Implementation of Armenia?s LDN commitments through sustainable land management and restoration of degraded landscapes

Part I: Project Information

GEF ID
10365

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Implementation of Armenia?s LDN commitments through sustainable land management and restoration of degraded landscapes

Countries
Armenia

Agency(ies)
FAO

Other Executing Partner(s)
Ministry of Environment

Executing Partner Type
Government

GEF Focal Area
Land Degradation

Taxonomy

Focal Areas, Land Degradation, Sustainable Land Management, Income Generating Activities, Community-Based Natural Resource Management, Integrated and Cross-sectoral approach, Restoration and Rehabilitation of Degraded Lands, Land Degradation Neutrality, Land Productivity, Land Cover and Land cover change, Carbon stocks above or below ground, Influencing models, Transform policy and regulatory environments, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Stakeholders, Communications, Public Campaigns, Strategic Communications, Education, Awareness Raising, Behavior change, Civil Society, Community Based Organization, Academia, Non-Governmental Organization, Private Sector, SMEs, Individuals/Entrepreneurs, Local Communities, Beneficiaries, Type of Engagement, Information Dissemination, Consultation, Participation, Gender Equality, Gender results areas, Participation and leadership, Access and control over natural resources, Knowledge Generation and Exchange, Capacity Development, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Capacity, Knowledge and Research, Knowledge Exchange, Knowledge Generation, Workshop, Seminar, Course, Training, Professional Development, Master Classes, Learning, Adaptive management, Theory of change, Indicators to measure change

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Submission Date

10/3/2019

Expected Implementation Start

10/1/2021

Expected Completion Date

7/1/2024

Duration

36In Months

Agency Fee($)

207,395.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
LD-1-1	LD-1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)	GET	1,383,105.00	7,618,000.00
LD-1-4	LD-1-4 Reduce pressures on natural resources from competing land uses and increase resilience in the wider landscape	GET	200,000.00	1,100,000.00
LD-2-5	LD-2-5 Create enabling environments to support scaling up and mainstreaming of SLM and LDN	GET	600,000.00	3,300,000.00
		Total Project Cost($)	**2,183,105.00**	**12,018,000.00**

B. Project description summary

Project Objective

To support the national efforts to implement the LDN targets of Armenia through sustainable land management and restoration of degraded landscapes

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1. Strengthened enabling environment and capacity at national level for evidence-based implementation of Land Degradation Neutrality (LDN)	Technical Assistance	1.1. Enhanced enabling environment for LDN at national level Targets: - Two cross-sectoral policies/One law integrating LDN principles	1.1.1. Assessment of LDN policy gaps and development of cross-sectoral policies/legal framework supporting LDN principles	GET	452,650.00	2,188,500.00
		- Functioning intersectoral coordination mechanisms for LDN (horizontal and vertical) reflectin the role of LDN in seeking synergy between the three Rio conventions	1.1.2. Strengthened intersectoral coordination mechanisms at two levels: national level, and between the national level and local decision makers and farmer groups			
		1.2. Enhanced understanding of land degradation drivers informs LDN target setting at the national and community levels Targets: - Land degradation trends and drivers mapped and its costs assessed; LDN local baseline established and mapped - LDN targets (Anticipated future losses	1.2.1. Assessment of the current status, trends, drivers, including impacts of climate change and migration, and costs of land degradation based on existing data and information (using			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2. Scaling up of resilient Sustainable Land Management (SLM) practices and approaches to meet LDN targets in degraded landscapes in Armenia	Investment	2.1. Resilient SLM practices and investments introduced on degraded land in target Regions Targets: - 4,000 ha of degraded grasslands restored - 7,300 ha of forest lands restored within the State Forest Fund and established in abandoned lands -166,000 ha under SLM practices in target regions (of which: 110,000 ha forests; 50,000 ha grasslands; 6,000 ha croplands) <u>Targets:</u> - 32,274,507 tCO2-eq sequestered - Two LDN local transformative gender sensitive projects/programmes of actions in target regions 2.2. Key land-based value-chains strengthened and made more resilient and equitable	2.1.1. Integrated land-management plans developed using participatory approaches and integrated with existing Community land use planning processes in target regions (Lori, Siunik) 2.1.2. ?LDN learning landscapes? established with SLM best practices and integrated restoration of landscapes that provide carbon benefits. 2.1.3. Resource mobilization plans developed for scaling up of best practices that incorporate National and target Regions Government and contributions from donors 2.2.1. Life Cycle	GET	1,375,150.00	8,183,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3. Monitoring, Evaluation and lessons learned	Technical Assistance	3.1. Project monitoring and evaluation and monitoring and assessment of global environmental benefits and LDN <u>Targets:</u> - Functioning M&E system and GEBs and co-benefits established - Functioning LDN reporting to the UNCCD 3.2. Lessons learned and dissemination of knowledge to support scaling up of LDN <u>Targets:</u> - 10 knowledge products and training/awareness raising materials on SLM and LDN (50% tailored to women)	3.1.1 Project mid-term and final evaluation conducted 3.1.2 Global Environment Benefits, co-benefits and costs of SLM in degraded landscapes monitored and assessed using gender disaggregated data 3.1.3. Monitoring system for LDN indicators (land cover, soil productivity and soil organic carbon) in place 3.2.1. Communication strategy developed and implemented to support SLM scaling up to meet LDN targets 3.2.2. Lessons analyzed and knowledge management products developed and disseminated	GET	252,150.00	1,045,600.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
				Sub Total ($)	**2,079,950.00**	**11,417,100.00**
Project Management Cost (PMC)						
	GET		103,155.00		600,900.00	
	Sub Total($)		**103,155.00**		**600,900.00**	
	Total Project Cost($)		**2,183,105.00**		**12,018,000.00**	

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment of the Republic of Armenia	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	Ministry of Economy of the Republic of Armenia	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	"Environmental Project Implementation Unit" (EPIU) State Institution	In-kind	Recurrent expenditures	48,000.00
Recipient Country Government	Forest Committee of the Ministry of Environment of the Republic of Armenia	In-kind	Recurrent expenditures	10,000.00
Beneficiaries	Gorayq community of syunik Marz	In-kind	Recurrent expenditures	50,000.00
GEF Agency	FAO	Grant	Investment mobilized	10,800,000.00
Other	Armenian National Agrarian University	In-kind	Recurrent expenditures	10,000.00
			Total Co-Financing($)	**12,018,000.00**

Describe how any "Investment Mobilized" was identified

FAO/GCF project: ?Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation?. Co-financing to the proposed LDN project has been agreed with the Government of Armenia and the GCF Secretariat. and ?Local Empowerment of Actors for Development (LEAD) Programme UNJP/ARM/011/EC (2020- 2024) USD 800,000.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
FAO	GET	Armenia	Land Degradation	LD STAR Allocation	2,183,105	207,395
				Total Grant Resources($)	**2,183,105.00**	**207,395.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount ($)

100,000

PPG Agency Fee ($)

9,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
FAO	GET	Armenia	Land Degradation	LD STAR Allocation	100,000	9,500
				Total Project Costs($)	**100,000.00**	**9,500.00**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
4000.00	11300.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

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 restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	11,300.00		

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
4,000.00			

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

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)
56000.00	166000.00	0.00	0.00

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)
	166,000.00		

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

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)
56,000.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

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

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	492672	32274507	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	492,672	32,274,507		

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2021	2022		
Duration of accounting	20	20		

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	750	1,250		
Male	1,750	1,250		
Total	2500	2500	0	0

Part II. Project Justification

1a. Project Description

.a Project Description

1) **The global environmental problems, root causes and barriers that need to be addressed (systems description)**

1.1 Country context

Global environmental problem

Armenia is a land-locked developing country (LLDC) in transition with a population of 3 million, located in the South Caucasus. After gaining independence from the former Soviet Union, a very difficult socio-economic situation developed in Armenia. The high cost of energy resources forces the population to intensively use forest resources as a source of energy. Due to the destruction of infrastructure, livestock mainly use pastures near settlements, which has led to their degradation as a result of overgrazing. As a result, remote pastures vegetative composition has changed due to under-grazing and to too low stocking rates. Land privatization has led to excessive land fragmentation and a small average farm size. Lack of access to proper agricultural technology as well as scientifically based zoning of crops has contributed to land degradation. The intensive development of the mining industry has led to the degradation of large areas occupied by both open pits and tailings. In recent years, the Government of Armenia has made significant attempts to correct the existing situation, taking the necessary decisions, attracting the help of various international organizations, and implementing international projects. But in general, the land degradation situation is still challenging and complex to address.

The country is a net importer of food and fuel, and highly vulnerable to global price fluctuations. Long-term labour migration is mostly male dominated, increasing the number of de facto female single-headed households to 26.5% of all rural households._Agriculture is the main source of economic activity in rural areas and generates around 20% of GDP, accounts for some 2% of economic growth, and employs about 35% of the working population of whom nearly 56% are female farmers. Women are over-represented in seasonal and precarious employment and 82% of all women working in agriculture do so informally. This informality, which leads to reduced access to social protection schemes, along with limited access to land and other agricultural assets compared with men, leave women in a vulnerable situation. Smallholders constitute the vast majority in the country, representing around 95% of all farms with the average size of 1.4 ha, usually fragmented into three or four plots. Smallholders produce the major part of the gross agricultural product, accounting for around 97%.

Currently, about 24,353 km^2 of the territory of Armenia, 81.9% (excluding the surfaces of Lake Sevan and water reservoirs), are to a varying extent exposed to desertification: 26.8% of the total territory faces extremely severe desertification; 26.4%, severe desertification; 19.8%, moderate desertification; and 8.8%, slight desertification. Only 13.5% (400 km^2) of the territory is not exposed to desertification. In the ?National Strategy and Action Program to Combat Desertification in the Republic of Armenia? (2015), drivers of desertification are divided into two groups: natural and anthropogenic. Natural

drivers include: droughts that are frequent in the Ararat valley and some areas of VayotsDzor and Syunik Marzes (Districts); sandstorms are frequently observed in the Ararat valley, VayotsDzor and Syunik Marzes. Moisture deficit caused by unequal distribution of seasonal and regional rainfall as well as geomorphological features, landslide processes, floods and naturally occurring salinization are common land degradation problems. Anthropogenic drivers include: urban development; unsustainable agriculture practices related to ploughing, absence or inappropriate application of crop rotation techniques, ineffective use of irrigation water and nutrients, overgrazing of pastures; road construction; illegal logging; mining, especially with open-pit methods; and unsustainable use of artesian water resources.

Critical land degradation processes in Armenia include[1][1] **water erosion** at various stages on nearly half of all forest land in all forest regions of Armenia (186,200 ha). Likewise, water erosion occur on almost half of all cropland in all regions of the country (220,000 ha), except orchards and vineyards. **Wind erosion** is observed on small cropland areas in the Ararat plain (22,000 ha). The total area of eroded land by wind erosion has increased between 2000-2010 by 20,000 ha. **Artificialized land** has also increased by 27,230 ha and now represents about 3.5% of the total area of Armenia. **Chemical pollution** occurs on 272,000 ha, with most of the land contaminated by mineral substances used in agriculture, and by chemicals in urban areas. Pollution by minerals has increased due to the relative low cost and incorrect application of chemical fertilizers, especially nitrate. The area of contaminated land has increased in all rural areas of the country. **Acidification** is mainly associated with natural soil properties, while **salinization** has intensified in recent years. Particularly secondary salinization occurs in the the Ararat valley, where artesian water is abundantly used for irrigation. Currently, the area of secondary salinization affects 27,000 ha. Improper use of agricultural machinery with improper irrigation methods has led to the appearance of **soil compaction** processes on vast areas - almost half of all agricultural land is currently in various stages of compaction. These areas are slowly but steadily increasing. Areas prone to **overgrazing** has not increased in recent years, but the consequences of overgrazing in the past have not been eliminated, and such land now covers about 170,000 hectares. **Under-grazing of pastures** - in particular in proximity to remote villages ? is also present on about 20,000 ha. The process of **deforestation** has practically stopped and reforestation and afforestation of non-forest areas is planned on at least 200-300 ha per year until 2030. In 2005, the Government of Armenia decided that the forest cover of Armenia has to be enlarged to 20.1% of the whole territory of the Republic. Moreover, in 2019 it was decided that 10 million trees should be planted in Armenia per year (implementation of this decision was postponed because of the Covid-19 pandemic). Thus, until 2030, 8.500 ha per year have to be afforested or reforested. Against this background, the Government of Armenia developed its Land Degradation Neutrality (LDN) strategy which includes four targets: (1) arrest cropland degradation and promote agro-ecology (conservation plus modern ?organic? technology); (2) afforest and/or reforest 2/3 of the degraded land; (3) arrest deforestation and improve forest management on 100% of the national territory; and (4) arrest overgrazing and improve grassland management on 100% of the national territory.

In addition to the on-going land degradation processes, climate change poses a serious risk to the vitality of the agriculture sectors in the country. These changes in climate are expected to exacerbate land degradation processes in the country unless action is taken. The Third National Communication (TNC) to the UNFCCC reports evidence of of a 1.1 degree C in average summer temperature and 10% reduction in average precipitation over the past 80 years (1934-2012). Projections reported by the IPCC (Ar5 RCP8.5 A2) as well as recent reports from the World Bank indicate average temperature increases by 2 degree C by 2070, further precipitation decreases of 3%, river flow decreases of 6.7% and 7% snow cover decreases by 2030 in Armenia. According to USAID, by 2030 yields are forecasted to

decline by 8-14% (agriculture), by 4-10% (pastures) and in reduction of forest cover of about 1/3 of remaining 11.2% with over 15% of Armenia?s higher plant species in danger of extinction. Total GHG emissions in 2013 accounted for 8.45 MtCO2e (2.82 tCO2e/capita, 0.02% of global GHG emissions). Energy accounts for 70%, agriculture for 16% followed by waste and industrial processes. Land use, land use change and forestry (LULUCF) activities sequester yearly (only from forests) about 0.48 MtCO2e, representing a net carbon sink equivalent to 4.6% of total emissions. Armenia?s NDC aims, by 2050, at emitting 2.07 tCO2e/capita.

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Institutional framework

Management and monitoring of land and natural resources in Armenia is spread over several sectors, ministries and agencies, making it challenging to establish a coherent and well functioning LDN monitoring system and to follow up on implementation of SLM. Table 1 below includes an overview of national and sub-national institutions, their mandate and expected role in the project.

Table 1. Institutional framework.

Sector/Stakeholder group	Mandate (or activities)	Potential role in Project
Ministry of Environment	The Ministry is the focal point for UNCCD, UNFCCC and CBD, and is rresponsible for the monitoring and implementing of land degradation neutrality in Armenia..	Provide technical and logistical support for the project implementation, support the identification of demonstration sites, benefit from capacity building activities. Mainstream sustainable management and restoration of degraded grasslands landscapes into the NBSAP

Environmental Project Implementation Unit, State Agency of the Ministry of Environment	It is the agency in the Ministry of Environment responsible for liaison with government authorities from different sectors. It will oversee integration of conservation measures and monitoring system into the Integrated Forest and Land Use Plans and annual work plans, and contribute to capacity building of stakeholders (public/private/community).	Coordinate project implementation, Liaison and internal coordination among the governmental stakeholder and support to the implementation of the coordination mechanisms at both national and local level
Bioresources Management Agency (Ministry of Environment)	Responsible to deliver up-to-date information on the country?s ecosystems. Also responsible for preparing the NBSAP.	Mainstream sustainable management and restoration of degraded grasslands landscapes into the NBSAP
Ministry of Territorial Administration and Infrastructure	It is the 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.	Responsible for the coordination with Local Self-Governing Bodies (Lori, Syunik regions) and the cross-sectoral policies/legal framework supporting LDN principles implementation at national level (building on the UNCCD mechanism) and benefit from capacity building activities

Ministry of Economy (merged with the Ministry of Agriculture)	The agricultural division of the Ministry is responsible for the country agrarian policy, rural extension service and all activities related to food production, processing and value chains.	Support the implementation of the activities related to agriculture, also they will be responsible for mainstreaming LDN principles in the agricultural sector and to assure that the implementation of the Strategy for Sustainable Agricultural Development will be coordinated with the project implementation. And benefit from capacity building activities
Forest Committee (Ministry of Environment)	Responsible for conservation, protection, restoration, afforestation and effective use of state forests; ensuring sustainable forest management, the implementation of measures to increase the productivity of the state forests; the protection of biodiversity of state forests; efficient use of the environmental, social and economic potential of state forests; provision of complete and reliable information on the forest lands and forests	Support the project implementation and all activities related to forest management, restauration and new practices, also the Forest Committee be involved in the policy review process and will be important stakeholder in the cross-sectoral coordination mechanism
State Committee of Real Estate Cadastre	It maintains state registry of real estate and geospatial information systems, promotes development of real estate market, as well as development and implementation of land policy.	Responsible for the implementation of the monitoring system of the LDN targets and the proposed changes in the Land Code

Armenian National Agrarian University	State university and higher educational institution based in Yerevan. The university trains and prepares specialists for the agricultural sphere.	The Armenian National Agrarian University will contribute to the knowledge generation and knowledge transfer of the project including development of knowledge products and training content
Local Self-Governing Bodies (Lori and Syunik Regions)	They are responsible for the development and implementation of the Integrated Forest and Land Use Plans in each region. They also are responsible for monitoring land use practices in the areas under the jurisdiction of the self-governing bodies.	Support the cross-sectoral policies/legal framework supporting LDN principles implementation at regional level and be part of the coordination mechanisms (building on the UNCCD mechanism) between the national level and local decision makers as well as the coordination mechanism with farmer groups/extension.
Local small producers organizations	Main beneficiary of the project and involved in land use and management	Benefit from support and capacity building and targeted producers will be responsible for transforming land management systems, and adopting SLM/LDN.

Legal and policy framework

Improvement of legislation (LDN report of Armenia) related to combating of desertification is consistent with the 2nd operational objective of the strategy of the "Convention to combat

desertification?", which implies creation of favourable conditions for decision-making concerning mitigation of land degradation and drought consequences and harmonization of the legal basis targeted at sustainable land use. The following actions based on this for 2015-2020 were: Elaboration of draft law on ?Legal regime of areas exposed to desertification?; Elaboration of draft law on changes and amendments in RA Land Code; Elaboration of draft law on ?Strategic planning of environmental issues?; Elaboration of draft law on making amendments and supplements in RA Law on ?Environmental education and upbringing of population?; Elaboration of draft law on ?Economics of ecosystem services?. The legislative framework of laws, resolutions, and decrees aimed at agricultural and environmental considerations, and in particular those addressing LD and environmental protection, are provided in the table below (Table 2).

Table 2. Legal Framework regulating Land Use, Zoning and Environmental issues in the Republic of Armenia

Date	Name of law or regulations	Areas /law regulation applies to
2005	The Forest Code	In order to achieve the strategic objectives of the RA National Forest Policy the Forest Code was developed (2005), which regulates the legal relations in the field. According to the Code the forests of Armenia are state property (though it is possible to have community and private forests, Article 4) and they are managed by state structures. The Forest Code clarifies the competences of the Government of the Republic of Armenia, state authorized bodies, territorial bodies of state management and local self-governing bodies in the field of sustainable forest management.
2001	The RA Land Code	Land Code includes the state regulation and state policy of legal relations of land resources management, ownership and use. The LC defines the composition of the forest land, forest land classification and general conditions of use of forest land. This means that the Land code and Forest code are the acts having equal legal force, but it is a fundamental regulation of RA laws for the whole of the natural resources. The Land Code is of special importance for the nature protection field. It classifies land areas by different categories, by the level of importance and use purposes as well as sets forth the competences of state management bodies and land users (nature users), land protection functions, the status and structure of the state land cadastre and others.
2011	RA governamental decision N 1192-N	This secondary legislation outlines the monitoring methodology for industrially polluted soils.

2012	RA Mining Code	The Code provides a number of provisions relating to the protection of land relations and incorporates the concept of ?re-cultivation? which assumes restoration measures aimed at the recovery of disturbed lands and bringing them into safe state to be viable for economic use and for conserving the environment envisaged by the design of extraction of minerals or geological exploration program.
2008	RA Law on Control Over Use and Protection of Lands	The Law defines the issues of effective use and protection of land, supervision of compliance with the requirements of land legislation, forms, supervisory authorities, rights and responsibilities of inspectors and inspectors, procedures for inspections. It oversees the protection and use of lands within the respective jurisdiction by the highest body of professional supervision established by the RA Law on Local Self-Government-State Authorized Body; the governors and community leaders.
2014	RA Law N 135-N on Food Safety	This law regulates food safety relationships and activities related to foodstuffs, food materials, food chains and trade and public catering, as well as provides for state guarantees for human health related with harmful substances and dangerous effects of foodstuffs and food materials. It regulates the basic principles and features of state control over food safety, veterinary and phytosanitary rights and obligations, duties of state controllers, as well as other relations related to state control.
2014	RA Law N 140-N on Plant Sanitary	The Law regulates the phytosanitary field in Armenia. It provides management relations, fixes mandatory phytosanitary requirements and the basic principles of phytosanitary process in the cultivation, storage, transportation or marketing of plants, plant products and other regulated articles, as well as obligations of natural and legal persons engaged in the cultivation of land.
2015	RA Government decree N 23 Dated May 27, 2015	Strategy and National Action Plan to Combat Desertification in the RoA
2019	Government decision N431-N as of April 11, 2019	"On approving the procedure for classification of land cover of the Republic of Armenia".
2020	Government decisions N2015-N as of December 10, 2020	? Land classification of the RoA?.
2017	Government decision N1404-N as of November 2, 2017	?On determining the requirements/norms for removing the fertile layer of soil and defining the requirements for the preservation and use of the fertile layer, and on recognition of loosing the legal force of #1026-N decree of the RoA Government as of July 20, 2006, which defines the requirements for norms for removing the fertile layer of soil and the preservation and use of soil fertile layer for improving the less productive soil.

2008	RA Law on Organic Agriculture	The Law regulates the production, preservation, processing, transportation and sale of agricultural products and materials as well as the storage of wild plants, and defines the principles of and legal grounds for the management of organic agriculture, its main circulation demands, directions of state support, and the duties of the authorized body. One of the stipulated principles refers to natural way of land physical, chemical and biological state improvement and fertility enhancement.
2011	RA Government Decree N 256-N on Approving the List of the Permitted Pesticides and Agrochemicals for Using in RA	The decree provides information on over 1400 materials and substances under 12 headings such as pesticides, herbicides, fungicides, rodenticides, biologically active materials, etc. It details on the sales names, affecting material, content of the affecting material, the forms and producers.
2011	RA Government Decision N1396-N on Regulating the Use of Soil Fertile Layer	The Law regulates the relations related to efficient and purposeful use of the soil fertile layer, particularly the responsibilities of landowners and land users, jurisdictions of community heads and governors, counting and recording of data on removal, storage, transportation and use of the fertile layer of soil.
2006	RA Law on Specially Protected Natural Areas	The Law aims at setting forth the legal principles of State Policy for sustainable development, restoration, conservation and use of ecosystems, nature complexes and separate objects of Specially Protected Natural Areas of the Republic of Armenia representing environmental, economic, social, scientific, historical-cultural, aesthetic, health, climate regulating, recreational and spiritual values. Article 4 provides that Specially Protected Natural Areas in the RA are State ownership. It is prohibited to transfer the state ownedlands of specially protected natural areas to a private ownership. Article 4 provides that Specially Protected Natural Areas are taken into account for elaboration of economic and social development programs, territorial planning designs, land zoning and usage schemes, land, forest and city planning project documents and definition of boundaries of administrative units.
1995	RA Law on Environmental Impact Assessment Law (1995)	The Law provides that the objectives of environmental impact assessment are as follows: ? analysis of intended activities, concepts and the possibility of their alternatives and expediency, considering all ecological restrictions. ? appraisal of the possible effect and the degree of their danger of the intended activity, concept and their alternatives; ? inspection of the degree of the possible ecological effect of intended activities, concepts and the possibility of their alternatives.

	RA Law on Nature Protection and Nature Utilization Payments	The Lw provides obligatory payment to the state or community budget for implementation of nature protection measures, use and (or) sale of natural resources, which are considered state property. According to the law the nature utilization fee is a payment to the state budget for efficient, complex use of natural resources considered state property or a compensation payment for use and (or) sale of these natural resources.

Other important documents or innovations being promoted by the Republic of Armenia with direct links and impacts on land use and management regarding LD are the following:

? **Land Degradation Neutrality Strategy and Action Plan, 2015**: The RA Government developed its Land Degradation Neutrality Strategy which includes four voluntary targets: (1) Stop cropland degradation and promote agro-ecology (conservation plus modern ?organic? technology); (2) afforest and/or reforest 2/3 of the degraded land; (3) Stop deforestation and improve forest management in 100% of national territory; (4) Stop overgrazing and improve grassland management in 100% of national territory.

? **The Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of the Republic of Armenia for 2020-2030:** The Strategy prioritizes the land reform as an important step for the growth in agriculture sector. In particular, it envisages modernized and accurate land registration, adoption of an updated land legislation and development of technical measures to reduce abandoned lands. The overarching objective is to rapidly improve land productivity via rapid land consolidation, focusing on both land rental and sales markets.

? **RA Strategic Development Programme for 2014-2025**, annexed to RA Government Decree N 442-N (2014): The programme is comprehensive and reflects the government?s main directions and priorities: job creation, export-oriented industrial policy implementation, development of small and medium-sized enterprises. It includes Agriculture and rural perspective development visions such as domination of production of agriculture products with high added value in the plant cultivation and animal husbandry intra?branch structure; improve servicing of agricultural equipment, implementation of state?supported programs on irrigation of pastures, ensuring access to and from pastures, promoting creation of 'cooperatives of pasture users' and supporting their activities, activities geared at addressing agriculture production and technical services, etc. The strategy also stresses the importance of arable land increase through improvement of agricultural machinery provision, implementation of programs for consolidation of fragmented lands with application of incentives (such as grants, subsidies, loans, etc.), implementation of measures for restoration of degraded lands and their incorporation into agricultural activity cycles, plantation of forest stripes for field protection, as well as provision of state support for cultivation of lands in unfavourable zones.

? **National Forest Policy and Strategy Paper (2004):** The main goal of the RA National Forest Policy and Strategy is to ensure restoration of degraded forest ecosystems, sustainable use and development of useful properties of the forests. It stresses the need for safeguarding long-term and scientifically justified sustainable forest management, implementation of institutional and legislative reforms to support sustainable forest management, application of international indicators for sustainable forest management and quality standards for forest certification and assessment. Among the strategic objectives of the Policy is to develop scientifically proven forest management plans (long-term and short-term) to ensure sustainable forest management and to improve the legislative basis contributing to sustainable forest management, including the provision of strategic ways for definition of scientifically proven mechanisms (methodologies, standards, indicators, etc.) with the application of international experience (international standards, classifications, etc. in sustainable forest management).

? **RA National Forest Program** (RA Government Decision on 21.7.2005, N 1232-N). Program of Activities for Forest use, protection, rehabilitations.

? **Programme of the Government of RA for 2017-2022:**The Programme presents activities of the RA Government that will guarantee the country?s sustainable development in the period between 2017 and 2022. For the purpose of protection of land and subsoil resources, the RA Government plans to: (1) by the end of 2017, improve the legislation on environmental monitoring and accountability by subsoil users, introducing a current monitoring system; (2) by the end of 2017, adopt a concept paper for management of the reclamation fund for the purpose of targeted use of funds allocated to the environment protection fund (reclamation fund) by subsoil users and for the restoration of degraded lands; (3) during 2018-2020, introduce mechanisms ensuring the implementation of the concept paper provisions.

? Governmental Decision N 1192-N adopted by the RA government on August 18, 2011 sets monitoring methodology of industrially polluted soils.

? RA government?s decision N 387 Main directions of activities of the RA Ministry of Environment aimed at ensuring national security strategy were approved on April 8, 2010 .According to the above decision, internal threats include forest and land degradation, desertification, deficiency in the level of environmental education of the public and lack of awareness.

? RA government?s decision 2011 N 1918-N (December 29), Procedure for establishing temporary scheme of land use. The temporary land use scheme is drawn up on the basis of cadastral maps, topographical surveys and, if not, land use plans. A temporary land use scheme is designed to change the purpose of the land use.

? RA Government decision N 389-n adopted in April 14, 2011 - On establishment of procedure for use of pastures and grasslands

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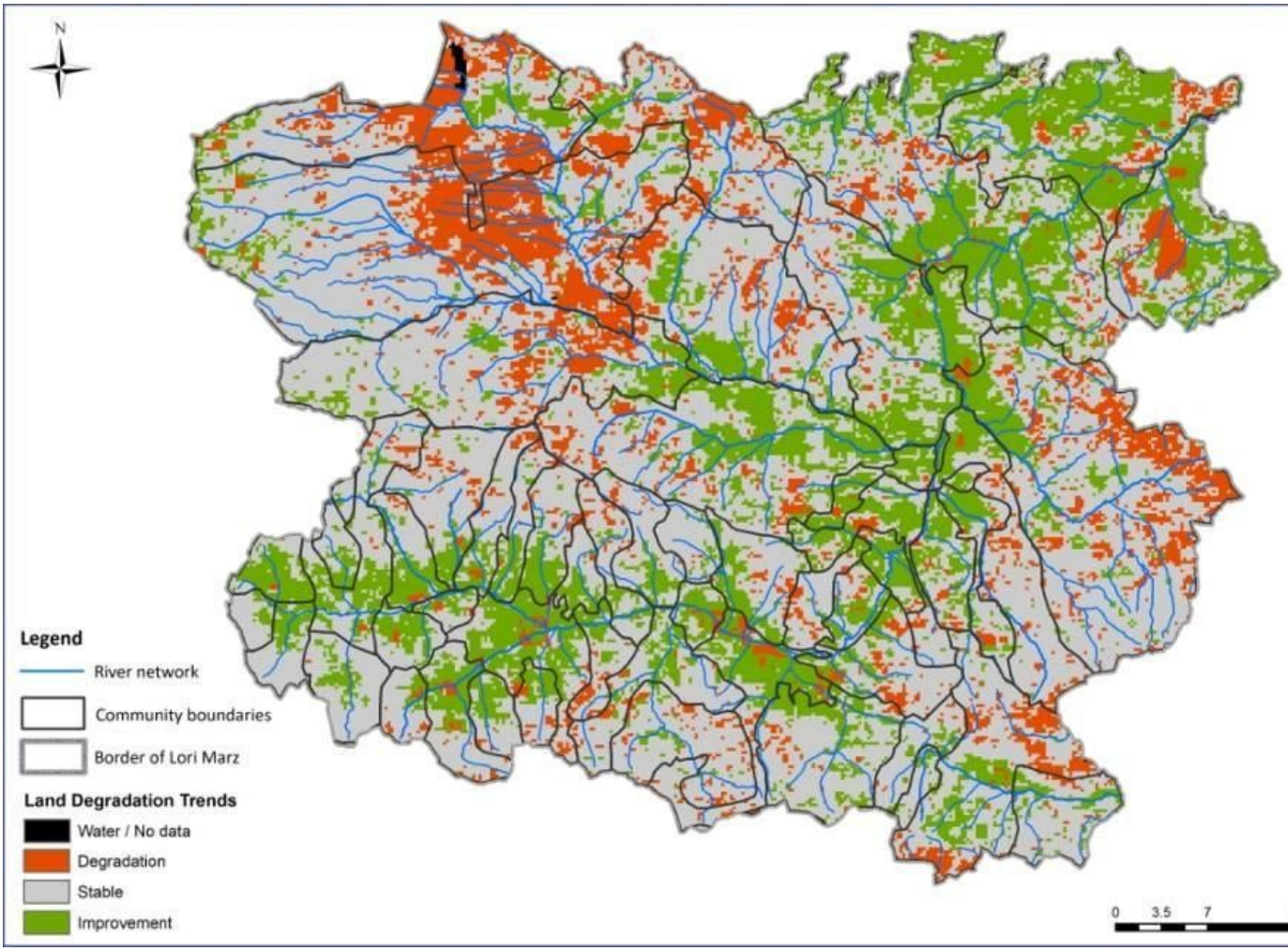
[1] As presented in the LDN report of Armenia.



There is currently no agreed method of assessing or monitoring LDN voluntary targets or guidelines at a national level, and apparently little national or regional planning processes in which LD or LDN accounting and protocols could be incorporated. National strategies exist, but do not have the authority, autonomy or funding to self-organise and act at landscape or regional scales in efforts to reduce LD extent and rate.

1.2 Area of intervention

The area of invention for the project are the Districts/Marzes of Lori and Syunik that both suffer significantly from land degradation and negative trends in land productivity, as can be seen in Figure 1 below.

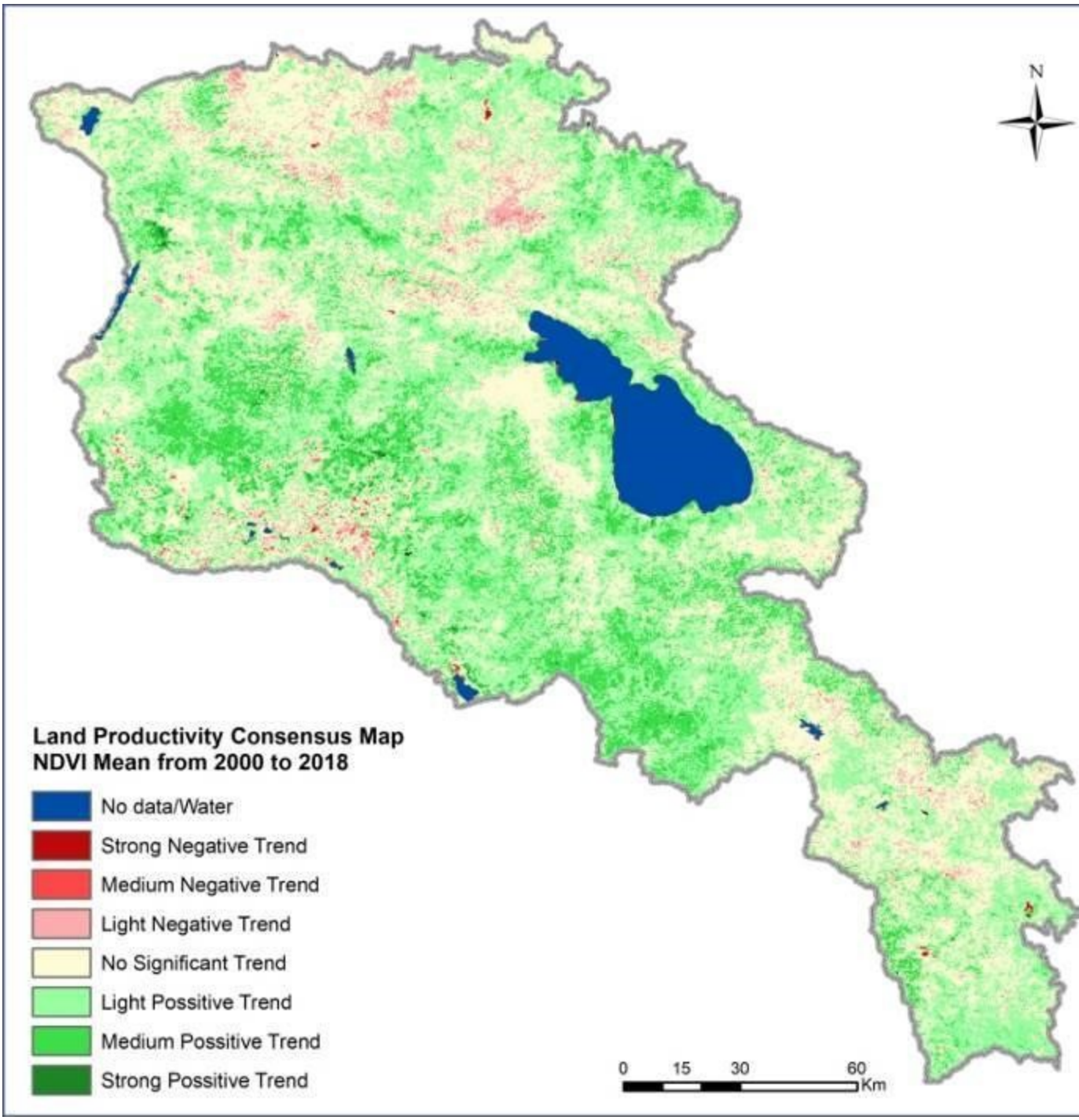
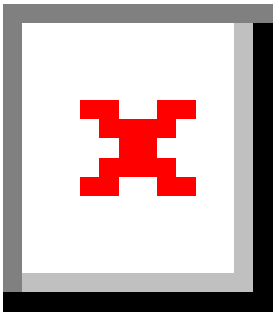


Figure 1. Map of Armenia with the project pilot districts/marzes highlighted and a Land Productivity Consensus Map (FAO 2020).

Lori Autonomous Region

The Region of Lori is located in the north of Armenia (Figure 2). The administrative area of ??the region has an uneven relief, with approximately 80% of the area being composed of mountainous foothills and ranges. The settlements in the region are located at an altitude of 520-1800 m above sea level. Moderately hot climates are found in the lower parts of the region, cold mountainous climate prevails in the higher parts, and temperate mountainous climates are present in the middle parts. The region is characterized by relatively humid climatic conditions, the amount of annual precipitation is 600-700 mm.The administrative territory of the region occupies an area of ??379864.5 ha, of which 145633.2 ha are natural pastures. Within this total, 54.1% (78810.2 ha), of pastures, are community property, 43.6% (63539.7 ha) are state property, 2.18% (3176.1 ha) are owned by legal entities, and 0.07% (107.2 ha) are owned by private citizens. Pastures are mainly distributed in mountain steppe and forest landscape zones, partly in the subalpine and alpine high-mountainous zones. In the lower, mostly medium-height pastures, the soils consist of the mountain black and mountain forest brown and cinnamon-colored soils. In the high mountainous areas, meadow-steppe and mountain-meadow soil types predominate. The climatic conditions and soil types of the region provide favorable conditions for the formation of pastures with rich biodiversity.

Figure 2. Lori region LD rates, selected district boundaries and field survey sites (FAO 2020).



The majority of livestock in rural communities continually graze local pastures throughout the year. Under these conditions, stock density can be quite high and without a well-designed management plan that takes into account livestock mobility and grass recovery times, overgrazing and trampling become inevitable. As a result, degradation is quite high in the pastures of the surrounding communities, with those areas with steep relief being particularly susceptible to erosion processes due to the thinning of vegetation and loss of protective ground cover. Degradation of the pasture base also contributes to the deepening of the existing socio-economic problems of households in the communities, as well as the application of traditional knowledge in the field of grazing and pasture management.

To solve such problems, in the rural communities (Marts, Karinj, Lorut, Shamut, Atan, Ahnidzor, Dsegh, Margahovit and Mets Parni) of different regions (Tumanyan, Gugark, Spitak), "Pasture Users' Union" consumer cooperatives were established within the framework of the CARMAC program. Within the framework of this project, agricultural machinery was provided, certain pasture infrastructures were built, professional advice was provided to create opportunities in the communities, mechanisms to increase the productivity of the livestock sector, to improve the management and use of natural pasture. Demonstration of rehabilitation measures applied to degraded areas (3-5 ha in each community) were carried out for the restoration of degraded pastures in the communities. The measures have achieved very high results in terms of eliminating degradation issues and improving pasture productivity and quality. Improvement and rehabilitation of 280 hectares of degraded pastures in the rural communities of the Gugark region of Lori marz (Gugark, Vahagn, and Margahovit communities) under the the UN Development Program "Implementation of Sustainable Land and Forest Management in the Mountainous Landscapes of Northeastern Armenia" has also been undertaken. Excellent results have been noted in the field of agro-technical activities carried out within the framework of the above-mentioned programs, such as pasture and infrastructure maintenance, undersowing mixtures of grasses, for eliminating degradation and increasing pasture productivity by 2-3 times.

Syunik Autonomous Region

The Autonomous Region of Syunikis is located in the southernmost reaches of Armenia (Figure 3). The administrative territory of the region has an uneven relief, being the region with the most significant differences in altitude in Armenia. Evidence of this can be seen in the difference between the highest peak (3 904 m. Kaput jugh mountain) and the lowest valley (375 m. Meghri gorge) which are 3529 m. The mayority of settlements in the region are located at an altitude of 400-2100 m above sea level. The extreme relief and the large differences in altitude have led to extraordinary climatic diversity, with moderately hot and dry subtropical climates in the lower parts, a cold mountainous climate prevailing

in the higher parts, and moderate mountainous climates in the middle parts. In the lowlands of the region, the annual precipitation does not exceed 260-300 mm, and the highland landscapes are characterized by relatively humid climates. In these upper areas, the amount of annual precipitation is 550-700 mm. The administrative territory of the region occupies 450,541.8 hectares, of which 145,555.1 hectares are natural pastures. Of this total, 48.0% (69861.6 ha) of pastures are community property, 51.9% (75614.4 ha) are state property, 0.04% (58.7 ha) are owned by legal entities, and 0.01% (20.4 ha) are owned by private citizens. Pastures are mainly distributed in mountain steppe and forest landscape zones, partly in the subalpine and alpine zones. In the lower, mostly medium-height pastures, the soil stock consists of mountain forest brown and cinnamon-colored soils, as well as mountain brown and mountain black soils.In the high mountainous areas, meadow-steppe and mountain-meadow soil types predominat. The climatic conditions and soil types of the region provide favorable conditions for the formation of pastures with rich biodiversity. Pasture vegetation is mainly composed of meadowgrasses, legumes, and versigrass. In the pastures of the subalpine and alpine zones, there are also less effective species of sedges and rushes. The diversity of natural conditions in the region determines the multifaceted development of agriculture. In the southern and the lower parts of the central zone, fruit growing is developed, and in the middle mountainous zone, the fields of specialization are crop cultivation (cultivation of grain and fodder crops) and cattle breeding. The high mountain zone is considered a principal cattle-breeding area. In the northern part of the region (Goris and Sisian regions) mountain steppes and meadows are most common, the reason behind them being considered typical cattle-breeding areas. In the rural areas of the middle-high mountainous parts of the region, households are mainly specialized in the field of crop cultivation and cattle-breeding. Of the described areas, the main source of income for households is derived from livestock-based products.

In recent years, large livestock farms have increased considerably in the Sisian and Goris regions, but it should be noted that the share of small household production still plays a decisive role in the share of livestock production. Dairy operations and their products are principally for self-sufficiency of the household; therefore dairy breeds make up most of the regional herd. As in other regions of Armenia, pasture cattle breeding is also developed in the rural communities of Syunik region and in recent years, sheep breeding has also developed to some extent. Cattle are fed on pasture for about 180-200 days a year. Taking into account this circumstance, pastures, as the main means of fodder, play a decisive role in the development of the livestock sector in the region.

Due to the location of the pastures and the relief of the region, mainly the dual-zone pasture behavior operates in the rural communities similar to that described for Lori. In some communities (Goris region) most of the livestock are moved to the Araks River valleys and winter pastures in late autumn and winter. Due to the currently difficult access to remote pastures due to technical, economic, and social problems, as well as the lack of infrastructure, the use of long-distance pastures is mostly realised by large farms that have sufficient resources. As remote pastures, great importance is given to the existing pastures in the administrative territory of Gorayk enlarged community of the Sisian region.Here, during the summer grazing period, livestock farms (combined with herds of herds) of different communities of Goris and Sisian regions carry out transhumance movements to grazeleased pastures in these areas. works and undersowing of mixtures of grasses.

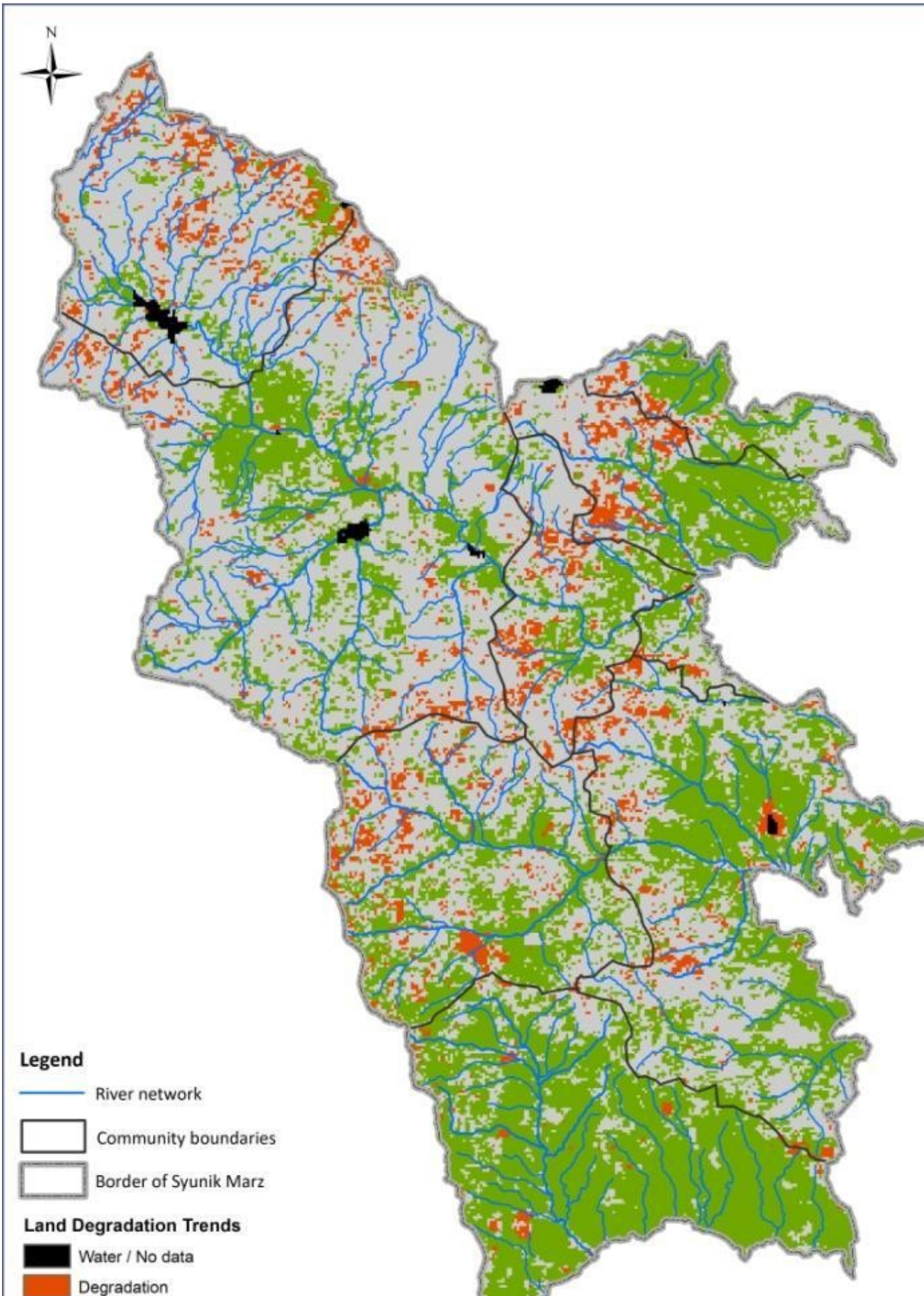

N
Legend
River network
Community boundaries
Border of Syunik Marz
Land Degradation Trends
Water / No data
Degradation

Figure 3. Syunik region LD rates, selected district boundaries and field survey sites (FAO 2020).

Within the framework of "Sustainable Biodiversity Management in the South Caucasus" by GIZ, "Livestock Development in the South of Armenia" implemented by SDA NGO and WB-funded CARMAC-1 and CARMAC-2 programs, technical assistance has been provided to establish stakeholder-endorsed management areas, to increase field productivity, livestock productivity, sales opportunities, as well as to improve the management and use of natural fodder. Excellent results have been registered in the field of agro-technical activities carried out within the framework of the above-mentioned programs, such as pasture maintenance.

1.3 Barriers

To overcome the multiple challenges to sustainable land management in Armenia and for the country to prepare to achieve LDN in line with SDG target 15.3 as well as targets under the Paris Agreement, three interlinked barriers need to be addressed:

Barrier 1: Weak enabling environment. At present, despite relatively good knowledge and high-level understanding of the land degradation situation, there are no national programs, plans or regulations to promote the introduction and dissemination of LDN. The upcoming revision of the Agriculture Policy (2019-2029) is lacking LDN considerations. Grassland and pastureland management is scattered among several legal frameworks and Codes. There is no law or integral legal act in Armenia that regulates the use and legal statutes regarding natural pasture and grasslands. Instead, two legal acts deal exclusively with the use of natural fodder field, and management issues are partially regulated within them. LDN approaches are not yet integrated in land-use planning processes; various departments and divisions do not work in an integrated way. There is no scientific data on how different sector management systems affect LDN indicators. There is also limited information available on land productivity and soil organic carbon content of lands in Armenia. Likewise, there are no significant national budget allocations to LDN.

More specifically, systems-thinking and holistic approaches to land management required to implement LDN are lacking, incuding the use of a landscape-scale context for testing, introducing and adapting SLM options within a larger economic and ecological plan, leaving decisions to be made based on immediate, individual needs and short-term economic gains; this is especially so for commonly managed resources, such as pastures, forests or water. There is a need for improved planning and transition of abandoned agricultural lands into either natural landscapes or agriculturally productive systems that provide adequate returns on investment. Cropland abandonment and uncontrolled succession processes often lead to the establishment of woody weeds and invasive species. This increases costs for returning the land to a cultivatable state and does not provide adequate forage for livestock.There is also a lack of State or sub-national budgeting and funding specifically targeting land degradation, land restoration and LDN. National institutions are understaffed, under-budgeted or non-existent in key areas. Local communities also lack capacity to generate or adequately invest funds to move up to higher-value agricultural chains to stay comptetive in local, regional and global markets to increase livelihood opportunities. Currently, the majority of funds for addressing land degradation or

environmental conservation activities come from international projects and grants. Lack of funding is also an issue when considering capacity building and development of the RA national and sub-national LDN monitoring systems and responses to LD issues.

Barrier 2: Limited of knowledge and awareness of SLM. Although the general land degradation processes are understood, the details of the interactions between current sector management systems and land degradation are not well known. At the local level, land users are generally not aware that alternative land management practices exist and that the benefits of these alternatives are probably high ? this is especially the case for small and middle- sized farms. In particular, they are not aware of the details of alternative practices, which to use and when, and what are the benefits. There is a lack of low-cost, effective reforestation methods to address the LDN target of 20% national forest cover. This will require techniques that not only meet germination and survival rates for new forest, but does so in a cost-effective manner over different ecological contexts.

Moreover, opportunities to develop the livestock sector in Armenia, to improve livestock breeding, to create opportunities for investment in innovative technologies, are mostly unavailable for small businesses, and for large businesses due to lack of experiences or models on which to base investments. Evidence of this problem is the scarcity of large livestock farms in the country. There is currently some significant progress in this area, as the Ministry of Economy is offering sustainable livestock-based business models and affordable lending conditions to develop the livestock sector and smart agriculture. However, modern measures to improve overgrazed pastureland, such as, for example, pastures? rest, and implementation of rotational grazing system is currently used sporadically. Given that agriculture has always had high associated risks, producers often go to great lengths to reduce risks and over time become risk averse. Even when producers are aware of how their land management practices impacts natural resources, often the perceived risks of changing their practice is considered too high. Convincing them to change long-term practices can prove a significant barrier to the introduction of SLM or other innovations, especially among older generations. There is a lack of financial planning mechanisms to support rural households to break the sustenance farming focus and develop more market-oriented value chains for their produce.

Barrier 3: Poor capacity of decision-makers and local communities to identify and monitor the benefits of innovative SLM approaches and technologies. There is a lack of real-time data on the condition of land and state of natural resources: data discrepancies are common and fail to capture on-the-ground realities. Unified, national data protocols and datasets are also missing, leading to failure to show national and regional trends and thresholds within different land cover types and landscape areas. Also, there is no monitoring of the benefits of SLM practices nor dissemination of knowledge to support broader scaling up strategies to reduce land degradation. There is no system in place to identify how to balance land degradation and loss of productive land with restoration within given land types, nor the transfer such lands to other land types. In other words, there is no mechanism for monitoring the implementation and achievement of LDN.

1) **The baseline scenario and any associated baseline projects.**

The Government of Armenia (GoA) acknowledges the above-mentioned barriers to achieving LDN and is committed to provide an effective response across sectors and at various government levels. Armenia, as a signatory to the UNCCD, is committed to set and implement measures that meet the global commitments of LDN, contributing to goal 15.3 of the SDGs to achieve LDN by 2030. The

LDN National target for Armenia has been set to: ?Increase organic carbon stocks on land (above and below ground) by 1.5% by 2040 compared to 2015 ?. In the baseline scenario, several national organizations are implementing relevant activities on different land use types. The government of Armenia has a number of national strategies and legislative/regulatory frameworks addressing land-related issues. *The Land Code*, and supporting regulations, stipulates the responsible bodies for management of land resources. The system of the authorized bodies Ministry of Economy, Ministry of Urban Development, Ministry of Industry and Trade, Ministry of Environment, Ministry of Energy and Natural Resources, Ministry of Transport and Communication, Ministry of Health, Ministry of Education, Science, and Culture, State Committee of the Real Estate Cadastre, State Property Management Department, State Committee of Water Resources) and the scope of their authorities, as well as the list of legal acts ensuring the implementation of the Land Code were established. *The Forest Code* controls the use and protection of forest land. There are several regulations related to creating the national framework on land degradation and land-related issues. In addition, there are currently several related international supported projects, described below.

Several programs for the **restoration and improvement of degraded pastures** have been implemented and are currently being implemented in Armenia. Large-scale restoration of degraded pastures has been carried out in different regions (Syunik, VayotsDzor, Tavush, Lori) and cover a total area of 200-500 hectares. From an environmental and economic point of view, the results have been highly appreciated. Costs for restoration of different types of land have been estimated to: for pastureland of medium degradation: 170 000 ? 250 000 AMD / approximately USD325-480/ha; when using agrotechnical measures including water, fertilizers, seeds: 250 000 AMD/ USD480/ ha; and for degraded forest 250 000 ? 300 000 AMD/ USD480-575/ha. The costs may vary depending on the landscape, type of seeds (in case of very degraded lands it is more expensive) and other parameters. Due to the increase in vegetation cover and enrichment of the quality, the erosion and degradation of the soil have been prevented, and the productivity of pasture animals has increased. The main objectives of the second CARMAC project (Community Agricultural Resource Management and Competitiveness) are to improve the productivity and sustainability of pastures and livestock systems in the target communities and to increase the marketable products of selected livestock and high-value agri-food value chains. The LDN Pilot project ?Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia? was implemented in the Narek community of the Ararat region and completed in late 2020. Fieldwork began in 2019. The community received organic fertilizer - bio humus. A drip irrigation system has been installed in the area of ??30.29 hectares of orchards. 4,735 hectares of wind-resistant forest was planted, where a drip irrigation system was installed. On an area of ??10.5 hectares, the soil was improved by fertilizing with biohumus. Another 19.79 hectares were to be fertilized in 2020. The project?Livestock Development in the South of Armenia is a multi-component program implemented in the rural communities of the two regions of Southern Armenia (Syunik and VayotsDzor) to develop the livestock sector and increase the productivity of farms.

The project ?Livestock Development in Armenia: South-North is aimed at the development of the livestock sector. Participatory technical assistance is provided to leading farmers to develop fodder production, improve farms, develop production capacity, and increase access to the dairy market. On a participatory basis, community local government bodies are provided with assistance (technical, consulting, training) to develop the livestock sector, increase productivity, operate sustainable pasture management systems, and improve degraded pastures. The project ?Management of natural resources and safeguarding of ecosystem services for sustainable rural development in the South Caucasus (ECOserve)?, implemented in Armenia, Azerbaijan, and Georgia. The main directions of the ECOserve program in Armenia are sustainable pasture management and energy efficiency/ alternative energy. The goal of the project is to apply sustainable natural resource management approaches to balance their use and conservation by promoting the protection of biodiversity and mitigation of climate change. In addition, the project aims to improve energy efficiency, promote the use of alternative energy sources,

biofuels, which will further reduce the pressure on forests and pastures. ?Integrated Biodiversity Management in the South Caucasus?, implemented in Armenia, Azerbaijan, and Georgia focus on preserving natural ecosystems, and sustainable management, of in particular pastures and grasslands. ?Support Programme for Protected Areas ? Armenia (SPPA-Armenia)? aims to promote the socio-economic development of communities, to ensure the sustainability of the provision of environmental ecosystem services, to reduce anthropogenic pressures on natural ecosystems.

In 2018, the "The Program Coordination Platform for Sustainable Management of RA?s Natural Fodder Areas: Pastures and Grasslands" was established, co-funded by the Strategic Development Agency, the German International Cooperation Agency and the second CARMAC Project implemented by the Ministry of Economy. The basis for the creation of the platform was the need to promote effective cooperation, exchange of information, and coordination of program activities between programs for sustainable management of pastures and grasslands. Since 2018, the Platform has expanded its staff; now more than 10 organizations, buildings, programs, public administration bodies are participating in the work of the Platform, which is pursuing a goal to jointly ensure the viability of investments in the field of animal husbandry programs aimed at the preservation of natural fodder fields, to expand the economic opportunities of the communities and contribute to the growth of incomes from livestock products, as well as to promote the effective and sustainable management of natural fodder fields. Since the establishment of the platform, the aim has been to promote the improvement of the legislative framework regulating the process of natural fodder field management and the institutional system, which will promote the implementation of an effective and joint mechanism of pasture management in Armenia.

With respect to **restoration of forest cover in Armenia**, the ?Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia? (UNDP/GEF) project is implemented in two regions of northern Armenia: Lori and Tavush. The project used participatory and management approaches, both in forest restoration and in sustainable forest pasture management, conservation, and improvement of degraded areas. Communities are directly involved in co-financing and human resource implementation to ensure continuity of the project. Training is carried out in the pilot communities of the target regions with different components, professional advice is provided on the maintenance and sustainable management of forests and pasture areas. Forest restoration, degraded pasture rehabilitation, and improvement projects are being implemented in the pilot areas. Technical assistance is provided to communities for the production of plant-based fuels/pellets / to cultivate fodder crops in uncultivated arable lands to reduce the pressure on forests and pastures.

The FAO project ?Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation? is key and will provide co-financing to the current GEF LDN project that will primarily fund restoration of pastureland. The project will be financed over an eight years period with a total budget of USD 19.2 million: 52%-GCF, 31% - Republic of Armenia, 9% Austrian Development Agency (ADA), and 8% as FAO, WWF-ARMENIA and the Autonomous Province of Bolzano (APB, Italy). The project will invest in Lori and Syunik Regions with the highest forest degradation by: (i) increasing forest cover by 2.5%, (ii) reducing fuelwood demand of rural communities by at least 30%, (iii) enabling sustainable and climate adaptive forest management on at least 135,800 ha of forests (20 y) and ensuring technology transfer to rural communities, private sector and institutions. Beneficiaries of the project are the total rural population of target areas (15 municipalities and 207 rural communities), the private sector and line ministries including, among the others, the Ministry of Economy and Innovation, the Ministry of Territorial Administration and Development and the Ministry of Energy and Nature Protection. Rural communities in the two regions are mostly poor or very poor with the higher direct dependency on forest ecosystem services for fuelwood (average 8 m3/y) and

livelihood (agriculture, beekeeping, NWFP). The project will invest in forest restoration in the same regions as the proposed GEF project and can thereby contribute to achieving LDN on forest land. Taking an integrated landscape approach, the GEF project will establish a system for monitoring of LDN on all land types and promote restoration on the widespread pastures in the regions.

All of the above-mentioned projects are closely related to the proposed GEF project, in terms of policy, institutional and technical baseline, beneficiaries and landscapes. The current situation indicates that a tremendous effort is required to achieve SDG 15 as well as the set national LDN target, expected to be achieved by 2040. However, it is also clear that ongoing initiatives and the existing policy, institutional and legal framework will not allow Armenia to accomplish its international commitments to the 2030 Agenda. The lack of internal coordination needs to be overcome as it poses a barrier to the achievement of the national targets. Armenia therefore still needs support to all the steps involved in achieving LDN: (1) Leveraging LDN through improved coordination across ministries and sectors involved in land management, (2) assessing LDN, including the current state of land degradation and its drivers; (3) setting LDN targets also at district level and associated measures to avoid, reduce or reverse land degradation; and (4) achieving LDN through strengthening of the enabling environment and integration of the LDN concept into national policies as well as identification of transformative LDN programmes and projects. The proposed project is thus designed to assist Armenia in taking the steps required to achieve LDN.

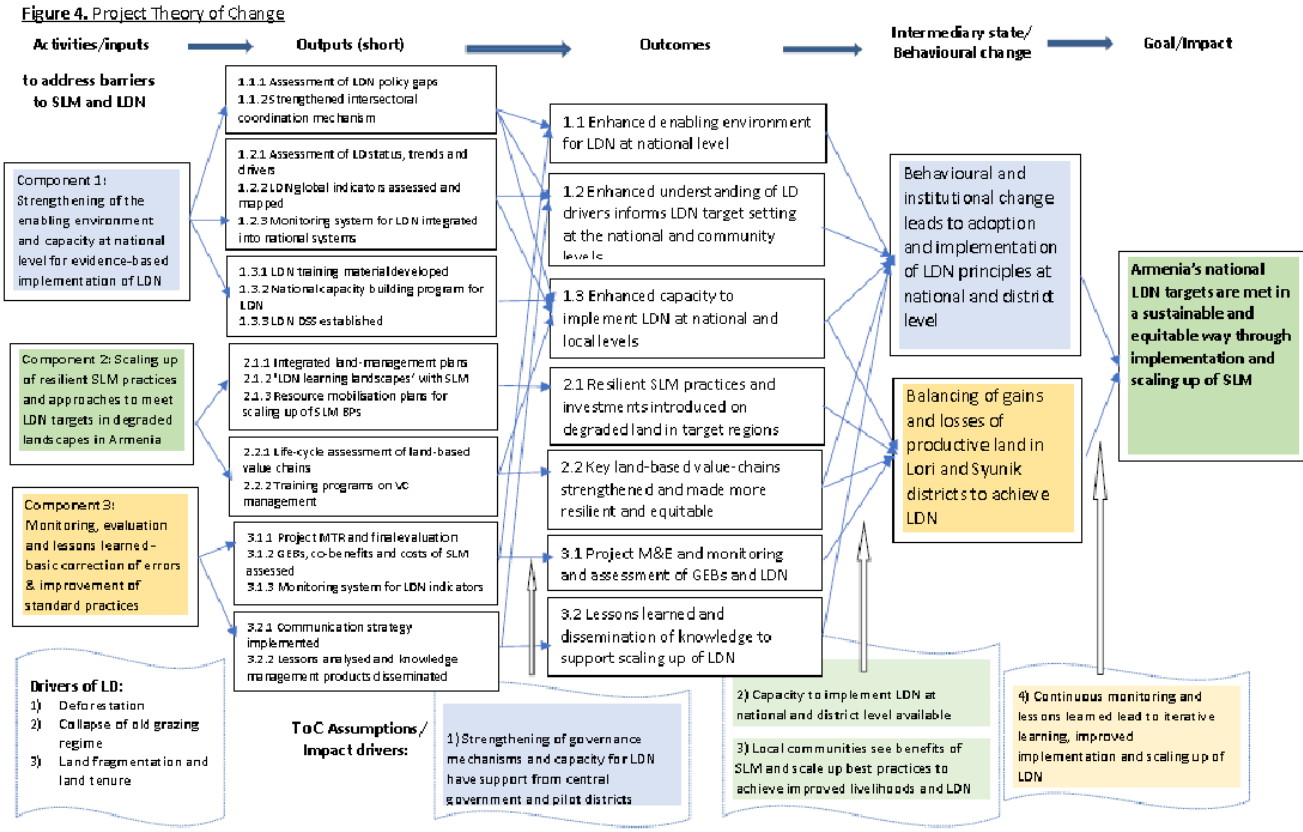
2) **The proposed alternative scenario with a brief description of expected outcomes and components of the project and the project?s Theory of Change.**

The proposed project will follow a landscape approach in line with GEF?s vision to foster sustainable integrated landscapes. Working at landscape level allows issues to be addressed in a multifaceted way, integrating sectors, involving stakeholders and working at different scales ? tackling the underlying causes of degradation and challenges related land degradation and food security and not just the symptoms. Landscape and territorial approaches that focus on people and their aspirations are among the most effective ways to address development needs while restoring and protecting natural resources. In this context, the project will work to formulate comprehensive land-use planning to rationalize land use in a way that addresses interconnectedness and trade-offs across multiple ecosystems, promote good governance to align policy directives at the national and sub-national level, and promote innovations in sustainable land management (SLM).

To remove the barriers to SLM and implementation of LDN in Armenia, the project will take a three-pronged approach starting with strengthening the enabling environment for LDN, followed by support to scaling up of resilient SLM practices in degraded landscapes in Lori and Syunik marzes/districts. These two components will be underpinned by monitoring, evaluation and dissemination and communication of lessons learned supporting behavioural and institutional change that leads to adoption and implementation of LDN principles at national level, and balancing of gains and losses of productive land in Lori and Syunik districts to achieve LDN. This intermediary state is expected to lead to the ultimate goal of Armenia meeting its national LDN targets in a sustainable and equitable way through implementation and scaling up of SLM. A key assumption and impact driver to achieve the expected outcomes along the impact pathway is that there is political support from the government and the pilot districts. Reaching the intermediary state of behavioural change is based on the assumptions that capacity to implement LDN at national and district level has been successfully created and is available, and that local communities see benefits of SLM and scale up best practices to achieve

improved livelihoods and LDN. Finally, to reach the project goal of meeting the national LDN targets, it is assumed that continuous monitoring and lessons learned lead to interative learning, improved implementation and scaling up of LDN. The project theory of change is summarized in Figure 4 and was developed using the linear logic model and the STAP Theory of Change Primer from 2020[1].

[1] Stafford Smith, M. 2020. Theory of Change Primer, A STAP Advisory Document. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, D.C.



Component 1. Strengthened enabling environment and capacity at national level for evidence-based implementation of Land Degradation Neutrality (LDN)

This component will strengthen the capacity to implement LDN following the UNCCD response hierarchy of avoiding, reducing and reversing land degradation using standard tools and approaches for LD and SLM assessment (e.g. LADA, WOCAT, ELD, Trends.Earth). LDN policy gaps need to be addressed and collaboration and coordination strengthened among key sectors allocating and using land for different purposes, including agriculture, forestry and conservation. This needs to be underpinned by an understanding of the key indirect and direct drivers of land degradation, including climate change, that leads to loss of productive land, tenure as well as the associated costs to local communities and the national economy. Barriers to scaling up of SLM also need to be understood in order to design

strategies and policies that will promote scaling up to achieve LDN following the UNCCD response hiearachy. LD and SLM monitoring systems need to be strengthened to inform decision making and design a decision-support system (DSS) that can help set and monitor LDN targets in the pilot districts and eventually at national level. This will be achieved through three outcomes with associated outputs and activities that will strengthen the policy and institutional enabling environment for LDN, enhance the understanding of LD drivers, and enhance the capacity to implement LDN at national and local level.

Outcome 1.1. Enhanced enabling environment for LDN at national level. This outcome is generated by development of two cross-sectoral policies covering environment, forestry, agriculture, rural development and knowledge development/transfer that will integrate the key LDN principle of balancing degradation of land with restoration within the same land type so that the net balance of productive land is neutral or positive compared with the baseline. Implementation of the new policy and legal framework for LDN will be supported by enhanced intersectoral coordination for LDN through two mechanisms that (i) link different sectors at the national level, and (ii) link the national level with the regional/landscape level. This will be achieved through two outputs with associated activities:

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Output 1.1.1. Assessment of LDN policy gaps and development of cross-sectoral policies/legal framework supporting LDN principles. Many of the existing policy documents fail to reflect current understanding and approaches to LD, including principles outlined in the LDN conceptual framework, including gender-responsive provisions. There is no law or integral legal act in Armenia that regulates the use and legal statutes of natural pasture and grasslands. At the same time, many other legal acts are in force in the country, which to some extent address issues related to the management of natural resources, the powers of local self-government bodies, and issues related to land use. However, questions remain on the use and management of the community-owned natural fodder fields. The RoA Law on Local Self-Government defines the powers of local self-government bodies in the field of general land use, agriculture, veterinary medicine, phytosanitary issues, as well as the protection of the environment. The RoA Law on Control over Land Use and Conservation defines the spheres of control of various authorized bodies in the field of land use. However, the documents are very general, they do not specifically address the issues related to the management of natural resources, nor do they assign roles and responsibilities or funding. The Land Code will therefore be strengthened and a new law related to LDN will be developed. The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forest in the Context of National Food Security (VGGT), will be used as a reference document and assess if the land code is consistent with principles of the VGGT.Activities to strengthen the policy framework include:

? Policy review and mapping of entry points for LDN in relevant sectors, such as environment, agriculture, forestry, energy, tenure, including gender sensitive analysis and consultations with rural women and related stakeholders.

? Analysis of policy gaps and constraints to implement LDN principles, including identification of gender-responsive provisions.

? Strengthening of the Land Code and development of new gender responsive LDN legislation. The VGGT will be used to assess if the land code is consistent with principles of the VGGT.

? Drafting of cross-sectoral policies for achievement of LDN through integrated landscape management with focus on pastures.

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Output 1.1.2. Strengthened intersectoral coordination mechanisms at two levels: national level, and between the national level and local decision makers and farmer groups. These mechanisms will build on existing intersectoral coordination of the implementation of the UNCCD and SLM and include representatives of women farmers and their interests. Activities include:

? Analysis of the existing mechanisms for implementation of the UNCCD and SLM in Armenia.

? Development of new TORs for the existing UNCCD coordination mechanism that integrate gender responsive LDN implementation and strengthening of its mandate.

? Establishment of intersectoral coordination mechanisms to support gender responsive LDN implementation at the landscape scale in Lori and Siunik Regions.

Outcome 1.2. Enhanced understanding of land degradation drivers informs LDN target setting at the national and community levels. This outcome will be generated by mapping of land degradation trends and drivers, including of how gender differences and inequalities contribute to land degradation, and assessment of its costs. In addition, the LDN local baseline will be established and mapped and LDN targets (anticipated future losses versus anticipated future gains) will be established in target landscapes in Lori and Syunik Regions. Following recommendations from the UNCCD, the Good Practice Guidance[1] promotes the use of the SDG 15.3.1 sub-indicators as means to measure and monitor compliance with voluntary LDN national targets. These sub-indicators are Land Cover Change, Land Productivity and Soil Organic Carbon (SOC; seen as a proxy for carbon stocks above and below ground). Definitions for Land Cover classes under the UNCCD guidelines fall under 7 simplified classes - ?Tree (covered), Grassland, Cropland, Wetland, Artificial land, Other land, and Waterbody ? which are also used in the Project. The LDN conceptual framework developed by Orr. et al (2017) has indicated the need for validation of the results and incorporation of local knowledge to offset remote sensing errors and ensure local objectives and needs are considered before basing decisions on the sub-indicator mapping results. This will be achieved through three outputs:

-

Output 1.2.1. Assessment of the status, trends, drivers, including impacts of climate change and migration, and costs of land degradation based on existing data and information (using LADA, WOCAT, ELD). A LADA-based approach is proposed to provide data on LD rates and extent as well as stakeholder feedback and engagement to reduce degraded areas and improve ecosystem services[2][2]. To avoid a negative bias due to a focus only on land degradation, LADA also assesses and maps land improvement proposals and sustainable land management (SLM) using World Overview of Conservation Approaches and Technologies (WOCAT) tools. The WOCAT database is the recommended by the UNCCD as the most appropriate source of contextually adapted SLM technologies and management approaches. The Economics of Land Degradation (www.eld-initiative.org) approach will be used to assess the costs of LD and benefits of SLM. Total economic valuation will consider the externalities associated with land degradation (such as loss of productive land and productivity, loss of biodiversity and reduced CO2e mitigated and increased vulnerability to drought), exacerbating the direct negative effects of land degradation. Activities will include:

? Land Degradation Assessment in Dryland (LADA) global and local tools will be used to assess land degradation status, trends and drivers, including assessment of how gender differences and

inequalities contribute to land degradation. The activity was initiated in the PPG phase, but gender assessment, ground truthing and stakeholder consultations with both women and men farmers will be undertaken in the first six month of the implementation phase.

? World Overview of Conservation Approaches (WOCAT) questionnaires for technologies (QT) and approaches (QA) will be used to assess drivers of degradation and barriers to SLM, including land tenure issues, based on interviews and stakeholder consultations. The QT already includes questions on land use rights and land tenure as a driver of degradation will be assessed in depth.

? Economics of Land Degradation (ELD) tools and knowledge will be used to assess and/or estimate the costs of land degradation through a multi-level approach for quantitative assessment of the economic benefits derived from adopting sustainable land management practices.

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Output 1.2.2. LDN indicators (landcover, land productivity, and soil organic carbon) in target Regions assessed and mapped (using Trends.Earth, CollectEarth, etc.). To identify Land Degradation Hotspots in an efficient and timely manner, a LDN monitoring system that is scalable to national and sub-national contexts is proposed that has already been utilized for project baseline establishment. The system relies on SDG 15.3.1 and GPG recommendations[3][3], as well as other climate trend and LD mapping processes, which are summarised Table 3 below.

Table 3. Summary of map scale, type and description.

INDICATOR SET	MAP TYPE	DESCRIPTION
National Context	National map showing selected Marzes	The map shows national boundary of Armenia and administrative boundaries of the first level (Marzes)
	Other national maps, ecoregions, principal water sources, etc.	Two maps were constructed to include the administrative division of Syunik and Lori Marzes at community level. In addition, two maps of vegetation zones and climate zones of Armenia were constructed based on the National Atlas of Armenia (2011)
Land Cover	National Land Cover Map using ESA sources	The map shows ESA Global Thematic Land Cover Classes for the year 2015 using data from 5 different satellite missions at a resolution of 300m. This resolution is not sufficient for adequate land cover mapping in Armenia.

	National Land Cover Map using UNCCD definitions	The 37 ESA land cover categories were reclassified using the standard IPCC and UNCCD reclassification criteria (Trends.Earth) to produce a map of the main Land Cover categories for 2015
Land Productivity	Land Productivity under different models and temporal resolutions	With the objective of comparing different methodologies for characterizing land productivity trends, the following alternative methods were used based on NDVI band of MODIS 16-Day Global 250mimage: ? LTT: Long-Term Trend for the NDVI Annual Mean; ? LTT: Long-Term Trend for the NDVI Annual Ecosystem Services Productivity Index (ESPI); ? SWATI: Step-Wise Approach Trend Index for the NDVI Annual Mean; ? SWATI: Step-Wise Approach Trend Index for the NDVI Annual Ecosystem Services Productivity Index (ESPI); ? SSWATI: Slope Step-Wise Approach Trend Indexfor the NDVI Annual Mean ? SSWATI: Slope Step-Wise Approach Trend Index for the NDVI Annual Ecosystem Services Productivity Index (ESPI)
	National Land Productivity Consensus Map	A map of NDVI mean for the period of 2000-2018 was constructed based on NDVI band of MODIS 16-Day Global 250m image
	National Land Productivity Trends.Earth Map	Two maps on land productivity dynamics were constructed using FAO?s Joint Research Commission (JRC) simplified model and the Trends.Earth tool (http://trends.earth) promoted by the UNCCD as a QGIS plug-in that allow users to simple compute SDG 15.3.1 indicator with a number of options and data sources.
Soil Organic Carbon	Soil Organic Carbon Map (tons/ha for year 2018).	At the request of the Ministry of Economy of Armenia, The Armenian Soil Information System (ArmSIS) was established through a collaboration between FAO, the Global Soil Partnership, the Armenian National Agrarian University, the Centre of the Agricultural Services (SNCO) and the Institute of Geological Sciences. A map of the SOC inventory was constructed for the year 2018 using UNCCD guidelines

	Soil Organic Carbon degradation/trends Map	A map on Soil Organic Carbon degradation/trends for the period of 2001-2018 was constructed using UNCCD guidelines
Climate Trends	Precipitation trends for last 20 years map	A map on total annual precipitation for the period of 1960-1991 was constructed using WorldClim V1
	Precipitation trends for the period of 1999-2019	Three maps on precipitation trends for the period of 1999-2019 were constructed using: ? CHIRPS precipitation trend : Climate Hazards Group InfraRed Precipitation with Station Data (version 2.0 final) ? PERSIANN-CDR: Precipitation Estimation from Remotely Sensed Information Using Artificial Neural Networks-Climate Data Record ? TRMM preciptation trend: this dataset algorithmically merges microwave data from multiple satellites, including SSMI, SSMIS, MHS, AMSU-B and AMSR-E, each inter-calibrated to the TRMM Combined Instrument
Land Degradation	Land degradation map	A map on land degradation trend was constructed throuugh aggregation of classes from the maps produced by Trends.Earth
	National Fire Map for 2019	A map on fire incidence in 2019 for Armenia was constructed using FIRMS dataset
	National Fire 5-year frequency Maps	A map on fire frequency for the period of 2014-2019 for Armenia was constructed using FIRMS dataset
Lori Marz	Lori marz map LD trends and community boundaries	Lori Marz map showing selected community boundaries, regional Land Degradation Trends with project pilot communities highlighted.
	Tumanyan community map showing community boundaries and LD trends	District map showing linkages between LD and UNCCD land cover classes
Syunik Marz	Syunik marz map LD trends and community boundaries	Syunik Marz map showing selected community boundaries, regional Land Degradation Trends with project pilot communities highlighted.
	Gorayq community map showing community boundaries and LD trends	District map showing linkages between LD and UNCCD land cover classes

Activities include:

? In-depth analysis of available data and metrics in Armenia on land cover, land productivity and soil organic carbon (Table 4) and other national indicators relevant to the monitoring of LD and impact of SLM, including the land tenure system.

? CollectEarth (FAO) and Trends.Earth (CI) used to assess LDN using existing national datasets and freely available remote sensing data.

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Output 1.2.3. Monitoring system for LDN indicators integrated into the national land use monitoring systems. There is currently no agreed method of assessing or monitoring LDN voluntary targets or guidelines at a national level. National strategies exist, but do not have the authority, autonomy or funding to self-organise and act at landscape or regional scales in efforts to reduce LD extent and rate. LDN needs to be integrated into e.g. the Armenian Soil Information System (ArmSIS: http://armsis.cas.am/). This will be addressed by the current project through the following activities:

? Develop agreed method and raise institutional capacities on monitoring of LDN indicators (landcover, land productivity, and soil organic carbon) and their driving factors (soil erosion, soil salinity, soil carbon sequestration potential).

? Map the entry points for including the LDN indicators in the current national land use monitoring systems.

? Establish LDN monitoring system and integrate it with land use monitoring by the Land Cadastre.

Outcome 1.3. Enhanced capacity to implement LDN at national and local levels. Under this outcome, 100 people will be trained at national level and 500 at sub-national level, of which 50% will be women, to ensure sufficient capacity to implement LDN at different scales. It will be achieved through three outputs:

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Output 1.3.1. LDN training material developed for decision makers as well as practitioners. This will build on available international as well as national training material that will be tailored for the needs of achieving LDN focusing of linking of national LD indicators and monitoring systems with LDN specific indicators and requirements. The training material will include a dedicated gender section that integrates relevant gender dimensions outlined in the UNCCD Manual for Gender-Responsive Land Degradation Neutrality Transformative Projects and Programs[4][4]. Activities include:

? Development of training module on LDN principles, including land tenure and gender dimensions, concepts and key indicators targeting decision makers and technical staff.

? Development of training module on LDN in practice and how implementation of SLM contributes to gender-responsive achievement of LDN targets at national and sub-national level targeting technical staff as well as local communities (through the rural advisory service farmer-to-farmer training, etc.)

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Output 1.3.2. National capacity building program on LDN for key decision-makers and practitioners at national and sub-national level. Implementation of practical workshops and training for working groups and stakeholders, on land use planning, tenure rights, sustainable pasture management and value chains should not only increase knowledge on SLM and production issues, but link management to landscape scale processes and economic outcomes and impacts through value adding and small-scale industries to improve food safety and household income. It will build on existing training material developed by baseline projects, such as Guidelines for Development and Implementation of Sustainable Management Plans for Pastures and Grasslands (http://www.mtad.am/files/docs/1468.pdf). Activities include:

? Training in LDN of decision makers and technical staff at the national level on LDN indicators, monitoring using standard tools and balancing strategies.

? Decision makers and technical staff from the Ministry of Environment, Forest Committee; Local Self-Governing Bodies (Lori and Syunik Regions) and Ministry of Economy involved in the implement of LDN (at least 30 women out total 100 people, with an emphasis on the sub-national level).

? Extension staff[5][5] at national level with staff from Lori and Syunik prioritized (at least 30 women out of 100 people).

? Training in LDN of local communities (through the rural advisory service, farmer-to-farmer training, etc.) from Lori and Syunik Regions (500 people, of which at least 250 women heads of household whether formally or *de facto* due to male outmigration etc.) on land-use planning, tenure rights, participatory monitoring and identification of SLM options to balance gains and losses of productive land.

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Output 1.3.3. LDN decision support system for target setting, planning and strengthening of governance arrangements together with national and local stakeholders established. This output will support gender-equitable governance of land and natural resources for LDN and build on the Decision Support Framework (DSF) for SLM (Figure 5) developed by the FAO/GEF project on ?Decision Support for Scaling up and Mainstreaming Sustainable Land Management (DS-SLM)?. The objective was to collect evidence on the range of benefits generated by SLM in different farming systems and at different scales to inform decision-making and investments in the transition to sustainable practices as a means to combat desertification (FAO, 2019)[6][6].

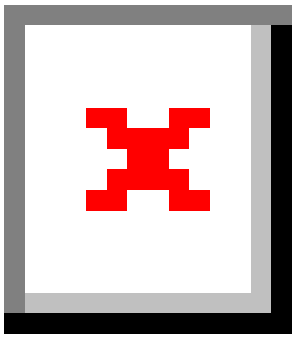

Figure 5. Decision Support Framework for SLM mainstreaming and scaling out (source: FAO, 2019).

The project encouraged countries to develop SLM mainstreaming strategies that integrate these findings into key national and sub-national decision-making processes to promote SLM. The Decision Support Framework (DSF) developed can be used to achieve LDN by linking SLM knowledge to evidence-based decision making aligned with the LDN response hierarchy (Liniger et al., 2019)[7][7]. Activities to develop an LDN DSS for Armenia thus include:

? DS-SLM tools developed by a FAO/GEF project (Figure 5) used to design the LDN DSS and integrate data identified under outputs 1.2.1 and 1.2.2.

? LDN Decision-Support System for gender-equitable governance of land and natural resources established at national level.

? LDN pilot DSS at sub-national/landscape level established in Lori and Syunik.

Component 2. Scaling up of resilient Sustainable Land Management (SLM) practices and approaches to meet LDN targets in degraded landscapes in Armenia

This component will initually focus on the two districts/marzes of Lori and Syunik and work closely with the GCF project on ?Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation? that will fund activities related to forest restoration in the two pilot marzes. The FAO/GEF LDN project will take an integrated landscape approach to achive LDN across land use classes/types and GEF funding will complement the GCF funding by focusing on other land-use types, primarily degraded pastureland, but also small agricultural plots and value chains important for livelihood diversification and resilience. The process of community and state-owned pastures management (use, maintenance, improvement) is reserved for local government bodies, which do not have clear means approved by the community budget to carry out pasture management and maintenance functions. Local self-government bodies do not receive financial allocations from the state budget to carry out such functions. Opportunities to develop the livestock sector in Armenia, to improve livestock breeding, to create opportunities for investment in innovative technologies, are mostly unavailable for small businesses. For large businesses in many cases it is not profitable in the sense that there are no experiences or models on which to base investment. Evidence of this problem is the scarcity of large livestock farms in the country. There is currently significant progress in this area because the government and the Ministry of Economy is offering sustainable livestock-based business models and affordable lending conditions to develop the livestock sector and climate-smart agriculture. The current project will capitalize on these developments to introduce resilient SLM practices and investments on degraded pastureland and to strengthen key agricultural value chains that will be made more resilient and equitable, with the ultimate objective to achive LDN at the landscape scale.

Outcome 2.1. Resilient SLM practices and investment introduced on degraded land in target regions/marzes. Two integrated land management plans will be supporting the restoration of 4,000 ha of degraded pastures and grasslands, and 7,300 ha of forest lands within the State Forest Fund and abandoned lands. It will also bring 166,000 ha of land under SLM practices in target regions (of which: 110,000 ha forests; 50,000 ha grasslands; 4,000 ha croplands). All this together will result in sequestration of 32,274,507 tCO2-eq (See annex L for detailed calculation). In addition, two LDN local transformative gender sensitive projects/programs of actions, here called ?learning landscapes? will be develop in target regions to support further scaling up of LDN. To successfully realise this outcome, and with Components 1 and 3 in mind, Figure 6 provides a simple diagram of how the land management plans and participatory monitoring systems could inform land management through the LDN conceptual framenwork.

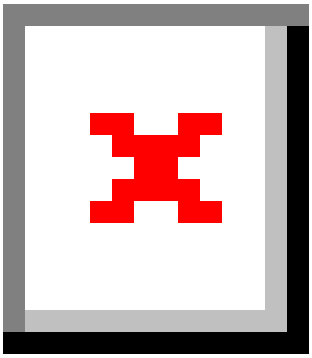

Figure 6. Simplified approach for linking LDN to Land Management Plans.

The outcome will be achieved through three outputs:

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Output 2.1.1. Integrated land-management (ILM) plans developed using participatory approaches and integrated with existing community land use planning processes in target regions (Lori, Syunik). This involves development of guidelines for those active or potential members to understand their rights and obligations under the status quo and for communities to enact programs and activities under the current legislation, specifically ?On Defining the Procedure for Using Pastures and Grasslands? of the Government of the Republic of Armenia 28.10.2010; Decision N 1477-N / ?On Defining the Procedure for the Use of Pastures and Grasslands in the Republic of Armenia? of the Government of the Republic of Armenia 14.04.2011; Decision N 389-N. Mobilization of target communities of Syunik and Lori marzes and establishment of working groups at the level of communities and settlements will be based on local self-governing bodies, and include community specialists, women and men farmers engaged in land cultivation and livestock management, including up to 50% of women. Of particular importance are understanding the ?whole under management?, meaning the group should have an inventory of lands, resources (physical, economic, human) and common management objectives that must be endorsed and agreed upon by a wide range of stakeholders and land users. There currently exists within the country and in the Armenian language materials and manuals that support this process, as well as a wide number of tested participatory approaches from abroad that could easily be adapted to local contexts. Communal management systems need management approaches that holistically act at the larger landscape and socio-economic scales and the ILM plans developed will reflect priorities identified by rural women as well as men. Activities include:

? Development of guidelines to establish recommendations and provide a roadmap for legal status and protection of the pasture management groups, both active and potential, within the selected project communities (with links to 1.1.1), including land tenure rights.

? Stakeholder analysis that takes influence, power structures and gender into consideration, and mobilization of local communities for equitable participation in target landscapes in Lori and Syunik.

? Participatory land-use planning with local communities following the LADA/WOCAT and DS-SLM methodology (see Figure 5, 1.3.3) that will include women?s groups and/or actors representing the interests of women engaged in farming, including informally.

? Integration of the ILM plans, including provisions to improve gender equity in access to/governance of land, with other community and district-level planning processes. Close links and collaboration with the developed National Platform and existing or informal pasture management groups currently operating within selected areas will be established.

Output 2.1.2. ?LDN learning landscapes? established with SLM best practices and integrated restoration of landscapes that provide carbon benefits. This involves establishment of LDN-transformative and gender responsive SLM demonstrations on implementation of SLM on different land use types/classes to counterbalance degradation to achieve LDN at the landscape scale in Lori and Syunik, with a focus on pastures. Activities include:

? Demonstration of sustainable pasture management practices within the ILM plans that build on women?s and men?s distinct roles and gender-equitable access to pastures and their governance, including:

o *Directed grazing*: also referred to as ?rotational grazing?, describes the use of domestic grazing animals as tools to complete a variety of tasks, including suppressing weed growth, reducing biomass in fire prone areas, improving soil fertility and nutrient cycling, increasing pasture or forest biodiversity and to maintain historic landscapes, etc. It also includes the possibility of keeping animals in cattle sheds.

o *Weed Control*: following grazing applications, manual or mechanical weed control measure should be taken to maintain pasture productivity. These could necessitate the purchase of specialised machinery (tractors, brushcutters, tractor implements), manual tools, specialized clothing and gear and other supporting materials.

o *Pasture fertility works and seeding/planting*: although the improved grazing rotations will more effectively distribute manure and urine across the pasture surface, there will most likely be key areas which have been poorly managed and are in need of restoration works. This could include soil preparation works (ripping, ploughing, raking), seeding with local or improved pasture species, organic fertilizers and soil amendment applications, irrigation, etc. Seeding or planting of key native or forage species could also form part of this approach to build a stable and high quality base for feed.

o *Earthworks and water harvesting*: focused earthworks and water harvesting structures can greatly improve water capture, retention and distribution through the grazing space. They often require heavy machinery, water distribution and storage infrastructure and fencing if animals are to be excluded from the area. These works can and most likely should include roadwork to improve access and movement of goods.

o *Creation of wetlands and other diverse landscape areas as pasture support components*: Pasturelands cannot always provide adequate forage in times of drought, and backup measures should be incorporated into the grazing landscape. This requires certain areas, often marginal lands or boundaries, be planted with deep rooting shrubs and trees that can be cut as green feed in time of emergency. Trees can also be used as windbreaks, to create calm, sheltered areas for lambing or calving, woodlots, wildlife corridors, etc.

? Demonstration of sustainable forest management practices within the ILM plans, which will also ensure equitable access to forest resources. This activity will be implemented jointly with the FAO/GCF project in Lori and Syunik that will provide co-financing to establishment of tree nurseries, investments in sustainable and climate adaptive silviculture approaches and practices, and restoration of forest land within the selected landscapes.

? Demonstration of sustainable agricultural practices, including dairy production from integrated crop-livestock systems, efficient water usage technologies such as drip irrigation of organic non-traditional vegetables close to homesteads, and production of berries and fruits, such as raspberries, blackberries, apple, pear and plum (linked to strengthening of agricultural value chains under 2.2). These practices will be gender-responsive in that they will bring benefits to women as well as men and be feasible for women as well as men to implement after the Project ends.

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Output 2.1.3. Resource mobilization plans developed for scaling up of best practices that incorporate National and target regions Government and contributions from donors. The resource mobilization plans will prioritize approaches that benefit/are accessible by women as well as men, and organizations known to prioritize gender equity will be approached. Activities include:

? Identification of possible sources of financing for scaling up of SLM to achieve LDN at sub-national level, including in-kind contributions from communities, cooperatives, private sector, etc. Special efforts to identify women-specific support will be sought e.g. local development plans with budgets for gender equality.

? Identification of national level LDN financing including from line ministries, donors, climate finance, private sector, etc. Organizations known to prioritize gender equity e.g. Austrian Development Agency, ADB, USAID, Green Climate Fund etc. will be prioritized.

? Development of resource mobilization plans at national and sub-national level to scale up LDN will prioritize approaches that benefit/are accessible by women as well as men.

Outcome 2.2. Key land-based value-chains strengthened and made more resilient and equitable. Creating and/or moving up high-value agricultural chains and staying competitive in local, regional and global markets is one of the priorities of the Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of the Republic of Armenia for 2020-2030[8][8]. Agricultural trade and sustainable value chains plays a crucial role for the overall economic development and reduction of food insecurity, as well as for increasing rural incomes and decreasing rural poverty. This outcome will be based on application of number of tools for value-chain analysis and mapping (Table 4) to further narrow down the preliminary selection of value chains undertaken in the project preparation phase (see 2.2.1):

Table 4. Value chain analysis tools.

	Tools		**Outcomes**

1.	Chain mapping		Chain structure, stage of maturity (new or existing) context, orientation/exposure to the chain
2.	Chain market mapping		Relative power balances in the chain; enabling environment; business and extension services; the information required for fieldwork/ interviews/ surveys
3.	Interview of chain actors		Chain actors? data
4.	Screening at chain actor level		Critical issues at chain actor level
5.	Screening at chain level		Critical issues at chain level
6.	Identification of performance indicators and performance targets		Strategic needs for improving chain performance

Source: PPG report on value-chain development, based on data from Attaie and Fourcadet 2003, Hellin and Meijer 2006[9][9].

As the Armenian National Agrarian University plays a key role in training both public and private extension agents, three university Curricula will be modified to include relevant LDN topics, leading to 350 training certificates obtained (disaggregated by gender and youth), and 2,500 direct target beneficiaries (households) benefit from improved advice on value-chains. The outcome will be achieved through two outputs:

-

2.2.1. Life Cycle Assessment of the land-based value chains. Based on consultations with key stakeholders, a preliminary selection of value chains was undertaken during project preparation based on factors such as gender, environmental impact, job creation potential, market demand, value-addition potential and food security and nutrition co-benefits. The value chains selected for Lory and Syunik districts are summarized in Table 5.

Table 5. Selected value chains for Lori and Syunik marzes made in the PPG phase.

Lori marz	**Syunik marz**

1. Dairy products development under proper land and production management practices are introduced	1. Dairy production development
2. Tree and seedling production	2. Honey
3. Organic non-traditional vegetables	3. Berry and fruit production (fresh and dried), except for Gorayq community
4. Honey (pine pollen)	

Dairy products development was considered important in both districts, as it is the main occupation of the majority of households in rural areas and it has the potential to create additional employment, mainly for women and stabilize household income. In Lori, tree and seedling production can also create new employment opportunities for women as well as youth and support new programmes on forest restoration. Honey production from pine pollen can be considered an alternative traditional employment opportunity in both districts. Lori is already considered to be a leader in organic crop products and strengthening of this value chain, especially for non-traditional vegetables, can contribute to increase of sales opportunities in both domestic and export markets. In Syunik in the Sisian community, the climatic conditions are favorable for increasing cultivation and production of nut-stone fruits (apple, pear, plum), as well as various berries (raspberries, blackberries, etc.), as an alternative to field crops. This value chain can increase the employment opportunities for rural households and ensuring sustainable income, especially of the youth and women. After the final selection, at least two VCs will be strengthened through LDN principles and at least one will be focused on women and the other VC will also be gender responsive.

Activities to further analyse these value chains include:

Chain mapping, chain market mapping, screening at chain-actor level, screening at chain level, identification of performance indicators and performance targets (see Table 4 above).

? Selection of value chains based on environmental and socio-economic sustainability criteria informed by Annex 3 (gender-responsive VC selection criteria) in the Project GAP, and ADA mapping under EU GAIA project[10][10] (done in PPG phase).

? Social life cycle assessments (SLCAs) and life cycle sustainability assessments (LCSAs) of the selected value chains conducted including land use and gender-responsive indicators based on FAO guidelines[11][11] and gender dimensions of a mapping supported by the European Commission[12][12].

? Development of business plans for the selected value chains, including mapping of financial institutes/ donor-supported credit schemes that work for women (e.g. require little collateral or at least do not require that they own land).

COVID-19 implications for women and men will be explicitly addressed in the value chain analysis.

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2.2.2. Training programs on value-chains management (e.g. marketing, processing, and certification) for local communities extension services, farmers, women groups, and youth. This involves training and information on improving and developing gender-responsive value chains based on animal husbandry (milk intake and processing) and other land-based activities in the communities. It also involves training on new business models and identification of co-financing investments to expand the services of community farmers with natural or legal status (leading individual farmers, cooperatives, associations, women groups) in the field of milk production, processing (cheese production), improving production quality, and increasing market access for small farms. Activities include:

? Modification of 3 curricula of the Armenian National Agrarian University to include relevant LDN topics and gender dimensions of LDN and agricultural VCs.

? Training of the extension service (350 officers, 50% women) in new business models, as well as marketing, processing and certification of selected value chains.

? Training of local communities in business management, marketing, processing and certification of selected value chains. Topics could also include how to work in groups or mutual benefits and how to manage contract farming benefiting 2,500 people (50% women).

? Training targeting women and youth (1,750 people) on business management, marketing, processing and certification of selected value chains. Training session on equitable decision-making with women and main adult male (if any) in women-focussed VC to focus on benefits to the whole household if women are allowed to decide how profits are spent/ how to run the business and emphasise that this still allows for joint discussions.

Component 3. Monitoring, Evaluation and lessons learned

This component is supporting learning and scaling up of the project experiences and the LDN approach in Armenia through establishment of a robust project monitoring and evaluation system, and collection and analysis of lessons learned that will feed into the project learning cycle (Figure 7). This will be achieved through two outcomes with associated outputs and activities that will ensure monitoring of project progress, as well as global environmental benefits and co-benefits disaggregated by gender generated by the project that will support the achievement of LDN. It will also ensure dissemination of lessons learned and LDN knowledge to support replication of best practices and scaling up of LDN beyond the two pilot districts. This component will also contribute to the FAO and GEF portfolio monitoring in order to identify lessons learned and enable continuous learning from assessment of LDN and SLM demonstration activities on the ground. This will inform adaptive management and improvement of the LDN monitoring tools and methodologies as well as GEF?s SLM portfolio monitoring.

[1]https://www.sciencedirect.com/science/article/abs/pii/S1462901118305768

[2] FAO. 2011. Land degradation assessment in drylands: mapping land use systems at global and regional scales for land degradation assessment analysis. Version 1.1. Rome (also available at: www.fao.org/docrep/017/i3242e/i3242e.pdf);

FAO. 2013. Land degradation assessment in drylands: methodology and results. Rome (also available at: www.fao.org/3/a-i3241e.pdf).

[3] Sims et al. 2017, Good Practice Guidance SDG Indicator 15.3.1 Proportion of land that is degraded over total land area; Sims et al. 2020, A land degradation interpretation matrix for reporting on UN SDG indicator 15.3.1 and land degradation neutrality, Environmental Science & Policy, Volume 114, December 2020, Pages 1-6

[4] UN Women, Global Mechanism of The UNCCD and IUCN. 2019. A Manual For Gender-Responsive Land Degradation Neutrality Transformative Projects and Programmes.

[5] Gender-responsive extension services are fundamental for behaviour chnage toward equitable LDN, as highlighted in UNCCD gender/ LDN manual, yet according to FAO ((2017) ?women have unsatisfactory access to technical knowledge on agriculture, and face barriers to accessing information, extension services and training?.

[6] FAO, 2019. The Sustainable Land Management Mainstreaming Tool; Bastidas, Soleded; FAO, Rome, 2019.

[7] Liniger, H., Harari, N., van Lynden, G., Fleiner, R., de Leeuw, J., Bai, Z., & Critchley, W. (2019). Achieving land degradation neutrality: The role of SLM knowledge in evidence-based decision-making. Environmental Science & Policy, 94: 123?134. doi:10.1016/j.envsci.2019.01.001

[8] Ministry of Economy (MoE). Summary of the Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of the Republic of Armenia for 2020-2030. Available at: https://mineconomy.am/en/page/1467

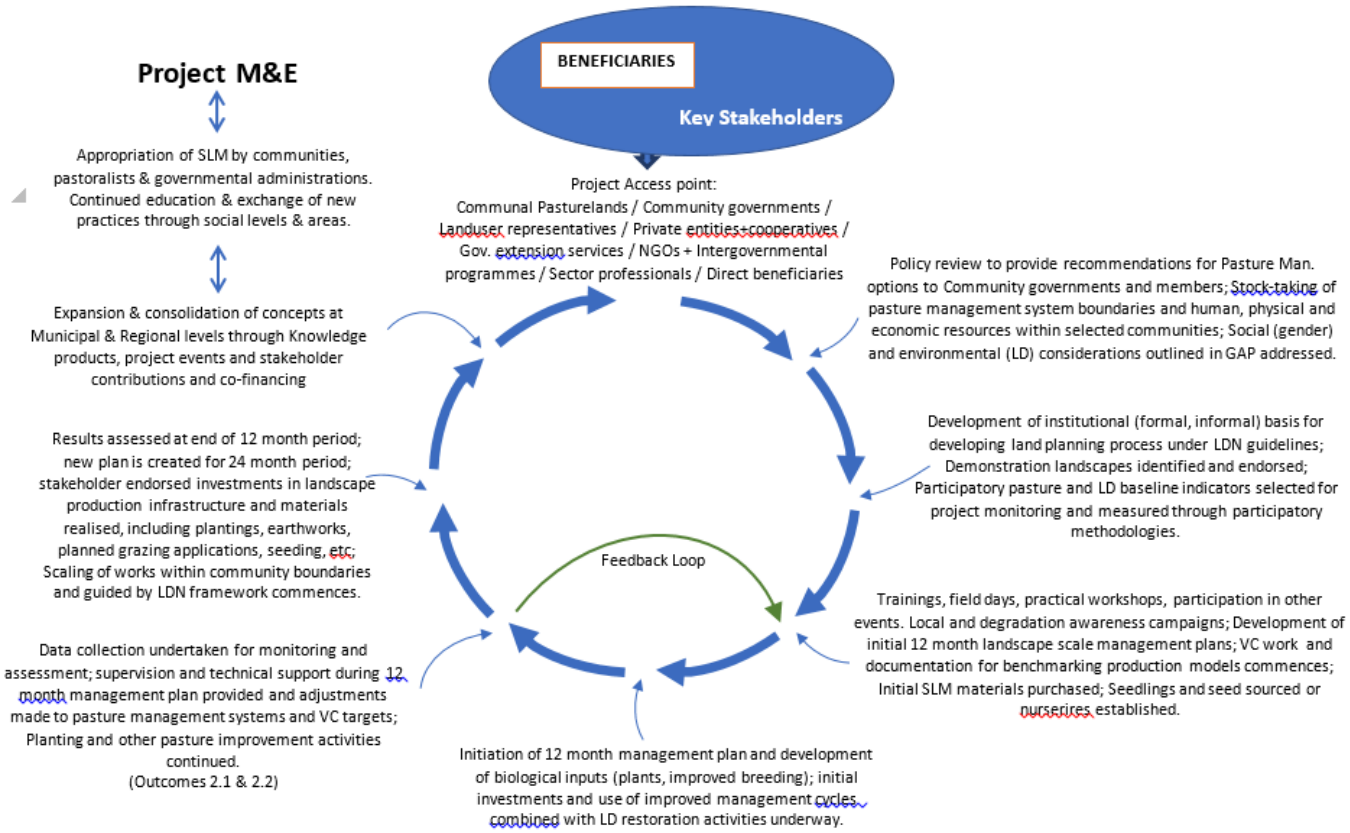
[9] Attaie, H. and O. Fourcadet. 2003. Guidelines for Value Chain Analysis in the Agri-Food Sector of Transitional and Developing Economies. FAO Agricultural Support System Division. Available at: http://www.fao.org/tempref/AG/Reserved/PPLPF/Docs/Reports%20&%20Papers/GUI_MT_GL_JO_04_Value%20Chain%20Analysis_ESSEC.pdf;

Hellin, J. and M. Meijer. 2006. Guidelines for value chain analysis, November 2006. URL: http://www.fao.org/fileadmin/templates/esa/LISFAME/Documents/Ecuador/value_chain_methodology_EN.pdf

[10] Austrian Development Agency. 2020. Market and Feasibility Study to select Value Chains.Final Report.

[11] FAO. 2018. Developing gender-sensitive value chains: Guidelines for practitioners.

[12] Austrian Development Agency. 2020. Market and Feasibility Study to select Value Chains.Final Report.



Outcome 3.1. Project monitoring and evaluation, and monitoring and assessment of global environmental benefits and LDN. This outcome includes a functioning project M&E system, monitoring, and assessment of global environmental benefits and co-benefits disaggregated by gender that will be generated by the project. It will also include a mid-term and final evaluation, and LDN reporting to the UNCCD and be generated by three outputs:

-

Output 3.1.1 Project mid-term and final evaluation conducted. A mid-term evaluation will be carried out with field visits to selected sites and consultation with local stakeholders and national project partners. A final evaluation will also be conducted and will include review of project reports, web-based information, and field visits to selected project sites, with recommendations for ensuring sustainability of Project outcomes and the LDN system. Both evaluations will be carried out by teams that include gender expertise. Activities include:

? Project mid-term evaluation with a section reporting on the implementation of the Gender Action Plan (GAP) of the project.

? Project final evaluation with a section reporting on the implementation of the Gender Action Plan (GAP) of the project.

-

Output 3.1.2 Global Environment Benefits, co-benefits and costs of SLM in degraded landscapes monitored and assessed using gender disaggregated data. A Project M&E system will be established to measure project progress and impacts in terms of multiple global environmental benefits (GEBs), and social and economic benefits. Baseline and targets for project indicators will be refined and used for monitoring project progress and impacts and reporting through 3 annual project reports (PIRS) submitted to GEF Secretariat and 6 half-yearly project progress reports submitted by the PCU to the LTU and FAO/GEF unit. Activities include:

? Monitoring of GEBs, including area under SLM and carbon benefits.

? Monitoring of socio-economic benefits using gender disaggregated data.

? Assessment of GEBs and co-benefits disaggregated by gender for reporting to the GEF and for the mid-term and final evaluations.

-

Output 3.1.3. Monitoring system for LDN indicators (land cover, soil productivity and soil organic carbon) in place. Activities include:

? Harmonisation and digitization of land cover data together with the Ministry of Economy and the Land Cadastre.

? Harmonisation of land productivity monitoring using remote sensing (NDVI) and national data on soil fertility.

? Soil organic carbon monitoring at agricultural experimental stations digitized.

? Monitoring system established under the auspices of the Ministry of Environment.

Outcome 3.2. Lessons learned and dissemination of knowledge to support scaling up of LDN. 10 gender sensititve knowledge products and training/awareness raising materials on SLM and LDN (50% tailored to women) will support the dissemination of knowledge and scaling up of SLM to other landscapes and districts/marzes in Armenia. The national LDN coordination mechanism linked to the UNCCD will play a key role in this regard. Two outputs will generate this outcome:

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Output 3.2.1. Communication strategy developed and implemented to support SLM scaling up to meet LDN targets. The project will prepare a gender responsive communication and outreach strategy to support the dissemination of it results and lessons. Activities include:

? Development of gender responsive communication strategy in consultation with key line ministries and stakeholders.

? Adoption of the communication strategy by the national LDN coordination mechanism that will be established under outcome 1.1.

? Public awareness raising campaign to reach all project direct and indirect beneficiaries.

? At least 10 informational events and media outreach activities organized.

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Output 3.2.2. Lessons analysed and knowledge management products developed and disseminated to promote replication of the LDN approach. Gender sensitive knowledge and communication products will be developed on SLM and value-chain management that can be applied to achieve LDN at sub-national and national level in Armenia. A national LDN guideline will also be published that describes how LDN should be measured at different scales and how gains and losses could be balanced from the micro-basin, basin, landscape and up to the national scale. Activities include:

? Development of a national LDN guideline and fact sheets on how to balance degradation with restoration. Project to produce gender-focused products and feed into others so that they are not gender blind, including country-specific examples and to be informed by UCCD gender/ LDN manual and *One UN Climate Change Learning Partnership* (UN CC:Learn) module on Gender and LD.

? Other gender-focussed knowledge management products to be developed include:
o Training module incorporating both of the above and targeting *stakeholders*, to be produced as a two-hour Powerpoint presentation, including exercises for self-reflection by participants.

o Two products *targeting male and female farmers*, using easily accessible format and channels targeting women. Produced in time for Project outreach.

o ?Gender-responsive SLM approaches for LDN targets in Armenia: options that work for women and men?, targeting *policymakers*/*stakeholders* and produced towards Project end so as to build in experiences. Project to contribute to relevant databases e.g. WOCAT so as to inform future interventions in Armenia.

? ?Gender-responsive value chains for LDN targets in Armenia? (including mapping, selection, implementation and results), targeting *policymakers*/*stakeholders* and produced towards Project end so as to build in experiences. Project to contribute to relevant databases e.g. WOCAT so as to inform future interventions in Armenia.

1) **Alignment with GEF focal area and/or Impact Program strategies;**

The project will contribute to the Land Degradation focal area objective one to Support on-the-ground implementation of SLM activities to achieve LDN and its priority LD-1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management, and LD-1-4 on Reduce pressures on natural resources from competing land uses and increase resilience in the wider landscape. This will be achieved through Project Component 2 on Scaling up of resilient SLM practices and approaches to meet LDN targets in two degraded landscapes in Armenia ? Lori and Syunik. The project will also contribute to GEF LD objective 2 on Creating and enabling environment to support voluntary LDN target implementation and its priority LD-2-5 on Create enabling environments to support scaling up and mainstreaming of SLM and LDN through Component 1 on Strengthened enabling environment and capacity at national level for evidence-based implementation of LDN.

2) **Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;**

The alternative scenario with GEF funding will lead to strengthened capacities to achieve LDN in Armenia thanks to strengthened intersectoral coordination on land-related issues and improved monitoring systems that improve decision-making. It will also lead to restoration of selected landscapes where degradation of pastures, grasslands and forests will be balanced with restoration to achieve a positive net balance at the landscape scale and contribute to improved livelihoods and socio-economic well-being of target communities. GEF incremental support will help introduce resilient and sustainable management of pastures, while forest restoration will be co-funded by a GCF project. This will help to will improve ground cover and productivity while enhancing carbon stocks in landscapes amounting to 32,274,507 tCO2-eq., while improving selected value-chains that will contribute to increased income generation opportunities and job creation for women as well as men. With the GEF funding, this project will therefore address key issues related to land degradation, such as soil erosion and loss of land productivity, through improved pasture management (GEF) and forest restoration (GCF). GEF-funded interventions will build on a solid baseline and consolidate ongoing projects funded by GCF, GIZ, FAO and others, and government efforts to strengthen overall capacities to achive LDN. Moreover, GEF support will allow identification and promotion of good sustainable land management practices including rotation of pastures, and other value chains, which will help boost soil quality and land productivity, while conserving and enhancing carbon stocks in line with LDN targets. Without the GEF resources, the observed land degradation trends, lack of intersectoral institutional frameworks and policies, and unsustainable land management practicies, will lead to further loss of ecosystem services and global environmental goods and loss of socio-economic opportunities for local communities and the nation at large.

3) **Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);**

The project will seek to support the development of sustainable integrated landscapes to generate Global Environmental Benefits (GEBs) through building resilient landscapes that contribute to LDN targets in the Lori and Siunik mosaic landscapes that are dominated by grasslands and forests. The proposed project is expected to contribute to the global environment by (i) restoring 4,000 ha of degraded grasslands; (ii) restoring 7,300 ha of forest lands (through co-financing); (iii) bringing 166,000 ha under SLM practices in target regions (of which: 110,000 ha forests; 50,000 ha grasslands; 6,000 ha croplands); (iv) sequestration of 32,274,507 tCO2-eq. The project will also increase the sustainability and resilience of agriculture value chains (e.g. dairy products, honey, organic vegetables, berries and fruit) and generate socio-economic co-benefits for 2,500 beneficiaries in Lori and Syunik. Value chains will be further analysed and selected in collaboration with local stakeholders in the project inception phase.

4) **Innovativeness, sustainability, potential for scaling up and capacity development[1] . ?**

Innovation

Landscapes in Armenia are comprised of various land cover and use types, while their management is compartmentalized in various ministries and at various levels of administration. The introduction of the integrated landscape approach to balancing gains and losses in landscapes is new to Armenia and requires innovative ways of introducing close intersectoral collaboration. The existing GCF project in Armenia will focus strictly on the mitigation and adaptation benefits in the forestry sector, while the GEF project will target SLM and restoration of the grasslands/pasturelands and croplands. Bringing the two projects together under an integrated landscape approach will bridge the fragmented approaches to management of natural resources. Grasslands and forestlands are featured prominently in Armenia?s LDN report (3 out of 4 goals). Thus, with strong co-financing from the GCF and technical integration

at the landscape level, the GEF incremental financing unlocks possible implementation of multiple goals of the LDN strategy.

In addition, this project design has followed the checklist for Land Degradation Neutrality (LDN) Transformative Projects and Programmes (TPP), assuring consistency and completeness in the implementation of LDN, and positive transformative change in support of LDN. An innovation in this respect is to establish ?LDN learning landscapes? for demonstration and scaling up of SLM.

Sustainability

The LDN approach will be integrated into national policies and programmes as well as monitoring systems that will ensure its sustainability from an institutional perspective. Capacity development and training of decision-makers as well as technical staff will further support the sustainability of LDN in Armenia and be supported by strengthened capacities also at the sub-national level of extension staff and local communities. In addition, the project will be anchored in innovative measures (such as community-based management, pasture management approaches and technologies, landscape approach, and strengthening of value chains) for the restoration of degraded landscapes in selected areas. The project will support cooperation and collaboration among different sectors and existing stakeholders, and will increase the national capacity in addressing land degradation and planning for LDN. These two features will support the sustainability of the project promoting ownership of the results and benefits generated

Scaling up

Scaling up of LDN on the ground in Armenia will be supported by analysis of lessons learned from implementation of SLM and dissemination of knowledge products and training manuals on LDN following the learning cycle that will be implemented under Component 3 (Figure 5). Scaling up of SLM to achieve LDN will also be supported by a strengthened policy framework and new laws and regulations supporting the implementation of the Land Code as well as the DSS that will be established for LDN. Mainstreaming of LDN into the forestry and the agricultural sector can also unlock more financing to LDN from the public as well as the private sector.

5) Summary of changes in alignment with the project design with the original PIF

Output 2.1.2. has been rephrased to ??LDN learning landscapes? established with SLM best practices and integrated restoration of landscapes that provide carbon benefits? from ?Demonstration plots established with SLM best practices and integrated restoration of landscapes that provide carbon benefits? to better link to the learning objectives of this outputs and to Component 3 on Monitoring, evaluation and lessons learned .

[1] System-wide capacity development (CD) is essential to achieve more sustainable, country-driven and transformational results at scale as deepening country ownership, commitment and mutually accountability. Incorporating system-wide CD means empowering people, strengthening organizations and institutions as well as enhancing the enabling policy environment interdependently and based on inclusive assessment of country needs and priorities.

? Country ownership, commitment and mutual accountability: Explain how the policy environment and the capacities of organizations, institutions and individuals involved will contribute to an enabling environment to achieve sustainable change

? Based on a participatory capacity assessment across people, organizations, institutions and the enabling polivy environment, describe what system-wide capacities are likely to exist (within project, project partners and project context) to implement the project and contribute to effective management for results and mitigation of risks.

? Describe the project?s exit / sustainability strategy and related handover mechanism as appropriate.

1b. Project Map and Coordinates

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

The coordinates of the pilot communities in Lori and Syunik districts are provided in Figure 8 below. Detailed district-level assessments of land degradation and SLM are found in the attached PPG reports.

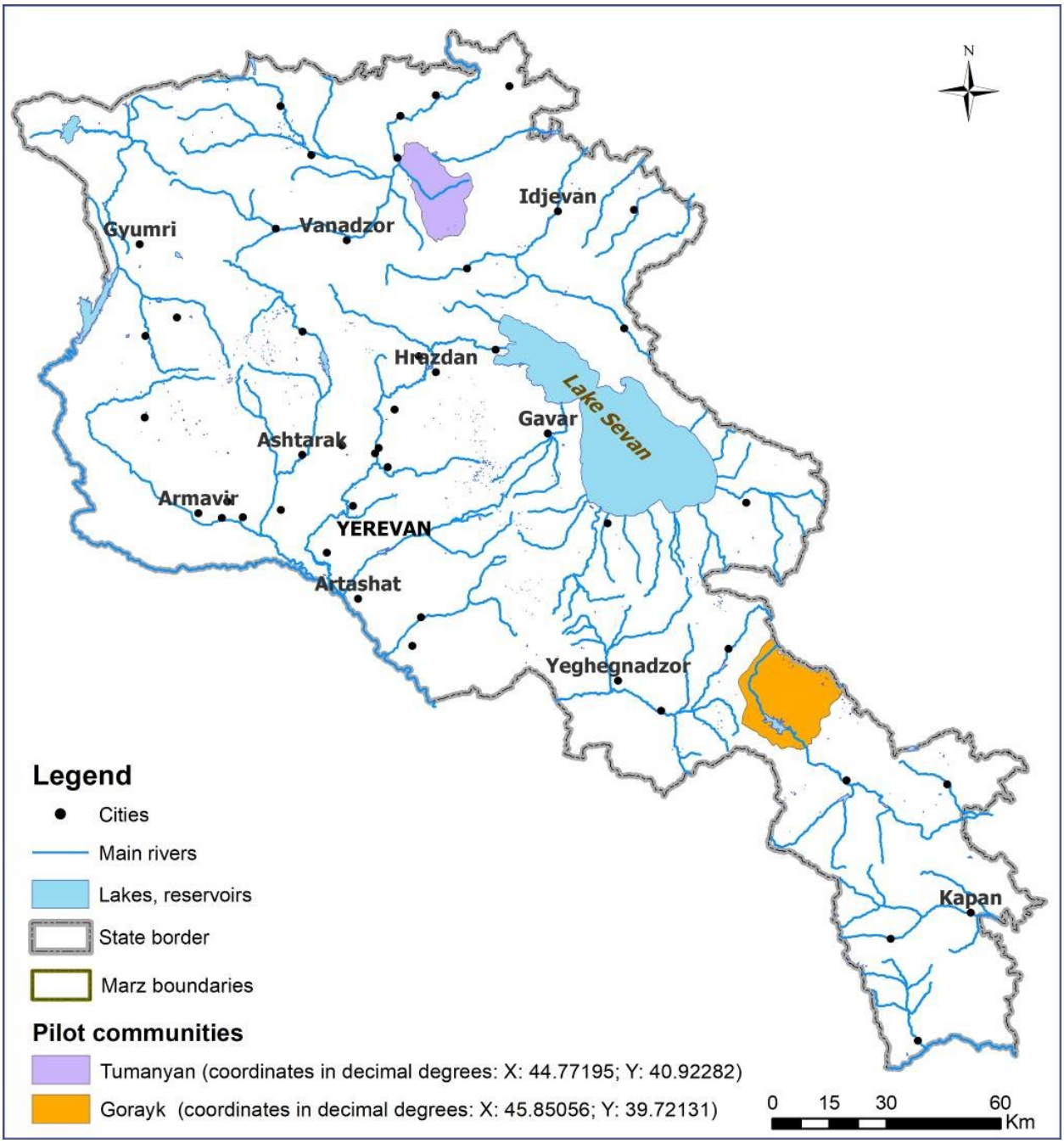

Figure 8. Location and coordinates of pilot communities in Lori and Syunik districts.

In Lori marz, the pasture vegetation is mainly composed of meadow grasses, legumes, and versigrass species. In the pastures of the subalpine and alpine zones, there are species of sedges. In the rural areas of the region, the main economic activity is cattle breeding and crop cultivation. This is combined with fruit production and horticulture in the lower, flatter areas. Livestock derived products are the principal source of income, with dairy and meat operations based on native pastures predominantly. In recent years, large livestock farms have been formed in the region, but it should be noted that the share of small household production (70-75%) still plays a decisive role in the share of livestock production.

For a period of 190-220 days a year, cattle are fed in pasture areas. Due to the location of the pastures and the relief of the region, mainly the dual-zone pasture behavior operates in the rural communities.

The difficult access to remote pastures due to technical, economic, and social problems, as well as the lack of infrastructure, the use of long-distance pastures is carried out in part, mainly by large farms that have sufficient resources. Long-distance farming is partially organized for small farms, when farms combine up to 100-150 head of cattle, forming herds to move to distant pastures. It is quite a serious problem for livestock farmers to store enough quality fodder for the winter nursery period, as no more than 50% of arable land is currently cultivated in the region (Table 6), in which case the share of fodder crops in the field does not exceed 28-35 %.

Table 6. Land Cover class area and degradation per class for Lori Region.

	Total Area, ha	Percentage of Total Area	Degraded	Percentage Degraded	Stable	Percentage Stable	Improved	Percentage Improved
Tree-covered	99,345.73	26.13	7,018.81	7.07	53,946.64	54.30	38,380.28	38.63
Grassland	182,846.13	48.09	28,655.49	15.67	117,768.71	64.41	36,421.93	19.92
Cropland	91,975.42	24.19	13,518.74	14.70	58,677.92	63.80	19,778.76	21.50
Artificial	5,322.69	1.40	1,043.34	19.60	703.00	13.21	3,576.36	67.19
Other land	663.94	0.17	50.21	7.56	368.24	55.46	245.49	36.97
Water Body	55.79	0.01	22.32	40.00	27.90	50.00	5.58	10.00
Total	380,209.71		50,308.91		231,492.40		98,408.40	

In the Syunik region, the use of remote pastures by small farms is partially implemented, the main reason for which is technical and economic problems. Due to this problem, the majority of livestock in rural communities graze in the pastures of the rural areas throughout the pastoral period. As a result, degradation is quite high in the pastures of the surrounding communities. The natural productivity of the pastures is not high, and the qualitative composition of the vegetation is quite low, which when properly addressed will lead toreduced and insuficient animal nutrition and production. The main reasons for the degradation of community pastures are mostly due to improper management. This problem is aumented by the low socio-economic level of households in the communities, as well as the application of traditional customs in the pasture period and pasture use. The continuous use of pastures in this way deepens the degradation over the years. Therefore, in the rugged and steep landscapes of this region, quite serious preconditions can be formed for the development of soil erosion and desertification phenomena. According to the monitoring results carried out in recent years, about 70-72% of the pastures of the Syunik region are degraded to different degrees (Table 7).

Table 7. Land Cover class area and degradation per class for Lori Region.

	Total Area ha	Percentage of Total Area	Degraded	Percentage Degraded	Stable	Percentage Stable	Improved	Percentage Improved
Tree-covered	114,666.60	25.59	4,368.62	3.81	65,970.12	57.53	44,327.86	38.66
Grassland	232,574.79	51.91	18,367.19	7.90	129,150.56	55.53	85,057.04	36.57
Cropland	93,253.09	20.81	7,732.97	8.29	46,749.29	50.13	38,770.83	41.58
Artificial	401.71	0.09	106.01	26.39	66.95	16.67	228.75	56.94
Other land	6,823.53	1.52	853.64	12.51	2,778.51	40.72	3,191.38	46.77
Water Body	318.02	0.07	33.48	10.53	150.64	47.37	133.90	42.11
Total	448,037.75		31,461.90		244,866.08		171,709.77	

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement. Please identify disadvantaged or vulnerable groups/individuals that may be affected by the project for appropriate consideration in the stakeholder engagement plan and in the risk matrix or environmental and social management plan.

Stakeholder engagement processes started at the phase of project identification. National and local stakeholders have already participated in the stakeholder consultation meetings during all the phases of the project formulation. In particular, consultations were conducted with appropriate stakeholders together with the involved governmental institutions for reviewing the proposed execution arrangements and identifying opportunities for GEF financing, co-financing and partnerships. On September 12, 2019, the Ministry of Environment hosted and led a stakeholder consultation to discuss the PIF. the following institutions participated in the consultation: Ministry of Environment represented by the Deputy Minister, Biodiversity and Forestry Policy Department, Agency of Bioresources Management, Implementation Unit/Agency of Environmental projects, Forest Committee, Forest Monitoring Center; Ministry of Territorial Administration, Ministry of Economy (former Agriculture), Cadaster Committee, and the Armenian National Agrarian University. Local Governments were represented by Lori Region Local Government, Shirak Region Local Government, Aragatsotn Region Local Government, Syunik Region Local Government, and Kotayk Region Local Government. The consultations resulted in the selection of final regions for the field components. The stakeholder consultation meeting had large media coverage with 23 local media news stories. As an example is one of the articles available at here: http://www.mnp.am/en/post/4177.

Moreover, during the phase of Project Preparation Grant (PPG) consultations were held with the governmental entities together with local stakeholders in the selected communities in Lori and Syunik. Taking into account the COVID-19 pandemic situation, the consultation were held both in person and online formats during summer-autumn 2020. For instance, Inception Workshop was organized on June 17, 2020 with participation of the Deputy Minister of Environment, heads of various Departments and Agencies of the Ministry of Environment, representatives of other Ministries and local governments, academic institutions, international donor organizations and FAO experts. The total number of participants reached about 50. Subsequently, four working group on-line meetings were held on various topics. Another stakeholder consultation meetings took place in September 2020 within the frameworks of the Life Cycle Assessment of the land-based value chains. Based on consultations with key stakeholders, a preliminary selection of value chains was undertaken during project preparation based on factors such as gender, environmental impact, job creation potential, market demand, value-addition potential and food security and nutrition co-benefits. The final national consultation for review and approval of the project document was organized on 29 April 2021 with participation of governmental representatives from respective ministries, agencies, local governments, research organizations and donor organizations.

In view of the current COVID-19 situation, precautionary measures will be exercised during the stakeholder consultation process to prevent infection. These may include:

? Avoiding public gatherings taking into account national restrictions, including public workshops and community meetings;

? If permitted, conduct consultations in small-group sessions, such as focus group meetings and deploy hygiene practice;

? If meetings are not permitted to conduct meetings through online channels;

? Diversify means of communication focusing more on social media and online channels;

? If stakeholders have limited access to online channels, use traditional channels of communications such as TV, newspaper, radio, phone and mail.

? All the employed channels of engagement should specify the mechanisms of receiving feedback and suggestions from stakeholders.

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Stakeholder consultations foreseen during project execution and implementation include:

Stakeholder name	Stakeholder type	Stakeholder Profile	Consultation methodology	Expected Timing
Lori and Syunik Marzpetarans representatives	Direct Beneficiary	Local Government Institution/body	Workshops & working groups; field visits	Semiannually; during field visits

Ministry of Economy representatives	Interested Party	National Government Institution/body	Workshops	Semiannually
Ministry of Territorial Administration representatives	Interested Party	National Government Institution/body	Workshops	Semiannually
Ministry of Environment representatives	Interested Party	National Government Institution/body	Workshops & working groups	Semiannually
UNCCD Focal point	Interested Party	National Government Institution/body	Workshop	Semiannually
Forest Committee representatives	Interested Party	National Government Institution/body	Workshops	Semiannually
Forest Committee representatives	Interested Party	National Government Institution/body	Workshops & working groups	Semiannually
Armenian National Agrarian University representatives	Interested Party	Academic and Research Institution	Workshops & working groups	Semiannually
State Committee of Real Estate Cadastre representatives	Interested Party	National Government Institution/body	Workshops	Semiannually
Armenian Women for Health and Healthy Environment	Interested Party	Non- Governmental Organization	Workshops & working groups	Semiannually
Armenian Young Women Association	Interested Party	Non- Governmental Organization	Workshops	Semiannually
OXFAM	Interested Party	Non- Governmental Organization	Workshops & working groups	Semiannually
World Vision	Interested Party	Non- Governmental organization	Workshops	Semiannually

Austrian Development Agency	Interested Party	International Development Organization	Workshops & working groups	Semiannually
IFAD	Interested Party	International Development Organization	Workshops	Semiannually
GIZ	Interested Party	International Development Organization	Workshops & working groups	Semiannually
World Bank	Interested Party	International Development Organization	Workshops	Semiannually
UNDP	Interested Party	International Development Organization	Workshops	Semiannually
FAO	Implementer	International Development Organization	Workshops & working groups	Semiannually
Farmers	Direct Beneficiaries	Individual entrepreneurs	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Local communities	Direct Beneficiaries	Local community	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Women groups and youth	Direct Beneficiaries	Local community	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Land-user representatives	Direct Beneficiaries	Local community	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Community governments	Direct Beneficiaries	Local community	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)

Extension services	Direct Beneficiaries	Governmental and private entities	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Private entities, and agriculture value chain actors (processors, certification bodies, traders, etc.)	Direct Beneficiaries	Private entities	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Refuges displaced to due to Nagorno-Karabakh conflict	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
People with disabilities	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Traditionally underserved and disadvantaged communities in remote boarder areas	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Female headed households	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Poor people/households	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)
Children and youth heads of households	Direct Beneficiaries	Disadvantaged or vulnerable groups or individuals	Field visits, direct communication, interviews, trainings	During project implementation, field visits (as necessary)

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Below the stakeholders which will be directly involved in ~~the~~ project implementation

Stakeholder (group)	**Mandate (or activities)**	**Potential role in Project**
Ministry of Environment	The Ministry is the focal point for UNCCD, UNFCCC and CBD, and is rresponsible for the monitoring and implementing of land degradation neutrality in Armenia..	Provide technical and logistical support for the project implementation, support the identification of demonstration sites, benefit from capacity building activities. Mainstream sustainable management and restoration of degraded grasslands landscapes into the NBSAP
Environmental Project Implementation Unit, State Agency of the Ministry of Environment	It is the agency in the Ministry of Environment responsible for liaison with government authorities from different sectors. It will oversee integration of conservation measures and monitoring system into the Integrated Forest and Land Use Plans and annual work plans, and contribute to capacity building of stakeholders (public/private/community).	Coordinate the project implementation, Liaise internal coordination among the governmental stakeholder and support the implementation of the coordination mechanisms at both national and local level
Bioresources Management Agency (Ministry of Environment)	Responsible to deliver up-to-date information on the country?s ecosystems Also responsible for preparing the NBSAP	Mainstream sustainable management and restoration of degraded grasslands landscapes into the NBSAP
Ministry of Territorial Administration and Infrastructure	It is the 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	Responsible for the coordination with Local Self-Governing Bodies (Lori, Syunik regions) and the cross-sectoral policies/legal framework supporting LDN principles implementation at national level (building on the UNCCD mechanism) and benefit from capacity building activities

Ministry of Economy (former Ministry of Agriculture)	Under the agriculture sector, it is responsible for the country agrarian policy, rural extension service and all activities related to food production, processing and value chain	Support the implementation of the activities related to agriculture, also they will be responsible for mainstreaming LDN principles in the agricultural sector and to assure that the implementation of the Strategy for Sustainable Agricultural Development will be coordinated with the project implementation. And benefit from capacity building activities
Forest Committee (Ministry of Environment)	Responsible for conservation, protection, restoration, afforestation and effective use of state forests; ensuring sustainable forest management, the implementation of measures to increase the productivity of the state forests; the protection of biodiversity of state forests; efficient use of the environmental, social and economic potential of state forests; provision of complete and reliable information on the forest lands and forests	Support the project implementation and all activities related to forest management, restauration and new practices, also the Forest Committee be involved in the policy review process and will be important stakeholder in the cross-sectoral coordination mechanism
State Committee of Real Estate Cadastre	It maintains state registry of real estate and geospatial information systems, promotes development of real estate market, as well as development and implementation of land policy.	Responsible for the implementation of the monitoring system of the LDN targets and the proposed changes in the Land Code
Armenian National Agrarian University	State university and higher educational institution based in Yerevan. The university trains and prepares specialists for the agricultural sphere.	The Agrarian University will contribute to the knowledge generation and knowledge transfer of the project including development of knowledge products and training content
Local Self-Governing Bodies (Lori and Syunik Regions)	They are responsible for the development and implementation of the Integrated Forest and Land Use Plans in each region. They also are responsible for monitoring land use practices in the areas under the jurisdiction of the self-governing bodies.	Support the cross-sectoral policies/legal framework supporting LDN principles implementation at regional level and be part of the coordination mechanisms (building on the UNCCD mechanism) between the national level and local decision makers as well as the coordination mechanism with farmer groups/extension.

Local small producers organizations	Main beneficiary of the project and involved in land use and management	Benefit from support and capacity building and targeted producers will be responsible for transforming land management systems, and adopting SLM/LDN.
Private sector actors	Promote sustainable value chains and foster innovative markets.	Responsible to support the enabling environment needed for the sustainability of the values chains

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

In Armenia, approximately 34.8 percent of employed people are involved in agriculture, of whom almost 56 percent are women (ARMSTAT, 2015b, p. 61). Livestock production is predominant in the agricultural sector, employing about 75 percent of the agricultural labour force, and utilizing about 80 percent of agricultural land (Welton, Asatryan & Jijelava, 2013). With respect to men?s employment, work in agriculture accounts for nearly 30 percent; and for women?s employment, agriculture accounts for more than 40 percent, which makes women crucial participants in agricultural development. While sex-disaggregated data on farm registration or land ownership are not available, 26.5 percent of rural households are headed by women, and in many cases this is linked with male out-migration. About 38 percent of income in rural communities in 2010 came from agriculture, with a little less than half of this generated by the sale of agricultural products. Wage employment accounted for 29 percent of rural income, 20 percent came from pensions and social payments and about nine percent came from remittances (ARMSTAT, 2015c).

Despite government efforts to achieve gender equality, rural women face several challenges including policy gaps, gender-gap earnings, gender-based segregation, gender stereotypes and rigid gender roles and decision making. The Project will build on FAO?s recent Country Gender Assessment in Armenia.[1] Women in rural areas are extensively involved in work related to the production of agricultural goods and services for the family and household use. This work includes crop production and breeding of livestock in the households? plots and family farms; production of household goods; production of food for consumption by the family and household members and for sale; fetching water and firewood; housework; looking after children, the elderly and sick members of the families. Many women are involved in unpaid and informal work. Unfortunately, even women themselves rarely consider this work because it is not paid and is considered part of their gender responsibilities. As such, their contribution to agricultural production remains invisible and under-recognized. During focus groups conducted for FAO?s Gender Assessment, women involved in unpaid or informal work identified themselves or were identified by others as ?helpers? whose work is regarded as secondary, despite the fact that it could entail longer hours in the field than men.

The Project considers gender mainstreaming as central to its successful achievement because of the reasons put forward above and in key international agreements relating to land degradation and gender equality. The Project Gender Action Plan (GAP) is informed by relevant international and national frameworks and policies related to the environment and gender equality as set out below :

Compliance with GEF Policy on Gender Equality This GAP is designed to meet the mandatory requirements of the **GEF Policy on Gender Equality (2017)[2].** This GEF policy aims to ensure equal opportunities for women and men to participate in, contribute to, and benefit from GEF-financed activities in support of the GEF?s efforts to achieve global environment benefits. Principles include requirements that **stakeholder engagement and analysis be conducted in an inclusive and gender responsive manner**, so that the rights of women and men and the different knowledge, needs, roles and interests of women and men are recognized and addressed. In addition, GEF-financed activities must be conducted, designed and implemented in an inclusive manner so that women?s participation and voice are, regardless of their background, age, race, ethnicity or religion, reflected in decision-making, and that consultations with women?s organizations, including Indigenous women and local women?s groups, are supported. Furthermore, a gender-responsive[3] approach must be applied throughout the identification, design, implementation, monitoring and evaluation of the project.

This GAP aims to ensure the Project meets these GEF requirements, specifically with regard to the GEF project and programme cycle i.e. ?*In Program Framework Documents (PFDs) and Project Identification Forms (PIFs) submitted for Work Program entry or CEO Approval, Agencies provide indicative information on Gender considerations relevant to the proposed activity, and any measures to address these, including the process to collect sex-disaggregated data and information on Gender.*? In

addition, the Project GAP sets out operational details such as responsibilities and budget considerations.

Compliance with FAO Policy on Gender (2013) The FAO is the principal Agency and the GAP also contributes to the objectives of its Policy on Gender (2013) as in Table 8 below.

Table 8. Project contribution to objectives of FAO Policy on Gender (2013).

Women participate equally with men as decision-makers in rural institutions and in shaping laws, policies and programmes.	1.1.1 Assessment of LDN policy gaps and development of cross-sectoral policies/legal framework supporting LDN principles : policy analysis and engagement to include a gender lens i.e. gender analysis, consultation with women and/ or related stakeholders and gender-responsive provisions. 1.1.2. Strengthened intersectoral coordination mechanisms at two levels: national level, and between the national level and local decision makers and farmer groups: to include representatives of women farmers and their interests.
Women and men have equal access to and control over decent employment and income, land and other productive resources.	1.1.1. Assessment of LDN policy gaps and development of cross-sectoral policies/legal framework supporting LDN principles to promote gender equitable access to land and other productive resources. 2.1.1. Integrated land-management plans developed using participatory approaches and integrated with existing Community land use planning processes to reflect priorities identified by rural women as well as men. 2.2.1. and 2.2.2 Of the two value chains improved though LDN principles, at least one is focused on women and the other will also be gender-responsive. Women to have equitable access to related training. HH level sensitization on equitable decision-making for social and economic development will help women as well as men to decide on how income is spent.
Women and men have equal access to goods and services for agricultural development, and to markets.	1.3.1 and 1.3.2. LDN capacity development to support sustainable agricultural practices for women and men: 600 people trained, of which 50% are women.
Women?s work burden is reduced by 20 percent through improved technologies, services and infrastructure.	Both to prioritze labour- and time-saving options that work for women as wll as men: 2.1.2. Demonstration plots established with SLM best practices and integrated restoration of landscapes that provide carbon benefits & 2.1.3. Resource mobilization plans developed for scaling up of best practices.

The share of total agricultural aid committed to projects related to women and gender equality is increased to 30%.	Project will track contribution of financing related to women and gender equality in Project and report on contribution to global target of 30%.

The GAP is also framed by the **FAO Regional Gender Equality Strategy for Europe and Central Asia (2019)**, which includes a focus on minimizing gender-related risks and safeguarding rural women?s rights in all actions to achieve sustainable and equitable food systems and rural development. A key risk is that women may be able to participate in value chain development but not have any voice in how to spend/ re-invest profits. For this reason, the families of women-focussed value chains will be supported in more equitable intra-household decision-making.

Compliance with gender section of FAO Environmental and Social Management guidelines (2015) This GAP is compliant with all the provisions related to gender. There is a special focus on women as the gender gap tends to disadvantage them in Armenia as in many countries. However, the role of men is also analyzed e.g. in the value chain analysis.

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[1] http://www.fao.org/3/a-i6737e.pdf

[2] Available at https://www.thegef.org/council-meeting-documents/policy-gender-equality

[3] Definitions related to gender, including gender equality, gender-responsive refer to those given in the GEF Policy on Gender (2017).

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The Project will work closely with the private sector, namely local small producers organisations, in the selected areas in Lori and Syunik to add value to their pasture, agricultural and forestry products and strengthen selected value chains and link the producers to local, regional, national and even international markets. To achieve sustainable land management, it will be important to create stable revenues from agricultural products and to introduce a sustainable supply chain. Local cooperatives and association in Lori and Syunik are being identified, including, Syunik Water Users Association, Tsghuk Community Pastures Users Association, Gorayq Community Pastures Users Association, Spandaryan Community Pastures Users Association, Syunik-Development NGO, Kapan Small Farmers Association, Khustup Environmental NGO, Meghu (Bee), Syunik Women Resource Center Network, Lori Water Users Association, Atan Community Pastures Users Association, Shamut Community Pastures Users Association, Ahnidzor Community Pastures Users Association, Lorut Community Pastures Users Association, Qaridj Community Pastures Users Association, and Bee-keepers of Lori NGO (implementing bee-keeping projects) and will be engaged in project implementation and the strengthening of selected value chains.

The Farm Credit Armenia, a credit cooperative will be involved in the project since the beginning and help the partnership with other private sectors entities. It is expected to involve Farm Credit Armenia in the strengthening of the value chains, as well as help the engagement of other SMEs as well. Also it is expect the contribution of the Federation of Agricultural Associations, a nationwide federation which will support the dialogue with private sector entities.

In addition to this, for the implementation of the ?Outcome 2.2. Key land-based value-chains strengthened and made more resilient and equitable?, value chain analysis (VCA) will be conducted. During the PPG phase, potential values chains were identified such as dairy, honey and organic non-traditional vegetables. During the Project inception phase, in-depth analysis will be conducted to select two value chains that will be strengthened by the project, including an extensive mapping process of potential private sectors to be engaged since the beginning of the project. . Socio-economic and environmental sustainability will be taken into consideration in the selection of the value chains. Small farmers association or cooperative will be strengthened through development of new business plans and training and capacity building. The project will utilize the Pasture Platform to further inform and engage the private sector to build resilient production supporting LDN..

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Table 9. Project risks and mitigation actions.

Description of risk	Impact[1]	Probability of occurance3	Mitigation actions	Responsible party
Project execution under the new government that is reviewing procedures for management of international funds	**M**	**L**	The Ministry of Environment (Executing Entity) has assured that changes will only involve the legal definition of the Project Implementation Unit and it will not change its functions or composition.	**Ministry of Environment (MoE)**
Weak cooperation between key institutional stakeholders (i.e. Environment and Agriculture sectors)	**M**	**M**	This risk will be mitigated under Component 1 of the project that will strengthen the intersectoral coordination mechanism to enhance cooperation on LDN.	**MoE, Ministry of Economy (MoEc)**
Lack of political support to LDN and SLM in the context of grasslands and pastures	**L**	**L**	Political support is high in Armenia for SLM and LDN, which is demonstrated by policy reform processes initiated both in the agriculture and forestry sector. This project will provide an opportunity to strengthen the LDN framework that requires inter-sectoral coordination and to demonstrate good practices in the field.	**MoE, MoEc**
Low technical capacity in operationalisaing LDN at national, regional and landscape level affecting project implementaiton	**L**	**L**	Capacity development for LDN will be provided under Components 1 and 2, which will mitigate the risk. Component 3 will in addition provide capacity building for replication of the LDN in other regions.	**Ministry of Territoral Administration and Infrastructure (MoTAI)**
Natural changes in agro-ecological zones due to gradual changes in climate and the incidence of extreme events	**M**	**H**	SLM practices to be demonstrated and scaled up by the project are proven to enhance resilience to climate change, such as improved grazing rotation and and multi-purpose agroforestry practices.	**MoTAI**

Lack of local stakeholder engagement and commitment to adopt SLM to achieve LDN	**L**	**L**	Implementation will be undertaken through community-based participatory approaches that address local cultural, socio-economic and ecological concerns. The project will provide incentives to farmers to engage in various activities that target LDN, involving both capacity building, awareness raising, and value chains strengthening. The local stakeholders have already participated in the stakeholder consultation meeting that took place on September 12, 2019 and have been consulted in all steps of the PPG process.	**MoEc**
Impacts of climate change and associated hazards threatens agricultural production and peoples livelihoods	**H**	**M**	The condition of the land is highly variable temporally, largely due to climate variability. Progress toward LDN will take climate change impacts into consideration in both the monitoring of drivers of LD and the implementation of SLM practices that will be selected based both on their productivity enhancing impact as well as their resilience to climate change.	**MoE**
Impact of COVID-19 causes significant economic downturn that impacts project outcomes	**M**	**M**	Globally this is a real risk for ABD conservation and can threaten landrace product value chain enhancement and this will be monitored, and adaptive management applied if necessary. The potential availability of co-financing could also be affected by changes in government fiscal priorities and exchange rates.	**MoE, Ministry of Economy (MoEc)**

Impact of COVID-19 would affect the engagement of local farmers and communities	**M**	**M**	At the national level, Government has its protocols in place for staff, and is requiring a full normal workload. Meetings are being conducted in small groups and via video. Nevertheless, response times are normal, The Ministry of Environment (MoE) is fully engaged on this proposal and is expecting FAO to move forward with the work. At the district level, precautions will be taken adhering to normal protocols established by the government	**The Ministry of Environment (MoE)**
Consequences derived from the Nagorno-Karabakh conflict and potential resurgence of conflict	**M**	**M**	**At national level** Strong focus on the recovery of the conflict and lack of capacity of the executing organization in follow up with all projects activities. During the inception phase a structured context analysis will be undertaken to inform the project?s design /implementation and identify the leading causes and drivers of localized disputes, tensions and conflicts, map local stakeholders and detail localized conflict lines and the perception of the concerned actors	
Support to COVID-19 recovery efforts in the context of this project	**L**	**L**	It is expect that the project can increase resilience of food system, strengthen a land-based value chain and generate income for local communities. This can generate a positive response to the post-COVID-19 recovery process of the targeted communities.	

[1] H: High; M: Moderate; L: Low.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

6.a Institutional arrangements for project implementation

The Ministry of Environment (MoE) will have the overall executing and technical responsibility for the project, with FAO providing oversight as GEF Agency as described below. The MoE will act as the lead executing agency and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO. As OP of the project the MoE is responsible and accountable to FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements. The project organization structure is as follows:

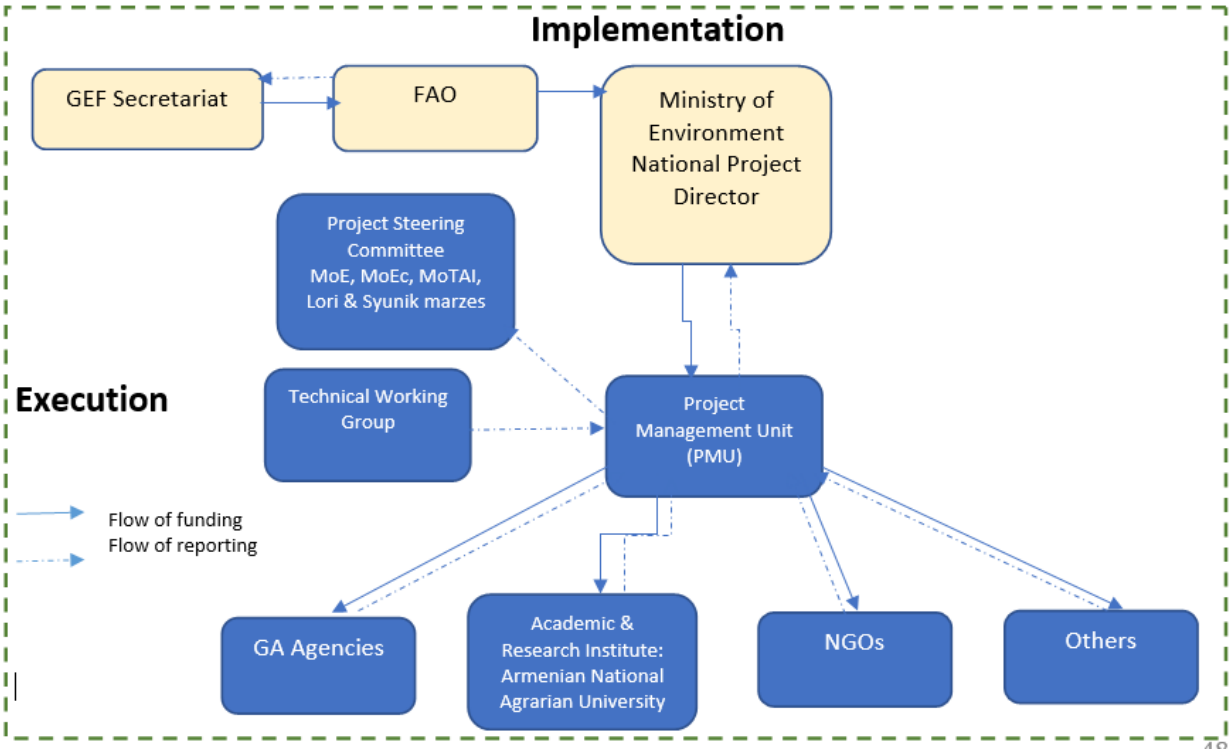

Figure 9. Project organigramme.

The government will designate a National Project Director (NPD). Located in the Ministry of Environment, the NPD will be be responsible for coordinating the activities with all the national bodies related to the different project components, as well as with the project partners. He/she will also be responsible for supervising and guiding the National Technical Chief Advisor (see below) on the government policies and priorities

The NPD (or designated person from MoE) will chair the Project Steering Committee which will be the main governing body of the project. The PSC will approve Annual Work Plans and Budgets on an yearly basis and will provide strategic guidance to the Project Management Team and to all executing partners. The PSC will be comprised of representatives from MoE, MoEc, MoTAI and the Lori and Syunik marzes. The members of the PSC will each assure the role of a Focal Point for the project in their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project; (iii) facilitate coordination and links between the project activities and the work plan of their agency; and (iv) facilitate the provision of co-financing to the project.

The National Technical Chief Advisor (see below) will be the Secretary to the PSC. The PSC will meet at least twice per year to ensure: i) Oversight and assurance of technical quality of outputs; ii) Close linkages between the project and other ongoing projects and programmes relevant to the project; iii) Timely availability and effectiveness of co-financing support; iv) Sustainability of key project outcomes, including up-scaling and replication; v) Effective coordination of government partner work under this project; vi) Approval of the six-monthly Project Progress and Financial Reports, the Annual Work Plan and Budget; vii) Making by consensus, management decisions when guidance is required by the National Technical Chief Advisor of the PMU.

A Project Management Unit (PMU) will be co-funded by the GEF and established within the Ministry of Environment. The main functions of the PMU, following the guidance of the Project Steering Committee, are to ensure overall efficient management, coordination, implementation and monitoring of the project through the effective implementation of the annual work plans and budgets (AWP/Bs). The PMU will be composed of a National Technical Chief Advisor who will work full-time for the project lifetime. In addition, the PMU will include a full-time Project Assistant and be supported by part-time national experts on M&E, policy and land tenure, SLM, value-chain development, gender analysis, and communication. Two community facilitators will be based in Lori and Siyunik, respectively.

The National Technical Chief Advisor will be in charge of daily implementation, management, administration and technical supervision of the project, on behalf of the Operational partner and within the framework delineated by the PSC. S/he will be responsible, among others, for:

i.coordination with relevant initiatives;

ii.ensuring a high level of collaboration among participating institutions and organizations at the national and local levels;

iii.ensuring compliance with all OPA provisions during the implementation, including on timely reporting and financial management;

iv.coordination and close monitoring of the implementation of project activities;

v.tracking the project?s progress and ensuring timely delivery of inputs and outputs;

vi.providing technical support and assessing the outputs of the project national consultants hired with GEF funds, as well as the products generated in the implementation of the project;

vii.approve and manage requests for provision of financial resources using provided format in OPA annexes;

viii.monitoring financial resources and accounting to ensure accuracy and reliability of financial reports;

ix.ensuring timely preparation and submission of requests for funds, financial and progress reports to FAO as per OPA reporting requirements;

x.maintaining documentation and evidence that describes the proper and prudent use of project resources as per OPA provisions, including making available this supporting documentation to FAO and designated auditors when requested;

xi.implementing and managing the project?s monitoring and communications plans;

xii.organizing project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan;

xiii.submitting the six-monthly Project Progress Reports (PPRs) with the AWP/B to the PSC and FAO;

xiv.preparing the first draft of the Project Implementation Review (PIR);

xv.supporting the organization of the mid-term and final evaluations in close coordination with the FAO Budget Holder and the GEF Unit. OED can provide support insofar as it supports other decentralized evaluations

xvi.submitting the OP six-monthly technical and financial reports to FAO and facilitate the information exchange between the OP and FAO, if needed;

xvii.inform the PSC and FAO of any delays and difficulties as they arise during the implementation to ensure timely corrective measure and support.

The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the IA role, FAO will utilize the GEF fees to deploy three different actors within the organization to support the project (see Annex J for details):

the Budget Holder, which is usually the most decentralized FAO office, will provide oversight of day to day project execution; the Lead Technical Officer(s), drawn from across FAO will provide oversight/support to the projects technical work in coordination with government representatives participating in the Project Steering Committee; the Funding Liasion Officer(s) within FAO will monitor and support the project cycle to ensure that the project is being carried out and reporting done in accordance with agreed standards and requirements.

FAO responsibilities, as GEF agency, will include:

? Administrate funds from GEF in accordance with the rules and procedures of FAO;

? Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s)and other rules and procedures of FAO;

? Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;

? Conduct at least one supervision mission per year; and

? Reporting to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress;

? Financial reporting to the GEF Trustee.

? Also, as part of the PMC costs, a Project Assistant and the National Technical Chief Advisor will be hired (ToRs available at annex M)

6.b Coordination with other relevant GEF-financed projects and other initiatives.

The proposed project will coordinate with a range of relevant initiatives and groups in Armenia to share experiences to avoid overlap and double-spending of resources for maximum synergistic impact. One of the main vehicles to share the technical knowledge and experiences related to pastures will be shared under the Pastures Platform, that is chaired by the Ministry of Environment (funded by GIZ). Relevant projects and prorammes are summarised in Table 10.

Table 10. Previous programmes and interventions related to Pasture and LD in the RoA.

#	Name of Project or Initiative	Agencies / Years of implementation	Relevant Lessons Learnt
1	?Community Agricultural Resource Management and Competitiveness (CARMAC, Second Program)?	World Bank Ministry of Economy (former Ministry of Agriculture) 2015-2022	The main objectives of the second CARMAC project are to improve the productivity and sustainability of pastures and livestock systems in the target communities and to increase the marketable products of selected livestock and high-value agri-food value chains.

2	Project ?Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation?	FAO, Ministry of Environment (8 years)	The project will invest in Lori and Syunik Regions with the highest forest degradation by: (i) increasing forest cover by 2.5%, (ii) reducing fuelwood demand of rural communities by at least 30%, (iii) enabling sustainable and climate adaptive forest management on at least 135,800 ha of forests (20 y) and ensuring technology transfer to rural communities, private sector and institutions.
3	Project ?Enhancing of Adaptive Capacity of Communities and Ecosystems Adjacent to Specially Protected Areas of Nature of Armenia?	Ministry of Environment 2019-2022	
4	Pilot project ?Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia?	UNEP Ministry of Environment 2017-2019	In August 2018, with the support of the Secretariat of the UN Convention to Combat Desertification of the Republic of Korea, a pilot project "Implementation of the Concept of Neutrality of Land Degradation in the Ararat Valley of Armenia" was launched, which is implemented by the Ministry of Environment.
5	Project ?Livestock Development in the South of Armenia?	Swiss Agency for Cooperation and Development Strategic Development Agency, in partnership with Ministry of Territorial Administration and Emergency Situations, Ministry of Agriculture 2006-2020 (four phases)	Improving the ability of female and male farmers to use new approaches and methods in farm management, strengthening and developing the capacity of meat and milk value chain participants involved in animal husbandry to provide advisory and information services. As well as by implementing separate advisory measures aimed at increasing the productivity of farms (training, exchange of experience, individual counseling, etc.).

6	Project ?Livestock Development in Armenia: South-North?	Swiss Agency for Cooperation and Development, Austrian Development Agency (ADA) Ministry of Environment 2018-2020	The long-term goal of the program is to increase incomes and reduce poverty in the target communities through sustainable development of the livestock sector and improved market access.
7	Project ?Management of natural resources and safeguarding of ecosystem services for sustainable rural development in the South Caucasus (ECOserve)?, implemented in Armenia, Azerbaijan, and Georgia.	German Federal Ministry for Economic Cooperation and Development (BMZ) GIZ with Ministry of Territorial Administration 2018-2021	The main directions of the ECOserve program in Armenia are sustainable pasture management and energy efficiency / alternative energy. The goal of the project is to apply sustainable natural resource management approaches to balance their use and conservation by promoting the protection of biodiversity and mitigation of climate change.
8	Project ? Integrated Biodiversity Management in the South Caucasus?, implemented in Armenia, Azerbaijan, and Georgia.	German Federal Ministry for Economic Cooperation and Development (BMZ) GIZ with Ministry of Territorial Administration 2015-2019	The aim of the project is to develop strategies for sustainable management of biodiversity and ecosystem services in sectoral and administrative frameworks.
9	Project ?Support Programme for Protected Areas ? Armenia (SPPA-Armenia)?	German Financial Cooperation (GFC) through KfW Development Bank Ministry of Environment 2015-2020	The primary goal of the program is to preserve the natural resources of 7 protected areas of Syunik marz of the RA and to improve the management of those areas without having a negative impact on the livelihood of the local population.

10	Project "Mapping of grassland extent, condition and biomass in Armenia"	German Federal Ministry for Economic Cooperation and Development (BMZ), ICARE foundation GIZ with Ministry of Territorial Administration 2020-2021	The project aims to map the grass-covered and non-grass-covered areas in Armenia in 2020, to assess the possibilities of these areas becoming pastures or grass-covered meadows, and to describe the condition of Armenia's grasslands and biomass productivity by mapping.
11	Project ?Establishment of land management instruments and institutional framework to address land abandonment?	FAO/ Ministry of Economy (former Ministry of Agriculture) 2019-2021	The project supports the development and operationalization of a new regulatory framework and introduction of a set of land management instruments to address the abandonment of agricultural land and improvement of farm structures. Land management instruments such as land consolidation, land banking, mediation of lease and active state land management can in some situations contribute directly to achieving the LDN objectives and targets in specific countries. This is especially the case when private owned agricultural land is affected and the land use needs to change as part of the LDN project. Furtheromre land tenure is intertwined with the LDN principles.
12	Local Empowerment of Actors for Development (LEAD) in Lori and Tavush Regions	FAO/UNDP/EU/ Ministry of Economy	The project helps the local population in Lori and Tavush to play an active role in inclusive, resilient and sustainable local development by strengthening mechanisms of partnership building, territorial cooperation, organizational and service development and creating better local governance through applying the principles and mechanisms of the EU LEADER approach. This project is relevant since it is also implemented in Lori Region and it can link broader community development efforts with the integrated land-management (ILM) plans / community land use planning in view of achiving LDN.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

There are different laws, governmental decrees and regulations that concern the problems of desertification. *The Land Code*, and supporting regulations, stiputales the responsible bodies for management of land resources. The system of the authorised bodies Ministry of Economy, Ministry of Urban Development, Ministry of Industry and Trade, Ministry Environment, Ministry of Energy and Natural Resources, Ministry of Transport and Communication, Ministry of Health, Ministry of Education, Science, and Culture, State Committee of the Real Estate Cadastre, State Property Management Department, State Committee of Water Resources) and the scope of their authorities, as well as the list of legal acts ensuring the implementation of the Land Code were established. *The Forest Code* controls the use and protection of forest land. There are several regulations related to creating the national framework on land degradation and land-related issues. Hence, the proposed project is in line and is supportive of the national strategies and priorities. In addition, the proposed project directly supports implementation of Armenia?s commitments to the UNCCD, and is strongly aligned with the priorities established under other relevant multilateral environmental agreements (MEAs) as follows:

UNCCD LDN

? The proposed project is in line with the priorities established under Armenia?s LDN Target Setting Report, that identifies the national goal as *?By the year 2040, the carbon stock lost between 2000 and 2010 will be recover and increase by 2,8% in relation to present?.* The report further identifies four targets to achive the goal, with the project directly responding to the two of them:

? <u>Stop deforestation and improve forest management in 100% of national territory by 2050.</u> Currently, the country started the work on the elaboration of new management plan for all forestry enterprises. In these plans ?High value forests? should be marked out for special conservation, fully taking into account the possible consequences of global climate change and measures will be enforced towards sustainable use of forest resources. Priority mesures: Afforestation, reforestation and improving of forest stands. Investment required: US$70 million.

? <u>Stop overgrazing and improve grassland management in 100% of national territory by 2040.</u> Priority mesures: 1) elaboration of new grazing norms and management plans for pastureland, 2) development of management plans for use of grasslands for fodder conservation and grazing. Investment required: US$20 million.

CBD National Report

? Strategic Direction 2: Enhancement of biodiversity and ecosystem conservation and restoration of degraded habitats

? National Target: To enhance conservation of biodiversity habitats with minimizing their degradation.

? Strategic Direction 4: Elimination of the main causes of biodiversity loss through regulation of intersectoral relations and public awareness raising

? National Target: To take steps aimed at introduction of mechanisms in intersectoral relations, which will exclude disturbance of ecological stability due to use of natural resources.

? Strategic Direction 5 Enhancement of scientific research, knowledge management and capacity building in the field of biodiversity conservation and sustainable use of natural resources.

UNFCCC NDC

? Land use and Forestry (afforestation, forest protection, carbon storage in soil) is among the main sectors included in the mitigation contribution. This involves ensuring ?organic carbon conservation, accumulation and storage in all categories of lands through comprehensive measures.? Water resource management and agriculture are priority sectors for the adaptation activities.

UNFCCC National Communications (NC)

? Grasslands/pastures feature prominently in NC-3. Climate change affects natural pastures and grasslands. The majority of grazing lands in Armenia have deteriorated over the last two decades as a result of irregular grazing, and a lack of control and improvement measures. Pastures around settlements were subjected to intense overgrazing, the while productivity of remote pastures decreased as a result of underuse. The forecasted affects of climate change will have a further adverse impact on natural grasslands and grazing land. As a result of shifts in natural zones, the areas of more valuable alpine and sub-alpine grazing land will be reduced by 19 and 22% respectively, while semi-desert and meadow-steppe areas will increase by 17%, and grazing land with relatively low productivity by 23%.

? Climate change also impact livestock production directly (thrugh temperature variations on animal health) and indirectly (spread of diseases, pests, parasites, and pasture productivity decline). Climate change-related changes to natural pasture could lead to serious fluctuations in the volume of livestock products. As a result of structural changes in natural zones, milk, meat and wool production will fall. To mitigate consequences of climate change for livestock in Armenia, the preventive measures should be developed and implemented.

? Given that pastures in Armenia are under disproportional use, it will be possible to offset expected losses through increased livestock populations and fodder-crop production by implementing of activities designed to improving balanced use of pasture. In summary, the project responds to several of Armenia?s commitments to the MEAs and will thus contribute to synergies in implementation of the SDGs and Agenda 2030, especially for SDGs 2, 13 and 15.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

The project will hire a part-time communications expert and will analyse lessons learned from previous LD and SLM experiences in Armenia and elsewhere and develop a number of knowledge management products. Lessons learned from other LDN projects where FAO plays an IA role will be widely shared. Support will be provided to enhance communication and visibility of LDN at the national level through support to dissemination of best practices and lessons learnt under Component 3 and field level through support under Component 2 to demonstrations of SLM related to LDN. At the local level, community exchange visits to the ?LDN learning landscapes? will be supported through rural advisory services.

The Project M&E system will feed data and lessons into a Project learning cycle that will inform adaptive management. In addition, the communication strategy developed under Component 3 will use existing knowledge sharing platforms and technical tools, such as LADA. WOCAT, the UNCCD preferred database for SLM best practices reporting, will be used to share successful SLM measures at all levels.

Finally, additional in-depth consultations will take place during the inception phase to examine and evaluate: (i) successful knowledge management experiences in other projects, (ii) obtain current feedback from stakeholder groups and possible beneficiaries groups (iii) determine how to best link the knowledge generated by other institutions and projects to the findings of this proposal. The knowledge sharing plan is summarised below (Table 11).

Table 11. Knowledge sharing plan for the Armenia LDN project.

Deliverable	**Timeline**											
	Year 1				**Year 2**				**Year 3**			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Knowledge material on LDN												
Local communities land management practices		x	x	x	x							

Develop material to support farmers to improve land management						x	x	x				
8 case studies of SLM best practices to reduce LD and improve productivity using the WOCAT tools, at least 4 cases studies target women									x	x	x	x
Online SLM database				x	x	x						
								x	x	x		
Life Cycle Assessment and market studies of value chains conducted including gender analysis					x	x	x	x				
National Capacity building program												
Capacity Building Plan for skill enhancement on LDN monitoring and implementation		x	x	x								
Systematize and disseminate lessons learned, including gender-related experiences, from capacity-building programmes on LDN				x	x	x	x	x	x	x	x	x
Training content on land tenure and LDN, including land tenure governance, gender aspects of access to natural resources, land management instruments, VGGT and tenure security, etc.												
Assessment of the knowledge and knowledge gaps, perceptions, and awareness levels of LDN by decision-makers		x	x	x	x							
Awareness raising												

Communications Strategy development		X										
Media campaigns (at a minimum 1 update on FAO website once every quarter)			X	X	X	X	X	X	X	X	X	X
Promotion of LDN and SLM										X	X	
Sharing of project results at UNCCD COPs/relevant events								X	X			

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The project will ensure transparency in the preparation, conduct, reporting and evaluation of its activities. This includes full disclosure of all non-confidential information, and consultation with major groups and representatives of local communities. The disclosure of information shall be ensured through posting on websites and dissemination of findings through knowledge products and events. Project reports will be broadly and freely shared, and findings and lessons learned made available.

The monitoring and evaluation of progress in achieving the results and objectives of the project will be based on targets and indicators in the Project Results Framework (Annex A). Project monitoring and the evaluation activities are budgeted at **USD 147,000** (**see Table 12**). Monitoring and evaluation activities will follow FAO and GEF policies and guidelines for monitoring and evaluation. The monitoring and evaluation system will also facilitate learning and replication of the project?s results and lessons in relation to SLM and LDN.

Oversight and monitoring responsibilities.

The monitoring and evaluation roles and responsibilities specifically described in the Monitoring and Evaluation table (Table 12) will be undertaken through: (i) day-to-day monitoring and project progress supervision missions (PMU); (ii) technical monitoring of indicators to measure a reduction in land degradation and achievement of LDN (PMU and LTU in coordination with partners); and (iii) monitoring and supervision missions (FAO).

At the beginning of the implementation of the GEF project, the PMU will establish a system to monitor the project?s progress. Participatory mechanisms and methodologies to support the monitoring and evaluation of performance indicators and outputs will be developed. During the project inception workshop, the tasks of monitoring and evaluation will include: (i) presentation and explanation (if needed) of the project?s Results Framework with all project stakeholders; (ii) review of monitoring and evaluation indicators and

their baselines; (iii) preparation of draft clauses that will be required for inclusion in consultant contracts, to ensure compliance with the monitoring and evaluation reporting functions (if applicable); and (iv) clarification of the division of monitoring and evaluation tasks among the different stakeholders in the project. The project?s M&E Expert will prepare a draft monitoring and evaluation matrix that will be discussed and agreed upon by all stakeholders during the inception workshop. The M&E matrix will be a management tool for the NPC and the Project Partners to: i) six-monthly monitor the achievement of output indicators; ii) annually monitor the achievement of outcome indicators; iii) clearly define responsibilities and verification means; iv) select a method to process the indicators and data.

The **M&E Plan** will be prepared by the M&E expert together with local communities in the first three months of the PY1 and validated with the PSC. The M&E Plan will be based on the M&E summary table and the M&E Matrix and will include: i) the updated results framework, with clear indicators per year; ii) updated baseline, if needed, and selected tools for data collection (including sample definition); iii) narrative of the monitoring strategy, including roles and responsibilities for data collection and processing, reporting flows, monitoring matrix, and brief analysis of by who, when and how will each indicator be measured. Responsibility of project activities may or may not coincide with data collection responsibility; iv) updated implementation arrangements, if needed; v) inclusion of data collection and monitoring strategy to be included in the final evaluation; vi) calendar of evaluation workshops, including self-evaluation techniques.

The day-to-day monitoring of the project?s implementation will be the responsibility of the NPC and will be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project stakeholders. As tools for results-based management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output and outcome targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output and outcome targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with all stakeholders and coordinated and facilitated through project planning and progress review workshops. These contributions will be consolidated by the NPC in the draft AWP/B and the PPRs.

An annual project progress review and planning meeting should be held with the participation of the project partners to finalize the AWP/B and the PPRs. Once finalized, the AWP/B and the PPRs will be submitted to the FAO LTO for technical clearance, and to the Project Steering Committee for revision and approval. The AWP/B will be developed in a manner consistent with the Project Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

Following the approval of the Project, the PY1 AWP/B will be adjusted (either reduced or expanded in time) to synchronize it with the annual reporting calendar. In subsequent years, the AWP/Bs will follow an annual preparation and reporting cycle.

Reporting schedule

Specific reports that will be prepared under the monitoring and evaluation program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv)

Annual Project Implementation Review (PIR); (v) Technical reports; (vi) Co-financing reports; and (vii) Terminal Report. In addition, the GEF-7 Core Indicator Worksheet will be completed and will be used to compare progress of Project Core Indicator 4: ?Area of landscapes under improved practices?, as well as Project Core Indicator 11: ?Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment? with the baseline established during the preparation of the project

Project Inception Report. After FAO internal approval of the project, an inception workshop will be held. Immediately after the workshop, the NPC will prepare a project inception report in consultation with the FAO Representation in Armenia and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B and the M&E Matrix. The draft inception report will be circulated to, FAO, the PSC and for review and comments before its finalization, no later than three months after project start-up. The report will be cleared by the FAO BH, LTO and the FAO/GEF Coordination Unit. The BH will upload it in FPMIS.

Annual Work Plan and Budget(s) (AWP/Bs). The NPC will present a draft AWP/B to the PSC no later than 10 December of each year. The AWP/B should include detailed activities to be implemented by project Outcomes and Outputs and divided into monthly timeframes and targets and milestone dates for Output and Outcome indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The FAO Representation in Armenia will circulate the draft AWP/B to the steering committee and will consolidate and submit FAO comments. The AWP/B will be reviewed by the PSC and the PIU will incorporate any comments. The final AWP/B will be sent to the PSC for approval and to FAO for final no-objection. The BH will upload the AWP/Bs in FPMIS

Project Progress Reports (PPR). The PPRs are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the Project Results Framework (Annex A), AWP/B and M&E Plan. Each semester the NPC will prepare a draft PPR, and will collect and consolidate any comments from the FAO PTF. The NPC will submit the final PPRs to the FAO Representation in Armenia every six months, prior to 10 June (covering the period between January and June) and before 10 December (covering the period between July and December). The July-December report should be accompanied by the updated AWP/B for the following Project Year (PY) for review and no-objection by the FAO PTF. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR, in consultation with the PMU, LTO and the FLO. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner.

Annual Project Implementation Review (PIR). The NPC, under the supervision of the LTO and BH and in coordination with the national project partners, will prepare a draft annual PIR report covering the period July (the previous year) through June (current year) no later than July 1st every year. The LTO will finalize the PIR and will submit it to the FAO-GEF Coordination Unit for review by July 10th. The FAO-GEF Coordination Unit, the LTO, and the BH will discuss the PIR and the ratings. The LTO is responsible for conducting the final review and providing the technical clearance to the PIR(s). The LTO will submit the final version of the PIR to the FAO-GEF Coordination Unit for final approval. The FAO-GEF Coordination Unit will then submit the PIR(s) to the GEF Secretariat and the GEF Independent Evaluation Office as part of the Annual Monitoring Review of the FAO-GEF portfolio. The PIR will be uploaded to FPMIS by the FAO-GEF Coordination Unit

Technical reports. The technical reports will be prepared as part of the project outputs and will document and disseminate lessons learned. Drafts of all technical reports must be submitted by the National Technical Chief Advisor to the PSC and FAO Representation in Armenia, which in turn will be shared with the LTO for review and approval and to the FAO-GEF Coordination Unit for information and comments before finalization and publication. Copies of the technical reports will be distributed to the Liaison Committee and the PSC and other project stakeholders, as appropriate. These reports will be uploaded in FAO FPMIS by the BH.

Co-financing reports. The NPC will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all the project cofinanciers and eventual other new partners not foreseen in the Project Document. Every year, the NPC will submit the report to the FAO Representation in Armenia before July 10th covering the period July (the previous year) through June (current year). This information will be used in the PIRs.

Core Indicators worksheet. In compliance with GEF policies and procedures, at project mid-term and completion, Agencies report achieved results against the core indicators and sub-indicators used at CEO Endorsement/ Approval.

The GEF evaluation policy foresees that all medium and large size projects require a separate t**erminal evaluation**. Such evaluation provides: i) accountability on results, processes, and performance; ii) recommendations to improve the sustainability of the results achieved and iii) lessons learned as an evidence-base for decision-making to be shared with all stakeholders (government, execution agency, other national partners, the GEF and FAO) to improve the performance of future projects.

The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the ?GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects.? FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team ? in particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation, draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings.

After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within 4 weeks and share it with national partners, GEF OFP, OED and the FAO-GEF CU.

Final Report. Within two months prior to the project?s completion date, the National Technical Chief Advisor will submit to the PSC and FAO Representation in Armenia a draft final report. The main purpose

of the final report is to give guidance to authorities (ministerial or senior government level) on the policy decisions required for the follow-up of the Project, and to provide the donor with information on how the funds were utilized. Therefore, the terminal report is a concise account of the main products, results, conclusions and recommendations of the Project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to the integrated landscape management in the two pilot sites, as well as in practical execution terms. This report will specifically include the findings of the final evaluation. A project evaluation meeting will be held to discuss the draft final report with the PSC before completion by the National Technical Chief Advisor and approval by the BH, LTO, and FAO-GEF Coordination Unit

Table 12. Summary of the main monitoring and evaluation reports, parties responsible for their publication and time frames.

M&E Activity	**Responsible parties**	**Time frame/ Periodicity**	**Budget**
Inception workshop in Yerevan	PC; FAO Representation in Armenia (with support from the LTO and FAO-GEF Coordination Unit), Ministry of Environment	Within two months of project startup	USD 3,350
Inception workshops in project Municipalities	PC; FAO Representation in Armenia (with support from the LTO and FAO-GEF Coordination Unit), MoTAI	Within two months of project startup	USD 6,000
M&E Expert			USD 58,000
Project Completion Workshop	PC; FAO Representation in Armenia (with support from the LTO and FAO-GEF Coordination Unit), MoTAI	Two months prior to the end of the project	USD 4,000
Project Inception Report	Ministry of Environment, PC, M&E Expert, FAO Representation in Armenia	Immediately after the workshopds	MoE staff time
Field-based impact monitoring	PC; project partners, local organizations	Continuous	MoE staff time and FAO visits will be borne by GEF agency fees

Supervision visits and rating of progress in PPRs and PIRs	Ministry of Environment, PC; FAO-GEF Coordination Unit may participate in the visits if needed.	Annual, or as needed	FAO visits will be borne by GEF agency fees Project Coordination visits shall be borne by the project?s travel budget: USD 6,155
Project Progress Reports (PPRs)	Ministry of Environment, PC, FAO Representation in Armenia with stakeholder contributions and other participating institutions	Six-monthly	MoE and FAO staff time
Project Implementation Review (PIR)	Drafted by the PC, with the supervision of the LTO and BH. Approved and submitted to GEF by the FAO-GEF Coordination Unit	Annual	FAO staff time financed though GEF agency fees. PIU time covered by the project budget.
Co-financing reports	PC with input from other co-financiers	Annual	PC staff time
Technical reports	PC; FAO (LTO, FAO Representation in Armenia)	As needed	GEF Agency fees
Independent mid-term review	PC and PIU; FAO Representation in Armenia; FAO-GEF; FAO technical staff no participating in project implementation	Midpoint of year 2 of project	USD 35,000
Final Evaluation	The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED.	At least six months before end of project	USD 35,000
Terminal Report	PC; FAO (FAO Representation in Armenia, LTO, FAO-GEF Coordination Unit, Business Development and Resource Mobilization (PSR) Reporting Unit)	Two months prior to the end of the project.	USD 6,000
Total budget			**USD 147,350**

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

Degraded lands in Armenia, including forest land, pastures and cropland provide many important ecosystem goods and services important for food and water security as well as for conservation and recreation. These lands provide not only economic benefits, but also quality of life and heritage values cherished by many people. Global environmental benefits related to the establishment of an effective Land Degradation Neutrality system that balances gains and losses of productive land and supports resilient and productive landscapes with a mosaic of land uses and diverse livelihood opportunities will also generate socio-economic benefits for the local communities in the pilot districts of Lori and Syunik related to:

? Strengthening of value chains and improvement of market access for revenue and income generation, with improved employment opportunities for rural women and youth in particular

? Improved food, nutritional and water security for vulnerable rural households that are often headed by women, strengthening their human rights to access to food and water

? More resilient and equitable livelihoods for both women and men

? Reduced risk (natural disasters, market volatility, access to information and finance) related to investing in value-chain development, restoration and SLM on degraded lands

? Improved access to finance for smallholders and small-scale livestock owners for investing in new business plans related to restoration and SLM for achieving LDN

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Low		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Table 9. Project risks and mitigation actions.

Description of risk	Impact [1]	Probability of occurance3	Mitigation actions	Responsible party
Project execution under the new government that is reviewing procedures for management of international funds	**M**	**L**	The Ministry of Enviroment (Executing Entity) has assured that changes will only involve the legal definition of the Project Implementation Unit and it will not change its functions or composition.	**Ministry of Environment (MoE)**
Weak cooperation between key institutional stakeholders (i.e. Environment and Agriculture sectors)	**M**	**M**	This risk will be mitigated under Component 1 of the project that will strengthen the intersectoral coordination mechanism to enhance cooperation on LDN.	**MoE, Ministry of Economy (MoEc)**
Lack of political support to LDN and SLM in the context of grasslands and pastures	**L**	**L**	Political support is high in Armenia for SLM and LDN, which is demonstrated by policy reform processes initiated both in the agriculture and forestry sector. This project will provide an opportunity to strengthen the LDN framework that requires inter-sectoral coordination and to demonstrate good practices in the field.	**MoE, MoEc**
Low technical capacity in operationalisaing LDN at national, regional and landscape level affecting project implementaiton	**L**	**L**	Capacity development for LDN will be provided under Components 1 and 2, which will mitigate the risk. Component 3 will in addition provide capacity building for replication of the LDN in other regions.	**Ministry of Territoral Administration and Infrastructure (MoTAI)**

Natural changes in agro-ecological zones due to gradual changes in climate and the incidence of extreme events	**M**	**H**	SLM practices to be demonstrated and scaled up by the project are proven to enhance resilience to climate change, such as improved grazing rotation and and multi-purpose agroforestry practices.	**MoTAI**
Lack of local stakeholder engagement and commitment to adopt SLM to achieve LDN	**L**	**L**	Implementation will be undertaken through community-based participatory approaches that address local cultural, socio-economic and ecological concerns. The project will provide incentives to farmers to engage in various activities that target LDN, involving both capacity building, awareness raising, and value chains strengthening. The local stakeholders have already participated in the stakeholder consultation meeting that took place on September 12, 2019 and have been consulted in all steps of the PPG process.	**MoEc**
Impacts of climate change and associated hazards threatens agricultural production and peoples livelihoods	**H**	**M**	The condition of the land is highly variable temporally, largely due to climate variability. Progress toward LDN will take climate change impacts into consideration in both the monitoring of drivers of LD and the implementation of SLM practices that will be selected based both on their productivity enhancing impact as well as their resilience to climate change.	**MoE**
Impact of COVID-19 causes significant economic downturn that impacts project outcomes	**M**	**M**	Globally this is a real risk for ABD conservation and can threaten landrace product value chain enhancement and this will be monitored, and adaptive management applied if necessary. The potential availability of co-financing could also be affected by changes in government fiscal priorities and exchange rates.	**MoE, Ministry of Economy (MoEc)**

Impact of COVID-19 would affect the engagement of local farmers and communities	**M**	**M**	At the national level, Government has its protocols in place for staff, and is requiring a full normal workload. Meetings are being conducted in small groups and via video. Nevertheless, response times are normal, The Ministry of Environment (MoE) is fully engaged on this proposal and is expecting FAO to move forward with the work. At the district level, precautions will be taken adhering to normal protocols established by the government	**The Ministry of Environment (MoE)**
Consequences derived from the Nagorno-Karabakh conflict and potential resurgence of conflict	**M**	**M**	**At national level** Strong focus on the recovery of the conflict and lack of capacity of the executing organization in follow up with all projects activities. During the inception phase a structured context analysis will be undertaken to inform the project?s design /implementation and identify the leading causes and drivers of localized disputes, tensions and conflicts, map local stakeholders and detail localized conflict lines and the perception of the concerned actors	

Section B: Environmental and Social risks <u>from the project</u> ? ESM Plan

This section is based on the risk matrix obtained during risk screening in the concept note (in FPMIS) and based on further update and revision by the PTF under the responsibility of the LTO.

The project is classified as low risk.

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[1] H: High; M: Moderate; L: Low.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted

Title	Module	Submitted
FAO ES Screening Checklist Armenia	**CEO Endorsement ESS**	
Project Risk Certification	**CEO Endorsement ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Objective: To support the national efforts to implement the LDN targets of Armenia through sustainable land management and restoration of degraded landscapes							
Component 1: Strengthened enabling environment and capacity at national level for evidence-based implementation of Land Degradation Neutrality (LDN)							
Outcome 1.1: Enhanced enabling environment for LDN at national level	New cross-sectoral policies/laws Intersectoral coordination mechanisms for LDN	LDN principles are not part of the SLM enabling environment in Armenia	One cross-sectoral policy on LDN developed	Two cross-sectoral policies/One law integrating LDN principles Functioning intersectoral coordination mechanisms for LDN (horizontal and vertical)	Policy documents; Draft legal laws and sub-laws/regulation; Technical reports; State budget document and budgetary reports from varous stakeholders working on the national priorities Minutes from meetings of intersectoral coordination mechanisms	Strengthening of governance mechanisms and capacity for LDN have support from central government and pilot districts	Ministry of Environment

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.1.1.1: Assessment of LDN policy gaps and development of cross-sectoral policies/legal framework supporting LDN principles	LDN Policy assessment Policy framework supporting LDN	LDN has not been assessed and LDN principles are not yet integrated in the existing national legal and policy frameworks	LDN policy assessment that includes a gender lens Draft LDN cross-sectoral policy framework	LDN policy assessment that includes a gender lens LDN cross-sectoral policy framework agreed by key Government sectors and LDN principles integrated into the revised Land Code	LDN policy assessment report Technical reports from validation and stakeholder dialogue workshops Revisions of the Land Code	Strengthening policy framework for LDN has support from central government	Ministry of Environment
Output.1.1.2: Strengthened intersectoral coordination mechanisms at two levels: national level, and between the national level and local decision makers and farmer groups	Horizontal intersectoral coordination mechanism at national level Vertical intersectoral coordination mechanisms	The existing UNCCD coordination mechnism at national level is weak and does not include LDN There is no vertical coordination mechanism	Gender-balanced horizontal and vertical intersectoral coordination mechanisms at national level and sub-national levels	Gender-balanced horizontal and vertical intersectoral coordination mechanisms at national level and sub-national levels fully functioning with agreed terms of reference	Terms of references and meeting minutes from the two mechanism; padrticipants? lists	Strengthening of coordination mechanisms have support from central government and pilot districts	Ministry of Environment Ministry of Territoral Administration and Infrastructure

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Outcome 1.2: Enhanced understanding of land degradation drivers informs LDN target setting at the national and community levels	LD mapping that specify how gender differences and inequalities contribute to land degradation LDN targets set in Lori and Syunik	There is no comprehensive LD mapping available that builds on a consensus map and understanding of drivers LDN targets are only set at national level	LD trends and drivers mapped using a gender lens; LDN local baseline established and mapped	LD trends and drivers mapped using a gender lens; LDN local baseline established and mapped LDN targets established in target communities in Lori and Syunik	LD maps at different scales LDN reports from Lori and Syunik	Evidence-based information on LD and LDN is used by policy and decision makers at national and district level	Ministry of Environment
Output.1.2.1: Assessment of the current status, trends, drivers, including impacts of climate change and migration, and costs of land degradation based on existing data and information (using LADA, WOCAT, ELD)	LD assessment and cost assessment that specify how gender differences and inequalities contribute to land degradation	There is no LD assessment available that uses global standard tools, such as LADA, WOCAT and ELD	Draft LD assessment and cost assessment that specify how gender differences and inequalities contribute to land degradation	LD assessment and cost assessment that specify how gender differences and inequalities contribute to land degradation finalised and presented to the Government	LD assessment report based on LADA/WOCAT tools LD cost assessment report that builds on ELD	Capacity and knowledge available to undertake LD and cost assessment	Ministry of Environment

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.1.2.2: LDN indicators (land cover, land productivity, and soil organic carbon) in target Regions assessed and mapped (using Trends.Earth, CollectEarth)	LDN indicator assessment and maps from target regions	There is no LDN assessment or maps available from Lori and Syunik	LDN indicator assessment and maps from Lori and Syunik using Trends.Earth	LDN indicator assessment and maps from Lori and Syunik using all available data and integrated into Collect Earth	LDN indicator assessment report LDN maps from Lori and Syunik	Capacity and knowledge available to undertake LDN indicator assessment	Ministry of Environment Ministry of Territoral Administration and Infrastructure
Output.1.2.3: Monitoring system for LDN indicators integrated into the national land use monitoring systems	LDN monitoring system	National land-use monitoring system does not monitor LDN	Analysis of how to monitor LDN	LDN monitoring system forms part of the national land-use monitoring system	LDN monitoring system	Capacity and knowledge available to establish LDN monitoring	Ministry of Environment State Committee of Real Estate Cadastre

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Outcome 1.3: Enhanced capacity to implement LDN at national and local levels	Number of people, including women, with enhanced capacity in LDN implementation DSS for LDN	There is limited understanding of the LDN concept and its implementation and no DSS for LDN in place	100 people trained at national level and 500 at sub-national level (of which 50% are women	100 people trained at national level and 500 at sub-national level (of which 50% are women) DSS for LDN in place	Reports from training events Participants ? lists DSS web-portal and platform	Willingness and interest by national and district level staff to participate in LDN training and by the Government to integrate LDN in decision making	Ministry of Environment, FAO
Output.1.3.1: LDN training material developed for decision makers as well as practitioners	LDN training modules, including one dedicated to gender issues	There are no LDN training modules available	LDN training material and modules developed including one dedicated to gender	LDN training material and modules finalised and available in hard and soft copies	Hard and soft copies of LDN training modules	Capacity and knowledge available to develop LDN training modules	Ministry of Environment Ministry of Territoral Administration and Infrastructure
Output.1.3.2: National capacity building program on LDN for key decision-makers and practitioners at national and sub-national level	Nataional capacity building programme in LDN Number of people trained, including women	There is no national programme for capacity building in LDN	100 people trained at national level and 500 at sub-national level (of which 50% are women	100 people trained at national level and 500 at sub-national level (of which 50% are women	Reports from training events Participants ? lists	Willingness and interest by national and district level staff to participate in LDN training	Ministry of Environment Ministry of Territoral Administration and Infrastructure

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.1.3.3: LDN decision support system for target-setting, planning and strengthening of governance arrangements together with national and local stakeholders established	DSS for intersectoral and gender equitable governance of land and natural resources for LDN	There is no DSS for LDN in Armenia	Architecture of DSS for LDN agreed based on the DS-SLM framework	DSS platform in place for intersectoral and gender equitable governance of land and natural resources based on the three LDN indicators and DS-SLM framework	Tethnical reports on LDN-DSS adaptation and piloting/testing; LDN-DSS Technical Description, User Guideline and LDN-DSS web-portal and platform	Wilingness of the Government to integrate LDN-DSS in decision-making process	Ministry of Environment
Component 2: Scaling up of resilient Sustainable Land Management (SLM) practices and approaches to meet LDN targets in degraded landscapes in Armenia							

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Outcome 2.1: Resilient SLM practices and investments introduced on degraded land in target Regions	Number of ha of land with restored grasslands Number of ha of land with restored forest land Number of ha of land under SLM, including forest land, grasslands and croplands Amount of carbon sequestered through restoration and SLM Number of beneficiaries (households in pilot districts)	A baseline FAO/GCF project is supporting forestry investments in the two target districts, but SLM and restoration using an integrated landscape approach is not practiced in the two target districts Status of degradation was assessed using rapid LADA during the PPG	Integrated Land Management (ILM) plans for the two target districts with identification of restoration and SLM activities in different land-use classes for achieving LDN finalised	4,000 ha of degraded grasslands restored 7,300 ha of forest lands restored within the State Forest Fund and established in abandoned lands 166,000 ha under SLM practices in target regions (of which: 110,000 ha forests; 50,000 ha grasslands; 6,000 ha croplands) 19,000,000 t of CO2-eq sequestered 2,500 beneficiaries (target households in Lori and Syunik districts)	ILMs plans for Lori and Syunik PIRs LADA assessment conducted again at the end of the project	Capacity to implement restoration activities and SLM for LDN at national and district level available Local communities see benefits of SLM and scale up best practices to achieve improved livelihoods and LDN	Ministry of Economy Ministry of Territoral Administration and Infrastructure Local Self-Governing Bodies (Lori and Syunik)

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.2.1.1: Integrated land-management plans developed using participatory approaches and integrated with existing Community land use planning processes in target regions (Lori, Syunik) -	Number of ILM plans that reflect priorities of both women and men Number of ha covered by ILM plans	No ILM plans to achive LDN exist in target districts	Methodology and outline for ILM plans developed and validated with key stakeholders	Two gender sensitive ILM plans covering at least 166,000 ha that follow the LDN response hierarchy developed and presented to district and central authorities	Technical and validation reports ILMs plans for Lori and Syunik	Willingness of local stakeholders to be involved in ILM planning	Ministry of Territoral Administration and Infrastructure Local Self-Governing Bodies (Lori and Syunik)

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.2.1.2: ?LDN Learning Landscapes ? established with SLM best practices and integrated restoration of landscapes that provide carbon benefits.	Number of learning landscapes established Ha of land covered by restoration and SLM	A baseline FAO/GCF project is supporting forestry investments in the two target districts, but SLM and restoration using an integrated landscape approach is not practiced in the two target districts		Two LDN local transformative gender sensitive projects/programmes of actions (Learning Landscapes) covering a total of 166,000 ha in Lori and Syunik districts Restoration of 4,000 ha of degraded grasslands and 7,300 ha of forest land SLM practices on 110,000 ha of forest land; 50,000 ha of grasslands; 6,000 ha of croplands	Field implementation reports PIRs LADA assessment conducted again at the end of the project Remote sensing	Willingness of local stakeholders to be involved in implementation of restoration and SLM measures	Forest Committee/ Ministry of Environment Ministry of Economy

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.2.1.3: Resource mobilization plans developed for scaling up of best practices that incorporate National and target Regions Government and contributions from donors	Number of resource mobilisation plans that prioritize approaches that benefit/are accessible by women as well as men	No resource mobilisation plans for achiving LDN exist at neither national nor district level	Draft resource mobilization plans to attract additional investments are developed with national and local stakeholders	Final versions of three LDN resource mobilisation plans (1 national, 2 district) and presented to national governmental and international financial institutions for funding	Technical reports and funding applications to national governmental and international financial institutions	Willingness of national governmental and international financial to consider and fund submitted proposals for LDN projects	Ministry of Environment Ministry of Economy
Outcome 2.2: Key land-based value-chains strengthened and made more resilient and equitable	Number of value chains strengthened; number of VCs focused on women Number of value-chain actors with enhanced capacity in value-chain management	Value addition to agricultural products from the two selected districts is limited, which negatively affects income generation and equity		Two value chain (at least one focused on women) improved though LDN principles and SLCAs and LCSAs 350 value-chain actors with strengthened capacity (disaggregated by gender and youth)		Willingness of local stakeholders and rural cooperatives to be involved in strengthening of value chains and development of business models	Ministry of Economy

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.2.2.1: Life Cycle Assessment of the land-based value chains (e.g. dairy, organic non-traditional vegetables, etc.)	Number of life cycle assessment of value chains (SLCAs and LCSAs) Number of business plans for the selected value chains that work for women	Value chains are not well analysed, making it difficult to identify opportunities for value addition and development of equitable business plans	2 value chains with life cycle assessment (SLCAs and LCSAs)	4 business plans (2 for each district) that work for women finalised for the selected value chains	Life-cycle assessment reports Reports with business plans for selected value chains	Willingness of local stakeholders and rural cooperatives to be involved in assessment of value chains and development of business models	Ministry of Economy
Output.2.2.2: Training programs on value-chains management (e.g. marketing, processing, certification) for local communities extension services, farmers, women groups, and youth	Number of curricula modified to include management of the whole value chain Number of value-chain actors with enhanced capacity in whole value-chain management	Training curricula do not adequately address management of the whole value chain Capacity among stakeholders to manage the whole value chain is low	Three university Curricula modified to include relevant LDN topics and adopted by the National Agrarian University of Armenia	350 training certificates obtained (disaggregated by gender and youth)	University curricula Reports from training events Participants ? lists	Willingness and interest by farmers, extension staff, women groups and youth to participate in training on value-chain management	National Agrarian University of Armenia
Component 3: Monitoring, Evaluation and lessons learned							

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Outcome 3.1: Project monitoring and evaluation and monitoring and assessment of global environmental benefits and LDN	M&E system in place for monitoring of project progress and GEBs	No system in place	Implementation of the project based on adaptive rsults based-management	Project delivers expected results and GEBs and co-benefits established Functioning LDN reporting to the UNCCD	GEF core indicator work sheets PIRs, PPRs Mid-term and Final Evaluation reports	National lead agencies and other stakeholders support M&E processes	Ministry of Environment FAO
Output.3.1.1: Project mid-term and final evaluation conducted	Mid-term evaluation Final Evaluation	0	Mid-project review recommendations implemented	Final evaluation	Evaluation reports (FAO evaluation office)	Adequate funding allocated to evaluations	FAO
Output.3.1.2: Global Environment Benefits, co-benefits and costs of SLM in degraded landscapes monitored and assessed using gender disaggregated data	M&E system ensuring timely delivery of project benefits in terms of GEBs and gender disaggregated co-benefits	0	Timely monitoring of project outcomes, outputs, and activities	Timely monitoring of project outcomes, outputs, and activities	PIRs, PPRs	National lead agencies and other stakeholders support M&E processes	Ministry of Environment

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.3.1.3: Monitoring system for LDN indicators (land cover, soil productivity and soil organic carbon) in place	Monitoring system established under the auspices of the Ministry of Environment	No monitoring system for LDN exists Rapid assessment of land cover and productivity indicators during PPG using LADA methodology	Harmonisation and digitization of land cover data together with the Land Cadaster, and of land productivity monitoring using remote sensing (NDVI) and national data on soil fertility	LDN monitoring system based on the three global indicators functioning	Tethnical reports on LDN monitoring User Guideline	Wilingness of the Government to establish and maintain LDN monitoring system	Ministry of Environment
Outcome 3.2: Lessons learned and dissemination of knowledge to support scaling up of LDN	Direct and indirect beneficiaries with improved knowledge and increased awareness on restoration and SLM in line with LDN principles	0	5 knowledge products and training/awareness raising materials on SLM and LDN	10 knowledge products and training/awareness raising materials on SLM and LDN Public awareness raising campaign reaches 2,500 people	Handouts, guidelines, tutorials, publications, brochures At least 10 informational events and media outreach activities	Continuous monitoring and lessons learned lead to iterative learning, improved implementation and scaling up of LDN	Ministry of Environment FAO

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output.3.2.1: Communication strategy developed and implemented to support SLM scaling up to meet LDN targets	Number of people reached by public awarenss raising campaign Number of appearances in local media and partner websites	0	TBD	Public awareness raising campaign reaches 2,500 people (50% women) At least 10 informational events and media outreach activities	Articles in local media, apperance in TV, website and social media statistics	National lead agencies and other stakeholders support M&E processes, and are committed to continuous learning and exchange of knowledge on LDN	Ministry of Environment
Output.3.2.2: Lessons analyzed and knowledge management products developed and disseminated to promote replication of the LDN approach	Knowledge products developed on restoration and SLM in line with LDN principles (at least 50% tailored to women)	No knowledge products available	5 knowledge products ? to be determined at Project Inception meeting	10 knowledge products and awareness raising material (at least 5 tailored to women)	Handouts, guidelines, video tutorials, publications, brochures	There is an interest of stakeholder, including both women and men, in knowledge materials	Ministry of Environment

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Part I: Project Information		Response
GEF ID	10365	
Project Title: Implementation of Armenia?s LDN commitments through sustainable land management and restoration of degraded landscapes		
Date of Screening		

STAP member Screener	Graciela Metternicht	
STAP secretariat screener	Guadalupe Duron	
STAP Overall Assessment		**Minor issues to be considered during project design.** STAP welcomes FAO's project "Implementation of Armenia?s LDN commitments through sustainable land management and restoration of degraded landscapes". STAP is pleased to see Land Degradation Neutrality (LDN) being applied as a method to address land degradation in Armenia. STAP encourages FAO to apply UNCCD's Scientific Conceptual Framework for Land Degradation Neutrality" and the STAP guidelines on LDN (www.stapgef.org). Both resources describe the response hierarchy to achieving LDN - avoid, reduce, and reversing, which should be used to plan LDN interventions. STAP also recommends for a climate risk assessment to be conducted before designing the project, so the findings can inform the interventions. Climate change is projected to impact agriculture, rangelands, ecosystems, and water resources. STAP also recommends developing a theory of change, which encompasses describing at greater length the problem context, identifying the causal outcomes needed to achieve the project objective, and defining the assumptions underlying the success of the theory of change. STAP's theory of change primer can assist FAO in this regard. **FAO response:** STAP?s comments have been addressed during the PPG phase and more specific responses are provided below.
Part I: Project Information		
B. Indicative Project Description Summary		
Project Objective	Is the objective clearly defined, and consistently related to the problem diagnosis?	Yes. The problem statement describes Armenia's challenges with land degradation as a result of multiple drivers, including climate change. The need for an integrated land use planning method, such as LDN, is warranted. STAP would encourage the project developers to strengthen the description of current policy environment and inter- governmental conditions. Providing this context would support the logic underpinning component 1. **FAO response:** A comprehensive policy and governance analysis was part of the PPG process and is reflected in the design of the full project and attached PPG report. The sub-sections on institutional and policy framework in section 1.1 Country context provide a comprehensive description of the institutional and policy environment underpinning component 1 of the project.

Project components	A brief description of the planned activities. Do these support the project?s objectives?	Yes.
Outcomes	A description of the expected short-term and medium-term effects of an intervention.	Yes.
	Do the planned outcomes encompass important global environmental benefits/ adaptation benefits?	Yes.
	Are the global environmental benefits/adaptation benefits likely to be generated?	Yes if component 3 (monitoring and assessment and learning) is implemented successfully. **FAO response:** Component 3 has been further developed and an M&E Learning cycle will be part of the project.
Outputs: A description of the products and services which are expected to result from the project. Is the sum of the outputs likely to contribute to the outcomes?		

Part II: Project justification	A simple narrative explaining the project?s logic, i.e. a theory of change.	
1. Project description. Briefly describe:		
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)	Is the problem statement well-defined?	Yes. See comment above on providing further information on policy and inter-ministerial relationships.
	Are the barriers and threats well described, and substantiated by data and references?	Partly. In the full project, STAP recommends providing more detail on the barriers (e.g. describe further the current agricultural policy), and citing references supporting the information. **FAO response:** The barriers were analysed more in depth in the PPG phase and ~~they~~ more details are now provided both in the ProDoc in section 1.3 and PPG baseline reports.

	For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal areas; and is the objective well-defined, and can it only be supported by integrating two, or more focal areas objectives or programs?	Does not apply.

2) the baseline scenario or any associated baseline projects	Is the baseline identified clearly?	Yes, a baseline narrative is provided of on-going initiatives that are relevant to the project.
	Does it provide a feasible basis for quantifying the project?s benefits?	A quantifiable baseline is not provided. STAP expects for the indicators and their methodologies to be described at length in the full project. A brief mention is made to indicators on land cover, land productivity and soil organic carbon which will help establish the LDN baseline. These 3 core indicators need to be complemented by relevant, context-based indicators that can enable quantifying the projects' benefits as established in the LDN Conceptual framework. **FAO response:** A baseline assessment has been undertaken of land degradation and the three LDN indicators in Armenia as well as a more detailed assessment of the selected target landscapes in Lori and Syunik districts with a focus on degraded pastures, as an assessment of forest land already has been undertaken by the GCF project that provides co-financing. This is reflected in the ProDoc and additional information on context-based indicators is available in two PPG reports

	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?	Yes. This project clearly focuses on applyign LDN as integrated land use planning approach to achieve sustainable land management.
	For multiple focal area projects:	
	are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;	Does not apply.
	are the lessons learned from similar or related past GEF and non-GEF interventions described; and	Yes, several projects and their lessons are described, and will be used to design the project.
	how did these lessons inform the design of this project?	See above.

3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change? What is the sequence of events (required or expected) that will lead to the desired outcomes?	The project's theory of change is based on removing the barriers to SLM in Armenia by pursuing LDN. The project will "...take a three-pronged approach starting with strengthening the enabling environment for LDN, followed by support to scaling up of resilient SLM practices in degraded landscapes. These two components will be underpinned by monitoring, evaluation and dissemination and communication of lessons learned that would support further scaling up of resilient SLM practices in Armenia in support of LDN targets." STAP recommends the theory of change also identifies the underlaying assumptions that will help attaining the desired outcomes. **FAO response:** As part of the PPG process, the theory of change was fully developed, including identification of underlying assumptions and impact drivers, based on the STAP ToC primer from 2020 and the IEOs guidance on ToCs from 2007. See above. STAP recommends FAO uses the recent UNCCD SPI publication on https://knowledge.unccd.int/publication/creating-enabling-environment-land- degradation-neutrality-and-its-potential to identify the conditions that need to be in place in each of the sequences described above, to attain the desired outcomes. **FAO response:** We have studied this publication as well as lessons from the FAO/GEF projects and the ToC and project design include the required conditions to attain the expected outcomes.

	What is the set of linked activities, outputs, and outcomes to address the project?s objectives?	See above.

	?Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions? See above.	Uncertain. The assumptions need to be defined to gauge the success of the theory of change. **FAO response:** Underlying assumptions are included both in the ToC and Project Results Framework for each outcome and output.
	?Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?	Partly, SLM activities will be scaled to address climate risks. STAP recommends below activities to complement this current vision. **FAO response:** The project design now includes an M&E learning cycle that will inform adaptive management.
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes. Good monitoring and evaluation of the LDN baseline will be required to achieve the global environmental benefits.
6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	Are the benefits truly global environmental benefits, and are they measurable?	Yes, land degradation neutrality is a global environmental benefit~~,~~ that can be estimated using the 3 core indicators of land cover change, trends in land productivity and soil organic carbon. Soil organic carbon is a global environmental benefit.
	Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?	Uncertain. It is difficult to understand the scale of the projected benefits since the target area was not described in section 1. STAP suggests describing further the project area, and the context in which the problem is situated. This includes the underlying drivers, or conditions, that may influence the project outcomes. **FAO response:** Two pilot districts have been selected for the project. A comprehensive description of the two areas is included in the ProDoc and more baseline information can be found in the PPG baseline reports.

	Are the global environmental benefits explicitly defined?	Yes,the global environmental benefits are defined.
	Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?	Yes, the PIF briefly mentions the use of Collect Earth, or Trends.Earth to measure LDN indicators. STAP recommends FAO exploring complementary indicators and metrics as suggested in the LDN conceptual framework (page 101). STAP welcomes the practice of adopting life cycle assessement of land based value chains as part of the methodology. **FAO response**: Other LD indicators at national level have been reviewed in the PPG report on LD and are summarised in the Project rational and background in Table 3 together with available maps on different indicators.
	What activities will be implemented to increase the project?s resilience to climate change?	The project aims to scale-up SLM to address risks from climate. STAP, however, recommends undertaking a systems analysis based on climate data, and using the theory of change to develop the pathways of change and intervention options that address the project's resilience. **FAO response:** A systems analysis that included climate data was done for the two pilot districts and described in the ProDoc. The ToC includes introduction of resilient SLM practices and investments on degraded land in target regions in response climate change risks.
7) innovative, sustainability and potential for scaling-up	Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?	Yes, the project is innovative in establishing a LDN baseline for Armenia, and applying the LDN approach to address land degradation. The project can be innovative in various ways if the LDN approach (i.e. UNCCD's scientific framework for LDN) is fully applied. For example, achieving LDN will require adaptive management and learning. The LDN scientific framework, and STAP's LDN guidelines, spell out how a structured learning approach is part of achieving LDN. The project is innovative in its approach to knowledge transfer and training through modifying Univerisity curricula to include relevant LDN topics. Given the project identifies the private sector as one of the stakeholders the project could bring some innovation in methods of financing (e.g. exploring public-private partnerships). **FAO response:** The project learning cycle underpinning adaptive management and scaling up has been clarified.

	Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?	Partly. The PIF describes scaling through an enabled-environment, and across the agricultural and forestry sectors. Activities related to outcome 2.2 are ways to scale up, though the vision needs to be better articulated. The project developers may wish to consider the inter-connections between environmental, social, economic, and governance that often enables scaling. **FAO response:** The project learning cycle underpinning adaptive management and scaling up has been clarified in Figure 7 in the ProDoc.
	Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?	Based on the impacts that climate change is already having in Armenia, the project developers may consider designing the project with transformational change in mind. STAP recommends describing in greater detail the climate change context in the target site, and developing the components bearing in mind the projected changes in temperature and precipitation. Two sources for climate data for Armenia are: https://www.undp.org/content/dam/undp/library/Climate%20and%20Disaster%20Resilience/Climate%20Change/armenia_NAP_country_briefing.pdf https://climateknowledgeportal.worldbank.org/country/armenia **FAO response:** The climate change context and impacts at the sites in Lori and Syunik have been described and have informed the preliminary selection of SLM practices that will be introduced in the field with local communities.
1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.		STAP recommends providing the geo-referencing information where the project interventions will take place. Currently, the coordinates are missing, and hence it is difficult to ascertain if the said indicators/areas (ha) that will benefit from the interventions are plausible. **FAO response:** Georeferenced information for the two pilot districts, Lori and Syunik, has been provided.

2. Stakeholders. Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities.If none of the above, please explain why. In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.	Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?	STAP recommends developing a theory of change, and identifying the stakeholders that will be required to bring about the desired change. Questions to keep in mind while designing the theory of change include: Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers? What are the stakeholders? roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge? **FAO response:** A theory of change using the STAP ToC primer has been developed. Key stakeholders and their role in bringing about change have also been identified and summarised in a table in Section 2 on Stakeholders in the ProDoc.
	What are the stakeholders? roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?	See above. Section 2 in the ProDoc on Stakeholders groups stakeholders into direct beneficiaries and interested party. [1]

3. Gender Equality and Women?s Empowerment. Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd. If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project?s results framework or logical framework include gender-sensitive indicators? yes/no /tbd	Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?	A gender analysis will be carried out during the project preparation. During this analysis, STAP recommends addressing the following questions: Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences? Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed? **FAO response:** A gender analysis and Gender Action Plan were completed in the PPG phase and have informed the design of the project, particularly with respect to capacity building activities and on-the-ground interventions. Table 8. Details the Project contribution to women?s participation in decision making, access to resources and reduction of their work burden in agriculture. The GAP has been annexed to the project.
	Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?	See above. **FAO response:** The project has been designed to strengthen the role of women and their access to resources and income from agriculture. One example is the selection of agricultural value chains that benefit women that was done in the PPG phase.

5. Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design	Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project?s control?	Partly. STAP recommends a more extensive analysis of the climate risks in the target area, and developing the components to address these risks. Climate change is already exacerbating land degradation, and affecting household incomes. (See: https://www.undp.org/content/dam/undp/library/Climate%20and%20Disaster%20Re silience/Climate%20Change/armenia_NAP_country_briefing.pdf) Therefore, FAO is encouraged to describe the climate projections (temperature and precipation) for Armenia - particularly for the intervention area. The PIF provides some useful climate data in section 1, but it is uncertain whether it is for the country, or the project area. STAP also recommends for the project developers to consider: 1) the period of time the intervention is expected to contribute to global environmental benefits, and how the activities may be affected by climate change; 2) how each intervention will be impacted by climate variability, or weather-related disasters (e.g. droughts. floods); and, 3) how might climate, and non-climate stressors (e.g. out-migration?), interact to exacerbate climate risks? The project proponents may wish to refer to the World Bank's Climate Knowledge Portal to obtain climate project data for designing the project: https://climateknowledgeportal.worldbank.org/country/armenia. Similarly, the project developers may wish to refer to U.S. AID's Climate Risk and Management tool: https://www.climatelinks.org/resources/climate-risk-screening-management- tool; and STAP's guidance on climate risk assessment: http://www.stapgef.org/stap- guidance-climate-risk-screening. Likewise, the paper: Gevorgyan, A., Melkonyan, H., Aleksanyan, T., Iritsyan, A. and Khalatyan, Y., 2016. An assessment of observed and projected temperature changes in Armenia. Arabian Journal of Geosciences, 9(1), p.27. **FAO response:** Climate risks and resilience considerations have been integrated into the design of the project based on CC risk assessment during the PPG phase (see climate risk assessment in the PPG baseline reports). Moreover, the project receives co-funding from a GCF project that will focus on restoration of forest land in the two pilot districts. The GCF prefeasibility study includes a very detailed assessment of climate trends and analysis of future scenarios that this Project is also building on.
	Are there social and environmental risks which could affect the project?	The social risks have not been considered. In section 1, STAP suggests describing the socio-economic characteristics of the targeted population, and potential problems that may affect addressing the project objective. **FAO response:** A detailed description of the target districts, including the targeted population is now included in Section 1, which has informed the risk assessment.
	For climate risk, and climate resilience measures:	STAP recommends addressing the questions below in the full project.

	How will the project?s objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?	See above. **FAO response:** The project design is based on the climate change projections reported by the IPCC (Ar5 RCP8.5 A2) as well as recent reports from the World Bank indicate average temperature increases by 2 degree C by 2070, further precipitation decreases of 3%, river flow decreases of 6.7% and 7% snow cover decreases by 2030 in Armenia. According to USAID, by 2030 yields are forecasted to decline by 8-14% (agriculture), by 4-10% (pastures) and in reduction of forest cover of about 1/3. The project is expected to make the targeted landscapes more resilient to climate change through climate smart SLM practices that contribute to LDN.
	Has the sensitivity to climate change, and its impacts, been assessed?	**FAO response:** Yes, see above.
	Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?	**FAO response:** Yes, see above.
	What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?	**FAO response:** A good monitoring system and capacity on LD and LDN that the project will support will contribute to reducing the risks and impacts of climate change by providing timely information to decision makers, as healthy soils and landscapes are more resilient to CC impacts.

6. Coordination . Outline the coordination with other relevant GEF-financed and other related initiatives	Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects?	Yes. During the project design, FAO may wish to check whether it has covered all the relevant initiatives and projects it wishes to draw from to develop this project. **FAO response:** The baseline assessment of ongoing projects and programmes has been updated and summarised in the ProDOc.
	Is there adequate recognition of previous projects and the learning derived from them?	Partly. STAP would like to see a more detailed description of the lessons and how they are being used to design the project. **FAO response:** During the PPG phase a more thorough stocktaking of other projects and lessons learnt was undertaken and it is described in Section 1. The current project is building on the lessons and knowledge generated by these projects.
	How have these lessons informed the project?s formulation?	The lessson will inform the project. **FAO response:** Yes, lessons reviewed during project preparation have been integrated into the project design.
	Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?	Partly, through the knowledge management plan. However, STAP recommends developing a more robust knowledge-learning structure so that result indicators are assigned to knowledge management. This structure should also focus on what plans are proposed for sharing, disseminating and scaling-up results, lessons and experience. STAP congratulates the team for including national academic institutions as partners for training and knowleddge transfer. STAP also acknowledges the inclusion of extension services as a form of training (outcome 2.2) **FAO response:** The project has developed a learning cycle that will be informed by its M&E system. In addition, a communication strategy will be implemented and lessons analysed and knowledge management products disseminated under Component 3. Indicators and metrics for this are included~~is included~~ in the Project Result Framework.

8. Knowledge managemen t. Outline the ?Knowledge Management Approach? for the project, and how it will contribute to the project?s overall impact, including plans to learn from relevant projects, initiatives and evaluations.	What overall approach will be taken, and what knowledge managemen t indicators and metrics will be used?	**FAO response:** See above. Table 11 provides a knowledge sharing plan for the Armenia LDN project with clear indicators for production of knowledge material, capacity building and awareness raising.
	What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?	**FAO response:** See above and Table 11.
STAP advisory response	**Brief explanation of advisory response and action proposed**	

Naira to add information on role in project in Stakeholder Table - add under stakeholder type.

Response to Council comments:

Comments from Germany	FAO response
Update system description with recent political and economic changes	This was done in the PPG phase and the information is included in Part 1of the ProDoc.

Clear focus on one land-use category is recommended, e.g. on forests. For now, the proposal foresees interventions in pasture/grasslands, forests and croplands. Overall, the measures should be more specific than ?innovative SLM measures?.	The project is taking an integrated landscape approach to implementation of LDN whereby losses of productive land in one land-use class/type is balanced by gains in the same class. The selected districts have both pasture/grasslands, forests and croplands in their landscapes and the GEF project will primarily focus restoration and implementation of SLM in pastures, and to some extent on cropland through working with value chains. A GCF-funded project will provide co-financing to implementation of activities on forest land. The alternative scenario with GEF funding is now explaining more in detail which SLM measures will be implemented on grasslands/pastures and which value chains that will be strengthened.
There is a huge overlap with Ecoserve programme components, particularly on pastures and grassland management, e.g. legal, institutional framework, information availability and capacity development. Therefore, close coordination is needed to avoid duplication.	The Ecoserve programme was consulted in the PPG phase to avoid overlap of activities. This Project will build on Ecoserve to design and implement an LDN scheme that includes pastures, and is complementing, but not duplicating what it is doing.
While working on sustainable pasture management, monitoring, rehabilitation, Germany suggests using the results, tools, methods elaborated by GIZ Environmental Programmes, e.g. Pasture Monitoring Manual, Management Plans elaboration for pastures and grasslands, Degraded pastures and grasslands rehabilitation guidelines, Erosion control handbook. GIZ Environmental Programme has worked in Syunik region on pasture management issues from 2013-2018, the FAO project can build on results to avoid overlap.	This forms part of the baseline for this project that will build on all these knowledge products. They will be integrated into guidelines for LDN implementation on different types of land use.

To ensure local ownership, Germany would recommend addressing the following issues: Intersectoral approach and involvement of different ministries is essential: in particular the Ministry of Territorial Administration and Infrastructure (MTAI) when it comes to local level interventions and policies that affect the communities, or the Ministry of Economy for agriculture/pasture related issues (Former Ministry of Agriculture that has been merged with Ministry of Economy).	The project has a strong focus on improving the intersectoral policy framework as well as coordination for land management and both MTAI and the Ministry of Economy have important roles in the project and have been assigned responsibility for specific outputs and activities. MTAI will be responsible for the coordination with Local Self-Governing Bodies (Lori, Syunik regions) and the cross-sectoral policies/legal framework supporting LDN principles implementation at national level (building on the UNCCD mechanism) and benefit from capacity building activities. The Ministry of Economy will support the implementation of the activities related to agriculture, also they will be responsible for mainstreaming LDN principles in the agricultural sector and to assure that the implementation of the Strategy for Sustainable Agricultural Development will be coordinated with the project implementation.
Finally, Germany recommends the agency cooperates/consults with the following ongoing bilateral projects: Ongoing regional Ecoserve programme ?Management of natural resources and safeguarding of ecosystem services for sustainable rural development in the South Caucasus?, commissioned by the German Federal Ministry of Economic Cooperation and Development (BMZ) and implemented jointly by GIZ and MTAI (political partners), MoEnv and MoE. Duration 12/2018-11/2021. Build on experiences of recently finalized regional IBiS programme ?Integrated Biodiversity Management, South Caucasus?, duration 12/2015-11/2019, also commissioned by BMZ, co-financed until 2017 by Austrian Development Agency (ADA). Other important cooperation partners: ?Livestock development in Armenia South-North Project? (2017-2020), implemented by ?Strategic Development Agency? (SDA) NGO and financed by ADA and SDC.	This was done as part of the baseline assessment during the PPG phase and the Project is building on experiences and lessons from all these projects, as explained in Table 10.

Comments from U.S.	FAO response

While supportive of this project, we would request much more detailed information on local training, farmer-level incentives, and the advisory structure for pasture-management recommendations in subsequent versions of the proposal. Training was addressed in Outcome 1.3, but description of local training was very limited, and education of farmers on improved pasture management practices is critical to the project?s success. Additionally, incentives for farmers to adopt improved pasture management practices was mentioned in general, but no details were given. Additional incentives might lead to broader adoption, but it is hard to recommend any without knowing the specific incentives that are planned. Similarly, it is not sufficiently clear what the guidelines or advisors would be used to develop restoration plans, specifically on practice recommendations for pasture management.	Outcome 1.3 is primarily focusing on training of decision makers, technical and extension staff in LDN principles and approaches. Farmer-level incentives and training are addressed under outputs 2.1.1 and 2.1.2. Incentives will be strengthened through: ? Development of guidelines to establish recommendations and provide a roadmap for legal status and protection of the pasture management groups, both active and potential, within the selected project communities, including land tenure rights. ? Stakeholder analysis that takes influence, power structures and gender into consideration, and mobilization of local communities for equitable participation in target landscapes in Lori and Syunik. ? Participatory land-use planning with local communities following the LADA/WOCAT and DS-SLM methodology that will include women?s groups and/or actors representing the interests of women engaged in farming, including informally. ? Integration of the ILM plans, including provisions to improve gender equity in access to/governance of land, with other community and district-level planning processes. Close links and collaboration with the developed National Platform and existing or informal pasture management groups currently operating within selected areas will be established. Communities will be trained on the following pasture management practices: ? Directed grazing: also referred to as ?rotational grazing?, suppressing weed growth, reducing biomass in fireprone areas, improving soil fertility and nutrient cycling, increasing pasture or forest biodiversity and to maintain historic landscapes, etc. ? Weed Control: following grazing applications, manual or mechanical weed control measure should be taken to maintain pasture productivity. ? Pasture fertility works and seeding/planting: This could include soil preparation works (ripping, ploughing, raking), seeding with

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: **100 000**			
Project reparation Activities Implemented	***GETF/LDCF/SCCF Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
PPG baseline assessments, stakeholder consultations and project design	100 000	97,882	2,118
Total	**100 000**	**97,882**	2,118

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

The coordinates of the pilot communities in Lori and Syunik districts are provided in Figure 8 below. Detailed district-level assessments of land degradation and SLM are found in the attached PPG reports.

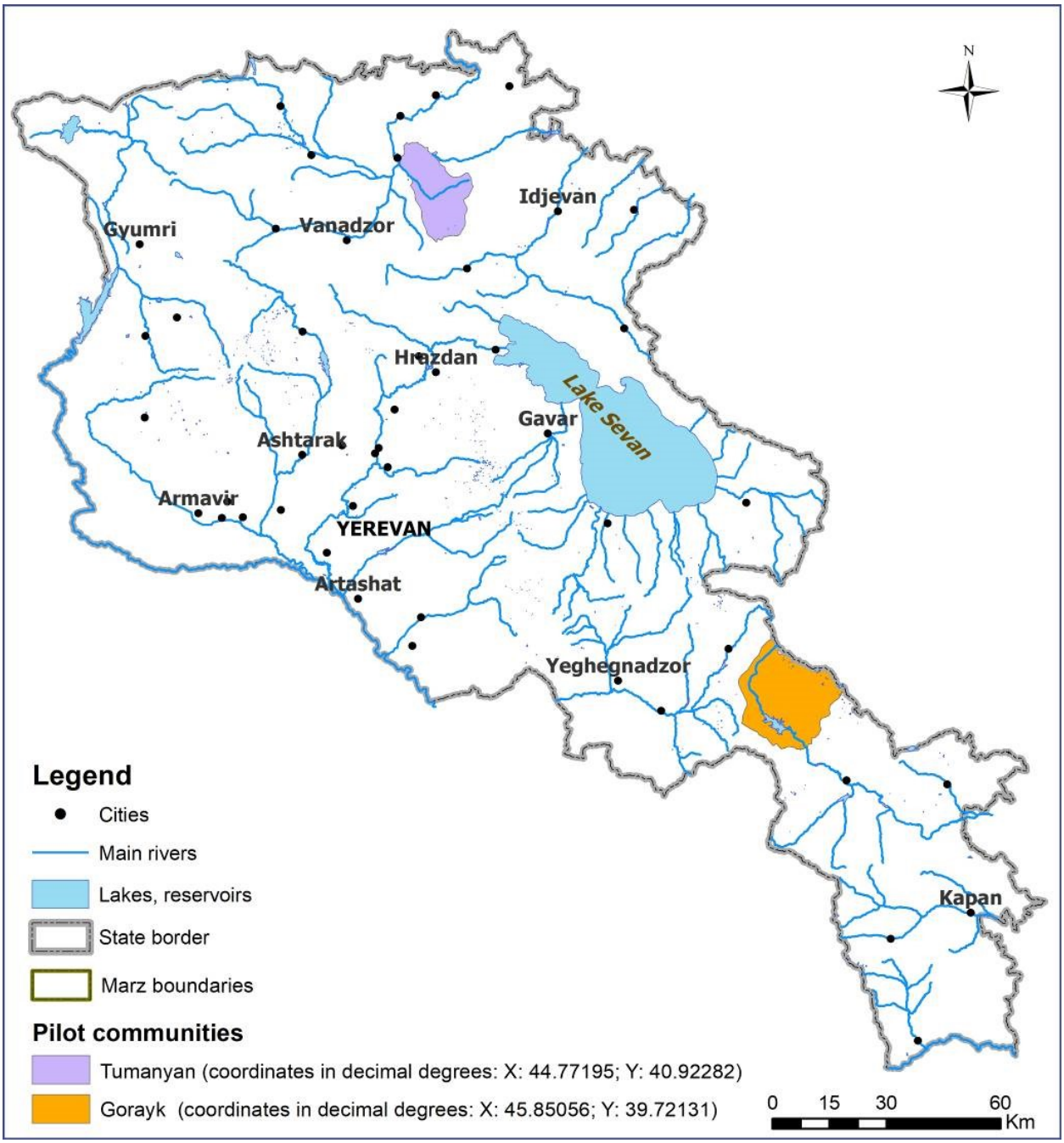

Figure 8. Location and coordinates of pilot communities in Lori and Syunik districts.

In Lori marz, the pasture vegetation is mainly composed of meadow grasses, legumes, and versigrass species. In the pastures of the subalpine and alpine zones, there are species of sedges. In the rural areas of the region, the main economic activity is cattle breeding and crop cultivation. This is combined with

fruit production and horticulture in the lower, flatter areas. Livestock derived products are the principal source of income, with dairy and meat operations based on native pastures predominantly. In recent years, large livestock farms have been formed in the region, but it should be noted that the share of small household production (70-75%) still plays a decisive role in the share of livestock production. For a period of 190-220 days a year, cattle are fed in pasture areas. Due to the location of the pastures and the relief of the region, mainly the dual-zone pasture behavior operates in the rural communities.

The difficult access to remote pastures due to technical, economic, and social problems, as well as the lack of infrastructure, the use of long-distance pastures is carried out in part, mainly by large farms that have sufficient resources. Long-distance farming is partially organized for small farms, when farms combine up to 100-150 head of cattle, forming herds to move to distant pastures. It is quite a serious problem for livestock farmers to store enough quality fodder for the winter nursery period, as no more than 50% of arable land is currently cultivated in the region (Table 6), in which case the share of fodder crops in the field does not exceed 28-35 %.

Table 6. Land Cover class area and degradation per class for Lori Region.

	Total Area, ha	Percentage of Total Area	Degraded	Percentage Degraded	Stable	Percentage Stable	Improved	Percentage Improved
Tree-covered	99,345.73	26.13	7,018.81	7.07	53,946.64	54.30	38,380.28	38.63
Grassland	182,846.13	48.09	28,655.49	15.67	117,768.71	64.41	36,421.93	19.92
Cropland	91,975.42	24.19	13,518.74	14.70	58,677.92	63.80	19,778.76	21.50
Artificial	5,322.69	1.40	1,043.34	19.60	703.00	13.21	3,576.36	67.19
Other land	663.94	0.17	50.21	7.56	368.24	55.46	245.49	36.97
Water Body	55.79	0.01	22.32	40.00	27.90	50.00	5.58	10.00
Total	380,209.71		50,308.91		231,492.40		98,408.40	

In the Syunik region, the use of remote pastures by small farms is partially implemented, the main reason for which is technical and economic problems. Due to this problem, the majority of livestock in rural communities graze in the pastures of the rural areas throughout the pastoral period. As a result, degradation is quite high in the pastures of the surrounding communities. The natural productivity of the pastures is not high, and the qualitative composition of the vegetation is quite low, which when properly addressed will lead toreduced and insuficient animal nutrition and production. The main reasons for the degradation of community pastures are mostly due to improper management. This problem is aumented by the low socio-economic level of households in the communities, as well as the application of traditional customs in the pasture period and pasture use. The continuous use of pastures in this way deepens the degradation over the years. Therefore, in the rugged and steep landscapes of this region, quite serious preconditions can be formed for the development of soil erosion and desertification phenomena. According to the monitoring results carried out in recent years, about 70-72% of the pastures of the Syunik region are degraded to different degrees (Table 7).

Table 7. Land Cover class area and degradation per class for Lori Region.

	Total Area ha	Percentage of Total Area	Degraded	Percentage Degraded	Stable	Percentage Stable	Improved	Percentage Improved
Tree-covered	114,666.60	25.59	4,368.62	3.81	65,970.12	57.53	44,327.86	38.66
Grassland	232,574.79	51.91	18,367.19	7.90	129,150.56	55.53	85,057.04	36.57
Cropland	93,253.09	20.81	7,732.97	8.29	46,749.29	50.13	38,770.83	41.58
Artificial	401.71	0.09	106.01	26.39	66.95	16.67	228.75	56.94
Other land	6,823.53	1.52	853.64	12.51	2,778.51	40.72	3,191.38	46.77
Water Body	318.02	0.07	33.48	10.53	150.64	47.37	133.90	42.11
Total	448,037.75		31,461.90		244,866.08		171,709.77	

ANNEX E: Project Budget Table

Please attach a project budget table.

FAO Cost Categories	Unit	No. of units	Unit cost	Total	Component 1:				Component 2:			Component 3:			M&E:	PMC:	Operational Partner Budget	FAO Support Services
					1.1	1.2	1.3	Total	2.1	2.2	Total	3.1	3.2	Total				
5011 Salaries professionals																		
Detailed- show job title for each profile					0			0			0			0				
								0			0			0				
5011 Sub-total salaries professionals					0	0	0	0	0	0	0	0	0	0	0	0		
5012 GS Salaries																		
								0			0							
								0			0							
5012 Sub-total GS salaries					0	0	0	0	0	0	0	0	0	0	0	0		
5013 Consultants																		
Detailed international consultants - show								0			0			0				
LDN & SLM Expert	person-days	45	550	**24,750.00**				0	24,750		24,750			0			24,750	
DSS Development Expert	person-days	45	550	**24,750.00**			24,750	24,750			0			0			24,750	
Gender Expert	person-days	45	550	**24,750.00**				0		24,750	24,750			0			24,750	
Land Tenure expert	person-days	40	550	**22,000.00**			22,000	22,000									22,000	
VC Development Expert	person-days	45	550	**24,750.00**				0		24,750	24,750			0			24,750	
Sub-total international Consultants							*46,750*	*46,750*	*24,750*	*49,500*	*74,250*	*0*	*0*	*0*	*0*	*0*	**121,000**	
National Technical Chief Advisor	person-	36	2600	**93,600.00**	13,000.0	10,900	10,900	*34,800*	15,000	15,000	*30,000*	10,900	10,900	*21,800*		7,000	93,600	
Project Assistant	person-	36	1,000	**36,000.00**				0			0			0		36,000	36,000	
Community Facilitators	person-	72	700	**50,400.00**				0	50,400		50,400			0			50,400	
M&E Expert	person-	25	2,320	**58,000.00**				0			0			0	58,000			58,000
Policy & Land Tenure Expert	person-	25	2,300	**57,500.00**	57,500.0			57,500			0			0			57,500	
SLM Expert	person-	24	2,000	**48,000.00**				0	48,000		48,000			0			48,000	
VC Development Expert	person-	18	2,000	**36,000.00**				0		36,000	36,000			0			36,000	
Gender Expert	person-	18	2,000	**36,000.00**				0		36,000	36,000			0			36,000	
Communication Expert	person-	22	2,300	**50,600.00**			10,600	10,600		5,000	5,000		35,000	35,000			50,600	
Sub-total national Consultants					*70,500*	*10,900*	*21,500*	*102,900*	*113,400*	*92,000*	*205,400*	*10,900*	*45,900*	*56,800*	*58,000*	*43,000*	**408,100**	**58,000**
5013 Sub-total consultants					**70,500**	**10,900**	**68,250**	**149,650**	**138,150**	**141,500**	**279,650**	**10,900**	**45,900**	**56,800**	**58,000**	**43,000**	**529,100**	**58,000**
5650 Contracts																		
Detailed- show "service provider/vendor"								0			0			0			0	
Knowledge materials	Lumpsum	1	25,000	**25,000.00**				0			0		25,000	25,000			25,000	
Translation service	Lumpsum	1	9,000	**9,000.00**			3,000	3,000		3,000	3,000		3,000	3,000			9,000	
Mass-media campaign on LDN	Lumpsum	2	10,000	**20,000.00**				0			0		20,000	20,000			20,000	
Assessment of SLM at demo sites using	Lumpsum	1	45,000	**45,000.00**		45,000		45,000			0			0			45,000	
Valuation of the costs of land	Lumpsum	1	30,000	**30,000.00**		30,000		30,000			0			0			30,000	
Mid-term Review	Contract	1	35,000	**35,000.00**				0			0			0	35,000			35,000
Final Evaluation & terminal report	Contract	1	41,000	**41,000.00**				0			0			0	41,000			41,000
OPIM Spot checks	Contract	6	4,275	**25,650.00**				0			0			0		25,650		25,650
OPIM Audit	Contract	3	9,025	**27,075.00**				0			0			0		27,075		27,075
5650 Sub-total Contracts					**0**	**75,000**	**3,000**	**78,000**	**0**	**3,000**	**3,000**	**0**	**48,000**	**48,000**	**76,000**	**52,725**	**129,000**	**128,725**
5021 Travel																		
International travel	round trip	25	2,500	**62,500.00**		45,000		45,000		17,500	17,500			0			62,500	
National travel	Lumpsum	1	72,000	**72,000.00**				0	72,000		72,000			0			72,000	
Travel for training/workshops and meetin	round trip	12	2500	**30,000.00**	30000			30,000			0			0			30,000	
5021 Sub-total travel					**30000**	**45,000**	**0**	**75,000**	**72,000**	**17,500**	**89,500**	**0**	**0**	**0**	**0**	**0**	**164,500**	
5023 Training																		
National capacity building program on	W/S	3	50000	**150,000.00**			150,000	150,000			0			0			150,000	
Training programme on SLM and VCs	W/S	2	24000	**48,000.00**				0		48,000	48,000			0			48,000	
Training program on value-chain	W/S	2	24000	**48,000.00**				0		48,000	48,000			0			48,000	
Project Inception Workshop in Yerevan	W/S	1	3350	**3,350.00**				0			0			0	3,350		3,350	
Project Inception Workshops at local	W/S	2	3000	**6,000.00**				0			0			0	6,000		6,000	
Project Completion Workshop	W/S	1	4000	**4,000.00**											4,000		4,000	
Exchange visits and knowledge sharing	W/S	3	15,000	**45,000.00**				0	45,000		45,000			0			45,000	
5023 Sub-total training					**0**	**0**	**150,000**	**150,000**	**45,000**	**96,000**	**141,000**	**0**	**0**	**0**	**13,350**	**0**	**304,350**	**0**
5024 Expendable procurement																		
Billboard signs -info and demarcation	Signs	6	2,000	**12,000.00**					12,000		12,000						12,000	
Implements for value chain actions	Lumpsum	6	11,000	**66,000.00**					66,000		66,000						66,000	
Implements for SLM practices	Lumpsum	6	52,000	**312,000.00**					312,000		312,000						312,000	
Seeds and saplings	Lumpsum	6	50,000	**300,000.00**				0	300,000		300,000			0			300,000	
Light implements for pasture	Lumpsum	3	50,000	**150,000.00**				0	150,000		150,000			0			150,000	
5024 Sub-total expendable procurement					**0**	**0**	**0**	**0**	**840,000**	**0**	**840,000**	**0**	**0**	**0**	**0**	**0**	**840,000**	
6100 Non-expendable procurement																		
Desk top computer	Piece	2	1,500	**3,000.00**				0			0			0		3,000	3,000	
Laptop computer	Piece	5	1,400	**7,000.00**				0		7,000	7,000			0			7,000	
Smartphones	Piece	5	1,000	**5,000.00**				0	5,000		5,000			0			5,000	
Printer and photocopier	Piece	1	2,380	**2,380.00**				0			0			0		2,380	2,380	
GIS software and licenses	Lumpsum	1	10,000	**10,000.00**				0		10,000	10,000			0			10,000	
6100 Sub-total non-expendable procurement					**0**	**0**	**0**	**0**	**5,000**	**17,000**	**22,000**	**0**	**0**	**0**	**0**	**5,380**	**27,380**	
5028 GOE budget																		
~~Phone monthly payment (5 phones)~~									0		0			0	0		0	
Office running costs	Lumpsum	1	2,050	2,050.00												2,050	2,050	
6300 Sub-total GOE budget					**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,050**	**2,050**	0
TOTAL				**2,183,105.00**	**100,500**	**130,900**	**221,250**	**452,650**	**1,100,150**	**275,000**	**1,375,150**	**10,900**	**93,900**	**104,800**	**147,350**	**103,155**	1,996,380	186,725

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

N/A

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

N/A

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

N/A