



PROJECT IDENTIFICATION FORM (PIF).

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Sustainable Land Management for Increased Productivity in Armenia		
Country(is):	Armenia	GEF Project ID: ¹	8005
GEF Agency(is):	IFAD	GEF Agency Project ID:	
Other Executing Partner(s):	Rural Areas Economic Development Programme	ReSubmission Date:	07 January 2014
GEF Focal Area(s):	Land Degradation	Project Duration (Months)	72
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:		Agency Fee:	374,062.50

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
LD-1 Program 2	GEFTF	3,137,500	19,463,000
LD-4 Program 5	GEFTF	800,000	3,537,000
Total Project Cost		3,937,500	23,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Increase incomes and assets generated by smallholder farmers through investments in sustainable land management systems and technologies					
Project Component	Financing Type ³	Project Outcomes	Trust Fund	(in \$)	
				GEF Project Financing	Co-financing
1. Investments in sustainable farming systems and technologies	Inv	1.1 Water-efficient irrigation technologies and sustainable farming systems adopted by target farmers benefiting from rehabilitated irrigation infrastructures	GEFTF	1,800,000	9,170,000
2. Soil erosion prevention through ecological restoration measures	Inv	2.1 Restoration actions are implemented to mitigate soil erosion and fertility loss	GEFTF	1,600,000	11,085,940
3. Enabling environment to enhance capacity of smallholder farmers against land degradation	TA	3.1 The capacity of key practitioners to adopt sustainable land management practices and technologies is upgraded 3.2 Index-based insurance system for drought risks to agriculture production is designed	GEFTF	350,000	1,254,060
Subtotal				3,750,000	21,510,000
Project Management Cost (PMC) ⁴			GEFTF	187,500	1,490,000
Total Project Cost				3,937,500	23,000,000

If Multi-Trust Fund project :PMC in this table should be the total and enter trust fund PMC breakdown here ()

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the GEF Website, [Focal Area Results Framework](#) which is an *Excerpt from GEF-6 Programming Directions*.

³ Financing type can be either investment or technical assistance.

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	IFAD	Loans	13,000,000
Donor Agency	OFID	Loans	10,000,000
(select)		(select)	
Total Co-financing			23,000,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
IFAD	GEFTF	ARMENIA	Land Degradation	(select as applicable)	3,937,500	374,062.50	4,311,562.5
(select)	(select)			(select as applicable)			
Total GEF Resources					3,937,500	374,062.50	4,311,562.5

a) No need to fill this table if it is a single Agency, single Trust Fund, single focal area and single country project.

b) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
IFAD	GEF TF	Armenia	Land Degradation		73,060	6,940	80,000
Total PPG Amount					73,060	6,940	80,000

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF upto \$1 mil; \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	800 hectares
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	3,500 hectares
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	(Enter number of freshwater basins)
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	(Enter percent of fisheries, by volume)
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	(Enter number of tons)
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	(Enter number of tons)
	Reduction of 1000 tons of Mercury	(Enter number of tons)
	Phase-out of 303.44 tons of ODP (HCFC)	(Enter number of tons)
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectorial planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	(Enter number of countries)
	Functional environmental information systems are established to support decision-making in at least 10 countries	(Enter number of countries)

PART II: PROJECT JUSTIFICATION

Project Overview

A.1. Project Description. Briefly describe: 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovativeness, sustainability and potential for scaling up.

1) Background information:

Armenia covers an area of 29,800 km² that is administratively divided into 11 marzes or regions (including the capital Yerevan) and communities, of which 48 are urban and 866 are rural communities. As of 2010, just over one third (36%) of Armenia's 3.1 million people live in rural areas and one-third of the population lives in the capital city of Yerevan, with the balance of the population in numerous small towns.

Mountains make nearly 70% of the country's territory, with an average altitude of 1,800 m, and about 90% of the territory located above 1,000 meters. The country is divided into two major watersheds, the Araks basin to the south and west and the Kuri basin in the north-east. The low-lying Ararat Valley has relatively rich, deep soils but only limited rainfall of some 300 mm/year. Here accessible groundwater and surface water flows have made the region the principal irrigated area with multiple cropping and dependable harvests. At higher altitudes, where soils tend to be shallower and stony, agriculture has

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

more limited scope often giving way to indigenous pasture vegetation.

Armenia has a highland continental climate, meaning hot summers and cold winters. The mean temperature in Armenia is 5.5°C, with the hottest regions averaging 12 to 14°C and the coldest regions averaging temperatures below zero. Summers are warm (16-17 °C mean temperature), with the hottest regions, such as the Ararat Valley, with temperatures of 24 to 26°C, and extremes reaching 38 to 40°C. Annual precipitation in Armenia varies by region: with an average annual precipitation of 592 mm, in the Ararat Valley and Meghri region it only reaches 200 to 250 mm, (less than 36 mm during summer), while some mountain regions receive 1,000 mm.

The agro-biodiversity of the country stands out for its diversity of economically valuable species, with more than 200 edible plants, more than 2,000 fodder plants, more than 10% of the flora with medicinal properties, about 350 honey plants, etc.

According to the socio-economic data of the National Statistics Service (NSS), more than one third of the population was still poor in 2011⁸, and three per cent have to be considered very poor; Shirak shows the highest rates, followed by Ararat and Lori. Female-headed households are particularly vulnerable to falling into extreme poverty since women are left alone to shoulder the burdens of household and childcare responsibilities.

Poverty and unemployment led to a huge wave of migration from Armenia, with approx. 50% of the population (1 million people) leaving the country since 1990. Unemployment is particularly high among youth (persons aged 20-24) with a 38% rate. While adult labour force participation rate for females is 51% (lower than 72% for males), female labour is intensely represented in agriculture with 45% of female employment in the sector (well above 33% of the share of male labour in the sector)⁹.

Over the past two decades, the performance of the Armenian economy ranged from a real GDP contraction of 42% following the collapse of the former Soviet Union, to sustained annual growth rates of over 10% between 2001 and 2008. The IMF reports¹⁰ that economic growth is now estimated to have been below 4% in 2013, while higher food and energy prices have driven inflation above the Central Bank target of $4 \pm 1.5\%$.

Agriculture constituted about 20% of GDP in 2013 and the contribution of the sector has remained at that level for several years. The sector, including livestock and downstream processing of agricultural products, is the main source of livelihoods for rural communities. Out of the total land area of Armenia, 70.7% (2.1 million ha) is agricultural land. Some 335,000 households are involved in the sector, with an average landholding of around 1.4 ha per household and a diversified production system involving both crops and livestock. The agriculture sector provides employment to more than 44% of the country's economically active population, including 65% in rural areas.

Over 80% of total agricultural production output in Armenia depends on irrigation. The crop water deficit during the vegetation period cannot be supplied by soil moisture alone particularly for higher value crops, making irrigation necessary for most of the crops. Major irrigation works were developed in Armenia during the Soviet era, comprising reservoirs, run-of-river schemes, pumping stations, tube-wells, and surface and sprinkler irrigation systems.

The area irrigated by the 44 WUAs operating in Armenia is 130,180 ha (2012). This represents only a 62% of the total command area of the schemes under the management of WUAs as per cadastral records meaning that substantial areas under the command of primary canals are not currently irrigated. This is mainly because of water losses in the systems. With the noticeable exception of the Yerevan and the Ararat valley, in all the other *marzes* the ratio of actual/potential irrigated area is below 70%. It is also relevant to note that almost 25% of the command area of the WUAs area is classified as "backyards", which are mainly consisting of household food production plots adjacent to the rural houses, averaging 0.17 ha¹¹. These plots are an important element of food security for the poor households and to some extent contribute to increased family income by providing opportunities to generate a reliable surplus of fruits and vegetables for sale.¹²

2) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

Armenia, with a predominant mountainous landform with arid climate conditions and vulnerable ecosystems, a particular history of droughts and uneven distribution of water resources, and an estimated 80% of land affected by land degradation processes, is among the most sensitive countries in the Europe and Central Asian Region to global environmental changes. Overall, challenges for the sustainable management of agricultural land in Armenia are due to multiple factors (geographic location, anthropogenic and climate change related issues):

- Marked vertical zoning, fragmented mountainous terrain, resulting in little available agriculture land (0.14 ha of arable land per capita).
- The extreme fragmentation of land (over 1.2 million land plots with an average size of 1.4 ha) led to unsustainable

⁸ NSS adopted the World Bank definition/methodology to measure absolute poverty, including consumption and asset values.

⁹ WB Data (2011).

¹⁰ See IMF Program Note of 1 October 2013.

¹¹ Household Characteristics and Farmer Practices - Mathematica Policy research for MCA Armenia (Dec. 2008).

¹² The FMAP Supervision Mission Aide Memoire of September 2011 reports a 10% increase in household incomes from these plots.

farming practices and the deterioration and abandonment of a large part of the irrigation schemes because the on-farm systems were not adapted to smallholder agriculture.

- The rise in subsistence farming since the 1990s has increased the use of poor land management practices, being estimated that more than 60% of arable land needs improvements: 50% loss of soil organic carbon and top soil due to poor agriculture practices over the recent three decades; increased salinization/alkalization in Ararat valley due to inadequate, excessive watering rates; marked erosion, mudflows and landslides in the more intensively farmed and grazed areas near the villages; declining soil fertility.
- Transportation, storage and uncontrolled use of expired pesticides and fertilizers have led to high soil and water pollution.
- The lack of adequate maintenance after the breakup of the Soviet Union has had a deleterious impact on the technical condition of the national irrigation system, which was characterized by high-energy requirements of about 600 million kWh/year for pumping. Damaged and poorly maintained water pipes have led to pollution and conveyance losses of over 30% in the major water canals. In the early 2000's only about 112,300 ha of a total of 420,000 ha irrigated during Soviet times was irrigated. The owners of the smallholdings resulting from the land privatization have little or no experience with irrigated agriculture. Approx. 20% of irrigated areas are affected by severe to moderate soil salinity (about 35,000 ha only in Ararat valley, which generates 50% of Armenia's agriculture production) due to poor maintenance and operation of irrigation systems. The underdeveloped tertiary distribution system is one of the main causes of the gap between the potential and the actually irrigated area under the WUAs. It should be noted that the total irrigated area under the WUAs has only marginally increased in the past 5 years (+1%, see Table 4) as investments in irrigation infrastructure by donors has mainly focused on conversion of operating but energy consuming pumping stations and to deferred maintenance of primary and secondary channels.
- The energy crisis during the 90's caused considerable deforestation as 50% of household energy was estimated to come from firewood. A combination of poor forest management and illegal felling resulted in damage to around 27,000 ha of forest (more than 8% of the total forest area), including the total clearance of around 7,000 ha, with accelerated erosion, floods, and landslides.
- Land degradation problems: (i) More than 2,500 landslides prone areas have been recently identified with a total surface of 1,221 km² (4.1% of the national territory), especially affecting Vajots Dzor, Tavush, Lori, Gegharkunik, and Syunik marzes; the damage caused by landslides in the country in 1994-2007 amounted to more than USD 17.5 million; (ii) All marzes in Armenia are subject to numerous floods every year, with a total economic cost of more than USD 41 million in the period 1994-2007; The highest number of floods with significant damages in the same period occurred in Gegharkunik, Lori, Shirak and Aragatsotn, Syunik, and Tavush; (iii) Areas prone to mudflows are quite numerous in Armenia, particularly in Lori, Syunik, Tavush and Aragatsotn marzes, and the entire territory of the Vajots Dzor marz.
- Climate change impacts, due to temperature increase (1.5°C to 3°C by 2050) and precipitation decline (20-31% by end of the century): (a) by 2030 snow precipitation is expected to decrease 7-11% and river flow by 6.7%, with an increase in evaporation of 13-14% in lake Sevan; (b) there is a predicted 10-30% reduction of soil water due to lower precipitation, higher temperature and higher evapotranspiration, causing increased salinization problems, a water deficit for crop production of about 25-30% by 2030, and 8 to 14% crop yield decline especially for rainfed farming, and 4 to 22% yield decline in pastures; (c) for winter wheat and vegetables crops water requirements are predicted to increase by 19-22% and irrigation requirements are predicted to increase by 35-36% and 38-42% respectively by 2100; (d) higher frequency and intensity of extreme weather events will exacerbate hailstorms, early frost and drought in most of the country, flooding in the north/east/south parts, and aridification in the Ararat valley, with the expansion of desert and semi-desert areas by 30%; (e) temperatures may expand pastures upwards with and expanded growing season length and opportunities for fruit tree production in the foothill areas¹³.

The result of this is a high food security risk with the poor communities of Armenia particularly exposed, as they have limited access to knowhow, sound equipment, financial services, and food markets. Consequently, if climate-resilient farming management practices and soil erosion control measures are associated with the IFAD IRFSP¹⁴ baseline programme objectives to increase productivity of small scale farming and poor smallholders' transition to high value cash crops, the risks associated with environmental risks can be minimized, ensuring a more stable production and higher quality of

¹³ The World Bank, 2014. Reducing the Vulnerability of Armenia's Agricultural Systems to Climate Change.

¹⁴ Infrastructure and Rural Finance Support Programme (IRFSP)

marketable products with better access to domestic and international markets, higher employment opportunities along value chains, upgraded food safety and rural livelihoods.

3) The baseline scenario or any associated baseline projects

As part of the recent comprehensive Armenia Development Strategy 2012-2025 (ADS), the Government of Armenia acknowledged that agriculture and rural development plays a key role in economic diversification, job creation, and poverty reduction. The objectives of the ADS include moving agricultural production to the path of intensive development, increase in the productivity of agricultural labour and reduction in rural unemployment; support the food industry value chain and export potential; and increase in the level of commercialization of farms.

The Strategy focus on sustainable agriculture, by promoting soil conservation measures, improving water collection and irrigation methods, limiting the use of fertilizers and other agro-chemicals, and improving pasture management. The Strategy also aims to forecast and mitigate the effects of natural disasters, as well as implement measures to mitigate the impacts of climate change.

A large share of public investments in the irrigation sector has been therefore geared to the rehabilitation of the main structures in economically viable, non-energy-intensive schemes. This has involved, when technically and financially feasible, the conversion of a number of multi-stage pumping systems into gravity-fed run-of-river systems. Additional investments in gravity mains are ongoing with support from international financiers. The overall investment strategy in the ADS shows the requirement for a steady level of public spending of 0.3% of GDP up to 2025 (USD 390 million in total). The expansion of irrigated land areas and higher efficiency of the systems would be at the core of the investment policy in irrigation until 2025.

The 2005 Food Security Policy encompasses important environmental issues including climate change, desertification, biodiversity protection and biological security. The policy states that agriculture should take into account the changing climate and its impacts. The programme includes: creating a data bank on natural resource use, assessing and monitoring natural resources, developing and implementing land consolidation projects, regeneration of valuable and rare ecosystems, and creating early warning systems to prevent crop damage.

The Government indicated a strong interest for IFAD to help design the Programme as a potential IFAD/OFID co-financed operation, and include in this new Programme successful components of previous IFAD/OFID operations in Armenia i.e. rural infrastructure improvement and the provision of rural finance. The request was for the Programme to be designed to support smallholders as well as small and medium size enterprises (SMEs) at the production and processing levels of agricultural value chains. Armenia has already demonstrated a good capacity to implement development activities with IFAD/OFID in these areas in previous projects through the experienced existing Rural Areas Economic Development Programmes Implementation Unit (PIU) (for infrastructure development and overall management) and for rural finance through two independent units already supported by IFAD from their start and fully operational: the Rural Finance Facility (RFF) and the Fund for Rural Economic Development in Armenia (FREDA). The current good performance of these three organizations gives confidence that the capacity is in place to launch such a successful broadly focused programme as has been proposed by GoA.

A new IFAD supported programme called the Infrastructure and Rural Finance Support Programme (IRFSP) was requested by the Government of Armenia (GOA) to assist with continuing to resolve the widespread occurrence of poverty in the rural areas. The overall objective of the Programme is to improve the economic and social status of the population in selected rural areas where poverty is prevalent, by generating income growth and sustainable employment opportunities through strengthening the agricultural production systems and the forward and backward linkages of value chains for cash crops. The Programme has four components: (i) Rural Finance; (ii) Rural Water Infrastructure; (iii) Farmer Awareness and Support; (iv) Programme Management. The Programme, with an IFAD funding of a loan of USD 12.5 million and a grant of USD 0.5 million, would provide improved economic opportunities and an improved standard of living for some 16,000 households or around 67,000 people (about 7% of the rural population of Armenia, and an estimated 21% of Armenia's rural poor).

4) The proposed alternative scenario: brief description of outcomes and components

The GEF project will support an array of adaptation options to increase the environmental and socio-economic resilience of the smallholders and farming agro-ecosystems targeted by the baseline IRFSP programme.

The GEF project target group will be poor farmers and rural households that cultivate crops in the command area of irrigation schemes that will be rehabilitated in the framework of the IRFSP baseline interventions. The broad geographic area for implementation of the IRFSP infrastructure rehabilitation component would be the same for the GEF interventions: the eight marzes of Ararat, Shirak, Lori, Tavoush, Gegharqunik, Vajots Dzor, Sjunik and Aragatsotn, which include the areas with highest incidence of land degradation problems (landslides, floods, and mudflows), the highest incidence of

poverty in rural Armenia, but also have agricultural potential sufficient to lift programme beneficiaries from poverty¹⁵. Dedicated studies would be conducted prior to and during implementation¹⁶ to identify the location of pockets of poverty within the targeted marzes in order to provide further guidance in the pro-poor targeting of investments.

The project approach and proposed interventions are based on the priority measures and recommendations proposed by the Armenian government in various strategic documents – SNC, the National Action Plan for Combating Desertification, the Sustainable Development Programme - to reduce environmental risks causing land degradation, agriculture productivity loss and food insecurity.

The GEF project objective is to reduce vulnerability and adaptation deficit¹⁷ of farmers while increasing incomes and assets generated through investments in training, education and sustainable land management systems / technologies.

The project will partner with the Ministry of Agriculture, the Ministry of Nature Protection and the Yerevan State University and interventions will be organized around the following components:

Component 1: Investments in sustainable farming systems and technologies

This component will complement the IRFSP baseline component on the construction or rehabilitation of irrigation infrastructure to enhance water distribution to upgrade productivity of irrigated smallholder plots and expand irrigated areas using water saved as a result of the upgrade program. IRFSP will support the development of tertiary irrigation distribution networks, currently largely based on open earth channels, and would include upgrading layouts on existing schemes to layouts more suitable for the privatised smaller farmland plots (increased density of water hydrants and the use of water saving piped systems drawing water from existing main pipelines). The GEF component will build on the baseline intervention on tertiary level irrigation and drainage (under WUAs, up to field edge) by supporting farmers willing to undertake investments in on farm development in line with the principles of sustainable use of water and land resources¹⁸ by introducing and promoting, among the others, optimized irrigation systems, improved drainage and water harvesting management techniques and soil conservation/improvement techniques to prevent degradation and soil losses. Furthermore, the GEF component will ensure the implementation of special demoplots in lowlands, intermediate lands and mountains to demonstrate practices and train agriculture stakeholders.

Outcome 1.1: Water-efficient irrigation/drainage technologies and sustainable farming systems adopted by target farms benefiting from rehabilitated irrigation infrastructures

The GEF project will enhance water use efficiency by farmers and WUAs by supporting investments in on-farm irrigation/drainage technologies such as drip irrigation, water harvesting techniques, drainage water reuse and sustainable land management technologies (i.e conservation agriculture, integrated nutrient management, improved agronomic practices) for soil and water conservation in crop production in the command areas of the rehabilitated irrigation infrastructure. This will help reduce soil erosion, soil salinization and water pollution problems associated with inefficient water storage, conveyance and distribution, as well as with on-farm poor management practices supporting the overuse of water in agriculture.

The project will stimulate private investment by small farmers and producers and agribusinesses to upgrade production and post-harvesting technologies through a coordinated use of matching grants combined with partnerships with mainstream financial institutions (FIs) to expand lending to agriculture for follow-on and replication investments. By offering matching grants the project will help to demonstrate profitable investment opportunities within the target crop value chains that can then be replicated and scaled-up by other farmers and businesses with greater confidence and a better understanding of likely risks and returns.

Component 2: Soil erosion prevention through ecological restoration measures

Three types of technologies for soil erosion prevention are prioritized governmental reports such as the Second National Communication (SNC) to the UNFCCC : (i) the implementation of permanent soil cover through conservation agriculture systems and technologies, such as mulching and crop rotation; (ii) the restoration of degraded forests and pasture land at the landscape level to prevent soil erosion upstream and downstream agriculture land; (iii) the restoration of windbreaks in between farmland plots and along irrigation canals to prevent wind erosion and avoid siltation;

Outcome 2.1: Restoration actions are implemented to mitigate soil erosion and fertility loss

¹⁵ According to NSS data Shirak is ranked as the poorest *marz* in Armenia. On the other six selected marzes the share of “vulnerable” villages entitled to direct agricultural inputs support form MoA ranges between 41% in Syunik to 22% in Vayots Dzor.

¹⁶ A Baseline/needs assessment survey was being carried out simultaneously during detailed design by international consultants covering four marzes of the RA (Shirak, Tavoush, Vajots Dzor and Syunik); a comprehensive “Poverty mapping” study will be commissioned at programme start up and repeated periodically during IRFSP implementation.

¹⁷ The World Bank, 2014. Reducing the Vulnerability of Armenia's Agricultural Systems to Climate Change.

¹⁸ “The use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions” (UN Earth Summit, 1992)

This component will complement the IRFSP/GEF joint efforts for the modernization of irrigation infrastructure and efficient irrigation cropping systems through vegetation restoration interventions that will minimize wind and water erosion/siltation and wind disturbances to the effective functioning of pressurized irrigation technologies. Restoration needs will also be identified within target watersheds to understand upstream and downstream vulnerabilities to soil erosion and select hotspot areas for the rehabilitation of pastureland and woody vegetation. With the support of international and national experts, the project team will identify suitable ecological restoration methods and bio-engineering techniques, and will support the development and implementation of restoration plans at the watershed level, with the participation of land owners and users.

WUAs and landowners will benefit from available matching grants to cover the costs of the restoration works, possibly providing in-kind contribution in the form of labour.

Component 3: Enabling environment to enhance capacity of key practitioners against land degradation risks

Experience shows that the main ingredients for a successful adoption of sustainable agriculture practices and technologies are: (i) a close collaboration since the very early stages between all concerned stakeholders, especially university researchers (also providing Climate Change Adaptation Research Small Grants), extension agents, civil servants, farmers and the private sector; (ii) the establishment of on-farm trials (demoplots) supported by strong local champions – leading farmers and/or pioneer research/academic/NGO; (iii) participatory technology development, education and training; (iv) the design of a sound implementation strategy; (v) the existence of a supportive policy framework, rural finance, marketing and value-chain development; (vi) the design of a wide and strong communication campaign to reach out all Armenian farmers and reduce the adaptation deficit of the Country. (vii) the creation of networks of Armenian and foreign Universities and of Armenian and Foreign Chambers of Commerce in order to ensure knowledge and availability of climate change adaptation technologies and practices.

The GEF Component 3 will address all capacity building needs to help smallholder farmers and other key practitioners consolidate their investments in sustainable farming practices and technologies and to contribute to the systemic mitigation of climate change induced agricultural risk.

Outcome 3.1: The capacity of key practitioners to adopt sustainable land management practices and technologies is upgraded

The GEF project will build the adaptive capacity of key agriculture practitioners – farmers, extension agents, private sector, agro-environmental NGOs, research and academia - to acquire a more professional profile for sustainable agriculture production making use of Efficient Irrigation Technologies (EIT) and soil and water conservation technologies (S&WC). The process will start with a baseline inventory of existing and ongoing experiences on efficient irrigation and sustainable farming systems and techniques in Armenia, neighbouring countries and elsewhere. The learning programme will include three consecutive stages: (i) training of trainers (ToT) programme; (ii) learning programme for farmers, based on on-farm demonstration and applied research actions, and exchanges with available local/international experience; (iii) elaboration and dissemination of findings and recommendations addressing prospects for the upscaling of efficient irrigation and sustainable farming practices, and the ecological restoration of natural and semi-natural agro-ecosystems in Armenia. (iv) support the GoA in ensuring effective coordination in the sector and synergic division of works among actors.

Outcome 3.2: Index-based insurance system for selected crops/breeds is developed and piloted

MoA is aware of the growing concern of farmers about the increasing impact of climatic-related risks, such as drought and hail, in their livelihoods, and intends to address the policy requirements for the development of the agricultural insurance market and enable increased availability of insurance products. This will require dialogue and partnership between the public and private sector to devise appropriate and affordable tools for insurance and risk management. Some of the project planned measures are: (i) assess needs and opportunities, and develop recommendations for developing an index-based insurance system; (ii) provide training and advice to civil servants, farmers, and insurance company staff on possibilities and potential for agricultural insurance.

As a basis for the index-based insurance schemes, the project will hire international expertise to support governmental and private sector actors to learn about GIS modelling to determine the vulnerability of crop and livestock yields to climate-related risks, mapping and understanding priorities for selecting suitable crops/crop varieties and breeds, strengthening forecasts of natural disasters, and developing the legal and operational frameworks for an index-based insurance system compensating farmers from drought, hail, etc.

The project will use project management cost to contribute covering the additional cost of a CC Adaptation Project Manager that will follow and supervise all CC related activities. Details regarding staffing and national / international experts will be provided at CEO endorsement stage.

It is expected that the number of direct and indirect beneficiaries from the Project would be about 67,100 people in rural Armenia. This is about 7% of the rural population of Armenia and 10% of the rural population in the 7 marzes, which are the focus of the Project.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEF and co-financing

GEF funding represents an opportunity to broaden the scope of the rural development objectives pursued through the baseline Infrastructure and Rural Finance Support Programme (IRFSP) in light of the expected land degradation impacts on the already fragile agro-ecosystems, soil and water conditions, and irrigation infrastructure. Without the GEF funding, the baseline intervention will not tackle the root causes of the main environmental constraints facing agriculture development in Armenia, reducing the likelihood to reduce food security risks in the long-term.

The GEF funding will aim at mainstreaming environmental sustainability in the baseline investments in irrigation infrastructures, and agriculture value chains, and enhancing the adaptive capacity of smallholder farmers, users' organizations and extension services to address the environmental risks causing land degradation and agriculture productivity loss. This will be done mainly by focusing on environmental-friendly measures that promote the sustainable management of water resources/infrastructures, that incorporate soil and water conservation into farming systems, and that help restore degraded farmland and rangeland. Building on the activities carried out by the baseline, the GEF will cover the additional costs associated with erosion/siltation reduction and conveyance water loss in the rehabilitated irrigation schemes, on-farm efficient irrigation and soil conservation farming systems and technologies, training in sustainable agriculture practices, landscape restoration, as well as the piloting of index-based insurance system in Armenia. The GEF project will be fully blended to the IRFSP baseline programme to secure a synergistic and complementary approach. The suggested pilot developments under the GEF would become models for replication and scaling-up across regions in Armenia.

The core target group will remain the same as that of the IRFSP, namely poor smallholder farmers that cultivate crops in the command area of the obsolete or inefficient irrigation schemes to be rehabilitated by the baseline, willing and able to move towards more commercial production. The project will put particular emphasis on poor rural women headed households and unemployed youth, the most vulnerable group to environmental risks. Due to the inclusive nature of the irrigation rehabilitation and landscape restoration, whereby entire command areas and watersheds will be improved, some farmers who are outside the core target group of the GEF may also benefit. Recovery of assets and promoting sustainable land and water management systems and techniques would enhance production and income generation among the target group beneficiaries.

The targeting approach, strategy and gender mainstreaming of the proposed project under the GEF financing will be consistent with that of the IRFSP, which comprises geographical targeting, self-targeting and direct-targeting. It will be reinforced and refined in order to align the strategy with the specific characteristics and requirements arising from the nature of the proposed investments (irrigation improvement, sustainable farming and landscape restoration).

The table below summarizes the added value of the GEF intervention in comparison to the baseline.

BASELINE PROJECT	ADDITIONALITY OF GEF INTERVENTIONS
<p>The overall goal of IRFSP is to improve the economic and social status of the population in selected rural areas where poverty is prevalent by generating income growth and sustainable employment opportunities through strengthening the agriculture production systems and the forward and backward linkages of value chains for cash crops.</p> <p>The specific objectives of the Programme are addressing rural poverty in selected regions of Armenia by: (i) increased efficiency of small scale farming, post production processes by participating smallholders to growing high value cash crops; (ii) creation of linkages between agro-processing facilities and poor rural smallholders to enhance their improved access to domestic and international markets and employment opportunities along the value chain; (iii) improving water infrastructures; (iv) upgrading food safety, the quality of marketable products, and family health by improving household water supplies.</p>	<p>The GEF interventions will improve resilience of the smallholder farmers' production systems to land degradation and climate-related risks - increasing rainfall shortage and evapotranspiration during the cropping season - by promoting Efficient Irrigation Technologies (EIT), soil and water conservation (S&WC) farming systems, and ecological restoration measures;</p> <p>The GEF project will incorporate erosion control measures (e.g. protective vegetation shelterbelts to prevent wind erosion and siltation problems in the irrigation infrastructure) and water efficiency technologies in the rehabilitated tertiary irrigation infrastructure and conveyance networks.</p>
<p>Component 1 of IRFSP would be Rural Finance, including credit for farmers and small enterprises to be channelled through the existing Rural Finance Facility (RFF), and equity and semi equity financing through the Fund for Rural Economic Development in Armenia (FREDA).</p>	<p>Financial institutions, including insurance companies, will be trained on environmental impact assessment of agriculture investments</p> <p>Financial Institutions will integrate the necessary information to evaluate robustness of applications for finance for environmentally sound, economically viable and socially beneficial investments.</p> <p>Climate index-based insurance will be piloted for selected crops/livestock and</p>

	climate risks – e.g. drought, hail - with the participation of governmental staff, interested insurance companies and farmers.
Component 2 of IRFSP would be Rural Areas Water Infrastructure (RAWI) , mainly irrigation improvement and rural water supplies, designed to improve the economic opportunities and standard of living for small farming families living in poor communities.	<p>Farmers and farmers' organizations operating the command areas of the IRFSP rehabilitated irrigation schemes will benefit from matching grants supporting investments in EIT and S&WC farming systems and technologies.</p> <p>Service providers will support farmers and farmers' organizations in the adoption of sustainable farming systems and technologies, and in the implementation of landscape restoration works.</p> <p>The financial support for sustainable farming investments shall significantly decrease soil erosion rates in farmland/rangelands and in the upstream and downstream neighbouring lands, soil fertility shall significantly improve at a lower production costs leading to higher and more stable crop yields, and water requirements for crops shall be reduced.</p>
Component 3 of IRFSP would cover the Farmer awareness and Support , providing technical support, capacity building, and technical studies.	<p>Services providers – extension, research, NGO, civil servants and credit associations - will be trained on the environmental benefits of efficient irrigation, sustainable farming systems and landscape restoration measures.</p> <p>Smallholder farmers and farmers' organizations will be trained on efficient pressurized irrigation technologies, soil and water conservation farming systems, and landscape restoration measures.</p> <p>Civil servants, researchers, service providers and farmers' organizations will be trained on GIS modelling technologies for assessing the vulnerability of crops/livestock to climate risks, selecting suitable crops/breeds and production systems, and strengthening forecasts of natural disasters.</p> <p>Information material (i.e. leaflets, handbooks, articles, etc.) showing lessons learned on efficient irrigation and CA/OA systems and technologies and landscape restoration prepared and disseminated widely to practitioners and society in general.</p>
Component 4 of IRFSP would finance Programme Management .	<p>The GEF project will help integrate CC aspects in the overall programme management and monitoring.</p> <p>The GEF project will cover the additional costs for a CC Adaptation Project Manager that will ensure the overall coordination of the GEF activities and effective integration in the baseline. National and international experts will be hired to provide technical support and guidance for the effective implementation of the different project components, and help fully integrate environmental risk-reduction issues in the baseline interventions and M&E system.</p>

6) Global environmental benefits and/or adaptation benefits

The proposal will be designed to achieve Global Environmental Benefits (GEBs) under the Land Degradation Focal Area (LD FA) whose purpose is to foster system-wide change to control the increasing severity and extent of land degradation in order to derive GEBs through sustainable land management (SLM) systems and technologies. In addition to the direct social and economic benefits that will be gained from addressing land degradation through the use of SLM practices and landscape restoration measures, the project will:

- (i) improve the integrity of agro-ecosystems and their environmental services;
- (ii) increase carbon stocks and reduce carbon emissions in the restored landscape areas and in the farmland plots under sustainable farming systems;
- (iii) preserve and restore particular semi-natural and natural rangeland habitats contributing to improved ecosystem stability and to the protection of agro-biodiversity of global importance;
- (iv) reduce erosion rates in watersheds including ecosystems and protected areas of international importance.

A further indirect benefit potentially yielding GEBs elsewhere is

- (v) contribute to a more programmatic approach to SLM at national level, including more investment in SLM. These practices and lessons will be compiled and made available for adoption in other watersheds of the region and the country.

7) Innovativeness, sustainability and potential for scaling up

The GEF project will identify, demonstrate, validate and disseminate SLM systems and technologies to prevent land degradation problems damaging irrigation schemes, and affecting farmland, pastureland, and forests at the watershed level. Best practices and case studies from Armenia and elsewhere will be gathered and adapted to the context of the project

intervention areas.

The project will build on successful experiences from other partners in Armenia and elsewhere, adapting efficient pressurized irrigation technologies to the rural context in Armenia, with a special focus on: (i) increasing yields with reduced water requirements; (ii) adapting drip irrigation to reduce salinity problems; (iii) preventing wind erosion problems decreasing the effectiveness of pressurized irrigation. The project will also promote innovative practices and technologies to disseminate Conservation Agriculture (CA) management principles (minimise tillage; retention of adequate levels of crop residues and soil surface cover; use of crop rotation) that ensure a more sustainable agriculture production while improving soil conditions and soil water availability. The project will help identify specific management strategies and components for the different agropedoclimatic conditions and project intervention zones in Armenia through adaptive research and active farmer involvement. The project will also look at the complementarities of CA and Organic Agriculture (OA), with the double aim to integrate compatible CA principles and practices into OA – i.e. avoidance of tillage and use of crop residues to reduce weed germination and improve soil Organic Matter, fertility and water infiltration – and to minimize the environmental impacts of agrochemicals.

Moreover, the project will also contribute to combine climate resilient agriculture with agro-landscape restoration measures to improve soil conditions at a broader watershed level, and mitigate the expected exacerbation of soil erosion and land degradation. The project will focus on innovative ecological restoration techniques supporting the production of high quality plant material, as well as effective soil preparation and planting techniques to ensure healthy plant growth and the long-term survival of the restored vegetation. The project will benefit from several EU funded research programmes on good practices on ecological restoration and desertification and land degradation control, and will promote exchanges of experiences and know-how with the project stakeholders.

Sustainability will be sought through a broad and deep capacity building (CB) programme, designed to create a critical mass of capacity for CA at the national level, and among all actors – from institutional to grassroots. The CB process will integrate strong participatory elements to fully address issues that affect the sustainability of natural resources and the welfare of local communities (continuous training and on-farm demonstrations to consolidate adoption of SLM and ecological restoration methods and techniques, and encourage adoption by other farmers in the region). The restoration of shelterbelts and vegetation in the target areas, and the enhancement of their protection functions will contribute to the stabilisation and health of the agro-ecosystem, thus to the sustainability of the project.

The sustainability of the project is also guaranteed by the full involvement and empowerment of smallholders throughout the various components of the project. Smallholders will be the targets of the awareness raising and capacity building programme, and they will be the main beneficiaries of the components on production/processing improvement and the provision of new technologies.

The IRFSP baseline support for rural investments and the innovative agro-oriented equity fund FREDa can be further developed by scaling up their capacity to invest in a larger scale and by introducing new, innovative approaches in their operations with the objective of reaching IFAD's ultimate target group in a more effective manner.

IFAD's specific role will be to lead the design process, and to ensure appropriate guidance during supervision of the programme, conduct impact assessments and studies to document the lessons learned so far. Results of the pilot adaptation actions will be disseminated widely within and outside the project area. Moreover, the project will be linked to ongoing regional and global programmes to ensure exchanges and dissemination of information at a wider scale using the IFAD website, UNFCCC, GEF and other platforms for experience sharing.

The GEF will be designed to maximise the possibility of upscaling lessons learned and best practices beyond project finalisation, and the need to expand the adoption of efficient irrigation technology, sustainable land management, and adaptive restoration practices beyond the project area. The strong capacity building component and the involvement and buy-in of all concerned stakeholders will undoubtedly facilitate this task.

A.2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes ☒ /no ☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

A number of meetings and consultations will be carried out at the GEF project design stages, including main stakeholders involved in the development and implementation of policies in the agriculture sector: (a) The Ministry of Agriculture (MoA), responsible for developing and implementing policies in the agriculture, forestry and fishery sector and supports agricultural extension through a network of MASC's;¹⁹ (b) The Ministry of Natural Protection (MNP) with the primary responsibility for the

¹⁹ MASC: Marz Agricultural Support Centers: The Armenian Extension Service, a private extension system, was established and funded by USDA in 1992-96. With the support from World Bank loan, the Ministry of Agriculture restructured the Armenian Extension Service into state owned, but decentralized and

protection, sustainable use, and regeneration of natural resources including water; (c) The Ministry of Territorial Administration (MTA), responsible for the development implementation of policies related to the management of lands in Armenia on the national, regional, and local level (oversees the management of lands that belong to local communities). As part of this, the MTA supervises territorial administration bodies and provides information about the territorial development programs of regional and local entities to the government, maintaining a database with relevant aggregate socioeconomic indicators for all the rural communities in Armenia; etc. The project design team will also organize meetings and consultations with local authorities, primary producers, smallholders and micro-entrepreneurs in selected rural communities from the target *marzes*.

Moreover, the project design team will build on the social analysis fieldwork carried out during the formulation of the IFAD/IRFSP baseline project, covering six rural communities across three target *marzes* (Yenokavan and Vazashen in Tavoush; Chochkan and Frashen in Lori; and Meghrashat and Azershat in Shirak) in which social research was carried out through a combination of community meetings, focus group meetings, household visits/interviews and key person interviews to discuss the development challenges and possible solutions. Other consultations carried out during the IRFSP design stages involved mostly WUA members and community heads as well as local NGOs. The IRFSP design team also met with the staff of the Rural Finance Facility (RFF); the rural credit apex unit and the Fund for Rural Economic Development in Armenia (FREDA) both set up with IFAD support; the Ministry of Agriculture, and key government agencies as well as donor partners. The mission also visited enterprises financed by FREDA equity investments, RFF clients and potential infrastructure investments and assessed the results of these investments.

A.3. Gender Considerations. Are gender considerations taken into account? (yes ☒ /no ☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The GEF project design will build on the gender mainstreaming efforts undertaken by the baseline IRFSP formulation to overcome barriers preventing rural women entrepreneurship and equal access to financial services. The “Women Income Generation through Goat Breeding in Lori Marz” was a project, which brought 15 women-headed households together as an association to apply for financing together from the Telefood project. This could be a model for increasing women’s access to credit.²⁰

The GEF project design team will give specific consideration to vulnerable women-headed households and youth, organizing consultation processes to select a menu of awareness raising, training and investment-support interventions suited for their specific needs. The project Component 3 will provide preferential access to women heads of households and youth for training. The aim will be to help the most vulnerable farmers develop an improved resilience of their agricultural production systems to soil erosion and regular fluctuations in rainfall levels through investments into sustainable land management technologies, to strengthen the baseline gender efforts to improve women’s entrepreneurship and access to finance and markets. The training would be provided by consultants or specialised service providers to be contracted by the PIU and would be linked with the baseline IRFSP training activities in Armenia.

The Project design team will seek for close liaison with selected partners to better reach out to vulnerable groups, to coordinate activities and lever support for the women-oriented activities of the GEF project and IRFSP baseline programme. One such identified partner would be the Asian Development Bank with its relevant operations in women’s entrepreneurship and SME development. The Women’s Entrepreneurship Support Sector Development Programme, to be implemented in 2013-2017, will provide USD 40.6 million to banks and one MFI to support the investments of the SMEs that are operated by Armenian women.

A.4 Risk. 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 (table format acceptable):

RISK	PROPOSED MEASURES
Climate Change Risks: Climate Change adversities (increase of average temperatures, reduced rainfall and snow), if not addressed, will severely compromise the project as these will reduce agricultural performances of the Country and will magnify the overall vulnerability of the sector.	The measures to mitigate such risks are contained in each of the 3 components. Activities will target adaptation deficit of the country, empower farmers / institutions and promote adaptive practices and infrastructures. All measures combined aim at reducing climate change vulnerability and improving

profit seeking Marz Agricultural Support Centers (MASCs). Ten MASCs and a Republican Agricultural Support Center (RASC) are now established with about 300 staff in total.

²⁰ Source: <http://www.ifad.org/english/gender/cen/profiles/arm.htm>

	management of natural resources and production systems.
Political Interference: Agreed criteria for the allocation of credit funds or infrastructure funds are not adhered to for political or other reasons. This could result in Project benefits accruing to beneficiaries outside the target group, or to support for investments that do not have an adequate economic result. Furthermore, inadequate arrangements are put into place for the O&M of Programme investments on completion.	The measures to mitigate these two risks will be built around the empowerment of the targeted communities in decision making, contractual relations to be put into place with competent water companies, and preconditions for financing which required adequate arrangements for O&M, and the professionalism of the Project Implementation Unit staff supported by training included in the Programme. These would have a pivotal role in planning and ensuring that investments are tailored to needs consistent with agreed criteria. Furthermore, IFAD supervision missions will monitor this risk and if undue influence is detected investigate and recommend suitable measures.
Reduced Impact: Benefits stemming from Program investments are not achieved	The risk that benefits stemming from Program investments are not achieved will be mitigated by including Component 3 of the Programme providing for farmer awareness and support through training and demonstration designed to increase the likelihood of achieving the conservative Programme benefit levels aimed at under the Programme which is a lesson learned from previous programmes which did not have such a supporting component.

A.5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives:

The IRFSP is closely linked to previous IFAD projects in Armenia which have supported the improvement of rural infrastructure, and the creation of RFF and FREDAs, institutions which have already launched successful efforts to provide credit and equity investments to farmers and rural enterprises financed by IFAD, WB and other donors. The Programme builds on the success of these programs. The design of the Programme has also drawn on the experience of other donors and investors and their ongoing programs to support WUA's (WB), cooperative development (EU), and financial literacy training (USAID, KfW).

There are good prospects for the establishment of formal links with complementary Projects being implemented by the GOA and other donors as there are many activities underway in Armenia, which would have a direct relevance to the GEF project and IRFSP baseline programme. A preliminary agreement has been reached for a Public Private Partnership agreement between IRFSP and the Armenian Water and Sewerage Company (AWSC) for the implementation of the community water supply interventions. Project design will take into account the lessons from complementary projects' activities, and during implementation it would be important to maintain links with these other activities, to share advisory systems and capacity during implementation. Partnership agreements would be contemplated where and when applicable. Likely candidates for linkages include:

- (i) The ongoing USAID "Enterprise Development and Market Competitiveness" (EDMC) Project launched in 2011, and the "Finance for Economic Development" (FED) intervention launched in 2013, which focuses on the provision of affordable and effective financial services to micro, small and medium enterprises, with a particular emphasis in rural areas. Ongoing USAID Financial Training activities can also inform the proposed farmer training programs to be included in the GEF project.
- (ii) The new German-Armenian Fund (GAF) agro-lending operation that will bring useful experience to the Project efforts to modernize the farming and agro-processing sectors in Armenia. There are good opportunities for IFAD to leverage technical assistance and training synergies with these GAF operations.
- (iii) The Asian Development Bank (ADB) credit line operations to support the SME sector in Armenia. Furthermore, under its Women's Entrepreneurship Support Sector Development Programme, to be implemented in 2013-2017, ADB plans to provide USD 40.6 million to banks and one MFI to support the investments of the SMEs that are operated by Armenian women.

- (iv) The results of the 2006-2011 Millennium Challenge Account Corporation (MCA) investments in irrigation construction works, including farmers' training, demonstrations plots and WUA strengthening.
- (v) The World Bank (WB) Irrigation Systems Enhancement Project (ISEP) for the construction of key water infrastructure and Water User Association (WUA) strengthening and performance monitoring.
- (vi) The WB financed Livestock Development Project which includes advisory support for livestock development will also be relevant for accessing support services on livestock in the project areas.
- (vii) For the farmers' awareness and capacity building actions to be included in Component 3, the Project will be able to leverage the work of many donor partners, which will greatly increase the effectiveness of this component, such as: WB support for WUA development and livestock services (see above); USAID support for financial training for farmers; ADB's efforts in training for women entrepreneurs; FAO activities in extension; numerous NGO training and support operations often financed by diaspora groups and the private sector, which boost the activities of the national extension services.
- (viii) The OSCE environmental portfolio that is currently funding 15 regional environmental offices in the Country which could be used by the project as service providers.
- (ix) The GEF funded project "Enhancing Livelihoods in Rural Communities through Mainstreaming and Strengthening Agricultural Biodiversity Conservation and Utilization" implemented by UNEP. Such coordination and collaboration will be useful to enhance conservation agriculture activities and other sustainable agriculture practices. .

Description of the consistency of the project with:

B.1 Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐). If yes, which ones and how: NAPAs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.:

The objective of the Project is consistent with Government policy:

- (i) The Government's Sustainable Development Strategy 2012-2030 (SDS) with the strategic directions to ensure sustainable economic growth, implement a targeted social policy for improving populations' living standards, improve the effectiveness of governance, and ensure environmental protection and sustainable management of natural resources; Improvement of rural water supplies were specifically called for in the government's Sustainable Development Strategy (PRSP-2);
- (ii) The Government's Agricultural Development Strategy 2010-2025 (ADS) that emphasizes the need for intensification of agriculture, and increasing the value added in agricultural and rural labour. Efforts have already been initiated for introducing an insurance system for agriculture production. Productive cooperation has been established between the MoA and "Armstatehydromet", which regularly provides meteorological data and short- and mid-term weather forecasts and warning in the case of dangerous hydro-meteorological phenomena.
- (iii) The Law "On the National Water Programme" (2006) that defines measures for meeting the demands of the population and the economy, ensuring ecological sustainability of the environment, forming and using strategic water reserve and protecting national water reserve through effective management of usable water resources;
- (iv) The 2002 *National Action Programme to Combat Desertification in Armenia*, calling improved land use planning and improvement of economic mechanisms for natural resource management. The project will also support the implementation of the 10-year *UNCCD Strategic Plan* especially Strategic Objective 2: To improve the condition of affected ecosystems, particularly Expected impact 2.1: Land productivity and other ecosystem goods and services in affected areas are enhanced in a sustainable manner contributing to improved livelihoods; and Strategic Objective 3: To generate global benefits through effective implementation of the UNCCD, specifically Expected impact 3.1: Sustainable land management and combating desertification/land degradation to the conservation and sustainable use of biodiversity and the mitigation of climate change.
- (v) The Second National Communication to the UNFCCC proposed adaptation technological measures to reduce losses from leakages in drinking and irrigation water supply systems, to apply advanced irrigation methods in agriculture (drip-subsurface irrigation, pivot irrigation, sprinkler irrigation, drip pipe irrigation, mole irrigation), to introduce drought and pest resistant locally adapted crops and varieties, to introduce early warning response system and climate index-based insurance system, to improve management of grasslands, and to implement soil and water conservation measures in farming systems;

(vi) The National Forest Policy and Strategy of Armenia and the National Forest Programme of Armenia (2005) that aim to ensure the protection, restoration, natural regeneration and sustainable use of forests;

(vii) The Biodiversity Strategy and Action Plan of the Republic of Armenia (BSAP) that among other issues aims to develop mechanisms for the conservation and restoration of degraded landscapes and the biodiversity of the areas damaged by economic activity;

Scaling up approaches and activities supporting rural finance and infrastructure that have benefitted the rural population under the previous IFAD programmes would be an effective way of contributing to poverty alleviation in Armenia. IFAD has already supported the successful creation of rural finance institutions that access the IFAD target group (i.e. RFF and FREDAs) and IFAD has an interest in providing further support to ensure that these institutions establish a robust level of sustainability.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY (IES)

- A. Record of Endorsement²¹ of GEF Operational Focal Point (S) on Behalf of the Government(s): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
H.E. Mr. Aramaic GRIGORYAN	Minister	Ministry of Nature Protection	

B. GEF Agency(is) Certification

This request has been prepared in accordance with GEF policies²² and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Gernot Laganda Officer-In-Charge, Environment and Climate Division IFAD		01/07/15	Rami Abu Salman, Regional Climate and Environment Specialist	+39065459 2291	r.salman@ifad.org

C. Additional GEF Project Agency Certification (Applicable Only to newly accredited GEF Project Agencies)

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

²¹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

²² GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF