in rainfall levels through investments into sustainable land management technologies, particular attention will be paid to enhancing women entrepreneurship.

The objectives of the Project are consistent with Government policy:

(i) The Government's Sustainable Development Strategy 2012-2030 (SDS) with the strategic directions to ensure sustainable economic growth, implement a targeted social policy for improving populations' living standards, improve the effectiveness of governance, and ensure environmental protection and sustainable management of natural resources; Improvement of rural water supplies were specifically called for in the government's Sustainable Development Strategy

(ii) The Government's Agricultural Development Strategy 2010-2025 (ADS) that emphasizes the need for intensification of agriculture, and increasing the value added in agricultural and rural labour. Efforts have already been initiated for introducing an insurance system for agriculture production. Productive cooperation has been established between the MoA and "Armstatehydromet", which regularly provides meteorological data and short- and mid-term weather forecasts and warning in the case of dangerous hydro-meteorological phenomena.

(iii) The Law "On the National Water Programme" (2006) that defines measures for meeting the demands of the population and the economy, ensuring ecological sustainability of the environment, forming and using strategic water reserve and protecting national water reserve through effective management of usable water resources.

(iv) The 2002 National Action Programme to Combat Desertification in Armenia, calling improved land use planning and improvement of economic mechanisms for natural resource management. The project will also support the implementation of the 10-year UNCCD Strategic Plan especially

Strategic Objective 2: To improve the condition of affected ecosystems, particularly Expected impact 2.1: Land productivity and other ecosystem goods and services in affected areas are enhanced in a sustainable manner contributing to improved livelihoods; and Strategic Objective 3: To generate global benefits through effective implementation of the UNCCD, specifically Expected impact 3.1: Sustainable land management and combating desertification/land degradation to the conservation and sustainable use of biodiversity and the mitigation of climate change.

(v) The Second National Communication to the UNFCCC proposed adaptation technological measures to reduce losses from leakages in drinking and irrigation water supply systems, to apply advanced irrigation methods in agriculture, to introduce drought and pest resistant locally adapted crops and varieties, to introduce early warning response system and climate index-based insurance system, to improve management of grasslands, and to implement soil and water conservation measures in farming systems.

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

The proposed project will seek close cooperation with the "Adaptation to Climate Change Impacts in Mountain Forest Ecosystems of Armenia" project especially in the area of reducing vulnerability and increasing adaptative capacity to cope with the adverse impact of climate change and with the UNDP/GEF project "Developing Institutional and Legal Capacity to Optimize Information and Monitoring System for Global Environmental Management in Armenia". The project will also utilize and monitor relevant data from the Climate Change Information Center that has been established under UNDP/GEF project on "Armenia- Country Study on Climate Change", data from the UNDP/GEF project on "National Biodiversity Strategy, Action Plan and First National Report to CBD" as well GEF financed National Reports to the Convention of Biological Diversity up to the forth report. The proposed project will also complement and build on relevant aspects of the work carried out under the "Natural Resource Management and Poverty Reduction" project. Through the aforementioned national executing agency of the project this project will seek to use all available experience, data and analysis on planning, rehabilitation, protection and sustainable management of state forests in the project area will be used while developing full project document for this PIF.

The project will also use Diversity Assessment Tool for Agrobiodiversity and Resilience DATAR (www.datar-par.org) on the GEF: Cross-cutting capacity building, knowledge services and coordination project for the Food Security Integrated Approach Pilot Program - GEF project 9140, to building capacity at national level in Armenia in multiple languages to link diversity assessment to pro poor development and land restoration practices. Available in English, Spanish, French, Russian and Chinese, DATAR is an open-source free IT platform. The DATAR system follows a protocol of linking the outputs of focus group discussions, household surveys and empirical data to allow the identification and location of intra-species level for crop agrobiodiversity across the landscape for the community to set their sustainable development and landscape restoration goals. The DATAR software platform includes a web interface, the DATAR Web Portal (freely available upon registration), and an Android App, which can be used off-line for field researchers and communities, which includes Free Prior Informed Consent (FPIC) forms to sign when working with farmer communities. DATAR enables the national user to assess information on perennial and annual crop/tree/ forage varieties and their functional traits; identify and describe genetic

material providers who supply crop seeds or saplings from local communities to public and private companies; assess management, market, policy and institutional constraints encountered by food producers; and provide age and gender sensitive actions and interventions to use this diversity to meet the goals of the community, together with an M&E platform to monitor the effect of these interventions of direct and indirect beneficiaries.

Similarly, it is intended that links are developed with other similar initiatives on specific parts of the agro-ecosystem such as fruit bearing crops and their wild relative's conservation and utilization governmental research project at the Faculty of Biology of Yerevan State University.

The proposed project will also work closely with relevant initiatives and activities underway at the Armenian State Agrarian University and coordinate work with the German-Armenian technical cooperation programme '*Sustainable management of biodiversity in the Southern Caucasus*' implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Models such as the Mera Eco 99 sustainable farm in the Ararat Valley demonstrate that agricultural productivity can be sustainably enhanced by integrating greater agricultural biodiversity into farming systems and through greater consolidation and cooperation of small farms for more effective management of land and resources. Such approaches can be scaled up to other locations. The proposed project would also align its activities with relevant existing extension and information disseminating services in Armenia including Information dissemination channels of the Ministry of Environment, Information dissemination channels and public relations units of Province Government Units and Aarhus Centers.

In order to bring the necessary experience to bear for effective project implementation, the proposed project will draw on the experience of the Platform for Agrobiodiversity Research PAR (www.agrobiodiversityplatform.org), which brings together those working on all aspects of agricultural biodiversity, sharing information and experiences and facilitating partnerships to make available tools including the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR), and practices and experiences on how to optimally maintain and use agricultural biodiversity. PAR is hosted by the non-profit charity: The Raffaella Foundation (www.raffaellafoundation.org) whose mandate is to supports actions that embrace diversity to promote equity, solidarity and well-being in urban societies and agricultural ecosystems.

Core Indicators

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10000	0	0	0

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10,000.00			

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20000	0	0	0

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20,000.00			

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Document(s) that justifies the HCVF)

Title

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	5,000			
Male	5,000			
Total	**10,000**	**0**	0	**0**

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

In the Forest Areas of Yerevan City we have about 210 ha of forest degraded areas` about 60 ha in Marash Forest area and about 150 ha in Erebuni forest area.

Under the management of the Forest Committee the total forest area of Tavush region is 118 753 ha from which about 11 933 ha is not covered by forest and the total area of forests under the management of the Forest Committee in Lori region is 101 212 from which about 15415 is not covered by forest.

Taking into account that the nearest forest area to the capital city of the Tavush province is Ijevan city and its nearest forestry area is “Ijevan Forestry” of the “HAYANTAR” SNCO of the Forest Committee which has total area about 25512 ha from which about 4556 ha is not covered by forest.

Taking into account that the nearest forest area to the capital city of the Lori province is Vanadzor city and its nearest forestry area is “Vanadzor Forestry” of the “HAYANTAR” SNCO of the Forest Committee which has a total area of about 30228 ha from which about 7904 ha is not covered by forest from which about 3660 are areas that have hard reachability and have rocky land category, which means that in “Vanadzor Forestry” of “HAYANTAR” SNCO project is going to have access on 4244 ha. The next urban City of the region is “Stepanavan Forestry” of the “HAYANTAR” SNCO of the Forest Committee which has 6665 ha from which 990 ha is not covered by forest and has easy access for project actions and operations.

Above figures prove that direct land restoration activities of the project is 10 000 ha concentrated in Lori and Tavush Provinces and a portion in Yerevan city.

During project life time project staff with its executing agency will organize exchange of visits, seminars and workshops for improving practices in other forestry areas of the “HAYANTAR” SNCO of the Forest Committee mainly for the following areas:

1. “Sev Qar”, “Noemberyan”, “Artsvaberd” forestry areas of Tavush Province that has total area 93241 from which 7377 ha not covered by forest, plus 40 ha forest park in Ijevan City of Tavush Province.

2. “Jiliza”, “Tumanyan” and “Tashir” forestry areas of Lori Province that has total area 64319 ha from which 6519 ha not covered by forest,

3. “Chambarak” forestry area of Gegharkunik Province that has 8379 ha from which 1500 ha not covered by forest, plus 17 ha forest park in Sevan City of the Gegarkunik Province.

4. “Gyumri” forestry area of Shirak Province that has 4737 ha from which 2737 ha not covered by forest.

5. “Vayots Dzori” forestry area of Vayots Dzor Province that has 15046 ha from which 7390 ha not covered by forest but from mentioned 7390 ha project will include only 1810 ha which has easy access for project proposed actions.

Above figures prove that project actions on landscapes under improved practices is 20 000 ha in Lori, Gegharkunik, Shirak, Vayots Dzor and Tavush Provinces.

During project life time project staff with its executing agency will organize exchange of visits, seminars and workshops for improving practices project will target minimum 5,000 males and 5,000 females that will benefit from the side of learning improved practices. In long-run after the end of project population of project regions will also benefit from non-timber products of restored forests.

Armenia's GHG emissions fell by about 70% between 1990 and 1995 and then fluctuated between 7 and 8,5 Mio t CO2eq until 2010. In the latest available year (2017). GHG emissions are at the level of 10,6 Mio t, which is an increase of 25% from 2010. This increase was mainly driven by increased economic activity (+34%) and counterbalanced by a decrease in population (-2.4%). In the updated Nationally Determined Contribution (NDC) 2021-2030, Armenia sets the economy wide GHG emission reduction single year target of 40% by 2030 compared with the base year 1990. (https://eu4climate.eu/armenia/)

In areas where forests are most productive (i.e., moist thick regions), they can sequester up to 11 tonnes of CO2 per hectare per year in above-ground biomass and additional carbon below ground. As mentioned above project direct land restoration activities spreads on 10 000 ha, in these areas project is going to establish forest and green areas. The long-term impact will decrease up to 110 000 tonnes of CO2 per year. Direct beneficiaries of the favorable impact of per year sequestered 110 000 tonnes of CO2 are going to be the population living in Lori and Tavush Provinces and Yerevan city.

Risks to Project Preparation and Implementation

Summarize risks that might affect the project preparation and implementation phases and what are the mitigation strategies the project preparation process will undertake to address these (e.g. what alternatives may be considered during project preparation- such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the project during its implementation. Please describe any possible mitigation measures needed. (The risks associated with project design and Theory of Change should be described in the "Project description" section above). The risk rating should reflect the overall risk to project outcomes considering the country setting and ambition of the project. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Moderate	Climate change or other environmental events can remove diversity and lead to expansion of desert and arid zones in Armenia. Necessary mitigation measures and good practices of mitigation will be identified and included in the National Agricultural Biodiversity Strategy and national policies to be developed within framework of the project. Emphasis will be placed on the active participation of local communities in the identification and implementation of adaptation measures. This will help the

		proposed project design measures aimed at increasing the resilience and adaptability of important agroecosystems in Armenia
Environment and Social	Moderate	Commitment to in situ and on farm conservation of agricultural biodiversity may not be desirable to all farmers and communities. To mitigate this, the project will explore the use of incentive measures to make this more attractive to farmers.
Political and Governance	Low	Armenia has a stable government system in place.
Macro-economic	Low	
Strategies and Policies	Moderate	National stakeholders have expressed a strong desire for this project and project development will rely on significant representative partnerships comprised of stakeholders at all levels.
Technical design of project or program	Low	
Institutional capacity for implementation and sustainability	Moderate	This will be assessed at the PPG phase.
Fiduciary: Financial Management and Procurement	Moderate	This will be assessed at the PPG phase.
Stakeholder Engagement	Low	Past experience has shown that it is difficult to engage the private sector in production of crops without, or little, monetary value. This might be aggravated by inadequately developed markets for potential agricultural biodiversity products. However, there is growing demand for products that can demonstrate a sustainable production base. Farmers and local communities will be involved in a participatory manner at all stages of project development so that their problems and concerns are realistically identified, and measures are embedded to address these. Project implementation experiences

		from over 20 countries have shown this risk is overcome by adoption of appropriate participatory approaches during project planning and implementation phases
Other		
Financial Risks for NGI projects		
Overall Risk Rating	Low	Overall Risk will be re-assessed at the PPG

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

Country policies does not contradict the intended outcomes of the project. On April 22, 2021, the Government of Armenia approved NDC of Armenia revised under the Paris Agreement for 2021-2030. According to the revised actions, Armenia has undertaken a commitment to increase the country's forest cover to 12.9% until 2030.

50 thousand hectares of new forest must be added. If we start this year, we will have to plant about 5,000 hectares of new forest per year. Professional skills should be improved, a nursery economy should be developed, and we should grow seedlings with a closed root system. We currently have two greenhouses, soon there will be six operational ones. Armenia plans to grow 15 million seedlings a year.

The project is designed to address local circumstances, integrating interventions to enhance in situ and on farm conservation with market- based approaches. It contributes primarily to GEF Strategic Objective 2, Mainstreaming Biodiversity in Production Landscapes and Sectors. The project supports Strategic Program 4, Strengthening the Policy and Regulatory Framework through its focus on policy aspects at local and national levels. The project also contributes to Strategic Program 5, Fostering Markets for Ecosystems Goods and Services, through the development of a set of specific targeted activities aimed at improving the sustainable marketing of the products of agricultural biodiversity rich production systems and wild ecosystems – particularly medicinal species, spices, fruits and vegetables and value-adding through agri- and eco-tourism. The ways in which certification schemes might be developed will be explored and where appropriate sustainable management and harvesting strategies and practices developed and adopted. Community driven approaches will be central to this work.

In its National Biodiversity Strategy and Action Plan (NBSAP) Armenia recognizes the following major needs and objectives in its genetic resources conservation strategy: improving legal and institutional frameworks for the conservation and management of natural resources; increasing the environmental awareness and educational programs at all levels of society, especially within NGOs and the National Ministry of Environment; upgrading the national capacity for biodiversity and ecological monitoring and for the planning, management and administration of protected areas; guaranteeing the long-term financial support of PGR conservation and maximizing actions likely to lead to economically, ecologically, and socially sustainable solutions for

agricultural biodiversity conservation; and ensuring that biodiversity concerns are incorporated into agricultural and pastureland practices.

In addition to the NBSAP there are a few other relevant documents which underscore the need for this project. The **Armenian Agricultural Sustainable Development Strategy** (Revised Version, 2006) covers the main directions of the state policy in agriculture for the period 2006-2015. The overall objective of the strategy for the agriculture sector development is to promote sustainable agricultural development, increase food security level and income of the rural population through the creation of favorable environments for the entities operating in the agricultural sector. The **Armenian Sustainable Development Program** (2008) includes strategies for both Environmental Protection and the development of sustainable livelihoods through support to agriculture and value-adding. Further, the **Law for the Republic of Armenia on Organic Agriculture** (adopted April 8, 2008) recognizes the main principles of organic agriculture, which are in line with the proposed project, including the formation of a favorable environment for the preservation of biodiversity as a result of selective breeding of plants and livestock, as well as reduction of risks caused by human activity. The law also provides for certification in the field of organic agriculture.

A Plant Genetic Resources for Food and Agriculture (PGRFA) National Programme has not yet been developed in the country. However, elaboration of a national PGRFA programme is considered a priority as a long-term platform for implementation of international agreements, such as the Global Plan of Action on the Conservation and Sustainable Utilization of PGRFA, as well as the relevant obligations of the CBD, Framework Convention on Climate Change and Convention to Combat Desertification. Moreover, the Government of Armenia recognizes the need of an effective and strong coordination both horizontally and vertically to minimize duplication of efforts and functions of stakeholders dealing the PGR conservation and use. In 2007 the elements of a national strategy for management and use of PGR in Armenia were developed within the framework of the FAO supported project on *Designing an Integrated Strategy to for Improved Utilisation of Plant Genetic Resources for Food Security in Armenia*. The proposed key recommendations targeted on improvement of the national integrated system will serve as a basis for elaboration of a National PGRFA Programme.

The proposed project is fully consistent with the national priorities and directly addresses its concern with the promotion of the research and development of agricultural biodiversity, including wild relative's genetic resources, strengthening capacity to support maintenance of agricultural biodiversity, enhanced benefit sharing and promotion of conservation and use through marketing and management. The project would enable Armenia to accelerate the implementation of national priorities and policies listed above. The project reflects the importance given by the Armenian government to maintenance of diversity in productions systems and wild ecosystems, livelihood and income generation and related policy development, the three major components of this project.

The proposed project is in line with the provisions of the United Nations Conventions on Biological Diversity and Combat Desertification, UN Framework Convention on Climate Change. It is also in line with the ongoing projects as FAO/GEF "Implementation of Armenia's LDN commitments through sustainable land management and restoration of degraded landscapes", IFAD/GEF "Sustainable Land Management for Increased Productivity in Armenia" project, and FAO/GCF "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation' projects.

In Armenia, 7B5 thousand people were living on degrading agricultural land in 2010 - an increase of 30% in a decade, bringing the share of rural residents who inhabit degraded agricultural land up to 68% of the total rural population. Land degradation can severely influence populations' livelihood by restricting people from vital ecosystem services (including food and water), increasing the risk of poverty.

The annual cost of land degradation in Armenia is estimated at 71 million United States dollars (USD). This is equal to 4.2% of the country's Agricultural Gross Domestic Product. Land degradation leads to reduction in the provision of ecosystem services that takes different forms - deterioration in food availability, soil fertility, carbon

sequestration capacity, wood production, groundwater recharge, etc.- with significant social and economic costs to the country.

Land-based mitigation options rank among the most cost-effective opportunities to sequester carbon emissions. Economic evaluations of various climate change mitigation alternatives show that capturing carbon

through restoring degraded lands (including degraded forest) is a cost-effective option that offers multiple co-benefits.

Sustainable Development Goal 15, life on Land', and its target 15.3 on Land Degradation Neutrality (LDN) is a unique opportunity for countries to curb the growing threats of land degradation and to reap multiple socioeconomic benefits of LDN. Armenia has committed to set a national voluntary LDN target, establish an LDN baseline, and formulate associated measures to achieve LDN.

Terrestrial ecosystems also play an important role as carbon sinks, offsetting emissions released by various sectors of the economy. The removals of carbon emissions through the sector Forestry and Other Land Use (FOLU) are estimated at 1 million tonnes of C02 in 2010 for Armenia. This is equal to 8% of the total emissions of the country. The potential carbon storage per hectare (ha) and year varies considerably depending on the type of biome, the practice on the ground, and the prevalent climate. The mean rate of sequestration is estimated at 1.5 tonnes of carbon (tC)/ha per year, where 0.5 tC is from soil organic carbon sequestration and an additional 1.0 tC from biomass. (https://www.unccd.int/sites/default/files/ldn_targets/2018-12/Armenia.pdf)

Project by its land and forest restoration activities is in-line with UNCCD alignment in regard with Land Degradation Neutrality targets.

From 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to the following targets:

Target 2 ″Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity ″,

On April 22, 2021, the Government of Armenia approved NDC of Armenia revised under the Paris Agreement for 2021-2030. According to the revised actions, Armenia has undertaken a commitment to increase the country's forest cover to 12.9% until 2030. This means that 50 thousand hectares of new forest must be added. For the realization of the above actions Armenia needs to improve professional skills, develop its nursery economy to grow seedlings preferably with a closed root system. The country will have to grow about 15 million seedlings a year. Project by its capacity building actions on land and forest restoration, enhancement of establishment of new greenhouses is in line with the government objective under the Paris Agreement for 2021-2023.

Target 5 ″Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spill-over, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities″,

Project by its capacity building actions is going to contribute to sustainable use of harvesting and trade of wild species is sustainable that prevents overexploitation and minimize unfavorable impacts on other species.

Target 9 ″Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities″,

Project by its capacity building activities is going to contribute to the establishment of sustainable management and use of wild species

Target 10 ″Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches contributing to the resilience and long-term efficiency and productivity of these production systems and to food security, conserving and restoring biodiversity and maintaining nature’s contributions to people, including ecosystem functions and services″,

Project by its capacity building activities is going to contribute the use of new environmentally safe methodologies of land restoration that can be used under agriculture.

Target 21 ″Ensure that the best available data, information and knowledge, are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent20, in accordance with national legislation″,

Project by its capacity building activities is going to contribute improved gender equity by specifically targeting women for management and leadership positions at community levels and in educational, scientific, and policy institutions.

Target 23 ″Ensure gender equality in the implementation of the framework through a gender-responsive approach where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and

their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity".

Project by its capacity building activities is going to contribute to the following outcomes:
1. Integration of gender equality and women's empowerment across all SDGs and the entire 2030 Agenda, systematic mainstreaming in the implementation of its three dimensions, economic, social and environmental, an all-of-government approach including in development assistance activities and initiatives,
2. Inclusion of all key stakeholders, particularly civil society, women's movements, youth, men and boys, faith-based organizations and the private sector for movement building, transforming social norms and addressing the needs of all women and girls.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
Ministry of Economy of the Republic of Armenia (ME)	In the Republic of Armenia, the main responsibilities of agricultural development lie with the Ministry of Economy. The Ministry of Economy of the Republic of Armenia with the current structure was formed as a result of the unification of the Ministry	The Ministry will be consulted concerning all project actions related to land and agrobiodiversity restoration and expected to contribute on activity formulation.

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
	of Economic Development and Investments of the Republic of Armenia and the Ministry of Agriculture of the Republic of Armenia according to the Law of the Republic of Armenia "On Amending and Adding to the Law "On the Structure and Activities of the Government" adopted by the National Assembly of the Republic of Armenia on May 8 2008. The Ministry of Economy of the Republic of Armenia includes 13 main professional structural divisions, 10 supporting structural divisions, 4 offices and 1 subordinate body. The Ministry of Economy has primary responsibility for policy issues with respect to agriculture.	
Ministry of Environment	Central body of executive power that elaborates and implements the state policy in the field of environmental protection and rational use of natural resources	Oversees project development and overall implementation plan and coordinates with other Ministries.
Ministry of Territorial Administration and Infrastructure	Central body of executive authority that develops and implements the policy of the Government of the Republic of Armenia in the field of territorial administration and infrastructure management	In co-execution with GEF national focal point agency oversees project implementation in project regions, participates in decision making process and development of public awareness materials. Through its regional government offices participates in project management and regional decision-making process. Component 1, 2 and 3
Provincial Government Administration Offices of Lori and Tavush Regions (provinces)	Provincial government administration offices are responsible for implementation of regional policies of the government of the Republic of Armenia and coordinate activities of territorial services of	Provincial Government Administration Offices of Lori and Tavush Regions (provinces) will assist the project in communication with local communities in the project sites, development and implementation of project activities on restoration of degraded lands and ecosystems in consultation and

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
	executive bodies between local citizens and community-level authorities, on the one hand, and the central government, on the other. Heads of provincial government administration offices are nominated by the prime minister, subject to approval by the parliament.	collaboration with local communities, promoting policies on use of local agrobiodiversity in provincial and community plans on sustainable land and forest management, engagement of local communities in sustainable land and forest ecosystems restoration and protection. They will participate and support as well as engage local colleges, universities and schools in public awareness campaigns of the project. Involvement of provincial government administration offices in Lori and Tavush regions (provinces) in project planning and implementation will ensure support of the project from the government side, its success and sustainability. Component 2 and 3
Forest Committee of Ministry of Environment	Ensuring sustainable management of state forests: conservation, protection, restoration, afforestation and efficient use.	In coordination with national stakeholders and partner institutions will manage the project on the national level. Component 1, 2 and 3
"HAYANTAR" (ArmForest) State Non-Commercial Organization of Forest Committee with its 17 forestry branches	Ensures the preservation, protection, reproduction, use, inventory, management of forest cadastre, increase of forest productivity and fertility of forest lands, sustainable use of forest resources. Carries out the following types of business activities: procurement, processing and sale of natural wood, growing and sale of planting material (seedlings, seedlings), secondary forest use (grass cutting, livestock grazing, installation of beehives and beehives, collection of wild fruits, nuts, mushrooms, berries, herbs and technical raw materials) and processing and sale of biological resources collected as a result, agricultural land production, processing and	Will serve as main partner for reforestation and public awareness activities. Component 2 and 3

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
	sale of food, provision of services related to leisure and tourism, consultancy and provision of information.	
Institute of Botany after A. Takhtajyan, NAS RA with its Yerevan Botanical Garden and Vanadzor Botanical Garden located in Lori region	Scientific institution, which manages Yerevan, Sevan and Vanadzor Botanical Gardens with over 1650 different species and cultivars. The Institute implements scientific studies in the fields of biodiversity, taxonomy, geobotany, ecology, paleobotany, plant introduction, conservation of genetic resources, etc.	Will support the Project in providing scientific and technical inputs and collaboration in research and in the development of methods and approaches. Will be invited to participate in Project consultations, seminars, conferences and workshops and to assist with development and delivery of training. Will support provision of additional diversity to project sites where needed. Collaborate in the development of outreach materials and the dissemination and up-scaling of Project outputs through peer-reviewed scientific publications. Will contribute to identification of major knowledge gaps and through the development of research proposals. Component 2 and 3
Vanadzor and Sisian City branches of the Armenian National Agrarian University based in Lori and Syunik regions.	Educational Scientific Institution with a purpose for preparing specialists in agrarian and forestry branches and implementation of scientific research.	Will support the Project in providing scientific and technical inputs and collaboration in research and in the development of methods and approaches. Will be invited to participate in Project consultations, seminars, conferences and workshops and to assist with development and delivery of training. Will support provision of additional diversity to project sites where needed. Collaborate in the development of outreach materials and the dissemination and up-scaling of Project outputs through peer-reviewed scientific publications. Will contribute to identification of major knowledge gaps and through the development of research proposals. **Engagement in the following studies:** • Soil origin, classification, geographic prevalence studies, • Agroindustrial, soil science and agrochemical soil mapping,

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
		• Micro and macro food element assurance studies of indicators of fertility of land resources, • Studies on soil fertility conservation and ensuring model of optimal reproduction, crop fertilization systems, acquiring new fertilizers, experimenting and explorations of fertilizing indicators, • Study of soil erosion and anti erosion measures development, • Development of new technologies of salt-affected and saline sodic soils melioration, • Contaminated Land Investigation, • Developing new technologies by eco-biological ways to create virus free plant materials. Component 2 and 3
Ijevan Branch of Yerevan State University (YSU Ijevan branch) based in Tavush region	Educational Scientific Institution with a purpose for preparing specialists in multi-disciplinary sectors from which project focuses on the following departments: 1 Tourism and 2. Environment and Environmental Use.	Will support the Project in providing scientific and technical inputs and collaboration in research and in the development of methods and approaches. Will be invited to participate in Project consultations, seminars, conferences and workshops and to assist with development and delivery of training. Will support provision of additional diversity to project sites where needed. Collaborate in the development of outreach materials and the dissemination and up-scaling of Project outputs through peer-reviewed scientific publications. Will contribute to identification of major knowledge gaps and through the development of research proposals. **Engagement in the following studies:** • Conservation and Sustainable use of native

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
		fruit and nut trees including in forest areas as NWFPs, • Micro and macro food element assurance studies of indicators of fertility of land resources, • Studies on soil fertility conservation and ensuring model of optimal reproduction, crop fertilization systems, acquiring new fertilizers, experimenting and explorations of fertilizing indicators, • Study of soil erosion and anti erosion measures development, • Development of new technologies of salt-affected and saline sodic soils melioration, • Identification appropriate areas for agrotourism and development of methods for enhancing agrotourism in new identified areas. Component 2 and 3
"Gavar State University" based in Gavar City of Gegharkunik region.	Educational Scientific Institution with a purpose for preparing specialists in multi-disciplinary sectors from which project focuses on the following departments: 1 Tourism, 2. Environment and Environmental Use, 3. Biology and 4. Geography.	Will support the Project in providing scientific and technical inputs and collaboration in research and in the development of methods and approaches. Will be invited to participate in Project consultations, seminars, conferences and workshops and to assist with development and delivery of training. Will support provision of additional diversity to project sites where needed. Collaborate in the development of outreach materials and the dissemination and up-scaling of Project outputs through peer-reviewed scientific publications. Will contribute to identification of major knowledge gaps and through the development of research proposals. **Engagement in the following studies:**

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
		• Soil origin, classification, geographic prevalence studies, • Agroindustrial, soil science and agrochemical soil mapping, • Micro and macro food element assurance studies of indicators of fertility of land resources, • Studies on soil fertility conservation and ensuring model of optimal reproduction, crop fertilization systems, acquiring new fertilizers, experimenting and explorations of fertilizing indicators, • Study of soil erosion and anti erosion measures development, • Development of new technologies of salt-affected and saline sodic soils melioration, • Contaminated Land Investigation, • Developing new technologies by eco-biological ways to create virus free plant materials. • Identification appropriate areas for agrotourism and development of methods for enhancing agrotourism in new identified areas Component 2 and 3
"M. Nalbandyan State University" of Shirak based in Gyumri City of Shirak region	Educational Scientific Institution with a purpose for preparing specialists in multi-disciplinary sectors from which project focuses on the following departments: 1. Biology and 2. Geography.	Will support the Project in providing scientific and technical inputs and collaboration in research and in the development of methods and approaches. Will be invited to participate in Project consultations, seminars, conferences and workshops and to assist with development and delivery of training. Will support provision of additional diversity to project sites where needed. Collaborate in the

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
		development of outreach materials and the dissemination and up-scaling of Project outputs through peer-reviewed scientific publications. Will contribute to identification of major knowledge gaps and through the development of research proposals. **Engagement in the following studies:** • Micro and macro food element assurance studies of indicators of fertility of land resources, • Studies on soil fertility conservation and ensuring model of optimal reproduction, crop fertilization systems, acquiring new fertilizers, experimenting and explorations of fertilizing indicators, • Study of soil erosion and anti erosion measures development, • Development of new technologies of salt-affected and saline sodic soils melioration, Component 2 and 3
"Armenian Forest" Environmental NGO	"Armenian Forest" Environmental NGO is engaged in promotion of sustainable forest development, forest restoration and monitoring. The NGO works closely with local communities and forest dwellers on their involvement in sustainable management of forest resources, planting trees in deforested areas. It organizes regular trainings for local communities and forest dwellers on technologies of sustainable management of wood and non-wood forest resources and forest ecosystems.	Providing data related to three species, soils, climate change, water needs and methods of irrigation and policy for comp 2,3 Will be engaged in sharing their experience and participating in the processes on drafting agricultural and forest related policies and legal acts, drafting PA materials and organization PA campaigns, grafting guidelines and standards on forest and land remediation and care "Armenian Forest" Environmental NGO will be involved in data collection and development of plans on forest ecosystems restoration and monitoring in the project sites, round tables with local communities on discussion of the land and forest ecosystems restoration plans

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
		developed by the project, finalization of these plans based on comments received from local communities and other stakeholders. Component 2 and 3
"My Forest Armenia" NGO	"My Forest Armenia" NGO is aiming by empowering local communities and under the guidance of scientists and forest experts sustainably increase forest coverage, thus decreasing carbon in the atmosphere, combatting soil erosion and desertification; and preserving biodiversity through the use of endemic tree species. The NGO implements numerous projects on reforestation and afforestation, establishment of forest tree nurseries, supporting forest trees seed supply systems, environment education.	They will participate in identification of new areas of land restoration and planting trees in communal and forest land areas. They will be engaged in training local population on the sustainable use especially NWFPs of forest and tree resources and land restoration as well as activities and capacity building and public awareness. "My Forest Armenia" NGO will deal with engagement of local communities in land and forest restoration activities of the project, building capacity of local communities in tree nursery management, development of community based land and forest restoration plans. Component 1, 2 and 3
"Armenia Tree Project" NGO (ATP)	The mission of ATP is to promote Armenia's socioeconomic development through reforestation, the use of trees to promote economic self-sufficiency, improving the Armenian standard of living while protecting the environment. Its urban and community tree planting programs work with cities and local neighborhoods to replant in public spaces such as in parks, school grounds and other public properties. In rural areas, farmers grow seedlings in their backyards for tree planting projects in northern Armenia Assist local communities in planting and using trees to improve their livelihoods and protect the global environment.	Providing data related to the tree species to be used and soil conditions as well as enhance local communities to be involved in project planting activities and new knowledge dissemination for comp 2,3 ATP will be involved in land restoration and reforestation activities of the project (support local communities in tree propagation, establishment and running tree nurseries, community green zones establishment), forest planting and development of strategy on sustainable use of forest resources, education and awareness. Component 2 and 3

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
SHEN NGO	SHEN NGO aims to promote the social and economic development and empowerment of remote and vulnerable communities. SHEN NGO has significant experience in addressing the gender dimensions of agricultural livelihoods in rural Armenia and implements projects in almost all marzes (administrative provinces) of Armenia ensuring 30 percent involvement of female beneficiaries as minimum.	Planning for gender preferences, harvesting, identification of new communal available forest areas for forest restoration. They will participate in identification of new areas of planting trees and be engaged on training local population on the sustainable use especially NWFPs of forest and tree resources. The NGO will participate in the development of Forest Substructions on harvesting and production of Forest Non-Wood products. Component 2 and 3
The Raffaella Foundation (www.raffaellafoundation.org)	Non-profit charity supports actions that embrace diversity to promote equity, solidarity and well-being in urban societies and agricultural ecosystems, with a global network of national partners. It hosts the Platform for Agrobiodiversity Research and the Diversity Assessment Tool for Agrobiodiversity and Resilience.	Planning with the Ministry of Environment and national government and non-government partners to build national capacity and support training to assess and monitor diversity and development actions, using the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) in Russian and English to identify, assess, analysis, and monitor the availability of indigenous cultivated fruit and nut tree diversity to meet communities social environmental constraints for land restoration. Including developing a plan for building national capacity to use DATAR to support project Monitoring and Evaluation (M&E) of diversity assessment and impact of agrobiodiversity use for land restoration and community benefits. Component 1, 2 and 3
High Schools in Ijevan and Noyemberyan Cities of Tavush region, Vanadzor and Alaverdi Cities of Lori region, Gyumri City of Shirak region, Sevan City of Gegharkunik region, Sisyan City of Syunik region	Educational organizations with a purpose for preparing specialists for multidisciplinary branches.	They will be consulted for specific activities on training needs. Component 2 and 3
Farmers and smallholders	Individuals or group of people that engaged in seed harvesting, growing seedlings, harvesting and/or	Will be involved in participatory appraisals and community based activities to map biodiversity and sustainable practices and to mobilize relevant biodiversity-

POTENTIAL Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation
	processing fruits and/or nuts of native fruit and nut trees.	based interventions such us practices and materials). They will have access to training and capacity building and other benefits arising activities. Will assist in the documentation of available traditional information and the maintenance and use of traditional knowledge and will also be involved in activities on conservation and sustainable management of local biodiversity. Component 2 and 3
Private Sector “Spayka” LLC, “Green Farmer” LLC	Private companies holding greenhouses and nurseries and specialised in breeding fruit and nut trees as well as other agricultural biodiversity varieties demanded by national markets	Will be engaged in sharing their experience and methods of harvesting local seeds, growing seedlings and planting materials as well as processing. Component 2 and 3

ADDITIONAL DETAILS ON GENDER FROM THE WORD VERSION OF THE PIF:

WATER SUPPLY

While most of the rural population (95%) is connected to a centralized water supply, about 560 communities in rural areas are not connected to the water grid, and 40 000 rural inhabitants do not have access to a piped water supply. Women are the major uses of water in most households, due to its use in domestic activities. In areas without a centralized water supply, women are responsible for fetching water as a domestic task, which adds an extra burden to their workload. This affects the “business as usual” scenario, as water shortages caused by land degradation and climate change will disproportionately affect women.

For escaping any unfavourable effect on water quantity or quality, project is going to enhance use of modern water saving mechanisms and trees planting methods, especially for peri-urban and forest areas. In the selected urban areas, there is no issue of water quantity or quality they are irrigated but the issue is climate change and land degradation and selection of planting resistant trees or trees that have adaptability in the new changed environmental condition.

TAKING CHARGE AND LAND OWNERSHIP

Of the 340 000 land holdings in Armenia, around 200 000 are functioning farms, with half of these operating on a subsistence or semi-subsistence basis. Most farms are thus small-scale, with only 20 000 to 30 000 farms

being larger than 5 hectares. Large scale farming is limited to a minority of farmers, with only 6% of farms being more than 10 ha large. Small-holder farms produce around 90% of Armenia's gross agricultural product.

Today, women are managing increasing amounts of land and thus farms as men migrate for work. For instance, in Tavush (a marz with significantly high migration rates), most land users are women. However, explicit female ownership of land remains low. Unclear land ownership and ignorance of ownership rights is a barrier in effective implementation of sustainability measures across the world – if someone does not know they own the land, they will not do anything with it. In Armenia women legally have the same land ownership rights as men, but knowledge of these rights is limited, especially in rural areas, and social norms encourage men more than women to inherit land. Post-Soviet land distributions also focused on "heads of households", and while both men and women were eligible for this role, in practice women only received land when there was no male head in the family, and thus men were prioritized in land assignments. As such, gender mainstreaming for this project should factor in this information, as if we wish for women farmers to join the project, they need to know that they have rights to that land.

In general, women's participation in decision-making at the community level, especially in rural communities, is low. The principal reasons for their limited involvement in community leadership include public opinion, men's lack of acceptance of women's leadership, women's fear of expressing themselves, and a lack of self-confidence among women. Holding interview or discussion sessions which explicitly prioritize women's voices could prove to be helpful in hearing their views as stakeholders in the project.

Some recommendations by the FAO report on agriculture and gender in Armenia to encourage women's land ownership rights and participations in decision-making include:

- When registering landowners, enable co-registration of all owners rather than simply the head of the household, and maintain a sex-disaggregated record of land ownership.
- Increase the number of professional women employed in extension services to support women farmers' engagement in learning and agricultural innovation.
- Support the implementation of FAO's Voluntary Guidelines on Land Tenure (FAO, 2012b). along with FAO's Technical Guide Governing Land for Women and Men (FAO, 2013b).
- Take the necessary measures during project implementation to ensure that women's access to land and land rights are improved and most importantly, not hindered.
- Provide accessible information on land rights to women in rural areas through projects and activities.

ACCESS TO INFORMATION AND KNOWLEDGE ON AGRICULTURE

Both men and women are deeply involved in the agricultural industry, with approximately 37% of women and 31% of men being employed in agriculture. The actual number of people involved in agriculture may prove higher, when including those who are unemployed but provide labour as part of the family. Of those employed in agriculture, 75% are in livestock production, which utilizes about 80% of agricultural land. However, the roles and access to information and technology is drastically different between men and women. Most harvesting activities are done by women, and they are generally responsible for seeds and product manufacture, including buying, sowing, and marketing. Men's activities are typically in maintenance during growth, such as cultivation, fertilization, watering, and land management. With cash crops such as apricots and grapes, women

are largely responsible for the processing post-harvest, whether of packing whole fruits or producing products like jams and juices. This difference in which tasks are usually given should be kept in mind when designing the project. As women are typically in charge of buying and sowing, they can be key stakeholders in the distribution of crops and trees by the project

Nearly 100% of machine operators are men, with access to farm equipment such as tractors and combine harvesters being heavily restricted to women by gender stereotypes. Additionally, most students in higher education institutions in the agro-food sector are men (70%), and only 38% of STEM graduates in general are women, meaning that despite making up the majority of agricultural workers, women form a minority of those with university educations in agriculture. While our project cannot reform the educational system, care must be given to be sure that the representation of women in partnerships and consultants is at least proportional to the number of women in that field.

PARTICIPATION IN ACTIVITIES

Mobility issues exist in Armenia, particularly for rural women. The majority (95%) of car owners in rural areas are men, and poor public transport limits the mobility of rural women. Additionally, societal barriers exist regarding women traveling unaccompanied. The Asian Development Bank found that this final problem posed a major hurdle, as a Yerevan-based NGO they worked with had difficulties inviting young women to the capital for training events, as families often did not want them to travel unless accompanied by a male relative. During field research conducted by the FAO for their report on gender and agriculture in Armenia, rural women complained about the difficulties they faced in accessing advisory services provided by the Agricultural Support Republican Center (ASRC) and the Small and Medium Entrepreneurship Development National Center (SMEDNC)

As seen above, women form a slight majority in farm workers and are often tasked with procuring seedlings, making them an important group to target for replanting projects. Additionally, most agricultural output comes from small farms, meaning that interventions cannot be targeted at a few key companies that control the majority of the land as in some other countries. Thus, for successful project implementation, the barriers that prevent rural women from accessing the resources we intend to provide must be lifted.

Some recommendations by the FAO report on agriculture and gender in Armenia to encourage women's participations in activities include to dedicate particular attention to the geographical and spatial location of training and meetings including:

- Avoiding meeting places where the presence of women may be questioned.
- Ensuring that women have access to transportation, using a location that is accessible for both women and men and providing transportation where necessary.
- Providing kindergartens where needed and agreeing the location of training and meetings with women and men farmers.

ADDITIONAL DETAILS ON THE PRIVATE SECTOR FROM THE WORD VERSION OF THE PIF:

Private Sector

Private sector representatives will be engaged in sharing best practices with farmers. During intercomunal visits and seminars, private sector representatives will be invited for sharing their experiences. With interested private sector entities, practical training programs will be conducted in privately owned greenhouses and nurseries to enhance knowledge of practical works. This training programs are expected to be opportunities to increase awareness on good technologies. During the PPG phase further methods and initiatives will be designed to increase the role of private sector in transfer of resource saving technologies (water and soil saving technologies (drip irrigation, hydrogel, biological pest and disease control practices), development of new products, development of eco-agrotourism routes, transfer of knowledge on marketing of products.

The project will organize broad consultation with local farmers' communities, small-scale business, food processing and trade companies, local eco- and agrotourism companies and other stakeholders to assess the challenges and to develop the project's strategy on their engagement in land and forest ecosystems restoration and sustainable management. A key component of the project strategy will be extensive analyses of market demand for agrobiodiversity-rich products and ecosystem services produced on the restored areas in the project sites.

For developing regional (provincial level) value chain plans or land and forest ecosystem restoration strategy through use of local agrobiodiversity, the project is going to cooperate with farmers in pilot communities, including meetings, consultations and presentation of internationally proved best practices.

Small-scale farmers often fail to benefit from available lucrative opportunities due to their limited ability to participate in high value market chains. This is caused by a lack of understanding about what products and services these markets demand, when they are in demand, and in what volume and quality. To help small-scale farmers overcome these major obstacles, the project will develop a list of potential market opportunities by studying needs of markets, including the seedlings supply markets and national trade companies as well as local companies dealing with tourism.

Another potential stakeholder is entrepreneurial traders / wholesalers, in particular those who have a positive attitude to working with farmers to supply new markets, rather than protecting a status quo with a focus on high volumes at low prices.

ADDITIONAL DETAILS ON KNOWLEDGE MANAGEMENT FROM THE WORD VERSION OF THE PIF:

During the UNEP/GEF "Enhancing livelihoods in rural communities of Armenia through mainstreaming and strengthening agricultural biodiversity conservation and utilization" project implementation period, the project team produced several public awareness materials within the PA campaign aimed to broaden the knowledge of local communities, policy makers, processors, education agencies on the importance of agrobiodiversity conservation and its economic, social and environment benefits. Project trainings were focused on increasing knowledge of local communities and local authorities on the importance of inter-sector collaboration within and between communities for effective conservation of agrobiodiversity. Trainings were also focused on the need of conservation and sustainable use of agro-biodiversity including forest resources.

From the previous project UNEP/GEF "Enhancing livelihoods in rural communities of Armenia through mainstreaming and strengthening agricultural biodiversity conservation and utilization", we have learned that

farmers need consultations, trainings and proved good experiences on growing, caring and selling/exporting species.

The project web site www.agroecoarm.com is being developed and currently functional. Information on the website is updated regularly. The website has sections on Experts, Partner institutions, Links, Maps, Priority species, Project outputs, Project sites, Publications, Site map, List of species. The project established and now maintains the database, which contains description of best practices documented in the Ararat and Gegharqunik project sites. These practices include organic agriculture of priority crops in Gegharqunik project site; adaptation and mitigation measures to climate change effects in Gegharqunik project site; water-saving irrigation technologies applied in Ararat project site; measures on climate adaptation and mitigation developed by "International Action on Adaptation and Climate" and "Integrating Climate Change Adaptation into Development".

The project will also make linkages with the ongoing FAO/GCF "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation' project in the area of forest restoration and establishment of new greenhouses for "HAYANTAR" (ArmForest) SNCO of RA Forest Committee.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
UNEP	GET	Armenia	Biodiversity	BD STAR Allocation: BD-1	Grant	706,425.00	67,110.00	773,535.00
UNEP	GET	Armenia	Land Degradation	LD STAR Allocation: LD-2	Grant	1,265,165.00	120,190.00	1,385,355.00
Total GEF Resources ($)						**1,971,590.00**	**187,300.00**	**2,158,890.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

50000

PPG Agency Fee ($)

4749

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
UNEP	GET	Armenia	Biodiversity	BD STAR Allocation: BD-1	Grant	18,301.00	1,739.00	20,040.00
UNEP	GET	Armenia	Land Degradation	LD STAR Allocation: LD-2	Grant	31,699.00	3,010.00	34,709.00

Total PPG Amount ($)		**50,000.00**	**4,749.00**	**54,749.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
UNEP	GET	Armenia	Biodiversity	BD STAR Allocation	793,575.00
UNEP	GET	Armenia	Land Degradation	LD STAR Allocation	1,420,064.00
Total GEF Resources					**2,213,639.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
BD-1-2	GET	706,425.00	2300000
LD-2	GET	1,265,165.00	2700000
Total Project Cost		**1,971,590.00**	**5,000,000.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Forest Committee	Grant	Investment mobilized	2000000
Recipient Country Government	Forest Committee	In-kind	Recurrent expenditures	3000000
Total Co-financing				**5,000,000.00**

Describe how any "Investment Mobilized" was identified

For ensuring co-financing of the project, Forest Committee of the Republic of Armenia and its “HAYANTAR” (ArmForest) SNCO organization with its 17 forest branches by their all-available means will contribute to the project with a total of US$ 5 million through its operational budget. To ensure smooth cooperation of the project with its main co-financer and its main executing agency, the project itself will be based in the Forest Committee. Forest Committee will provide project office, will cover project communication costs as internet, phones and international and national telegram and etc. As in-kind contribution the Forest Committee will provide support in reforestation, biodiversity conservation, propagation of climate resistant trees and shrubs land and ecosystems restoration issues. “HAYANTAR” SNCO of the Forest Committee will provide its regional offices for the project staff for organizing public consultations and meetings in the project pilot sites. All professional and labor force of Forest Committee and its “HAYANTAR” (ArmForest) SNCO will easily be available for project needs. Forest Committee will support to project by direct financing of National Experts presented by the project to the Forest Committee.

Farmers of the Lori and Tavush Provinces will provide their orchards and land plots for training workshops, exchange visits, meetings and scientific trials as well as will share with their experience in combating climate change and methods on overcoming land degradation issues.

The project will also seek opportunities to attract resources of private sector (small-scale commercial enterprises) as co-financing to the project activities.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

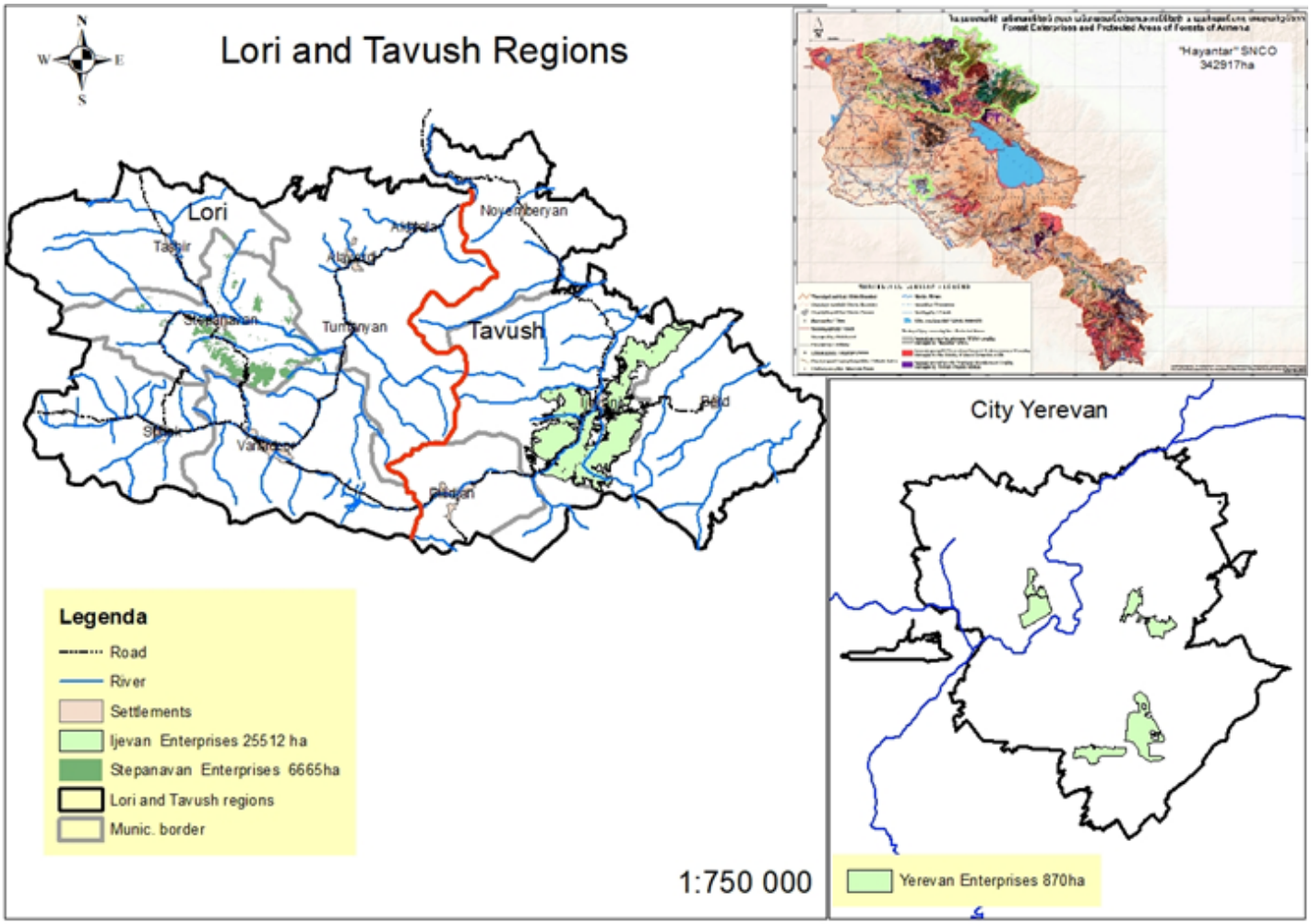
GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Victoria Luque Panadero		Ersin Esen		Victoria.Luque@un.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Mr. Hakob Simidyan	Minister	Ministry of Environment of the Republic of Armenia	3/3/2022

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title
SRIF Armenia Agrobiodiversity

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Significant Objective 1	Principal Objective 2	Principal Objective 2

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models	X		
Stakeholders	X		
Capacity, Knowledge and Research	X		

Gender Equality	X		
Focal Area/Theme	MFA		