Meeting of the Board
18 – 21 August 2020
Virtual meeting
Provisional agenda item 11

GCF/B.26/02/Add.13

28 July 2020

Consideration of funding proposals - Addendum XIII

Funding proposal package for SAP014

Summary

This addendum contains the following six parts:

a) A funding proposal titled "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation";
b) No-objection letter issued by the national designated authority(ies) or focal point(s);
c) Secretariat's assessment;
d) Independent Technical Advisory Panel's assessment;
e) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
f) Gender documentation.

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Simplified Approval Process
Funding Proposal

Project/Programme title:	*Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation.*
Country(ies):	*ARMENIA.*
National Designated Authority(ies):	*Ministry of Environment*
Accredited Entity:	*Food and Agriculture Organization of the United Nations*
Date of first submission:	*2019/3/08*
Date of current submission/ version number	*2020/3/13 V.006*
If available, indicate GCF code:	*This code is assigned to each project upon first submission of a Concept Note or Funding Proposal and remains the same throughout the proposal review process. If you have submitted this project/programme previously please indicate the GCF code here.*

GREEN CLIMATE FUND

Contents

Note to accredited entities on the use of the SAP funding proposal template

- The Simplified Approval Process Pilot Scheme (SAP) supports projects and programmes with a GCF contribution of up to USD 10 million with minimal to no environmental and social risks. Projects and programmes are eligible for SAP if they are ready for scaling up and have the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development.
- This template is for the SAP funding proposals and is different from the funding proposal template under the standard project and programme cycle. Distinctive features of the SAP funding proposal template are:
  - *Simpler documents*: key documents have been simplified, and presented in a single, up-front list;
  - *Fewer pages*: A shorter form with significantly fewer pages. The total length of funding proposals should **not exceed 20 pages**;
  - *Easier form-filling*: fewer questions and clearer guidance allows more concise and succinct responses for each sub-section, avoiding duplication of information.
- Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other funding proposal documents such as project appraisal document, pre-feasibility studies, term sheet, legal due diligence report, etc.
- Submitted SAP Pilot Scheme funding proposals will be disclosed simultaneously with submission to the Board, subject to the redaction of any information which may not be disclosed pursuant to the GCF Information Disclosure Policy.

Please submit the completed form to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

"SAP-FP-[Accredited Entity Short Name]-[yymmdd]"

A. PROJECT/PROGRAMME SUMMARY			
A.1. Has this FP been submitted as a SAP CN before?			Yes ☒ No ☐
A.2. Is the Environmental and Social Safeguards Category C or I-3?			Yes ☒ No ☐
A.3. Project or programme	☒ Project ☐ Programme	**A.4. Public or private sector**	☒ Public sector ☐ Private sector
A.5. Result area(s)	*Indicate the result areas for the project/programme.* Mitigation: Reduced emissions from: ☐ Energy access and power generation ☐ Low emission transport ☒ Buildings, cities and industries and appliances ☒ Forestry and land use Adaptation: Increased resilience of: ☐ Most vulnerable people and communities, including women and girls ☐ Health and well-being, and food and water security ☐ Infrastructure and built environment ☒ Ecosystem and ecosystem services		
A.6. Total investment (GCF + co-finance)	18,704,730 (million USD)	**A.7. Total GCF funding requested**	10 (million USD)
A.8. Type of financial instrument requested for the GCF funding	*Mark all that apply.* ☒ Grant ☐ Loan[1] ☐ Equity ☐ Guarantees ☐ Others:		
A.9. Division of GCF funding by thematic funding window (if applicable)	____7,451,630__USD or __74.5__ % Mitigation ____2,548,370__USD or ___25.5_ % Adaptation		
A.10. Implementation period	8 Years		
A.11. Total project/ programme lifespan	20 Years	**A.12. Expected date of internal approval**	*3/11/2020*
A.13. Executing Entity information	Republic of Armenia, acting through the Ministry of Environment / FAO		
A.14. Scalability and potential for transformation (Eligibility for SAP, max. 50 words)			

1 Senior loans and subordinated loans.

This investment focusing on a Forest-Energy nexus approach will address the government's urgent priority in both climate change mitigation and adaptation targets holistically and synergistically. The approach will secure the CO2 removals by increasing sustainable forest cover, improving forest management and forest restoration practices, and reducing GHG emissions from energy efficient fuelwood stoves.

Climate adaptation of forests is a precondition to achieve the mitigation targets – the project will increase the extent and resilience of forest cover against the projected climatic changes by introducing climate adaptive forestry technique such as production of climate adaptive seedlings (locally available species) and planting practice and improved management of restored forest lands. Moreover the introduced energy efficient stoves will reduce the use of fuelwood from forests and therefore reduce the pressure on forest ecosystems but also at the same time increase energy security in the rural areas vulnerable to the climate change.

This nexus approach is built on several innovations in particular application of ecosystem-based adaptation technique in forest restoration, integration of evidence-based GIS methodology for national forest governance and community engagement, development of national standards for energy efficient stoves, and a market-driven approach for access to affordable energy efficient stoves in rural communities vulnerable to the projected climatic change.

This GCF project will un-lock the private sector participation and future investments in the forest and energy sub-sectors, which are currently limited in the country, through: i) implementing supportive national policy guidelines in forest and rural energy sub-sectors; ii) introducing economically and financially sustainable afforestation and forest restoration practices and techniques; iii) enhancing the access to energy efficient technology; and iv) developing national curricula of the introduced / enhanced practices in forest-energy sub-sectors, to bring the highest sustainability of the nexus approach and impacts from the project.

Securing and scaling up CCA/CCM investments via tailored technology transfer (climate adaptive silviculture and rural energy efficiency) is a precondition for Armenia to fulfill the NDC[2] and to involve the private sector in achieving targets.

A.15. Project/Programme rationale, objectives and approach (max. 250 words)

The WB ranked Armenia among the top 4 CC vulnerable countries in the EECA region[3]. Forests are reported as most sensitive to climate change[4] with rural population heavily dependent on fuelwood for energy[5].Total GHG emissions in 2014 accounted for 10.5 $MtCO_2eq$ with reported growing tendency (+57% by 2030) and carbon removals from the forest sub-sector contracting by 11% (2010-2014). Literature correlates fuelwood with forest degradation as it is the primary energy's source for about 74% of rural households. Although the NDC identifies forestry as the major mitigation / adaptation tool, energy efficiency of heating appliances fueled with wood hardly reaches 40%. In this sense, the project will target adaptation measures by applying precautionary principle by investing in forest cover as an instrument to reduce exposure of communities in Lori and Syunik Marzes (49% of total forest cover) to climate induced risks. The project investments will aim at: (i) expanding national forest cover to about 2.5%, (ii) reducing fuelwood demand by at least 30%, and (iii) enabling sustainable and climate adaptive forest management on at least 135,800 ha[6] (20 y) also ensuring technology transfer to rural communities, private sector and both central and local institutions. Due to high public debt (> 61% GDP), the Country is undertaking key fiscal adjustment and increasing the foreign currency debt which represents an additional source of vulnerability (IMF).

Additionally, the implementation of adaptation measures will require an update in stakeholder's knowledge in Armenia to ensure that climate adaptive methodologies and technologies are transferred and mainstreamed in the formal education sector and can be reproduced beyond the project life span. In this sense, will respond to the Government goal to increase forest cover following an ecosystem approach for climate change adaptation and mitigation by restoring forests.

2 Kindly refer to Annex 2 pg. 6 for a complete list of acronyms and definitions used in the funding proposal.
3 WB, 2012 ref [329] Annex 2
4 See Climate Scenario Under Section 6 of the pre-feasibility study (Annex 2)
5 UNECE, 2017 suggests that at least 30% of population in the country can be considered energy poor with about 50% of total family income on energy and heating.
6 Equivalent to Forest Cover in Lori and Syunik.

B. PROJECT/PROGRAMME DETAILS

B.1. Context and baseline (max. 500 words)

Describe the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address. Available trends and projections indicate exposure to: (i) Average temperature increases of 2°C – 2070 / 4°C – 2100; (ii) Precipitation decreases of 3% - 2030, 6% - 2070, 9% - 2100[7];(iii) River flow decreases of 6.7% - 2030, 14.5% - 2070, 24.4% - 2100 compared to the 1961-1990 period; (iv) Snow cover decreases of 7% - 2030, 16 to 20% - 2070, 20 - 40% in 2100.

The Third National Communication to the UNFCCC (TNC) estimates that under a business as usual scenario (BAU) 5-6% of existing forests might be lost by 2030 as unhealthy trees and forest stands will become more sensitive to pests, diseases and fires. Additionally, rural communities are still heavily dependent from forests and, reportedly, responsible for the harvesting of up to 2 million m^3 of fuelwood yearly against an annual growth of forests of about 0.6 million m^3/y. Recent surveys on households' energy consumption concluded that due to raising prices of fossil fuels, fuelwood consumption per energy unit output will increase.

Concerning adaptation challenges, forestry represent one of the less adapted sub-sector. The TNC forecasts a shift in forests' boundaries associated with the development and spread of other ecosystems, forest wildfires, diseases and mass generation of pests. Similarly, a recent publication from USAID[8] includes ecosystems among the sectors that are more vulnerable to climate change and where impacts will be extensive and tangible. According to various sources[9] , plant and animal species are likely to shift upwards in elevation due to climatic changes, altering both ecosystem structure, habitat biodiversity and ecosystem services.

More than 15 % of Armenia's higher plant species are reported in danger of extinction due to projected climate change. Semi-desert and desert areas are projected to expand by 30 %, which will accelerate desertification. More frequent summer droughts and water stress will reduce the growth rate of trees and increase susceptibility to pests and diseases; this will also create conditions conducive to more frequent and intense wildfires, leading to an estimated 14,000 to 17,000 ha of forest loss by 2030. Additionally, studies from the Armenian academia, the UN the World Bank confirm that climate change is expected to have significant effects on the population dynamics of forest pest species. Armenian forests are expected to suffer significant growth losses caused by insect attacks under climate change. Severe and repeated pest infestations will lead to increased tree mortality, which also contributes to the accumulation of drying dead organic matter in forests increasing the risk of wildfires. As described Armenian forest are becoming more vulnerable and less resilient to climate change.

Consequently, net carbon emissions will be negative affected (forests are the only existing carbon sink in Armenia) and rural communities might be forced to accelerated migration to urban areas or abroad. In other words - without forest - national commitments toward the Paris Agreement and the Country's socio-economic development targets might be compromised. A full description of the climate scenario, exposure, vulnerability and adaptation deficit of Armenia and project areas is included in Annex 2 pages 12→19 (National circumstances) and pages 54→61.Total national emissions (2014) accounted for 10,450,000 tCO_2eq. The main contributor (>67%) is the energy sector while forests remove about 4.6% of total emissions yearly. Armenia's NDC (2015) aims to reach 20% of forest cover and to emit 2.07 tCO2eq/capita applying an ecosystem based approach by 2050. Mitigation will be mainly from renewable energy (RE), energy efficiency (EE), forests, and carbon storage in soil. Compared to 2010 levels, literature[10] forecasts + 57% emissions' increase by 2030 while the already decreased carbon removals (-11% 2010-2014) is projected to further decrease in the BAU scenario. Introducing climate adaptive silviculture practices, reducing degradation drivers of forests (i.e. fuelwood) and increasing participation in forest governance, will contribute to achieve NDCs and to low-carbon development pathways consistent with a temperature increase of less than 2 °C[11].

Describe the baseline senarios that the proposed intervention seeks to overcome (i.e. emissions baseline, climate vulnerability baseline, resilience/adaptation challenges. The baseline scenario includes: (i) carbon removals from the forest sub-sector (5% of total GHG emissions), (ii) fuelwood use (8m3 per hh/y) and emissions in project areas , (iii) Adoption rate of climate adaptive practices in forestry (0%), and (iii) community participation in forest governance (absent)[12].

Describe any recent or ongoing projects that are related to this FP, such as financing from Global Environmental Facility, Adaptation Fund, Climate Investment Funds or others, and how this project/programme complements these. EE and forestry are themes Armenia has experience in. Nevertheless, none of the current initiatives address the nexus between forests, EE /energy

[7]. Detailed information on climate change trends and projections is available in Annex 2- Section 6. References are available in Annex 12 # 160, 319,329, 335, 344
[8] Sources: Annex 12 # 160, 170, 180, 319, 329, 335.
[9] Sources: [21-31-94-102-123-170-190-214-220-228-255-257-258-263-264-267] Annex 12
[10] Sources: Annex 12 # 170, 180, 308, 320, 356
[11] Described approach is also one of the recommendations of the latest IPCC report [Annex 12 # 365].
[12] Baselines, targets, indicators and means of verifications are detailed in Annex 2-Sections 8/9/13

security and mitigation in rural areas. The project is designed to scale up best practices from past EE and forestry projects and to collaborate and coordinate with ongoing projects in the Country and in similar contexts (i.e. Lebanon, Turkey, Georgia)[13] so as to ensure that both approaches could be combined contributing to NDC targets.

Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed. As detailed in Annex 2-Section 6, the main root causes and barriers are:

- **(a)** lack of alternatives for rural populations – especially women (25% of rural households are headed by single women) - that need to fulfil their primary energy needs with inefficient and costly practices and appliances;
- **(b)** lack of technical capacities and institutional coordination of institutions to address energy needs and climate change in the forest sector;
- **(c)** lack of adequate policy mechanisms to apply the ecosystem approach aimed for in the NDC and ensure stakeholder participation in forest governance as foreseen in the Armenia Forest Code (2005) and related decrees[14].

B.2. Project/programme description (max. 1,000 words)[15]

Describe the proposed set of components, outputs and activities that will address the identified barriers and lead to the expected project/programme objective. The description should be provided for each component, output and activity, and should include a clear rationale for the cause-effect relationship of the interventions in each component. Include description of the target beneficiaries. The project will be executed in Lori and Syunik Marzes[16] (Annex 2-Sections 7 pg.49→56). Project areas have been selected by stakeholders as priority areas due to the importance of forest ecosystem in both Marzes, climate and climate change exposure and poverty level of rural population, population density, and type of forests.

Project support will be delivered in two Provinces: 105 rural communities in 8 municipalities of Lori Marz and 102 rural communities in 7 municipalities of Syunik Marz ("Project Area"). The selection of these Provinces, as well as the selection of direct beneficiaries, is further summarized in Table B.2.1. The Project will not foresee any transfer of ownership for the beneficiary contribution.

Table B.2.1. Selection of Project Area and beneficiaries

Level / type/ related project component	Criteria / process	Stage / timing
Municipality and community selection	The primary target group of the Project are all the rural population (mostly poor or very poor) with the higher direct dependency on forest ecosystem services for fuelwood (average 8 m3/y) and livelihood (e.g. agriculture, beekeeping, NWFP) in the 15 municipalities and 207 rural communities of Lori and Syunik Marzes. The selection of the municipalities and communities of Project Area was based on the assessment of a large number of data sets at national and regional scale and using the Earth Map tool as well as a series of vulnerability analysis and according to the following criteria (See Annex 2, Section 7: Project Areas And Target Group): a. Relevance of forest cover for the Country (Criteria: forest cover in %); b. Exposure of ecosystems to climate variability and change as well as to anthropogenic	Completed during project design. The following regions have been prioritized, and constitute the 'Project Area'. Lori Marz: 105 rural communities in 8 municipalities. Syunik Marz: 102 rural communities in 7 municipalities.

[13] For details on best practices and lessons learned Annex 2-Section 6. For the list of projects with which the project will coordinate and or collaborate: Annex 2-Section 11.
[14] E.g. Decree N- Decree N 583-N 2006 on forest concessions to communities.
[15] Detailed description of activities is available in Annex 2, pages 72→96
[16] Equivalent to governorate.

	stressors (Criteria: i) Fragility of mountain ecosystems characterized by forests; and ii) Relevant presence of forests (biodiversity hot spot) currently exposed to changing climate variables (mostly temperature) extensive exploitation for fuelwood and mining); c. Vulnerability of ecosystems and communities to climate change (Criteria: Availability of land suitable for forest restoration investments); d. Mitigation potential in terms of forest rehabilitation as a function of availability of suitable land from the State Forest Land (SFL) and from Municipalities (Criteria: i) Dependency of communities from forest for Energy, livelihood and protection); and ii) Interest of communities to engage into forest governance and positive past and ongoing experiences of communities and municipalities willing to invest in increasing forest cover); e. Socio-economic vulnerability of communities / high dependency of communities from ecosystem services (Criteria: i) Families located in the low/lowest income in %; ii) Households involved in migration processes in %; iii) Population relying on fuelwood as primary source of energy in %).	
Selection of State Forest Fund and municipal lands for Activity 1.2.1	Final selection of forest restoration investments will be determined by the MoE according the following agreed criteria: a. Identified sites will not overlap with other forestry projects; b. Identified sites will not correspond to areas assigned to offsets environmental damages caused by the private sectors or others; c. Identified sites will have the necessary biophysical requirement to secure survival of seedlings; d. Identified sites will be cleared by central and local institutions and will be clearly defined from a legal point of view (potentially disputed plots excluded). e. Identified sites will not require changes in land tenure or that might cause conflicts with adjacent communities; f. Identified sites will not include areas under legal/illegal pasture uses. g. Absence of natural regeneration.	During the project formulation, MoE (Hayantar State Non-Commercial Organization) pre-identified and geo-referenced about 8,000 ha of potential areas for planting of seedlings on State-owned forest fund lands. Finally selected sites will be reviewed by the Project Steering Committee (PSC) and final approval by the Executing Entities under the overall and final confirmation of the AE during the project implementation.
Beneficiary institutions actors at national level for the following Activities: 1.1.1; 1.1.2; 1.2.1; 1.1.2; 1.3.1; 1.3.2	Beneficiaries will be ministries, institutions, CSOs, and the private sectors including, among the others, Ministry of Environment, the Ministry of Economy, Ministry of Education, Science, Culture and Sport, Ministry of Territorial Administration and Infrastructure, Ministry of Labor and Social Affairs, Environmental Project Implementation Unit (EPIU), Hayantar State Non-Commercial Organization (SNCO), State Forest Monitoring Center (SCFU), WWF Armenia.	Identification of primary beneficiaries was completed during project design. Additionally research and educational institutions, private sectors and NGOs will be inclusively considered based on the discussion at the PSC and final approval by the Executing Entities under the overall and final confirmation of the AE during the project implementation. Contractual agreements required for co-financing contribution by selected beneficiaries will be signed by:

2.2.1; 2.2.2; 3.2.1; 3.2.2; 3.2.3.	Eligibility criteria for national level stakeholders include institutions involved in planning, management and monitoring of forest resource base and renewable energy in the context of climate change, institutions mandated to stimulate on socio-economic development. Eligibility criteria of beneficiaries for Activity 2.2.1 will include teachers and trainers of the Institute for Vocational Education and Training. Eligibility criteria for private sector actors at national level will be: • Private actors that are active in plant production in related fields (horticulture, etc) and/or are interested in forestry and sustainable use of forest resources of Armenia; or • Private actors that are involved in stove production and energy efficiency.	i) FAO and the Government of Armenia (Ministry of Environment) for the activities on forest land, nursery, and project management; and ii) FAO and WWF Armenia for the activities on technical assistance related to community engagement and participation in forest management and creating new forest areas in municipal lands in the Project Area. The final selection of private sector beneficiaries of Activity 2.2.1 will be carried out by FAO (Executing Entity) under the oversight of AE (FAO), reviewed by the PSC and finally confirmed by AE during the project implementation (Target number of beneficiaries will be 15 private companies). The Project will consult with national partners and will make every possible effort to promote involvement of young women to trainings during the implementation.
Beneficiary Institutions at local level for the following Activities: 3.1.1; 3.1.2; 3.2.3; 3.3.1.	The beneficiaries will be Marzes, town branches of Hayantar SNCO, municipalities, and communities. Eligibility criteria for national level stakeholders include institutions involved in planning, management and monitoring of forest resource base and renewable energy in the context of climate change, institutions mandated to stimulate on socio-economic development in the Project Area.	Identification of primary beneficiaries was completed during project design. Additionally research and educational institutions, private sectors and NGOs will be inclusively considered based on the discussion at the PSC and final approval by the respective Executing Entity under the overall and final confirmation of the AE during the project implementation.
Rural households participating in the adoption of Energy Efficient (EE) wood stoves benefitting from Technology Grant Support of Activity 2.3.1 (“End-users”)	The main selection criteria for the rural household beneficiaries of adopting EE wood stoves benefitting from Technology Grant Support of Activity 2.3.1 (“End-users”) will be: • Being a permanent resident of a forest adjacent community in Lori or Syunik; • Being registered in the Social Welfare assistance program; and • Full attendance of the fuelwood management training. The target number of beneficiary benefitting from Technology Grant Support will be 9000 rural households in the Project Area.	The final selection of rural household beneficiaries (“End-users”) will be carried out by the local CSO under the oversight of municipalities and EPIU (EE), reviewed by the PSC, and finally confirmed by AE during the project implementation. Contractual agreements with selected End-users will be signed by service providers (e.g. retailers, suppliers) of energy efficient wood stoves to be procured by EPIU through tendering process. Contractual agreement will contain indication of beneficiaries’ contribution amount.

The project will work with national and local institutions as well as with the FAO, the ADA, WWF-Armenia and the Autonomous Province of Bolzano – South Tyrol that are also co-financing activities in each of the proposed components. To ensure the aimed paradigm shift[17] the following goal, objective, outcomes and outputs[18] have been identified:

Overall Goal: By 2030, contribute to achieving ecosystem neutral GHG emission with clear and monitorable adaptation co-benefits[19].

[17] Detailed description of the paradigm shift as well as of the theory of change is available in Annex 2 – Section 8
[18] A complete list of identified activities per output is available in Annex 2-Sections 9 and 10.
19NDC goal

Project Objective: By Y8, CO_2 removals from the forests subsector are increased by at least 7% via sustainable climate adaptive forestry investments and fuelwood energy efficiency with effective involvement of communities.

Component 1. Climate Change mitigation and adaptation through forest investments and technology transfer[20]: will address the forest restoration interventions responding to the country goal to increase the national forest cover to at least 20% by 2050 (Armenia's NDC, 2015). The project will support the implementation of forest restoration interventions ensuring technology transfer and capacity development of concerned stakeholders pursuing both climate change mitigation and adaption objectives in order to: (i) secure higher capacity of forests to store carbon and (ii) contribute to higher resilience to climate risks of forests. **Barriers Addressed:** Item (a), (b) and (c) in Section B.1. ***Outcome 1*** *By Y8, at least 2.5% of degraded forestland is restored and sustainably managed following a climate adaptive methodology.*

Intervention	Mitigation benefits	Adaptation benefits
Output 1.1: By Y2, at least 3 nurseries are operational in the production of climate adaptive seedlings and Hayantar staff capacitated	• Increased carbon sequestration.	• Increased forests' drought/pest resistance, regeneration capacity after fires and other human induced stressors, • Enhanced ecosystem services for rural livelihoods (i.e. beekeeping and other NWFPs).
Activity 1.1.1: Establishment of 3 additional forest climate adaptive nurseries and capacity development of Hayantar staff and stakeholders on related topics	The project will develop nursery capacities for production of climate adaptive seedlings in Lori and Syunik Marz and by adding two greenhouses at Hayantar existing nursery in Hrazdan. The activity will include training of stakeholders involved in nurseries' management.	
Activity 1.1.2: Production of at least 12,000,000 container seedlings	Seeds will be collected by trained Hayantar staff in selected forests close to investments' areas (well-preserved forest site in the vicinity of each plot) according to specific protocols to ensure sustainability of the process and production of high quality plant materials. Production operations will start in the nurseries in order to have 12,000,000 one-year seedlings of the different target species. At least 9,000,000 seedlings will be used in project areas while remaining production will be used to sustain the regular operations of Hayantar.	
Output 1.2: By Y7, at least 7,300 ha of forest investments are secured in project areas with sustainable and climate adaptive approaches and practices	Increased carbon sequestration.	• Increased forests' drought/pest resistance, regeneration capacity after fires and other human induced stressors, Enhanced ecosystem services for rural livelihoods (i.e. beekeeping and other NWFPs).
Activity 1.2.1: Preparation work on selected State Forest Fund and municipality lands	Forest restoration areas will be selected by the MoE, Hayantar and communities according to criteria aimed at ensuring the highest survival rate and participation of communities. Species for each restoration plot will be selected based on the species composition of the reference ecosystem (well-preserved forest site in the vicinity of each plot).	
Activity 1.2.2: Planting and maintenance work on selected State Forest Fund lands (6,300 ha) and Municipal Lands (1,000 ha)	The project will restore an average of 784 ha every year from year 2 to year 6 of the project and ending planting activities in autumn of year 7 with replacement of dead seedlings on previous year's plantings sites. Forest restoration in Municipal lands will mainly take place in Syunik municipality, as part of a collaboration framework between the project and WWF-Armenia. Finally, the project will establish 1,600 ha of adaptive management measures that will be applied with stakeholders to secure health and growth of degraded stands.	
Output 1.3: By Y6, at least 1,700 people (of which 30% women) from Hayantar, local authorities, private sector and civil society are trained in sustainable and climate adaptive silviculture	• Long term sustainability of the intervention and country ownership, • Increased opportunities for youth and women, • Replicability of the project in Armenia and the region.	
Activity 1.3.1: Development and formalization of the training curricula with the MoE and the Institute for Vocational Education and Training of required trainings	The project will involve national institutions to ensure that capacity development needs identified by the experts and initially used to train practitioners involved in nursing, planning, planting and maintenance of forests in project areas, are transferred not only to targeted Hayantar staff but included in national curricula related to agriculture and forestry.[21]	
Activity 1.3.2: Capacity development of at least 1,700 people from Hayantar, Armenian Civil Society, Academia, Vocational Schools teachers and private sector	Methodologies and techniques introduced by the project will be disseminated among stakeholders with specific trainings, courses, workshop so to ensure the highest possible technology transfer to stakeholders.	

20 A detailed description of Component 1 is available in Annex 2-Sections 9 and 10, Component 1.

[21] The project team will consult with national partners and will make every possible effort to encourage involvement of young women to trainings, and ensure that at least 30 percent of trainees are represented by them.

Component 2. Promoting forest sustainability reducing forest degradation drivers[22]: will address the main driver of forest degradation (fuelwood harvesting) ensuring technology transfer of energy efficiency appliances to both the private sector and rural households so as to decrease pressure on natural ecosystems and strengthen natural regeneration and sustainability of forestry investments. **Barriers Addressed:** Item (a) and (b) in Section B.1. ***Outcome 2:*** *By Y6, fuelwood consumption per energy unit output of targeted rural communities is optimized and decreased by at least 30%. The project LogFrame (presented in Annex 2, pages 67-71) will inform GCF impact indicators M3 and outcome indicator M7, particularly related to GCF result area "Buildings, cities, industries and appliances".*

Intervention	Mitigation benefits	Adaptation benefits
Output 2.1: By Y2, National Standards for energy efficiency of heating related appliances are approved and EE companies are trained on how to incorporate them in their operations	• Transfer and scale up of emission reduction technologies and practices, • Low emission technologies are available to citizens, • Engagement of the local private sector in securing low emission development.	• Introduced technologies will increase energy security of the poorest and improve management of the energy needs at the national level.
Activity 2.1.1. Design and approval process of quality standards for EE heating appliances	The project will develop in joint venture with the MoE and the Ministry of Economy the standards necessary to sustain a sound and long term oriented engagement of the private sector as well as to guarantee quality of EE heating appliances fueled with wood.	
Activity 2.1.2. Testing of appliances	The project will support detailed analysis of the efficiency and risks of current heating appliances fueled with wood biomass as well as of those that will be installed via the project.	
Output 2.2: By Y5, at least 15 private EE companies are involved in wood-stoves assembling, installation and maintenance and dispose ofskilled labor in project areas	• Reduced emission from single sources, • Increased carbon storage due to avoided fuelwood related disturbance on forests.	• Reduced use on fuelwood will reduce pressure on forests increasing resilience against CC negative impacts
Activity 2.2.1. Coaching of manufacturers, retailers and teachers from vocational schools	Development of a manual for improved wood stoves and training of constructors and vocational schools teachers involved in the courses of light industry, energy and other disciplines related to EE.[23]	
Activity 2.2.2: Development and formalization of the training curricula with the MoE and the Institute for Vocational Education and Training of required trainings	The project will involve national institutions to ensure that capacity development needs identified by the experts are transferred not only to targeted private sector enterprises but included in national curricula related to EE appliance production, installation and maintenance.	
Output 2.3: By Y6, at least 9,000 HH (of which at least 25% women are single women headed) use increased EE wood stoves in project areas and are trained on fuelwood management	• Long term sustainability of the intervention, • Increased opportunities for youth and women, • Improved living standards for women and vulnerable HHs, • Replicability of the project in Armenia and the region.	
Activity 2.3.1. Technology Grant Support for the adoption of the RE appliances is developed and available for target households	The project will work with institutions and civil society to identify beneficiaries according to selected criteria[24] and will provided a technology incentive to cover the additional cost of technology of targeted appliances.	

Component 3. Strengthening governance of Forest resources and climate change's impact management at community, as well as local and central government levels[25]**:** of the project will assist stakeholders in creating the enabling conditions to execute the Armenia Forest Code (2005) and related bylaws ensuring sustainable and climate adaptive management and enhancing the capacity of rural communities to engage in forest governance. **Barriers Addressed:** Item (b) and (c) in Section B.1. ***Outcome 3:*** *By Y8, relevant stakeholders (including Hayantar[26] and local communities) are enabled to adopt effective governance and adaptive management of forests and related ecosystem services.*

Intervention	Mitigation benefits	Adaptation benefits
Output 3.1: By Y5, the guidelines to enhance participation and engagement of Community in sustainable and climate adaptive management of forest and related ecosystem services are adopted	• Increased carbon storage thanks to sustainable and climate adaptive forest management, • Reduced pressure on existing forest will allow higher rates of natural regeneration and increase	• Climate adaptive practices introduced by the project and formalized in the guidelines will increase the resilience of forests and mitigate negative impacts of CC,

22 A detailed description of Component 2 is available in Annex 2-Sections 9 and 10, Component 2.
23 The project team will consult with national partners and will make every possible effort to encourage involvement of young women to trainings, and ensure that at least 30 percent of trainees are represented by them.
24 With highest priority given to vulnerable women and vulnerable groups.
25 A detailed description of Component 3 is available in Annex 2-Sections 9 and 10, Component 3.
26 Hayantar is under the subordination of the State Forest Committee. Main functions of Hayantar are to ensure control, protection, conservation of biodiversity, restoration, re/afforestation and efficient use of state forests and forest lands. Annex 2, Section 6 pg. 27.

	carbon storage at no cost for the national budget.	
Activity 3.1.1: Development of sustainable and climate-adaptive forest governance guidelines applicable under forest concessions for community organizations	A group of national and international experts will design, with the stakeholders, the guidelines to enhance engagement of communities in forest governance and related fuelwood market applying introduced sustainable and climate-adaptive forest methodologies and practices[27]. The guidelines will be integrated by feasibility studies developed under Activity 3.1.2.	
Activity 3.1.2: Institutional and community support in applying climate adaptive forest governance guidelines including rural EE and climate change mainstreaming	The project will support relevant stakeholders in project areas in building the competencies to apply sustainable and climate adaptive management practices. Target communities will also receive specific and additional training related to energy efficiency, fuelwood management and sustainable biomass production so to increase the efficiency of the process and the interest of communities on forest management and sustainable use rather than exploitation. In addition, the project will also develop feasibility studies, to integrate the guidelines produced under Activity 3.1.1, developed together with stakeholders, for the creation of market oriented aggregation platforms, provided with or supported by viable financial inclusion mechanisms as appropriate to secure sustainable supply of fuelwood from community concessions.	
Output 3.2: By Y8, a National Forest Monitoring and Assessment System (NFMA) is established, the first inventory cycle completed, discussed with stakeholders and results mainstreamed into relevant policies	• Increased carbon storage thanks to sustainable and climate adaptive forest management, Reduced pressure on existing forest will allow higher rates of natural regeneration and increase carbon storage at no cost for the national budget.	• Increased knowledge of forests, their distribution and the ecosystem associated will increase the options available to policy makers also enhancing resilience and mitigating negative impacts of CC.
Activity 3.2.1: Assessment of land categories and, designing of forest monitoring system and developing national capacities	A forest monitoring system will be designed by the end of year 1. The design will be presented and discussed at a survey design validation workshop in the fourth quarter of year 1 beginning of year 2. This survey will consist of the visual interpretation of sample points (plots) on the basis of high resolution imagery available.	
Activity 3.2.2: Field data collection including survey data management, quality assurance, evaluation and interpretation of survey results	Field data collection will start in year 2 and continue till year 7 of the project when the plots established in year 1 of the first inventory cycle will be re-visited and re-assessed and will also serve as means of versification for Component 1.	
Activity 3.2.3: Assessment of intervention areas and impact by orthophoto mapping and digital surface models	Every second year of the project the SFMC will secure orthophoto mapping and digital surface models of project areas so to monitor investments and advise on mitigation actions if and when needed.	
Output 3.3: By Y7, at least 300,000 people (of which 52% women) from 207 rural communities in project areas are informed, sensitized and empowered on climate adaptive silviculture, Energy Efficiency and climate change mainstreaming	• Long term sustainability of the intervention, • Increased opportunities for youth. • Replicability of the project in Armenia and the region • Climate Change mainstreaming in National policies.	
Activity 3.3.1: Community empowerment, awareness and sensitization	The project will involve communities in project areas and at the national level in activities that aim at increasing the awareness of citizens concerning the main topics of the project and to enhance their participation into forest governance.	

Recent literature [Third National Communication and others] highlights that Armenian forests are particularly sensitive to changing climate conditions, as the long life span of trees prevents rapid adaptation in forest ecosystems. Many climatic factors such as changes in temperature and precipitation or more frequent heat waves and droughts will affect tree growth under climate change. Wind storms, wildfires and heavy rains are projected to become more frequent and intense under changing climate conditions with consequent significant effects on forests.

Additionally, consulted literature (**Annex 12**) forecasts that: suitable ranges of forest tree species will likely shift upwards on the mountain slopes associated with the development and spread of other ecosystems, forest wildfires, diseases and mass generation of pests. Additionally, the “aridifying” climate will increase the risk of wildfires by drying vegetation and making the dead organic matter in forests more flammable.

The changing conditions will also affect NWFP, which can have, in addition to the loss of crucial ecosystem services, significant impacts on rural populations and their livelihood as well as on recreational values of forests with probable impacts on ecotourism strategies of the Country.

Given the reported vulnerability and NDC commitments, investments in mitigation via forestry require an adaptive approach so as to ensure that new and existing forests will increase resilience against projected climate changes.

[27] Produced polices and guidelines will be gender responsive, and the staff will be trained on how to use them, and will be also exposed to awareness raising and sensitization.

In a business as usual scenario, the registered decrease in carbon reductions from forests will continue preventing – among other - the Country to fulfill its nationally determined commitments for both adaptation (i.e. forest ecosystems adaptation) and mitigation (i.e. mitigation contribution from land use and forestry).

Therefore, the project will support the implementation of several forest restoration interventions pursuing both climate change mitigation and adaption targets. Higher resilience to climate risks of existing and restored forests will correspond with higher and protracted capacity to store carbon and reduce exposure to climate induced risks.

Adaptation of ecosystems will be ensured by enhancing the forestry sector's capacity to produce adaptive seedlings, ensure adaptive plantations processes (Component 1), reducing drivers of degradation (Component 2) and providing the adequate management practices to central and local stakeholders (Component 3).

Selection and engagement of beneficiaries is differentiated throughout the project components but the selection has been agreed by participants of the national engagement process, the NDA and the FAO according to the following five criteria: a) relevance of forest cover for the Country, b) exposure of ecosystems to climate variability and change as well as to anthropogenic stressors; c) vulnerability of ecosystems and communities to climate change; d) mitigation potential in terms of forest rehabilitation as a function of availability of suitable land from the State Forest Land (SFL) and from Municipalities; and e) socio-economic vulnerability of communities / high dependency of communities from ecosystem services.

In this sense, direct beneficiaries are the population of project areas of Lori and Syunik Marzes (377,308 – 12% of the total population, 52% women) distributed in the 15 municipalities and 207 rural communities, public sector institutions and private sector's actors involved in nurseries, forestry and energy efficiency (EE). Including the entire population of project areas responds to the fact that increased and more resilient forest cover will directly and positively affect each communities (enhanced ecosystem services, higher availability of NWFP and reduced exposure to extreme events). Each of the 15 municipality and the connected 207 rural communities will be involved in trainings and awareness campaigns planned in Component 2 and 3.

Additionally, within the scope of Component 2, 10,000 people will be further involved in direct EE activities. Direct beneficiaries have been identified by considering the total rural population of project areas (35,209 households) that has fuelwood as main energy source for heating (74%) and that is included in the State Social Welfare Program of the Ministry of Labor and Social Affairs (39%). Rural communities in the two Marzes are mostly poor or very poor with the highest direct dependency on forest ecosystem services for fuelwood (average 8 m3/y) and livelihood (i.e. beekeeping, NWFP).

The entire Armenian population is considered indirect beneficiaries in view of the fact that forests in Armenia are public property and key ecosystem services such as reduced exposure to climate driven hazards as well as carbon sequestration will benefit the entire country population because: (i) it will be enhance the capacities of the entire staff of Hayantar (responsible for forest management within the Ministry of Environment) to manage forests in the context of a changing climate; (ii) it will transfer EE technologies and practices to the concerned private sector; (iii) it will ensure that transferred technologies and practices become part of the national curricula preparing youth in the field of forestry management and energy; and (iv) it will support the State in the design, adoption and mainstreaming of EE efficiency and safety standards for heating appliances fueled with biomass.

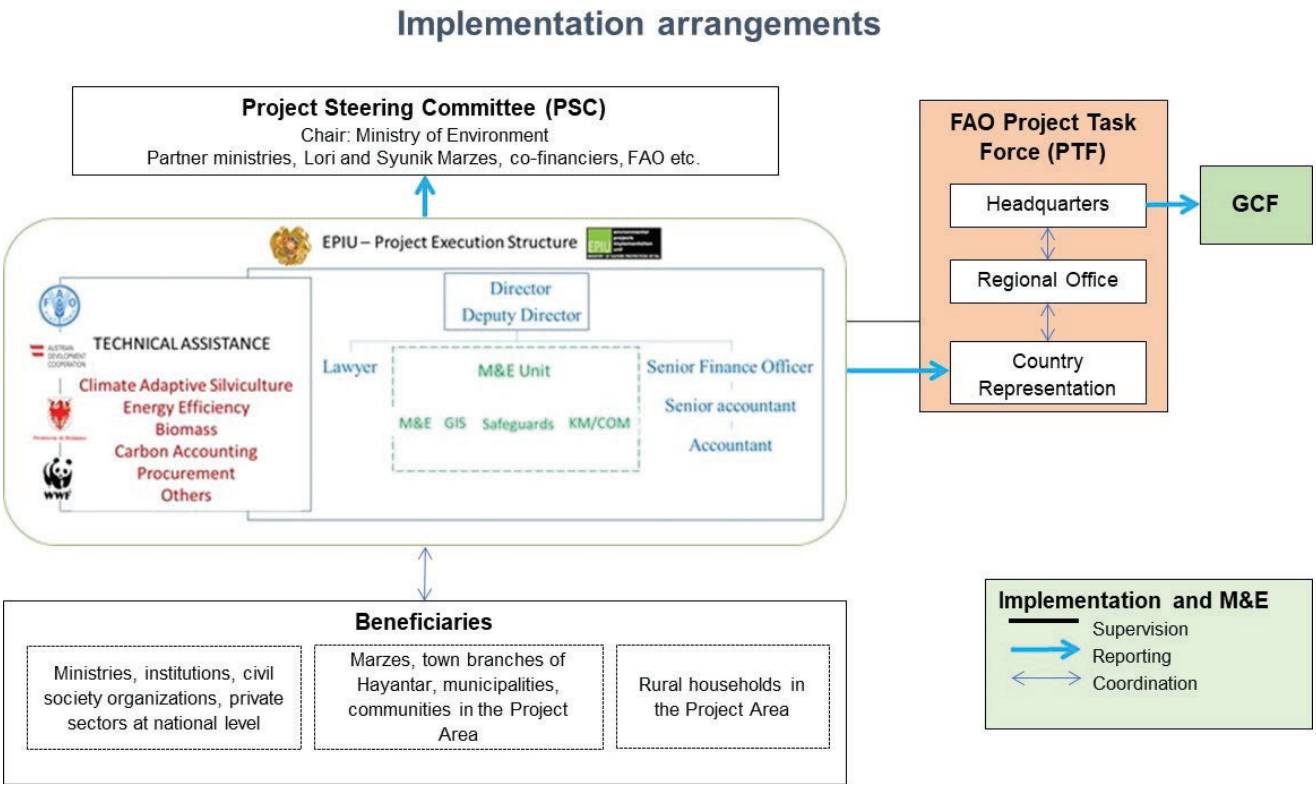
During execution of activities, beneficiaries will be selected according to the criteria agreed with the NDA and Steering Committee during the national engagement process. Details of beneficiaries is available in Annex 2, Section 7 pg.56→57.

Forest restoration under an ecosystem-based adaptation approach is a quite new concept characterized by the complexity of holistically addressing the environmental, social and economic challenges of forest restoration in a climate change scenario. Very limited experience is still available worldwide in terms of implementation. FAO established the Forest and Landscape Restoration Mechanism (FLR Mechanism) in 2014 to support the global efforts to regain ecological integrity and enhance human well-being through the restoration of the world's deforested and degraded lands (150 million hectares of restored forests by 2020 under the Bonn Challenge; 200 million hectares of restored forests by 2030 under the New York Declaration on Forests). In this sense, the envisaged efforts under this project will particularly contribute to the achievement of Armenia's commitment of bringing 0.26 million hectares of deforested and degraded land into restoration by 2030

B.3. Implementation / institutional arrangements (max. 750 words)

Provide a description of the project/programme implementation structure, outlining legal, contractual and institutional arrangements and the structure between the GCF, the Accredited Entity (AE) and/or the Executing Entity (EE) or any third parties (if applicable) and beneficiaries. Provide diagram that maps such arrangements and governance structure..

As Accredited Entity of the Project, the FAO's supervising role will be attributed to the FAO Regional Office for Europe and Central Asia (REU, located in Budapest) with support by the FAO Climate, Biodiversity, Land and Water Department (CB, located in Rome) and other technical divisions as required (located at FAO headquarters in Rome). FAO Representation in Armenia (FAO-AM) will be in charge of the execution of selected activities and of the contractual agreements with the project implementing partners (see Annex 2, Section 12: Institutional Arrangement and Project Management, page 103→107 for detail). The Executing Entities of the Project are the Republic of Armenia, acting through the Ministry of Environment (MoE) and FAO. Execution of activities will be conducted by the Environmental Projects Implementation Unit (EPIU) of the MoE, while FAO will coordinate the technology transfer and technical assistance to the EPIU. Both EEs will be jointly and severally responsible for the execution of the entire project. EPIU will sign a legal agreement (i.e. Operational Partners Agreement (OPA)) with FAO to enter EE role for the project. Scope of roles and responsibilities and legal conditions are defined in the OPA.



The project will work with a strong country ownership under the guidance of a Project Steering Committee (PSC) representing: (a) line ministries, (b) Governors of Lori and Syunik Marzes and (c) co-financiers (Austrian Development Agency, the FAO, the Autonomous Province of Bolzano (Italy), and WWF- Armenia[28]). The PSC will be chaired by the NDA to the GCF and will have the main function of: (a) ensuring political coordination, guidance and advisory and (b) to approve the Annual Working Plan and Budget (AWPB) and Annual Report (AR) according to the specifications provided in Annex 2-Section 13 and in Annex 10. PSC will meet at least once a year or when requested by the majority of its members. The PSC will submit to the FAO-HQ the approved AWPB and AR for official submission to the GCF

[28] A detailed description of co-financing and co-financiers is available in Annex 2 Sections 5 and 15.

and to co-financiers. The FAO (HQ/REU) will participate in the PSC as a member while FAO will support the MoE and the EPIU with logistic and organization needs.

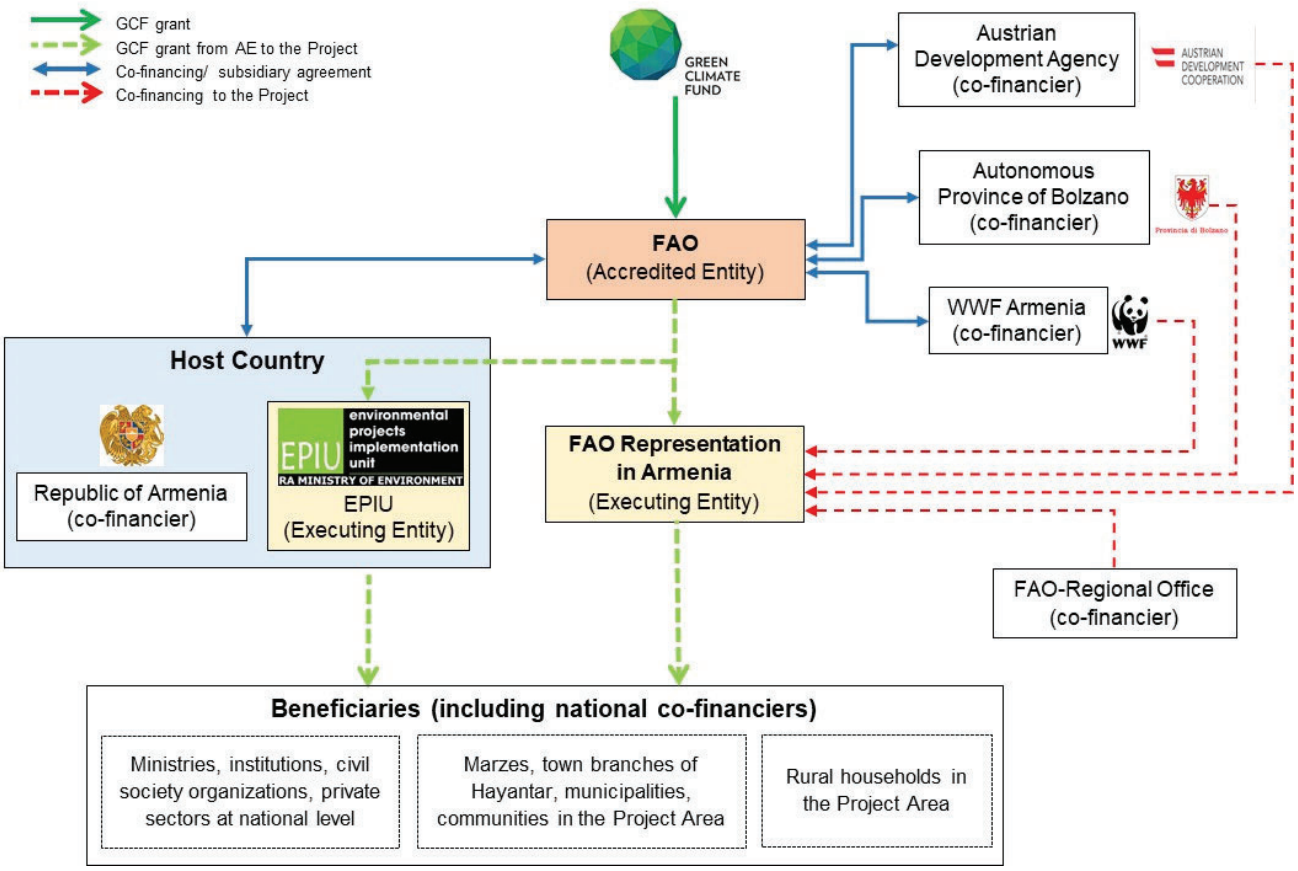
The EPIU will be in charge of the daily management of the project, will report to the PSC and will be supported by experts from FAO/Co-financiers and by international consultants hired by the FAO in agreement with the MoE. The external technical assistance component, a precondition which is essential for the proposed technology transfer, will be managed by the FAO Representation in Armenia so as to ensure the timely deployment of experts and enhance knowledge and technology sharing processes between international and Armenian experts. TORs of each expert will be jointly prepared by the FAO and the EPIU and will be included in the AWPB.

Additionally, the project will also integrate the existing staff of the EPIU with a dedicated M&E Unit that will be in charge, as detailed in Annex 2 – Section 14, pg. 106→107) and in Annex 10 Section 5.3, of monitoring and evaluation, of the E&S safeguards and of reporting/advising for the EPIU. The M&E unit will also have the mandate to ensure respect of the Gender and Environment Action Plan including the promotion and execution of intense training for EPIU and partners' staff members focusing on gender mainstreaming and the prevention of sexual harassment or any harassment for that matter as well as abuse of authority. All the other functions (in blue) will be co-financed by the project according to Armenian laws and FAO/GCF rules.

The project will be executed according to the agreed Term Sheet (Annex 6). FAO will sign with the MoE a legal agreement such as Letter of Agreement and/or Operational Partner Agreement (OPA)[29]. Similarly, FAO will sign with co-financiers a Letter of Intent / Memorandum of Understanding to formalize co-financing arrangements.

Provide information and an organogram on the financial flows between the AE and the EE(s) or any third party (if applicable), and the financial flows between the EE or any third party (if applicable) and beneficiaries. Also describe the financial flows in the context of applicable AE's accreditation parameters (e.g. specialized fiduciary function).

[29] Assuming the Assessment of the EPIU is positive and rated as low risk.



Co-financing from the Austrian Development Agency, the Autonomous Province of Bolzano (Italy), and WWF- Armenia will be managed by FAO Armenia in coordination with the Ministry of Environment. Co-financing agreement will be countersigned between each co-financier and FAO.

The in-kind co-financing from the Government of Armenia, the Autonomous Province of Bolzano, and WWF-Armenia will be monetized, monitored and reported during project implementation.

The in-kind co-financing from the Government of Armenia will contribute to achieve the project results through EPIU (as EE). It will be provided mainly by the Hayantar State Non-Commercial Organization (one of the structures of the Ministry of Environment) for the establishment of nurseries and production of seedlings (Output 1.1), preparation work and planting/ maintenance work of selected lands for forest restoration (Output 1.2), the establishment of national forest monitoring and assessment system and conduction of inventory cycle (Output 3.2). A legal agreement will be signed between EPIU and Hayantar SNCO for the usage of state budget as in-kind co-financing.

The in-kind co-financing by the Autonomous Province of Bolzano will deploy in Armenia the technical staff needed to execute Component 2 and part of Component 3 for elaboration of quality standards, coaching of retailers, EE/RE monitoring, biomass value chain analysis, and climate action plans. The co-financing is considered paramount for the execution of Component 2 and 3 as identified staff and competences are especially requested by Armenian counterparts, which are not available in Armenia. Identified experts will work under FAO supervision and guidance and will dedicate their work to technical assistance. The main support to the project will be for Activity 2.1.1, 2.2.1 and 3.1.2. The in-kind co-financing will be directly monitored by FAO and will be monetized based on the salary of identified experts, their per diem and travel expenditures.

WWF-Armenia is an independent Non-Government Organization (NGO) that has been registered as Armenian NGO since 2006. The in-kind co-financing by WWF Armenia is an integral contribution to activities needed to achieve the results of the project through the provision of trainings by experts on climate adaptive forest investment and community ecosystem management for the target communities in the Project Area. It is considered paramount for the execution of Component 1 as identified staff and competences are unique in successfully involve communities in forest restoration projects. The in-kind co-financing will be monetized based on the salary of identified experts, their per diem and travel expenditures. It will be directly monitored and reported by FAO during project implementation. Details on co-financing allocation are available in Annex 2 Sections 5 pg. 9, and12 and in Annex 3.

The Autonomous Province of Bolzano and WWF Armenia will contribute to the Project by providing their technical expertise though FAO. There will be no direct arrangement between the Autonomous Province of Bolzano, WWF Armenia and the Beneficiaries; however FAO as AE for the project will oversee the provision of support to the communities.

MoE is NDA to the GCF and, for this FP, will also act as Executing Entity. During the formulation period, AE has reviewed and identified potential conflict of interests that may raise in the dual role arrangement. In order to mitigate any potential conflict of interest, the following risk mitigation/ remedial measures will be considered during the implementation: i) Separation of personnel for the NDA office and EPIU (EE) office ; ii) Separation of functions for project approval process between the NDA office and EE. The Project will follow the statutory reporting requirements of EPIU according to the national legislation. EPIU will sign an Operational Partners Agreement (OPA) with FAO to legally define the EE role for the project; iii) Preparation of (a) terms of reference for PSC and its members and (b) of mitigation measures to address any potential conflict of interest; and iv) Continuous monitoring of potential conflict of interest by AE.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi)		10.0		million USD ($)	
GCF Financial Instrument		**Amount**	**Currency**	**Tenor**	**Pricing**
(i)	Senior loans	Enter amount	Options	Enter years	Enter %
(ii)	Subordinated loans	Enter amount	Options	Enter years	Enter %
(iii)	Equity	Enter amount	Options		Enter % equity return
(iv)	Guarantees	Enter amount	Options	Enter years	Enter %
(v)	Reimbursable grants	Enter amount	Options		
(vi)	Grants	10.0	million USD ($)		

(b) Co-financing information	**Total amount**	**Currency**
	8,704,730	million USD ($)

Name of institution	**Financial instrument**	**Amount**	**Currency**	**Tenor**	**Pricing**	**Seniority**
Government of Armenia	In kind	5.904680	million USD ($)	Enter	Enter%	Options
Austrian Development Agency*	Grant	1.631542*	million USD ($)	Enter	Enter%	Options
FAO	Grant	0.764758	million USD ($)	Enter	Enter%	Options
Autonomous Province of Bolzano	In kind	0.20375	million USD ($)	Enter	Enter%	Options
WWF Armenia	In kind	0.2000	million USD ($)	Enter	Enter%	Options

(c) Total investment (c) = (a)+(b)	Amount	Currency
	18.704730	million USD ($)
(d) Co-financing ratio (d) = (b)/(a)	*(b) = 8,704,730 USD (* converted from 1.5 million EUR to the amount in USD)* *(a) = 10,000,000 USD ==>* ***co-financing (b)/(a) = 87.0%***	
(e) Other financing arrangements for the project/programme (max ½ page)	*9,000 Households - selected according to objective criteria (Annex 2, section 7 "target groups and beneficiaries", page 62; ibidem under output 2.3, page 86) –will receive a technology grant support for the adoption of the Renewable Energy (RE) appliances (improved heating stoves). Such transfer will be conditioned to the contribution of a portion of the cost, for an overall estimated amount of about 450,000 USD in total.*	

C.2. Financing by component

Please provide an estimate of the cost per component (as outlined in Section B.2. above) and disaggregate by sources of financing.

Component (header text shortened)	Outcome	Indicative cost (USD)	GCF financing		Co-financing		
			Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions*
1. Climate Change mitigation via climate adaptive silviculture	**Outcome 1:** By Y8, at least 2.5% of degraded forestland is restored and sustainably managed following a climate adaptive methodology.	**10,111,064**	**4,566,424**	**Grants**	**5,544,640**	**Grants/in-kind**	**ADA, WWF, FAO, Government**
2. Promoting forest Sustainability reducing forest degradation drivers	**Outcome 2**: By Y6, fuelwood dependency of targeted rural communities is optimized and decreased by at least 30%	**4,204,802**	**3,391,552**	**Grants**	**359,750**	**Grants/in-kind**	**ADA, FAO, Bolzano**
3. Strengthening community participation in forest governance	**Outcome 3**: By Y8, relevant stakeholders are enabled to adopt effective governance and adaptive management of forests and related ecosystem services.	**3,922,636**	**1,563,996**	**Grants**	**2,358,640**	**Grants/in-kind**	**ADA, FAO, Bolzano, Government**
Project Management		**919,728**	**478,028**	**Grants**	**441,700**	**Grants/in-kind**	**ADA, Government**
Indicative total cost (USD)		**18,704,730**	**10,000,000**		**8,704,730**		

**Notes on Name of Institutions: Austrian Development Agency (ADA), the Government of Armenia (Government), the Autonomous Province of Bolzano (Bolzano), WWF-Armenia (WWF)*

This table should match the one presented in the term sheet and the names (in the rows) should match those presented in the logic framework in section D below. If the project/programme is envisaged to support capacity building and technology evelopment/transfer, please specify the total requested GCF amount for these activities respectively in this section..

The overall cost of capacity development is 4.6 million USD (2.3 m USD are funded by the GCF grant, i.e., 23 % of the grant), and the cost of Technology Transfer is about 6.4 million USD (4.1 m USD under GCF, or 41 % of the grant). The rest of GCF grant is dedicated to labour for planting (29%), travels (4%) and administrative costs (3%).

C.3. Justification for GCF funding request (max. 500 words)

Provide information why GCF is the appropriate donor for the proposed project/programme. The project fully aligned with the Armenia NDC and will contribute in creating the enabling conditions for the country to fulfill Paris Agreement "[…] *Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances." (Article 4.4)*. The proposed project represents an opportunity for Armenia to maximize the synergy between adaptation and mitigation actions necessary to ensure the envisaged ecosystem approach (NDC, 2015). As reported in the NDC, the country requires financial support to achieve its conditional commitments and technical assistance to ensure proposed strategies and means of implementation. The GCF is the only fund currently available that could mobilize the needed resources to support Armenian commitments, to mobilize key co-financing and to ensure the proposed technology transfer to adapt forestry to CC, ensure energy efficiency and ultimately supporting Armenia in attaining its main objective of reaching 20% forest cover by 2050.

Describe the challenges to access finance (public and private). Also, describe the financial gaps and barriers that the proposed project/programme is expected to fill and address in the absence of any other financing. Forests in Armenia are too limited to be relevant for large private investments. Land tenure (99% state owned) and the policy framework (Annex 2, Section

6 page 20→23) ruling the sector does not allow to foresee any specific interest from the formal private sector to invest in plantation of forests. Therefore, the task of expanding and maintaining forests applying an ecosystems approach (NDC, 2015) is fully on the central and local government budget. Nonetheless, forests are key in sustaining both food and energy security of rural households (36% of the total population). As reported, without technology and knowledge transfer in both the forestry and rural energy sectors (Annex 2 – Sections 6,9 and10) , the country will most likely miss its NDC targets with serious repercussions on livelihood and financial security of rural household. Co-financing from the State represents 31% of the total investment, but additional resources from the national budget could not be allocated to respond to climate change without: (i) increasing the public debt which is not currently an option as it has reached 61 % of the GDP and/or (ii) decreasing the foreign component of it (over 90 %). The increased national climate adaptive silviculture potential supported by the project will allow to meet in a more stable and secure way the NDC's CO2e sequestration forestry-related targets.

The involvement of the private sector is a critical element in the project's intention to shift paradigms, and the most suitable tool to ensure long term sustainability for the envisaged technological shift towards energy efficient heating stoves for rural areas. By financing the development of low cost EE stoves in the country and by providing concessional transfers of EE stoves, the project will increase awareness in rural areas of the related private and reduced adoption costs to affordable levels (HHs' savings in fuelwood) and public (increased CO2e sink potential) benefits and will generate a demand for improved technologies as demonstrated in the European Union, in Georgia and in Lebanon. At the same time, strengthening local manufacturing capacities to produce certified efficient stoves will allow to respond to the increased local demand. On the latter, the project will only provide capacity development, while private manufacturers will invest own resources to meet the increasing demand of EE stoves. Given the time horizon for accruing financial benefits in forestry investments, private sector's participation would not be possible even when considering positive externalities such as ecosystem benefits (e.g. beekeeping and NWFP) In this case, public resources are essential. As the country's external financial exposure would not allow to contract further sovereign debt, external grant resources are needed to break the initial barrier to forestry investment.

C.4. Exit strategy and sustainability (max. 250 words)

Elaborate how the project will be sustained after GCF exits the project. Specify the elements that will guarantee the sustainability of the investment, including essential information on the operation and maintenance of the activities in the post-implementation phase (e.g. key infrastructure, assets, contractual arrangements).

	Sustainability Rational
Outcome 1: By Y7, at least 2.5% of degraded forestland is restored and sustainably managed following a climate adaptive methodology	**NURSERIES:** Given the observed situation (Annex 2, Sections 6 and 10) technology transfer and capacity development to produce climate adaptive seedlings is a precondition for the attainment of the NDC commitment related to: (i) forest cover increase (+100% by 2050) and (ii) ecosystem based approach. Co-financing from the State will absorb about 72% of the investment. The technology transfer secured by the project will not require additional investments from the Country and will contribute to the overall reduction of costs related to NDC commitments (Annex 9). **FOREST RESTORATION**: The use of climate adaptive practices together with the capacity development investments supported by the project will reduce the cost of maintenance of forests, increase the resilience of ecosystems and enhance stakeholders' capacities to plan / maintain and restore forests. Introduced practices constitute a technical upgrade of existing practices with no changes in budget requirements or workforce needs.
Outcome 2: By Y6, fuelwood dependency of targeted rural communities is optimized and decreased by at least 30%	**BENEFICIARY LEVEL:** Proposed technologies will not require additional investments from beneficiaries. Introduced appliances will have a life span of at least 15 y compared to the current one of about 5 y. Introduced technology will reduce the yearly cost of fuelwood for rural households of about 30% greatly benefitting poor family income (Annex 9) as operational and maintenance costs of introduced technologies is equal or smaller than existing ones. **PRIVATE SECTOR LEVEL:** Introduced technologies and knowhow will allow enterprises to serve the Armenian market with locally produced and imported EE stoves allowing them to expand to rural areas also. **STATE LEVEL:** The introduction of standards for EE of heating related appliances fueled with wood or sun will not require additional resources from the state but will increase consumer confidence in the EE Armenian market.
Outcome 3: By Y7, relevant stakeholders (Hayantar and local municipalities) are enabled to adopt effective governance and adaptive management of forests and related ecosystem services.	Outcome 3 will ensure that: (i) communities are informed about the importance of and will acquire the necessary skills for fuelwood management and handling, thus saving money and protecting the forests, while local administration include biomass from forest in their management plans and energy need assessments; (ii) forests are monitored and assessed in a transparent and consistent manner for evidence-based forest governance; and (iii) key legal acts such as the Armenia forest code and the decree N-563 N[30] could be executed to enable communities to obtain concessions over state forests. Without this three set of actions sustainable management of forests will not be an achievable target.

[30] Provision of state forests to concessional management for the community organizations without competition.

	As reported inn Annex 2, pages 23→35, rural households are still largely dependent from forest for their livelihood and about 74% depend on fuelwood as primary source of heating energy. Therefore, community engagement in local governance and management of forest ecosystems associated with the appropriate forest monitoring tools and practice is the key to ensure long-term sustainability of any forest investment in Armenia. Ensuring access for communities to forest resources under the community concession window established by Decree N 583-N jointly with the introduced practices and technologies will: (i) increase the capacity of stakeholders to manage forests sustainably also factoring in climate change; and (ii) create the enabling conditions for private initiatives to develop sustainable biomass markets. Such knowledge and possibility will not imply increases of costs from the BAU scenario. Additionally, thanks to the agreement with the Ministry of Education and its vocational and training schools, the project will ensure transfer of practices and technologies also after the project as these will become regular elements of the national curricula related to energy efficiency, biomass production and forestry.

The exit strategy of the project is based on four pillars: (i) National ownership of the process [the project is aligned with national policies and strategies and is the result of extensive national consultations]; (ii) Economic and financial sustainability of the activities [as reported in Annex 9, proposed activities are financially sound with positive internal rate of return without further impacting on national or household's budgets]; (iii) Transfer of well tested innovations [proposed technologies and approaches have been already tested with success in different countries in the region and elsewhere] and set standards [support the State in the design, adoption and mainstreaming of energy efficiency (EE) and safety standards for EE wood fuel stoves]; (iv) Establishment of a viable market for locally produced low cost EE stoves complemented by the guidelines for sustainable biomass market and possible associated financial inclusion platform such as Renewable Resources and Energy Efficiency Fund (R2E2); and (v) inclusion in the national curricula of vocational schools of the introduced / enhanced practices [the Ministry of Education with the support of co-financiers will embed introduced technologies and practices so as to ensure capitalization and scaling up of the project]. These actions will ensure the sustainability after completion of the project and will provide beneficiaries and national authorities with the relevant tools to continue and scale up these actions to other parts of the country.

C.5. Financial management/procurement (max. 300 words)

Describe the project/programmer's financial management including financial accounting standards, disbursement and procurement arrangements (details in Annex 8 for procurement). Explain how the AE will ensure that its fiduciary standards (based on its accreditation type) are adhered to at all times. Explain the methodology and frequency of the periodic financial reviews, reporting of the project expenditures including the audit requirements and the frequency of the audit to ensure that funds are used for the intended purposes and project complies with the covenants, if any. The project will be executed by the EPIU, in the MoE, under FAO legal agreement such as the Operational Partner Implementation Modality (OPIM). FAO-Armenia, as Executing Entity and Budget Holder (BH), will be responsible for operational, administrative and financial management of GCF resources directly managed by FAO, and for overall project monitoring and reporting[31]. The BH will also be responsible for supervising the Operational Partner's (OP) management and results as summarized in the Feasibility Study and as specified in the OPA. Financial resources of the GCF will be managed according to AMA, Funded Activity Agreement and project term sheet. The administration of funds to be received from FAO is based on FAO rules and responsibilities of OPIM (FAO Manual Section MS-701).. Standard assurance activities to monitor financial and administrative management under OPIM are comprised of: i) Spot Checks (Evidence-based monitoring to verify that FAO project funds were used for the intended purpose, consistent with the work plan and required standards, policies and procedures for funds management and procurement, and conducted by an audit/accounting firm contracted by FAO; ii) Scheduled Audit (A scheduled audit conducted by an audit firm contracted by FAO); and iii) Special Audit (only when specific issues and concerns arise). The schedule and type of assurance activities are determined based on the annual transfer amount and overall risk rating of Micro Assessment Report prepared by an audit firm contracted by FAO. The BH will perform third party audits and spot checks on the OP performance at least once a year and will withhold any payment due to the OP in case of non-compliance with the reporting obligations detailed in the OPA. The OP shall maintain books and records that are accurate, complete and up-to-date. The OP' books and records will clearly identify all Fund Transfers received by the OP as well as disbursements made by the OP under its OPA, including the unspent and accrued interest. Procurement planning will be conducted to ensure the "Best Value for Money" for both executing entities. The BH and OP will prepare annual procurement plans for major items which will be the basis of requests for

[31] Additional details are available in Annex 2 – Sections 14 and 15.

procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. Details on Procurement are described in the Annex 8.

D. LOGIC FRAMEWORK AND MONITORING, REPORTING AND EVALUATION

This section refers to the project/programme's logic framework in accordance with the GCF's Performance Measurement Framework under the Results Management Framework to which the project/programme contributes as a whole, including in respect of any co-financing. This is different from the project/programme-level log frame(as there may be other impact measures for example that go beyond those defined by the GCF). A project-level logical framework, with specific indicators, baselines and targets, means of verification and assumptions should be provided as part of Annex 2.

D.1. Paradigm shift objectives [ANNEX 2, Section 8 pg. 58→60]

Shift to low-emission sustainable development pathways	In line with the NDC, carbon removals from the forests sub-sector are increased via the combined effects of Adaptation investments [(i) introducing climate adaptive practices in public and private silviculture operations] and Mitigation ones [(ii) securing technology transfer of EE heating appliances to the private sector, institutions and communities, and (iii) in enhancing community participation via ecosystem based approaches.]
Increased climate-resilient sustainable development	

D.2. Impacts measured by GCF indicators [ANNEX 2, Sections 9 and 14]

Select the appropriate impact for the project/programme. Note that more than one indicator may be selected per expected impact result. Add results as appropriate.

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
M3.0 Reduced emissions from buildings, cities, industries and appliances	M.3.1 Tonnes of carbon dioxide equivalent (t CO_2eq) reduced or avoided as a result of Fund-funded projects /programmes – buildings, cities, industries, and appliances sub-indicator	BUR submitted to UNFCCC by the MoE; Reports from Independent and external household surveys	Emission from heating appliances (t CO2eq)[32]: 0	Reduced Emission (t CO2eq): -122,988 Y4	Reduced Emission (t CO2eq): -175,697 Y8	GHG estimates are based on the twenty-year (20) project lifetime, estimated with EX-ACT tool, and monitored with independent households surveys aimed at assessing fuelwood management/consumption in project areas as well as project's reports. The project will decrease the fuelwood energy needs by at least 30 % (from 8 m^3 per households to 5.6 m^3 per households). Equivalent to a reduction of wood consumption from 36,806[1] to 25,764 tonnes of dry matter per year considering an emission factor of 1.326[33] t CO2eq/t of dry matter. Expected emission reductions over the project lifetime of 20 years –175,697 tCO_2eq.

[32] Based on data collected via household surveys aimed at assessing fuelwood consumption for heating purposes. Residential energy consumption survey, 2015
[33] Energy content of wood (moisture content 25%-35%) = 3.4 kWh/kg Wood CO2eq with an emissions factor of wood = 0.39 kg CO2 eq/kWh wood. Möllersten, K. 2017. The Power Africa beyond the Grid Fund for Zambia: Methodology to measure, report and verify on annually avoided greenhouse gas emissions and Breisinger, M. 2012. Greenhouse Gas Assessment Emissions Methodology.

M4.0 Reduced emissions from land use, reforestation, reduced deforestation, and through sustainable forest management and conservation and enhancement of forest carbon stocks	M.4.1 Tonnes of carbon dioxide equivalent (t CO_2eq) reduced or avoided (including increased removals) as a result of Fund-funded projects /programmes – forests and land-use sub-indicator	BUR submitted to UNFCCC by the MoE FAO EX-ACT informed by annual reports from the MoE - FMC[34]	Carbon removals from the forest sub-sector (t CO_2eq): 0	Carbon removals from the forest sub-sector (t CO2eq): -849,972 Y4	Carbon removals from the forest sub-sector (t CO_2eq): -7,919,876 Y8	According to the best available data, it has been estimated at project start that the total forest area of the target areas equals 135,790 ha, using the following Definition of Forest (based on forest code of Armenia in accordance with FAO FRA): Minimum land area of 0.1 ha with trees higher than 5 m and a canopy cover of more than 30 per cent. Forest Degradation can be defined as changes within the forest which negatively affect the structure or function of the stand or site, and thereby lower the capacity to supply products and/or services. Due to two decades of overexploitation of forest, mainly for fuelwood purposes, the average level of degradation at project start was estimated large (60%) according to EX-ACT classification, The change in the level of forest degradation with and without project scenarios are described in the EX-ACT methodology. The expected emissions over the 20-year project lifetime are -18,833,290 tCO_2eq. Absence of major natural disasters including forest fires in the country and in target areas. State budget allocated to fulfill NDCs is guaranteed during and after the project. The economic, social and political context in the country and project areas remains stable.

[34] Data will be collected by the Forest Monitoring Center of the Ministry of Environment via repeated assessment of the situation in project areas by field inspections + aerial imagery (high resolution orthophoto maps and surface models) acquired by drones in year 1, 3, 5 and 7. Location for each of the forest investment site will be georeferenced and a complete Project Intervention Atlas will be constantly updated by the M&E Unit starting from the Baseline. The Atlas will be public and shared annually.

A4.0 Improved resilience of ecosystems and ecosystem services	A 4.1 Coverage/scale of ecosystems protected and strengthened in response to climate variability and change	BUR submitted to UNFCCC by the MoE informed by annual reports from the MoE – FMC[35] National Report of the Republic of Armenia to the UNCBD and to the UNCCD.	0 ha of forest	3,800 ha of forest	135,800 ha of forest	Analysis of the Land Productivity Dynamics (LPD) via FAO Earth Map joined with ground truthing done with external experts[36] and communities will allow the assessment of project's impacts on ecosystems. Results will be disaggregated per level of degradation[37] at district, community and ecosystem levels. Absence of major natural disasters including forest fires in the country and in target areas. State budget allocated to fulfill NDCs is guaranteed during and after the project. The economic, social and political context in the country and project areas remains stable.

D.3. Outcomes measured by GCF indicators

Expected Outcomes	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
M7.0 Lower energy intensity of buildings, cities, industries and appliances	M7.1 Energy intensity / improved efficiency of buildings, cities, industries and appliances as a result of Fund support	Reports from external and independent technical assessments	Improved Efficiency of heating appliances <40% Energy Intensity < 50 GWh	Improved Efficiency of heating appliances >60% Energy Intensity 67.5 GWh	Improved Efficiency of heating appliances >60% Energy Intensity > 75 GWh	Economic social and political situation in the country and in project areas remains stable. Energy efficiency of existing wood stoves is < 40%. Introduced technologies and practices will increase the efficiency value to > 60%. Since current efficiency of wood stoves is <40%, less than 50 GWh of the total energy content of the Wood fuel (=125 GWh) can currently be transformed into heating energy. Detailed technical assessment will be performed by external and independent service providers after installation of the EE stoves, during the 4y of execution and at completion.

[35] Data will be collected by the Forest Monitoring Center of the Ministry of Environment via repeated assessment of the situation in project areas by field inspections + aerial imagery (high resolution orthophoto maps and surface models) acquired by drones in year 1, 3, 5 and 7. Location for each of the forest investment site will be georeferenced and a complete Project Intervention Atlas will be constantly updated by the M&E Unit starting from the Baseline. The Atlas will be public and shared annually

[36] Independent surveys.

[37] Declining productivity, Early Signs of Decline, Stable but Stressed, Stable not Stressed, Increasing productivity.

M9.0 Improved management of land or forest areas contributing to emissions reductions	*M9.1 **Hectares** of land or forests under improved and effective management that contributes to CO2 emission reductions	BUR submitted to UNFCCC by the MoE. Informed by annual reports from the MoE – FMC[2] External and independent interim and final evaluations	0	3,800 ha	135,800 ha	Analysis of the Land Productivity Dynamics (LPD) via FAO Earth Map joined with ground truthing done with external experts[38] and communities will allow the assessment of project's impacts on ecosystems. Results will be disaggregated per level of degradation[39] at district, community and ecosystem levels.
M5.0 Strengthened institutional and regulatory systems	M5.1 Institutional and regulatory systems that improve incentives for low emission planning and development and their effective	0	1 National energy efficiency standard for heating appliances and biomass fuels approved [40]	1 National energy efficiency standard for heating appliances and biomass fuels approved and implemented successfully.	Official publication from the Ministry of Economy (National Gazette)	Economic social and political situation in the country and in project areas remains stable. Standards will be prepared jointly with the Ministry of Economy, the Ministry of Energy and Natural Resources and the Ministry of Environment. Standards will be prepared according to the principles stated in the RA Law "On Energy Saving and Renewable Energy" (L. 122) 2004.
A8.0 Strengthened awareness of climate threats and risk-reduction processes	A8.1: Number of males and females made aware of climate threats and related appropriate responses	Vocational schools registers Reports from external and independent surveys with municipalities, communities and civil society Project reports[41].	Males: 0 Females: 0	Males: 74,000 Females: 78,000	Males: 144,000 Females: 156,000	The project will involve communities in target areas (15 municipalities and 207 rural communities).

Besides the arrangements (e.g. annual performance reports) laid out in the Accreditation Master Agreement, please provide project/programme specific institutional setting and implementation arrangements for monitoring, reporting and evaluation. Please indicate how the independent interim/mid-term and final evaluations will be organized, including the timing. As detailed in Annex 2 – Section 9 and 14 and Annex 10, the project will follow an evidence and result-based management approach also involving communities. The project will be monitored via: (i) **Georeferencing** ensuring a unique link between project's activities and geographical coordinates (Annex 2, Section 14, pg 105) and allowing stakeholders to ensure clear identification of activities and beneficiaries. (ii) **Field data Collection:** Field data will be collected by the Forest Monitoring Center and by the M&E unit via dedicated activities planned with communities according to the structure described in Annex 2- Section 14, pg 105 and in Annex 10. To this end the M&E unit will collect data with and from communities following the approach and specifications identified for the development of baseline. Additionally the project has planned for two supplementary households and institutions survey at mid-term and project completion (iii) **Geospatial analysis:** the M&E unit - supported by the Forest Monitoring Center of the MoE and by the FAO - will monitor activities and processes thanks to remote sensing and photointerpretation analysis via drones available at the MoE. The combination of georeferencing, groundtruthing, monitoring with communities and remote sensing analysis will allow stakeholders, including the GCF, to have a clear understanding of project's effectiveness and efficiency. Additionally, the described approach will allow the M&E unit to advise and support the EPIU management enhancing project's capacity to deliver and to support stakeholders in the decision making processes.

[38] Independent surveys.
[39] Declining productivity, Early Signs of Decline, Stable but Stressed, Stable not Stressed, Increasing productivity (Based on UNCCD definition).
[40] Government of RA's commitment to promotion of energy efficiency (EE) is reflected in the Law on Energy Saving and Renewable Energy (2004). The Law lays out the principles of the government's policy and governance structure supporting energy efficiency. While forming a fertile ground to ensure EE, the current laws and policies do not include EE standards for fuelwood fueled heating appliances that are the primary source of about 74% of the rural population. Such gap will be filled by the project as the current legal frameworks contains the elements needed to include fuelwood and other biomasses and EE standards for wood fueled appliances.
[41] Project reports will also include geographical coordinates (georeferencing) of each activity including trainings and forest investments. These will be public.

FAO as accredited entity will ensure annual reporting to the GCF. The report will include also the audit report that will be commissioned by FAO to an independent firm according to FAO covenants, rules and standards. Project's reporting will consist of four elements: (I) Technical Reports (TRs) prepared by Partners / Service Providers. TRs will describe executed activities and involved beneficiaries according to M&E indicators. Partners and service providers will ensure Georeferencing of each executed activity and will present TRs on a quarterly base to the M&E Unit of the EPIU/FAO; (II) Quarterly reports (QRs) prepared by the M&E for EPIU Director. QR will present the work and achievements of activities presented in the AWPB. It will include - among other - data and information from the beneficiaries and other involved stakeholders. QR are prepared by the M&E team for the EPIU and will contribute to the annual report; (III) Annual reports (ARs) prepared by the M&E unit for the PSC and FAO. ARs will present the work and achievements reported by the M&E unit via the QRs and will include implementation and fiduciary chapters. ARs will include findings and recommendations of FAO supervision reports (SRs). ARs will include as well independent annual audit reports (AARs) and the "Project's Implementation Atlas" presenting the maps and charts obtained thanks to the georeferencing of project activities. Both will be presented as annexes of the AR. ARs are prepared by the M&E Unit, validated by FAO-ARMENIA and the EPIU director and after inclusion in the AWPB are validated by the PSC and are transmitted to the GCF via FAO-HQ.

Evaluation Reports (ERs) are commissioned by FAO to an external and independent entities according to FAO covenants, rules and standards. ERs are shared with the Steering Committee and the EPIU for comments and after finalization sent to the Green Climate Fund at midterm (MTE) and within six (6) months from project's closure (FE). In accordance to FAO procedures for the evaluation of initiatives funded by voluntary contributions, the AE will secure:

a. An independent Mid-Term Evaluation, when delivery will reach 50% of the initial total budget and/or mid-point of scheduled project duration, to review efficiency and effectiveness of implementation in terms of achieving project objective, outcomes and delivering outputs. The MTE will be instrumental for contributing through operational and strategic recommendations to improved implementation for the remaining period of the project's life. FAO Office of Evaluation, in consultation with project stakeholders, will be responsible for organizing and backstopping the Mid-Term Evaluation, including: finalizing the ToR, selecting and backstopping the team and Quality Assurance of the final report.
b. An independent Final Evaluation, within six months prior to the actual completion date (NTE date) of the project. It will aim at identifying project outcomes, their sustainability and actual or potential impacts. It will also have the purpose of indicating future actions needed to assure continuity of the process developed through the project. FAO Office of Evaluation, in consultation with project stakeholders, will be responsible for organizing and backstopping the Final Evaluation, including: finalizing the ToR, selecting and backstopping the team and Quality Assurance of the final report.

FAO will support the PSC and the EPIU in reviewing and analyzing progress reports and assessing performances against baseline and targets. In addition to the support provided from FAO-Armenia, FAO-HQ will organize two or more (depending on needs) supervision mission per year[42].

In accordance with the AMA, the FAO Office of Evaluation will be responsible for the interim and final evaluation of the intervention. The evaluations will be conducted with a question-driven approach, and may include assessments against the broad criteria of relevance, effectiveness, and sustainability, amongst others, as appropriate. The interim evaluation will be instrumental for contributing through operational and strategic recommendations to improved implementation, setting out any necessary corrective measures for the remaining period of the project's life. The final evaluations will assess the relevance of the intervention, its overall performance, as well as sustainability and scalability of results, differential impacts and lessons learned. The evaluations will rely on a detailed evaluation methodology including the use of different evaluation methods and tools (including available open sourced tools FAO has developed, e.g. Collect Earth, Open Foris package). In addition to primary data collected by the evaluators and available secondary national data, both, interim and final evaluation will draw on the monitoring activities and reports prepared by project staff, including the surveys that will be implemented at baseline, mid-term, and project completion.

E. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

E.1. Impact potential (max. 300 words)

E.1.1. Expected tons of carbon dioxide equivalent (t CO_2 eq) to be reduced or avoided (Mitigation only)	Annual	998,769 tCO_2 eq
	Lifetime	19,975,387 tCO_2 eq
E.1.2. Expected total number of direct and indirect beneficiaries, disaggregated by gender	Direct	377,308 52% of female
	Indirect	3,018,854 52% of female
	**For both, Specify the % of female against the total number.*	
E.1.3. Number of beneficiaries relative to total population	Direct	12% (Expressed as %)
	Indirect	100.0% (Expressed as %)

	Impact/Result Potential:	Target	Rational

[42] Additional details on M&E and reporting procedures are available in Annex 2- Sections 12, and 14 pg. 113→ 115

MITIGATION	*Expected tonnes of carbon dioxide equivalent (t CO_2 eq) to be reduced or avoided*	19,975,387 tCO_2 eq/20Y	The project will ensure increased carbon removals from forests via: identified investments (C1); climate adaptive capacity development (C1-C3) and by reducing fuelwood consumption by 30%. Finally, the involvement of the private sector and of the Ministry of Economy in the technology transfer process (C2-C3) will increase availability of EE appliances for rural households and creating the enabling conditions for the biomass sector to develop sustainably and legally at both local and national level magnifying impacts in terms of emissions' reduction.
	Expected improvement in the management of land or forest areas contributing to emission reductions.	7,300 ha (8Y) 143,800[43] ha (20Y)	Ensuring investments in forestry (6,300 ha of public forests) and agroforestry (1,000 ha of municipal lands) in project areas as well as in capacity development, the project would increase national forest cover by 2.5% and will have direct positive impact on about 143,800 ha.
ADAPTATION	*Expected total number of direct and indirect beneficiaries, (reduced vulnerability or increased resilience); number of beneficiaries relative to total population (PMF-A Core 1), particularly the most vulnerable groups*	377,308 (52 % women) Individuals in project areas. Indirect beneficiaries: total population	The project will directly target the population of the Marzes of Lori and Syunik. An indirect positive impact is expected in terms of increased carbon removals, reduced emission from rural EE and in terms of market opportunities (EE) on the entire population of Armenia (100%) (Annex2, Section 7 pg. 56→57).
	Expected strengthening of institutional and regulatory systems for climate-responsive planning and development (PMF-A 5.0 and related indicator(s))	Increased participation of communities in forest governance and introduction of climate adaptive silviculture	The project, via the practices and technologies introduced in C1 and C2 will create the enabling conditions for communities to participate in forest management - according to existing laws and regulation – and ;largely contributing to the overall sustainability of the project in the medium and long term. The project will also create the enabling conditions for communities to organize sustainable and regulated biomass markets and possible associated financial inclusion.

E.2. Paradigm shift potential (max. 300 words)

Describe the degree to which the proposed activity can catalyze impact beyond a one-off project or programme Investment.

	Paradigm Shift	**Target**	**Rationale**
INNOVATION	*Opportunities for targeting innovative solutions, new market segments, developing or adopting new technologies, business models, modal shifts and/or processes*	**Adoption** of EE standards for heating appliances, **Introduction** of EE technologies for heating appliances and new procedures for forests investments. **Expansion** of the EE market to rural areas,	The project will support technology transfer and capacity development to increase the efficiency of existing heating appliances and will set, with the Ministry of Economy (standards) and the Ministry of Education and Science (education), the enabling conditions to support the private sector in contributing to a low emission and green growth of the Country. In the forestry sector the project will transfer technologies and practices to secure higher survival rate of forests investments.
LEVEL OF CONTRIBUTION TO GLOBAL	*Expected contributions to global low-carbon development pathways consistent with a temperature increase of less than 2 degrees Celsius*	Forests in Armenia are more resilient allowing enhanced and increased carbon removals in the described GHG growth scenario.	The project will decrease forest degradation drivers via tailored technology and knowledge transfer so as to: (i) increase resilience of forests and (ii) enhance community participation in forest governance. The selected approach will contribute in increasing carbon removals from the forest subsector by at least 7% against the observed declining 5%.
SCALABILITY	*A theory of change for scaling up the scope and impact of the intended project without equally increasing the total cost of operation*	No additional cost for the national budget	The project will not cause additional expenditures from the national budget to secure NDC targets and national strategies. The intervention will not add or modify such targets but will transfer the needed technology and knowledge to reach them at a lesser cost and higher impact.
REPLICABILITY	*A theory of change for replication of the proposed activities in the project in other sectors, institutions, geographical areas or regions, communities or countries*	Replication at the national and regional level	The project will enable stakeholders to expand proposed practices and methods outside project areas.
	Potential for exporting key structural elements of the proposed programme or project elsewhere within the same sector as well as to other sectors, regions or countries (replicability)	Linking energy needs of Rural HH with forest governance and climate adaptation to enhance carbon removals from the forest sub-sector	The strategy is replicable in the region with particular scalability in countries such as Georgia, Kyrgyzstan and Tajikistan where the nexus between energy security and forests is similarly strong.

[43] The total number of ha reported among the targets correspond to the existing forest cover plus the additional hectares restored by the project.

POTENTIAL FOR KNOWLEDGE AND LEARNING	*Contribution to the creation or strengthening of knowledge, collective learning processes, or institutions*	Introduced practices and technologies are transferred in relevant National VET Curricula Forest monitoring assessment protocol is in place and an M&E plan is available and shared among stakeholders	In addition to the program of awareness and community empowerment activities the project will work with the Ministry of Education (National Center for Vocational Training) to inject into targeted national curricula[44] the newly introduced technologies and practices so to ensure long term sustainability and national ownership. Additionally the project will ensure the preparation and sharing of a precise protocol to assess forests at the national level as well as of project activities also contributing to the creation of sustainable enabling conditions for the development of biomass market.
CONTRIBUTION TO THE CREATION OF AN ENABLING ENVIRONMENT	*Sustainability of outcomes and results beyond completion of the intervention*	No additional cost for the National Budget (Annex 9) Reduced heat expenditure costs for HH (-30%)	Given the NDC, the proposed outcomes will not generate additional costs to institutions and/or communities but will contribute to savings at both the household and national levels thanks to the reduced fuelwood cost, the increased survival rate of planted trees, the improved management practices and the enhanced participation of communities with possible impacts on the biomass market in Armenia.
	Market development and transformation	Technology transfer to the private sector and to consumers	The project will enhance the capacities of local entrepreneurs and technicians with new technologies related to heating appliances and will increase permeability of the EE market within the Country of the EE market increasing the basin of potential customers of EE appliances/materials as well as for technicians and certifiers. Finally the project will stimulate the creation of enabling conditions for communities in rural areas to establish market mechanisms that will allow sustainable sourcing of fuelwood.
CONTRIBUTION TO THE REGULATORY FRAMEWORK AND	*Potential for strengthened regulatory frameworks and policies to drive investment in low-emission technologies and activities, promote development of additional low-emission policies, and/or improve climate-responsive planning and development*	Technology transfer to national institutions (I, MoE --> EE standards for heating appliances and fuelwood)	The project, thanks to its collaboration with the I, will support the development and application of national standards to secure the quality and safety of heating appliances fueled with wood also mainstreaming EE and biomass for fuel standards at the national level strengthening Law 122 on Energy Saving and Renewable energy" ensuring forest biomass in the energy equation of the Country. The project will also ensure operationalization of the Armenia Forest Code enhancing community participation in forest governance as stated in Article 4 of the Code as well as its management also for commercial purposes (fuelwood coppicing).

In terms of rationale, please briefly describe the theory of change and provide information on how it serves to shift the development pathway toward a more low-emissions and/or climate resilient direction, in line with the Fund's goals and objectives. This should summarize the diagram of the theory of change requested as an annex to the funding proposal. BAU management of forests and energy security in rural areas has failed in guaranteeing the livelihoods, security and natural regeneration of forest's resources. Addressing forest mitigation and adaptation potential is instrumental in shifting from forest mining to a new path of development where forests are sustainably managed to ensure the provision of ecosystem services that are at the base of community survival in both project areas and that are precondition to secure mitigation targets of Armenia in 2050. Communities' dependency from forests for energy and livelihoods (i.e. beekeeping, NWFP) calls for innovative strategies and approaches to factor in climate change impacts and allow stakeholders to prepare and react rather than passively cope with impacts and effects of forests' degradation. Therefore, in line with the NDC, carbon removals from the forests sub-sector are increased via the combined effects of: (i) introducing climate adaptive silviculture practices applied by public and private operators, (ii) securing technology transfer to the private sector, institutions and communities, and (iii) in enhancing community participation in forest management via ecosystem based approaches. The combined effects of the three interlinked components will support Armenia in shifting from the described BAU scenario towards low-emission sustainable development pathways enabled by an increased climate-resilient forest cover and the enhanced capacity and adaptability of related private sector's operators. The BAU management of forest is not a consequence of missing the necessary legal framework but missing implementation of the existing forest code and related regulations. Mitigation becomes an opportunity to increase forest cover, enhance preparedness and to secure wider participation of stakeholders into forest's governance with clear and measurable co-benefits in terms of adaptation and low emission development of the most vulnerable population. See Annex 2, pages 63→64 and detailed step by step in the logical framework and project description available in Annex 2, pages 67→96, indicating how the project will demonstrate the needed change in the forest and energy sector and how these important lessons can be scaled up across the country.

E.3. Sustainable development (max. 300 words)

The project underwent screening according to FAO's Environmental and Social Management Guidelines (Annex 10) and the GCF's exclusion criteria as per the GCF Guidelines for the Environmental and Social Screening of Activities Proposed under the Simplified Approval Process. The proposed scope of activities will primarily result in positive environmental and social impacts. In addition to the described indicators, the project will also contribute to 8 SDG Indicators. The M&E unit will ensure data collection and description of each of the selected indicators in addition to those reported in the logframe matrix as reported in Annex 2 – Section 14 pg. 108→110.

	Sustainable Development Potential:	Target	Rationale
PROJEC	*Expected positive environmental impacts, including in other result areas of the Fund, and/or in line*	Contribution to: **Environmental:** SDG 12 [2]	The activities proposed by the project will contribute to tangible improvements of the overall state of the environment in Armenia. The project will have positive impacts on Armenian Biodiversity, on air quality (with particular emphasis on

[44] Light industry, (ii) agriculture, (iii) Forest resource reproduction and recycling and (iv) Energy

	with the priorities set at the national, local or sectoral level, as appropriate	SDG 13 [1,2,3,] SDG 15 [2,3,4,9,A-B] **Social and Gender** SDG 5 [B] SDG 7 [1,2,3, B] SDG 11 [4,6] **Economic** SDG 1 [5,] SDG 12 [2]	indoor air quality and household health), on soil quality (reducing erosion thanks to forest conservation) and water availability.
			Addressing EE at the rural HH level, involving rural women as actors and promoters of change, will have major impacts on women condition (reducing their direct vulnerability to CC) as well as on household health. At least 9,000 women (90% of component 2 beneficiaries) will be involved, and will be empowered to lead the new green growth opportunity of rural communities stimulated by the project.
			EE combined with investment in forests and forestry will also generate long term economic benefits for communities and in particular for rural women. Energy efficiency will allow savings of at least 30% of the total cost of heating with fuelwood corresponding to about 12% of annual income. Additionally, the project will increase the number of job opportunities in rural areas transforming, once more, forests and other ecosystems from exploitable resource to investments of national relevance (Annex 9).

Provide a summary of the gender assessment and project/programme-level gender action plan that is aligned with the objectives of GCF's Gender Policy. Please provide the full gender assessment and project-level gender action plan as an annex to the funding proposal. The project addresses gender dimensions in project design and implementation in order to identify and integrate interventions to provide gender responsive and transformative results. The prevalence of women headed households increased in Armenia due to high rate of long-term labor migration of men, as well as divorce. In 2016 the share of female-headed households was 34.3% (in urban areas 37.7 and in rural 27.8%)[45]. Women are key players in managing basic household resources, including stoves for cooking and heating. Women are also known as primary users of forests and main gatherers of forest products. Though women play such an important role in the protection of forests, their participation and presence in decision-making bodies is often seen to be insignificant. To this end, a gender analysis and action plan was prepared that accounts for gender and social inclusion in both forest resources management and energy efficiency activities (Annex 4).

E.4. Needs of recipient (max. 300 words)

Describe the scale and intensity of vulnerability of the country and beneficiary groups, and elaborate how the project/programme addresses the issue (e.g. the level of exposure to climate risks for beneficiary country and groups, overall income level, etc). Reportedly, target communities are vulnerable to climate change because of the following: (i) direct dependency of livelihood, food and energy security from ecosystem services provided by forests (49% of national forest is in project areas), (ii) high economic vulnerability of target population (15.2% of the nation's poor are in project areas) and (iii) high share of single women headed households (about 28% of which about 44% are poor)[46].

Describe how the project/programme addresses the following needs:

	Needs of Recipient:	Target	Rationale
ECONOMIC AND SOCIAL DEVELOPMENT LEVEL	*Level of social and economic development of the country and target population*	9,000 HH living in forest adjacent communities with priority given to: (i) SWHH[47], (ii) registered at the Ministry of Social Affaires	Communities in the two project areas and especially in Lori are reported as the most vulnerable in the Country home to about 15% of the Armenians living below poverty line [48] . Additionally, target population is the most vulnerable to climate change (high mountains communities).
ABSENCE OF ALTERNATIVE SOURCES OF FINANCING	*Opportunities for the Fund to overcome specific barriers to financing*	Cost of NDC target is reduced thanks to increased survival rate of forest, enhanced natural regeneration and reduced us of fuelwood of rural communities.	GCF funding will allow to: (i) update the technical and managerial capacities of forest stakeholders; and (ii) allow inclusion of communities in forest governance. Given the current economic situation and the national debt rate, the Country, will be able to factor in climate into policies and practices only if financial support will be provided. GCF funds will be catalytic in ensuring that efficient stoves will start being available at much lower prices in the market, nurseries will be prepared to address the needs of reforestation factoring in climate change and populations will be more aware of how to better benefit from forests and empowered to contribute to their governance.
NEED FOR STRENGTHENING INSTITUTIONS AND IMPLEMENTATIO	*Opportunities to strengthen institutional and implementation capacity in relevant institutions in the context of the proposal*	Enhanced mainstreaming of CC in the MoE, the MoA, the MENR and the MEI and the MSA[49]s	The project will be an opportunity to mainstream the importance of sustainable forest management and climate change within line ministries and to ensure understanding of the environmental, social and economic co-benefits. Designed activities will enable partners to execute effectively the Forest Code and the existing renewable energy policies described in Annex 2, Section 6.

E.5. Country ownership (max. 500 words)

Please describe how the project/programme contributes to the country's (or countries') identified national priorities (e.g. country's NDC, national climate strategies, relevant sectoral policies, or other plans such as Nationally Appropriate Mitigation Actions (NAMAs), National Adaptation Plans (NAPs), National Adaptation Programmes of Action (NAPAs), Technology Needs Assessments (TNAs), National Communications to the UNFCCC or equivalent). Please describe which priorities identified in these documents the proposed project is aiming to address and/or improve. The project

[45] Social Snapshot and Poverty in Armenia, National statistical service. 2017;p.57; http://www.armstat.am/file/article/poverty_2017_a_2.pdf
[46] Details description of project areas and target groups is available in Annex 2, Sections 5, 6, 7 and 10 and in Annex 4.
[47] Single Women Headed Household.
[48] https://www.armstat.am/file/article/poverty_2016_eng_2.pdf
[49] A detailed list of acronyms is available in Annex 2, Section 1.

aligns with (A) **NDC (2015)**: (**i**) Increase Armenia's forest cover from about 9.3% to 20.1% by 2050 (contribution of 1.7%); (**ii**) Decrease net annual GHG emissions per capita to 2.07 tCO_2e by 2050; (**iii**) Prioritize sector-based mitigation strategies with a focus on land use and forestry based on ecosystem approach; (**iv**) support the adaptation process of key ecosystems including forest ecosystems; (**v**) establish institutional mechanisms to overcome barriers for the introduction of innovative technologies for climate change mitigation and adaptation; (**vi**) support the establishment of consistent processes for professional training and education on climate change related issues in the forest governance domain, as well as enhance cooperation at the international and regional levels. (B) **Additional alignment with**: (**i**) Armenia Forest Code (2005); (**ii**) National Program on Energy Saving and Renewable Energy of the Republic of Armenia (2007) (**iii**) Second National Environmental Action Program (2008) (**iv**) Armenia Renewable Energy Program (2014); (**v**) Armenia Development Strategy for 2014-2025 (2014).

Please provide a full description of the steps taken to ensure country ownership, including engagement with relevant NDAs on the funding proposal design and applicable no-objection letter(s), and how the country ownership is embedded in scope and concept of the project/programme. Country ownership is secured by the following: (i) adherence with relevant national strategies and policy frameworks, (ii) joint development of the proposal with the NDA and relevant stakeholders (Annex 10, Section 5.1 page 13), (iii) involvement of a diverse set of central and local institutions, (iv) substantial co-financing (32%) allocated by Armenia to ensure the success of this project; (v) joint execution of the project.

Please describe experience and track record of the AE and EE(s) with respect to the activities that they are expected to undertake in the proposed project/programme. Please mention the AE's and EE's experience in the country/region, in the sector and experience of handling projects of similar funding cost. Describe in what way the AE is well placed to undertake the planned activities and what will be the implementation arrangements with the EE(s) and implementing partners. The FAO has extensive experience in the field of Climate Change Adaptation and Mitigation, fuelwood management and forestry. With more than 138 climate and resilience projects worth over USD 600 million including the GCF approved projects in Paraguay and El Salvador, the organization has the experience and technical capacity to manage the requested grant and to properly support Armenia in the forestry sector. Since 1993, FAO has built a vast and long lasting reputation in Armenia with over 30 projects executed (> USD 70 million). Forestry best practices are available in key publications such as FAO, 2011. Climate Change for Forest Policy Makers, FAO. 2010. Forests and Climate Change in Eastern Europe and Central Asia, FAO. 2008. Integration of climate adaptation and mitigation measures is co-beneficial for forest development in Armenia. Additionally, the FAO collaborates actively with the UNECE in the project: Accountability Systems for Sustainable Forest Management in the Caucasus and Central Asia. In addition, ADA has a long-standing experience and a portfolio of (ongoing or successfully completed) reference projects. ADA has been accredited with the GCF in October 2018.

The Ministry of Environment (NDA) is the Armenian Institution whose mandate oversees the state forest fund and its forests. The Ministry has a long lasting experience with international projects and is the repository of all the baselines concerning, forest, climate change and environment in general. As reported in the previous sections the Ministry of Environment will execute the project via its EPIU jointly with the FAO and will be the chair of the steering committee. The EPIU was formed with the decree N786, August 29, 2001 of the RAG. Its mandate is under the subordination of the RA Ministry of Environment. EPIU staff was formed following the RA Prime Minister's decree N707, 03.10.2001. Relations between the RA Government and the EPIU are regulated according to the RA legislation and the institution charter. The EPIU is accredited by the Adaptation Fund and is already accredited to the GCF as of February 2019. A list of past and current initiative managed by the EPIU is available in their official website.

Describe the selection process and related consultations undertaken to ensure the proposed project/programme reflects a broad spectrum of stakeholder views, including the approval process by NDA for providing the no objection letter and criteria used for selection of the proposed activities, with a particular emphasis on gender and ESS consultations. Details on the stakeholders consultation carried out during the project proposal preparation can be reported as part of annex 2 The current proposal is the resultant of the consultations with communities, civil society, private sector, development actors and institutions undertaken between June 2017 and November 2018. Details of the process are reported in Annex 10, Section 5.1 page 13. In order to ensure constant and transparent involvement of the NDA a no objection letter was provided for the Concept Note and an Aid Memoire was signed with the MoE after each phase of the process to ensure mutual agreement on achievement of the design and planning of next phases.

Briefly summarize the multi-stakeholder engagement plan and the consultations that were conducted when this proposal was developed. Under the guidance of the NDA the FAO facilitated 3 national and 2 local (Lori and Syunik Marzes) engagement workshops with the participations of local authorities, CSOs, IFIs, UN agencies, NGOs, Bilateral Donors as well as national academia and private sector. Details of the multi-stakeholders engagement plan and consultations are available in Annex 10, Section 5.1.

E.6. Efficiency and effectiveness (max. 1 page)

E.6.1. Estimated cost per t CO_2 eq, defined as total investment cost / expected lifetime emission reductions (Mitigation only)	(a) Total project financing	US$ 18,704,730
	(b) Requested GCF amount	US$ 10,000,000
	(c) Expected lifetime emission reductions	-19,975,387 tCO_2eq
	(d) Estimated cost per tCO_2eq (d = a / c)	US$ **0.93 / tCO_2eq**
	(e) Estimated GCF cost per tCO_2eq removed (e = b / c)	US$ **0.50 / tCO_2eq**
E.6.2. Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (Mitigation only)	(f) Total finance leveraged	US$ 9,168,235
	(g) Public source finance leveraged	US$ 8,504,740
	(h) Private source finance leveraged	US$ 663,500
	(i) Total Leverage ratio (i = f / b)	**87.0%**
	(j) Public source leverage ratio (j = g / b)	80.5%
	(k) Private source leverage ratio (k = h / b)	2.1%

Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objective(s), including addressing existing bottlenecks and/or barriers; providing the minimum concessionality; and without crowding out private and other public investment. With a full alignment to the NDC forest-related mitigation targets, the project is pursuing a public good-rated objective with a highly intensive requirement of public resources. The strategic selection, mobilization and involvement of partners and co-financiers allows the development of the project's objectives while ensuring public sustainability of the interventions. The financial structure of the project responds to the minimum needs to ensure success for such public good. Forestry investment (Component 1) is the core of the mitigation objective and represent about 53 % of the total project

cost. However, about half of such costs are composed of contributions from the Government of Armenia, showing ownership and guaranteeing financial sustainability. Investment in reduction of energy requirements via increased use and availability of improved EE wood stoves (Component 2) represent an essential element to ensure the sustainability of the physical investment in forestry, and include on the project total cost for less than one fourth of the budget (23 %). Despite the prevailingly low levels of income in the target rural areas, and the relatively high incremental cost of the improved technology (on average, 350 USD / stove, corresponding to over a third of the average annual income of a rural HH), the beneficiaries' contribution to the investment in EE stoves component is still set at about 15 %. Within the same framework, the project's investment in developing local EE stoves manufacturing capacities which will allow to break a technological barrier by allowing the private sector to invest (including via commercial loans) and meet the increased demand for EE stoves. Investment in improved governance and enabling environment (Component 3) is also a critical element in the paradigm shift, expected to absorb about 20 % of the project's cost. Component 2 has virtually the same amount of public investment as Component 3, despite directly addressing one of the main issues of forest unsustainability (inefficient use of fuelwood), because it aims at leveraging investment from the private sector. The third component receives a lower proportion of investment as it addressed mostly institutional and behavioral changes needs, which are critical to ensure project sustainability, but less demanding in terms of investment capital.

Provide the rationale of requested concessionality and explain the methodology and assumptions used to define it. Justify why the level of concessionality of the GCF financial instrument(s) is the minimum required to make the investment viable considering the incremental cost or risk premium of the project/programme. Additionally, how does the grant and the proposed pricing fit with the concept of minimum concessionality? Who benefits from concessionality? Refer to the financial analysis where appropriate. The access to financial products is a precondition for the sustainability of the investment under component 2. In this respect, the fluidity of the financial sector in the country represent a significant asset. The banking sector and credit organization provide financial services to a large share of the population (over half of the adults borrowed in 2017). While the agricultural sector represents only about 5 percent of the total portfolio (steadily growing in the last years), the overall access to credit is quite high (the share of adults borrowing to start a farm or business passed from 9 to 17 percent between 2014 and 2017), with manufacturing and trade representing over a third of it (CBA). Despite a relatively high cost of loans (interest rates are between 6 and 15 % in local currency), the financial system is sufficiently developed to provide the required liquidity to establish new investment and enterprises in the EE sector.

In general, the public debt level and the related limited space for fiscal policy, translate in strong limitations of the government of Armenia to fund its strategy to achieve its NDC mitigation targets. Nevertheless, the project succeeds at securing enough government financing so that, if continued at such levels, it alone will allow for scalability of project intervention after the project initial investment (nurseries, technology update and institutional and organizational reform). As shown in the economic and financial analyses, the project is capable to enable continued public investment after the project. Also, the project addresses clear market failures in terms of (i) investing in reforestation – largely a public good; (ii) investing in introducing awareness and capacity to produce energy efficient technologies suitable to rural areas. The project is built on the premise that by reducing the risk of investing in the development of efficient stoves by local manufacturers, these will be in conditions to supply the local market.

Please describe the efficiency and effectiveness of the proposed project/programme, taking into account the total financing and mitigation / adaptation impact the project/programme aims to achieve, and explain how this compares to an appropriate benchmark. If an economic analysis applies to this SAP funding proposal, please specify the expected economic rate of return and net present value based on a comparison of the scenarios with and without the project/programme. Provide summary of financial analysis provided as an annex and include (if applicable): Expected financial rate of return with and without the Fund's support Identification of the financial needs and gaps Identification of the constraints and barriers to access finance Investment analysis with sensitivity under various stress scenarios wherever applicable. An economic and financial analysis (EFA) has been carried out to assess the efficiency and effectiveness of the project. The structure of the analysis follows the one of the project, with three groups of models: (a) forestry investment for CO2e storage; (b) energy efficient stoves use and; (c) small scale economic activities associated to forest use (nurseries development, beekeeping, coppicing), related to the provision of capacity development. Details of the EFA are available in Annex 9.

Forestry. The limited potential financial benefits related to the collection of NWFPs (from selected varieties of wild fruit trees) are not sufficient to ensure attractiveness for the private sector, and remain essentially a co-benefit of the public investment. The economic benefits, taking into account the incremental above- and below-ground biomass creation, and some additional ecosystem services (NWFPs) are significantly higher. Even taking into account the minimum valuation of CO2e (i.e., 40 USD/t), through the investment mobilized by the GCF grant, the IRRs are substantially above the minimum threshold (refinancing rate of the CBA), and respective the NPVs remain essentially positive until the CO2e value drops by 50% (i.e., 20 USD/t). The high effectiveness of the forestry-related investment (including climate adaptive silviculture, coppicing and other activities) is shown not only by the overall cost of CO2e reduction of the project (USD9.2/tCO2e for component 1 only), but especially for the capacity to produce seedlings for an incremental 1,000 ha / year of reforestation. As fruit of the project's support to seedling production capacity (1.8 m seedlings / year), the country will be able to cover between 8 and 10 percent of the NDC reforestation target by 2050.

EE stoves. The support for the adoption of improved EE stoves will generate at least 30 % reduction in fuelwood consumption compared to BAU [61] (from 8m^3 to 5.6 m^3/year), corresponding to savings for up to one third of the annual income of a rural household (Annex 2, Section 6 page pg. 36→48). Currently, improved EE stoves are neither marketed nor produced in Armenia. In order to break the current lack of technology capacity and to ensure the generation of the demand for improved EE stoves, the project has identified a twofold approach: (**i**) by importing of EE stoves for demonstration (ranging from 60-70% efficiency, with costs comprised between 400-600 USD each). Considering the lack of alternatives and the high cost as share of rural HH income, the project set the concessionality between 50-60%. Such level (corresponding to an investment for the project between 200 and 350 USD, and for the beneficiaries between 200 and 250 USD), would allow the beneficiaries to enjoy net savings from reduced fuelwood consumption already from the second year after the investment. These net savings represent the needed adoption incentive for the target beneficiaries in rural areas, and represents the opportunity to increase their use beyond the project intervention by generating awareness, trust and breaking the market barrier serving as example and driver for a demand of technology shift; (**ii**) by supporting the local manufacturing of more affordable improved stoves (min 52 % efficiency, 250 USD/stove), the project will support the technology transfer. For this model, the project has set the concessionality at 20 percent, as with an investment of 50 USD, even the beneficiaries with lowest purchasing power would appreciate the incentive to investment in the new technology, and pay back the investment within one year (reference: EFA, in Annex 9). With the energy efficiency trainings, the awareness and information campaigns, and the support to the adoption will create a demand for stoves beyond the project area, the local manufacturing of stoves is a potentially lucrative economic activity (the 10-year IRR and NPV are positive even with a reduction of sale price of one stove by 15 percent), and can moderately contribute to employment generation in rural areas (especially for the youth in rural areas).

Small scale economic activities. While the project will not provide financial support to any private entrepreneurial activity, there are opportunities emerging from the improved conditions of forests and from the growing development of the biomass value chain. Through the incremental project's investment for the expansion and improved conditions of the forests, the large outreach of trainings sessions in forest management, the specific trainings on sustainable coppicing, and the potential increasing public procurement of seedlings to meet the NDC's targets the project will contribute to generate economic opportunities. Some of these opportunities include: (**a**) private small scale nurseries, funded through existing regular commercial loans to agriculture (15% interest, 3 years) show a positive financial performance (without loan, the 10 year IRR and NPV are respectively 59 % and 16,600 USD). The ideal case the entrepreneur can get access to an investment and working capital loan (which would reduce to less than 300 USD per year the negative cash flow, and possibly providing additional incentives for the young to enter the business); (**b**) beekeeping activities in rural areas will gain better results thanks to improved forests (a 10-year horizon NPV between 620 and 930 USD / year, depending on the size of the investment), and can be initiated with a limited agricultural loan; (**c**) sustainable coppicing activities are also promising, with 32% IRR and over 1,400 USD financial NPV (over 3,400 USD when considering the reduction in tCO2e losses by marketing fuelwood from sustainable coppicing practices).Concerning fuelwood marketing, the project will develop a series of guidelines and trainings for target communities and administrations to ensure that the enabling conditions for the market to develop sustainably and transparently are created (Annex 2, Activities 3.1.1 and 3.1.2). Also, the project will work with the Renewable Resources and Energy Efficiency Fund (R2E2)[50] – and other possible platforms promoting access to energy efficient technologies, to include sustainable fuelwood and other biomasses among the eligible renewable energies for start-ups and development financing (Annex 2, page 49).

Aggregated results of the EFA. The project aggregated benefits take into forest investment in 7,300 ha (including 1,300 ha under sustainable coppicing), the adoption by at least 9,000 HH of improved EE stoves, and at least 35 additional private enterprises for stove manufacturing, 40 new nurseries, 100 new beekeeping activities, and reduced forest degradation in at least 135,000 ha. The Financial analysis shows a 20 year IRR for about 13 percent, and corresponding NPV of USD 7.2m, higher than the 6 percent discount rate equivalent to the refinancing rate applied by the Central Bank of Armenia. The Economic analysis (which includes valuation of CO2e at 40 USD / tCO2e) shows a very high E-IRR (101 percent), with USD 268.6m NPV. The sensitivity to increase of costs or decrease of benefits also shows solid results: the financial NPV is negative in case of twofold costs or a drop in benefits by 45%. Economic results are substantially independent of costs and benefits, while they depend on the carbon pricing: when considering 10 USD / tCO2e (as the lowest range in the current carbon pricing initiatives), the E-IRR is 46 percent and NPV 77.0m. Considering the public nature of the forestry interventions, it is estimated that without grant no investment would take place (including for private sector investments which would be triggered by the forestry investment and by the technology grant transfers to stimulate EE stoves adoption).

An efficient approach to meet NDC Forest related targets. An additional benefit of the project lies in the effectiveness of the forestry investment and in the increased capacity of the country to meet the NDC forest-related targets (expanding forest cover by about 300,000 ha by 2050). The BAU practices for afforestation / reforestation in Armenia are characterized by higher seedling density (between four and six thousand, compared to two thousand) per hectare and lower survival rates (60 percent under BAU versus 80 percent) compared to the results of the techniques proposed by the project that follow the international practices. In order to achieve the additional 300,000 ha of forests, once the project techniques are fully adopted, the cost of the full target reforestation would still remain high (about 1 billion USD), but the country could save about 800 million USD compared to BAU.

An efficient carbon sequestration investment. Overall, the project is ready to tap into an efficient investment to meet its mitigation targets. The WB estimated social value of CO2e ranges between 40 and 80 USD per ton. Such level is considered the minimum required to stay consistent with achieving the temperature goal of the Paris Agreement (WB, 2017). A more recent study provides a review of carbon pricing actually applied by individual initiatives (government, international community – WB, 2018), showing prices varying between less than 10 (30 percent of the initiatives) to over 40 USD per tCO2e (20 percent of the initiatives).). As additional scenario, the 5 USD/t practiced by REDD+ is also used by taking the lowest price in this range, with an estimated removal of about 20.0 million tCO2e in 20 years, the project is able to generate a net incremental discounted value of about varying between 47 to 234 m USD (depending on the carbon pricing set – respectively 10 and 40 USD).

Please explain how best available technologies and practices have been considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices. For the preparation of this proposal, the FAO executed a detailed analysis of existing technologies as well as of those available in the region and in similar contexts and constitute as well the keystone of the co-financing strategy of the project. Accordingly, the ADA and the Autonomous Province of Bolzano are the most relevant partners to enhance the proposed paradigm shift and support the inclusion of the private sector and its needs in the project (Annex 2, Section 6).

[50] The "Renewable Resources and Energy Efficiency Fund" (R2E2) was established within the 2004 "Law on Energy Savings and Renewable Energy". The World Bank initially financed R2E2 as a non-governmental agency in order to create and enabling environment for private sector involvement in EE/RE. This fund financed small hydropower stations and utilized its revolving budget among others especially for the retrofitting of Public buildings. (Kindergartens, prisons, schools etc.). Additional details are available in Annex 2 pages 49→50.

F. ANNEXES

F.1. Mandatory annexes and file names contained in the submission package

☒	Annex 1	NDA No-objection Letter
☒	Annex 2	Feasibility Study
☒	Annex 2a	Project Logframe
☒	Annex 2b	Timetable
☒	Annex 3	Budget plan
☒	Annex 4	Gender Assessment and Action Plan
☒	Annex 5	Co-financing commitment letters
☒	Annex 6	Term sheet and evidence of internal approval
☒	Annex 7	Risk Assessment and Management
☒	Annex 8	Procurement plan

F.2. Other annexes to be submitted when applicable/requested

☒	Annex 9	Economic and/or financial analysis
☒	Annex 10	Environmental and Social Action Plan (ESAP)
☒	Annex 11	EXACT Carbon Accounting
☒	Annex 12	References

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

No-objection letter issued by the national designated authority(ies) or focal point(s)

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MINISTRY OF NATURE PROTECTION OF THE REPUBLIC OF ARMENIA
MINISTER
МИНИСТЕРСТВО ОХРАНЫ ПРИРОДЫ РЕСПУБЛИКИ АРМЕНИЯ
МИНИСТР

0010, ք. Երևան, Հանրապետության հր. Կառավարական 3-րդ տուն
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№ 1/08.2/10141
«30» «01» 2019թ.

To: The Green Climate Fund ("GCF")

Re: **Funding proposal for the GCF by the Ministry of Nature Protection of RA regarding the project: "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation".**

Dear Madam and Sir,

We refer to the FAO project "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation" (the project) in Armenia as included in the funding proposal submitted by the Ministry of Nature Protection to us on 17 December 2018.
The undersigned is the duly authorized representative of the Armenian Ministry of Nature Protection, the National Designated Authority/focal point of Armenia.
Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.
By communicating our no-objection, it is implied that:

(a) The government of Armenia has no-objection to the project as included in the funding proposal;
(b) The project as included in the funding proposal is in conformity with Armenia's national priorities, strategies and plans;
(c) In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.
We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme. We acknowledge that this letter will be made publicly available on the GCF website.
Sincerely,

ERIK GRIGORYAN
Acting Minister,
Focal point Green Climate Fund in Armenia

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Secretariat's assessment of SAP014

Proposal name:	Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation
Accredited entity:	Food and Agriculture Organization of the United Nations (FAO)
Country/(ies):	Armenia
Project/programme size:	Small (simplified approval process)

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
The project focuses on the strengthening of communities by increasing their role in governance and management of natural resources through forest concessions and improved fuelwood management, timber production and non-timber forest products. This is a relatively new approach in Armenia and is a very transformative part of the project, providing scalability to the entire country	There have so far been few experiences with community management of forest concessions. This provides the opportunity, rather than a challenge, to seek to achieve the most innovative and long-term solutions with community involvement
The project will support the Government of Armenia with a new standard of energy efficiency for the first time in the country's history and it will help guarantee the exclusion of inefficient stoves and biofuels from the market. It is a transformative approach which will enable the government to remove inefficient stoves, replace them with efficient ones and incentivize communities and the private sector in kickstarting a new market	
Another key strength of the project is the focus on vocational school curriculum. The project will ensure that experiences and lessons learned from both forest management, and efficient energy use will be included at the centre of the curriculum in vocational schools such as agriculture, forestry and light industry, and thereby shaping the future for generations in Armenia	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and addendum XVIII, titled "List of proposed conditions and recommendations".

II. Summary of the Secretariat's assessment

2.1 Project background

3. The project for forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation, is the first forestry-oriented funding proposal in the country. It aims to support forest restoration interventions in the most vulnerable parts of Armenia and secure higher capacity of forests to store carbon and contribute to higher resilience to climate risks for forests and particularly forest-dependent communities.

4. This project is expected to run from 2021 to 2029 and will be implemented in two Marzes (equivalent to governorate), Lori and Syunik, which are considered among the poorest and most vulnerable areas to climate change.

5. Armenia is one of the countries most vulnerable to climate change in the eastern Europe and central Asia region. Forests are reported to be highly sensitive to climate change, with a rural population that is dependent on fuelwood to meet their energy demands. This scenario is unlikely to change for some time.

6. The Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) estimates that under a business as usual scenario between 5 and 6 per cent of existing forests might be lost by 2030 as unhealthy trees and forest stands will become more sensitive to pests, diseases and fires. Additionally, rural communities are still heavily dependent on forests and, reportedly are responsible for the harvesting of up to 2 million cubic metres of fuelwood yearly against an annual growth of forests of about 0.6 million cubic metres per year. Recent surveys on households' energy consumption concluded that due to the rising prices of fossil fuels, fuelwood consumption per energy unit output will increase. As regards adaptation challenges, forestry represents one of the lesser adapted sub-sectors.

7. Total national emissions (2014) accounted for 10.45 million tonnes of carbon dioxide equivalent (tCO_2eq) (2.82 tCO_2eq/capita) with the energy sector being the main contributor (>67 per cent). Forests remove yearly about 4.6 per cent of total emissions. Armenia's nationally determined contribution (NDC, 2015) aims to reach 20 per cent of forest cover by 2050 and to emit 2.07 tCO_2eq/capita. Mitigation will be mainly from renewable energy, energy efficiency, forests, and carbon storage in soil.

8. The project is expected to contribute towards the reduction of greenhouse gas emissions through an increase in forest cover, improving forest management and forest restoration practices and finally through introduction of energy efficient fuelwood stoves.

9. The project will expand national forest cover by about 2.5 per cent, reducing fuelwood demand by at least 30 per cent, and enabling sustainable and climate adaptive forest management on at least 135,800 ha. At the same time technology transfer will be ensured to rural communities, the private sector and central and local institutions.

10. The project is fully aligned with the Armenia GCF country programme, the NDC, as well as national programmes in the forest and energy sector.

11. Component 1 will address the forest restoration interventions aligned with the NDC priorities of the countries which are aiming to increase the national forest cover to at least 20 per cent by year 2050. The project will support the implementation of forest restoration interventions which will help promote technology transfer and build the capacity of key

stakeholders, in particular government and communities. Both mitigation and adaptation aspects are targeted to help secure higher capacity of forests to store carbon and contribute to higher resilience of forests and dependent communities to climate risks.

12. Component 2 will concentrate on tackling the key driver of forest degradation in Armenia, which continues to be fuelwood harvesting, by promoting a transfer of technical knowledge and energy efficient appliances to both the private sector and rural households so as to decrease pressure on natural ecosystems and strengthen the natural regeneration and sustainability of forestry investments. Component 2 will furthermore support the government to introduce a new national standard for energy efficient heating-related appliances which will set a very high standard for all appliances produced and used in Armenia, helping the future transformation of the entire country.

13. Component 3 will provide support to stakeholders in creating the enabling conditions to execute the Armenia Forest Code (2005) and related bylaws ensuring sustainable and climate adaptive management and enhancing the capacity of rural communities to engage in forest governance.

14. The proposal requests USD 10.0 million in GCF grant financing. Total co-financing amounts to USD 8.7 million. The majority of the co-financing comes from the Government of Armenia (in-kind contribution in terms of staff time and related operational costs) of USD 5.9 million and further in-kind contributions from the Autonomous Province of Bolzano of USD 0.2 million and World Wildlife Fund (WWF) Armenia of USD 0.2 million mostly covering staff time. The Austrian Development Agency and Food and Agriculture Organization of the United Nations (FAO) contribute with co-financing in the form of grants of USD 1.6 million and USD 0.7 million respectively. The total project size is USD 18.7 million.

15. In terms of environmental and social safeguards (ESS), this proposal has been categorized as a category C project. The review by the Secretariat confirms the environmental and social risk category assigned by the accredited entity (AE).

16. The project offers a transformative approach to help Armenia improve the forest–energy nexus by improving forest management and restoration mechanisms and by introducing a new standard for energy efficient appliances, thus offeringan opportunity to stimulate a new market in the country for more efficient appliances. Moreover, for the first time communities will be fully engaged in managing forests adjacent to their residences and thus have full ownership of forest management practices, timber production and sustainable fuelwood production.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: N/A*

17. The project has a clear climate rationale and a significant impact potential in both mitigation and adaptation, expecting to reduce emissions by 20 million tCO_2eq (an average of 1 million tCO_2eq/year), and to increase the resilience and adaptive capacity of 377.000 forest-dependent people.

18. The project will strengthen the livelihoods of forest-dependent communities and increase their ownership of natural resources, providing them with the capacity and rights to manage forests adjacent to their homes and help diversify their livelihoods, and promotes an innovative model for scaling up community management of forests for the entire country.

3.2 Paradigm shift potential *Scale: N/A*

19. The project promotes a shift to a low-emission development pathway by reducing Armenia's high dependency on wood energy; creating a new and long-term market for energy efficient solutions; providing scalability to other regions and countries in the region; engaging the private sector in the energy market; and creating an enabling policy environment to help transform the energy and forest sector in the country.

20. The project supports a complete transformation of Armenia's fuelwood situation by introducing the new standard for energy efficient stoves which will help transform their use and production in the country for many years The project's focus on developing a new standard and new market for energy efficient stoves will have long lasting impacts in the Armenia and neighbouring countries.

21. The local communities will gain capacity to manage their own forests and the production of timber, and sustainable fuelwood and non-wood forest products thus supporting them to diversify their livelihoods. This is one of the first cases in Armenia where communities will be provided with the rights to use and manage forests and can help pave the way to scaling up best practices from the project to the entire country.

3.3 Sustainable development potential *Scale: N/A*

22. The sustainable development potential is deemed high due to the nature of the project activities. The environmental co-benefits are high due to the project's contribution to conservation, restoration and improved management of natural resources, biodiversity and flow of ecosystem services to vulnerable and poor communities. The project promotes protection and restoration of degraded forest ecosystems and helps restore ecosystem services in terms of biodiversity and habitat provision.

23. The economic co-benefits are considered high due to the diversification of livelihoods and incomes by promoting new opportunities in the forest and energy sectors, incentivising local entrepreneurship among women in local communities. The energy efficiency standard will help provide an enabling environment for attracting private sector investments and introduce a new energy efficient market and possibly alternative fuels in the longer term.

24. The social co-benefits are considered high due to the key role communities have in the project. The project is one of the first examples in Armenia of providing communities with the opportunity to manage their forests through a concessionary arrangement and will provide them with a role in managing natural resources in Armenia. The lessons learned from the project will feature in the curriculum of vocational schools and help inform future generations regarding sustainable forest management, energy efficiency and sustainable fuelwood.

3.4 Needs of the recipient *Scale: N/A*

25. The project targets some of the poorest (and energy poor) and most vulnerable parts of the country. Meeting energy demands in rural Armenia is a key priority for the government as the only available source of energy in rural areas is fuelwood. Nearly 80 per cent of rural communities depend on forest wood for energy and cooking purposes. The project targets this key priority in Armenia and seeks to find long-term sustainable solutions that can be scaled up for the entire country. Implementation of the standard on energy efficiency will secure the long-term sustainability of the activities.

3.5 Country ownership *Scale: N/A*

26. Country ownership is considered high. The government has prioritized meeting the energy demands for rural communities. The project is fully aligned with the government's policy objectives, strategies and policies in the forest and energy sectors and will help highlight the key importance of fuelwood ensuring this is factored into future policy and strategy development.

27. The energy efficiency standard on stoves supported by the project sets the course for long-term engagement and investment from the Government and will ensure that future policy and strategy in the forest and energy sectors will be based on an enabling and sustainable platform.

3.6 Efficiency and effectiveness *Scale: N/A*

28. The project will result in 20 million tCO_2eq of emission reductions over the 20-year project lifetime. The co-financing ratio is 0.187 (GCF budget: USD 10 million and co-financing: USD 8.7 million). The rationale for GCF financing is explained well, as is the rationale for grant financing on the specific activities.

29. The proposal leverages co-financing from FAO, the Government of Armenia, Austrian Development Agency, Autonomous Province of Bolzano and WWF Armenia. These commitments and the nature of the project will help create a catalytic effect to mobilize other resources from the private sector and other partners.

30. The support towards an energy efficiency standard will help create an enabling investment environment to attract private sector investors to create a new market and thus secure stability for future investments.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

Does the project comply with the GCF environmental and social policy?	Yes ☒ No ☐
Does the project have minimal to no ESS risks compatible with SAP?	Yes ☒ No ☐

31. The AE has screened and assessed the project to have minimal or no adverse environmental and/or social risks and/or impacts which is equivalent to category C classification. The Secretariat confirms the categorization which is within the entity's accreditation level on environmental and social risks.

32. The proposal identified the positive impacts associated with the project. Some of the interventions include establishment of nurseries for the production of climate adaptive seedlings, implementing sustainable and climate adaptive approaches and practices in the target areas and providing training in sustainable and climate adaptive silviculture. It will also assist in establishing national standards for energy efficiency of heating related appliances such as woodstoves and promote participation and engagement of communities in the management of forest and related ecosystem services.

33. To manage the minimal risks and impacts of the project, the AE has developed an Environmental and Social Action Plan (ESAP) which provides for measures to manage and take into consideration the possible negative consequences of the interventions. This include minor impacts of nursery and reforestation activities which may involve farm wastes that need to be managed properly. Reforestation activities as well as energy efficient stove manufacturing also entails engagement of local labor which could be exposed to occupational health and safety

risks. Thus, contractors and service providers must ensure that national labor code provisions are fully implemented. The project is also expected to only work in areas owned by the state and by the municipalities and will not include areas under illegal/legal pasture uses and other temporary land use by the communities agreed with local and central authorities.

34. Stakeholders are planned to be engaged in project implementation throughout the duration of the entire project. Communities will be engaged in the implementation of the project through marz-level meetings and through marz-level 'Community Monitoring Participation' consultations, the outcomes of which feed into a dedicated working plan. Resolution of grievances regarding environmental and social standards will be facilitated through the AE's grievance mechanism as well as with the project-level grievance mechanism which will implemented by the Environmental Project Implementation Unit (EPIU).

4.2 Gender policy

35. The Accredited Entity has provided a gender assessment and action plan and therefore complies with the requirements of the gender policy of the Green Climate Fund.

36. The gender assessment provides an analysis of gender differences and gaps relevant to the project and demonstrates an enabling policy and legal environment to address gender issues and women's empowerment. The gender context in Armenia is characterized, on the one hand, by favorable legislative framework on the other hand, by a lack of the mechanisms tasked with ensuring the attainment of gender equality goals declared by the State.

37. Equal rights of citizens are enshrined in the Armenian Constitution, in the RoA Gender Policy Concept Paper and in the RoA Law on provision of equal rights and equal opportunities for women and men and Armenia has signed and adopted almost all the international documents and treaties on gender equality including the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). Cultural norms, patriarchal systems and practices create formidable challenges for women's equality, control and access to resources and involvement in decision making. Rates of violence against women are high. Inheritance practices and sociocultural norms effectively limit women's access to land. And this is compounded by women's lack of awareness of land tenure/ownership laws and processes. Women also have limited access to social services and infrastructure, control of finances and earnings, access to productive capital and limited mobility and transportation. Women face many obstacles to participating in the formal economy and starting businesses. These include entrenched and perpetuated stereotypes about women's role and their participation in economy and in business in particular, limited access to funds, difficulties in obtaining loans, the absence of savings and property for collateral, burdensome interest rates, unfavorable business environment and informal payments to officials to facilitate business. This is often compounded by the lack of business contacts, lack of confidence and risk management skills.

38. These all impact women's economic opportunities and are barriers to gender equality and women's empowerment. These factors result in women and women headed households constituting a disproportionate number of poor in Armenia. The high rate of long-term, male labour migration has increased the prevalence of women-headed households (FHH). FHHs are more likely to suffer from extreme poverty compared with male-headed households due to women's limited economic opportunities, the gender pay gap and, above all, because FHHs tend to be single-parent households, with fewer economically active family members who bring in household income. Additionally, despite women's high educational level, they are virtually excluded from administration and development processes. And while there is a stipulation in the Electoral Code of a quota of 25% representation of each sex, representation of women in elected positions continue to fall below this quota especially in the National assembly.

39. In family farming, a strong gender-based segregation of tasks exists. Men tend to be more present in those tasks that are capital-intensive, involving higher amount of machinery and technology, and in those tasks that are better paid. In addition to their family care and domestic responsibilities, women from rural communities are strongly involved in livestock farming, particularly in dairy production (including milking, milk processing, and the marketing of milk and other dairy products). Poultry production is also almost completely the responsibility of women, including feeding, watering, slaughtering and trade in small scale (of both poultry and eggs). Both women and men are deeply involved in the crop production sector, with clear-cut roles and responsibilities. Women are generally responsible for seeds - including buying, sowing and marketing, and are strongly engaged in harvesting of most crops where this is done by hand, as they do not usually drive tractors or operate other agricultural machinery.

40. Wood is the most widely used fuel for heating and cooking and women are known as primary users of forests and main gatherers of forest products. Although women play an important role in the protection of forests, their participation and presence in decision making bodies is often seen to be insignificant. At the same time, a significant challenge for women participation in the forest and pasture management is the lack of awareness as well as low level of public and particularly women participation in issue related decision-making. This challenge is coupled with the fact that majority of women in Armenia still bear the double burden of paid and unpaid (family) work resulting in heavy workloads and time constraints/time poverty.

41. The AE, as per the requirment of the Fund's Gender policy, has provided a gender action plan. The gender action plan provides activities that will address many of the challenges faced by rural women in the target project areas. It provides baselines, indicators, targets, timelines and budgets. The AE will engage a gender expert to support the implementation of the gender action plan and will work under the guidance of the FAO regional gender team to ensure the implementation of the gender action plan. The gender action plan includes activities that are linked to the findings and analysis of the gender assessment and indicates that further information will be collected during the inception workshop and annually from a wide variety of stakeholders especially women's groups and associations representing interests of grass-roots rural women and women from forest-dependent communities, and particularly women-farmers and female-headed households. The activities included in the action plan are aimed at ensuring that women equitably benefit from the project by building women's awareness and capacity to engage and benefit from nursery development, silviculture, forest management, energy efficient technologies, climate change mainstreaming and, decision making at the community and regional levels. Targets for women's participation and engagement in decisionmaking, capacity building, income generating, awareness raising etc. are generally set at 30%. The action plan includes activities reviewing national energy efficieny policies and practices for inclusion of gender mainstreaming aspects. It also includes awareness raising and capacity building activities to counter gender stereotypes, strengthen gendermainstreaming and engage men to progress towards gender equality. The AE is encouraged to further examine the potential impact of the project on women's workload and time burden to ensure that appropriate measures are taken to minimize additional workload and ensure that the targets for women's participation and benefits from the project are realized.

4.3 Risks

4.3.1. Overall programme assessment (medium risk)

42. GCF is requested to provide a grant of USD10 million. The project aims to increase carbon emission reduction from the forest sector by at least by 7 per cent via sustainable climate adaptive forestry investments and fuelwood energy efficiency with effective involvement of communities. The AE and Austrian Development Agency are providing grant co-

financing of USD 0.7million and USD 1.6million respectively. The Government of Armenia and WWF Armenia are also providing in-kind contributions of USD 5.9 million and USD 0.2 million.

4.3.2. Accredited entity/executing entity capability to execute the current programme (low risk)

43. FAO will serve as AE and co-executing entity (EE) for this project. The FAO country office has been present in Armenia since 2004 and has considerable experience in the forestry sector, climate resilience and disaster risk mitigation. Since 2015 FAO has implemented 27 national and regional projects mounting to USD 21 million; 18 of these projects are ongoing and amount to USD 14 million. This includes projects in the areas of agriculture, fisheries, forestry, disaster risk reduction and climate resilience strengthening.

44. The Environmental Project Implementation Unit (EPIU), accredited with GCF in February 2019, is the implementation unit under the Ministry of Environment and will serve as a co-EE. The AE conducted the capacity assessment of EPIU; the result of the assessment shows as moderate risk.

4.3.3. Programme-specific execution risks (medium risk)

45. Regulatory risks: the project supports the approval of national standards for energy efficiency of heating appliances by the Ministry of Environment. There is a risk that the standards will not be approved, or that the approval will be delayed. The AE responded that the risk is considered low as it is a priority for the Ministry. In case of delay or no approval, the project will promote adoption of the standards on a voluntary basis by the private sector. Despite the voluntary nature of this approach, non-adoption of standards by private suppliers risks damaging their reputation as the use and dissemination of devices that perform poorly will undermine the expansion of their business in Armenia and the region.

46. Beneficiary contribution: the project expects that beneficiaries will contribute between USD 50 and USD 200 per unit of heating appliances while the average GCF contribution will be about USD 290 per unit. The total amount of the beneficiary contribution will be approximately USD 450,000 and this amount is separated from the list of co-financing agreements. It will be secured by each individual household during the implementation based on the selection criteria for beneficiaries in the funding proposal. Close monitoring with non-governmental organizations and service providers is required to trace the contribution from the beneficiaries.

47. Financial viability and concessionality: the AE has provided a financial analysis which results in the internal rate of return of 13 per cent with GCF grant and 46 per cent without GCF grant. The analysis assumes that without this grant most activities, especially Output 1 (forest), would not take place under current conditions in Armenia. The economic internal rate of return results in 101 per cent with grant and 56 per cent without grant. The AE has clarified that the current level of public debt (> 61 per cent of GDP) has raised concerns in the country in terms of debt sustainability and increasing the foreign currency debt (e.g. from international financial institutions) would represent an additional source of vulnerability.

4.3.4. Compliance (medium risk)

48. The proposed activities in this funding proposal do not themselves pose any unusually high risk for money laundering, terrorist financing or prohibited practices. Nevertheless, the activities will require close monitoring and internal controls. The AE has indicated that appropriate internal controls will be applied and will mitigate any risks for illicit activities. Based on the information at this time, the compliance risk assessment is medium.

4.3.5. GCF portfolio concentration risk (low risk)

49. In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration level, results area or single proposal.

4.3.6. Conclusion

50. It is recommended that the Board considers the above factors in its decision.

Summary risk assessment		Rationale
Overall programme	Medium	The Food and Agriculture Organization of the United Nations will be an AE and co-EE. Environmental Project Implementation Unit is an accredited entity of GCF and will be co-EE for this project. The government's timely support to approve the national standards for energy efficient heating appliances will benefit the project implementation. Close monitoring is required for beneficiary contributions
Accredited entity (AE)/executing entity (EE) capability	Low	
Project specific execution	Medium	
GCF portfolio concentration	Low	
Compliance	Medium	

4.4 Fiduciary

51. As AE of the project, the FAO supervisory role will be carried out by the FAO Regional Office for Europe and Central Asia with support from the FAO Climate, Biodiversity, Land and Water Department.

52. The project will be co-executed by the FAO Representation in Armenia and the EPIU of the Ministry of Environment of the Republic of Armenia. Both EEs will be jointly and severally responsible for the execution of the entire project. EPIU will sign a legal agreement (i.e. Operational Partners Agreement) with FAO to join the project as EE.

53. The project will have strong country ownership under the guidance of a Project Steering Committee. The EPIU will be in charge of the daily management of the project, will report to the Project Steering Committee and will be supported by experts from FAO/co-financiers and by international consultants hired by FAO in agreement with the Ministry of Environment.

54. FAO Armenia, as co-EE and budget holder (BH), will be responsible for operational, administrative and financial management of GCF resources directly managed by FAO, and for overall project monitoring and reporting. BH will also be responsible for supervising the operational partner's (OP) management and results. BH will perform third party audits and spot checks on the OP performance at least once a year and will withhold any payment due to the OP in case of non-compliance with the reporting obligations detailed in the Operational Partners Agreement.

55. GCF financial resources will be managed in accordance with the accreditation master agreement and funded activity agreement. The administration of funds to be received from FAO is based on FAO rules and responsibilities under the Operational Partners Implementation Modality.

56. OP shall maintain books and records that are accurate, complete and up-to-date. OP books and records will clearly identify all GCF transfers received by OP as well as disbursements

made by OP under its Operational Partners Agreement, including the unspent and accrued interest.

57. BH and OP will prepare annual procurement plans for major items, which will be the basis of requests for procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement.

4.5 Results monitoring and reporting

58. Overall, the funding proposal and logical framework have been found to adequately apply the results management framework and performance measurement framework indicators. The revised logical framework meets the GCF requirements on monitoring and reporting the anticipated results of the intervention. The project-level results are sufficiently aligned with the fund level impact and outcomes. That is expected to provide sufficient basis for measuring the desired results.

59. Implementation timetable: The implementation timetable has been provided in a standard format is assessed to be adequate. It will enable progress review and reporting in appropriate manner. It consists of clear indication of milestones and deliverables that would also help in determining the status of implementation performance.

60. This proposal addresses mitigation impact on one area: forest and land use.

4.6 Legal assessment

Has the AE signed the accreditation master agreement (AMA)?	Yes ☒ No ☐ Date of AMA execution: 8 June 2018
Has a bilateral agreement on privileges and immunities been signed with the country where the proposed project/programme will be implemented?	Yes ☒ No ☐
Has a certificate of internal approval been submitted?	Yes ☒ No ☐

61. The Accreditation Master Agreement was signed with the Accredited Entity on 8 June 2018, and it became effective on 4 October 2018.

62. The Accredited Entity has provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

63. The proposed Project will be implemented in the Republic of Armenia. The GCF has signed a bilateral agreement on privileges and immunities with the Republic of Armenia.

64. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Signature of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval; and

(b) Completion of legal due diligence to the satisfaction of the Secretariat.

Independent Technical Advisory Panel's assessment of SAP014

Proposal name:	Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation
Accredited entity:	Food and Agriculture Organization of the United Nations (FAO)
Project/programme size:	Small (simplified approval process)

I. Assessment of the independent Technical Advisory Panel

1.1 Impact potential *Scale: N/A*

1. Armenia, with a population of over 2.9 million people and a surface area of 29,740 square kilometres, is a is a landlocked country in the geopolitical Transcaucasus (South Caucasus) region located in the Southern Caucasus Mountains. The World Bank ranked Armenia among the top four vulnerable countries in the Eastern Europe and Central Asia region. Armenia's forests – already under stress due to fuelwood harvesting – are reported as highly sensitive to climate change, and the European Union defines the rural population as energy poor. Only 9.3 per cent of the country is covered by forests, and the vital ecosystem services they provide are in decline.

2. Forests are reported as most sensitive to climate change with the rural population heavily dependent on fuelwood for energy. Total national greenhouse gas (GHG) emissions in 2014 accounted for 10.5 million tonnes of carbon dioxide equivalent ($MtCO_2eq$) with a reported growing tendency (+57 per cent by 2030); carbon removals from the forest subsector contracted by 11 per cent (2010–2014). The project proposal correlates fuelwood with forest degradation as it is the primary energy source for about 74 per cent of rural households. The energy efficiency of heating appliances fuelled with wood barely reaches 40 per cent.

3. The project is therefore targeting adaptation and mitigation measures by investing in forest recovery and at the same time ensuring an energy efficiency approach by supporting efficient wood heating appliances for rural communities. The project has selected to work in two marzes that represent 49 per cent of the forest cover: Lori and Syunik.

4. The project has three components. Component 1 will mainly address the forest restoration interventions responding to the Government of Armenia's goal to increase forest cover following an ecosystem approach for climate change adaptation and mitigation (Armenia's intended nationally determined contribution (INDC) report, 2015) and enhancing community participation in forest governance (Forest Code, Article 5, 2005). This component will support the implementation of several forest restoration interventions involving communities and pursuing both climate change mitigation and adaption objectives. The outputs will provide at least three nurseries in operation with Havantar staff and communities trained in climate-adaptive seedlings, investment in at least 7,300 ha of forest and agroforestry systems and at least 1,700 people (of which at least 30 per cent women) from Hayantar, local authorities, the private sector and civil society trained in sustainable and climate adaptive silviculture.

5. Component 2 will target energy efficiency policies and measures with the following outputs: (i) approval of national standards for energy efficiency of heating-related appliances; (ii) training of energy efficiency companies on how to incorporate the standards in their operations; (iii) involvement of at least 15 private energy efficiency companies in assembling,

installing and maintaining wood stoves; and (iv) dispose of skilled labour in project areas and at least 9,000 households using more energy-efficient wood stoves in project areas and are trained in fuelwood management. The target is to optimize fuelwood consumption per energy unit output and decrease its use by at least 30 per cent in targeted rural communities by the end of the project.

6. Component 3 will assist stakeholders in creating the enabling conditions to execute Government Decree May 4 2006 N 583-N "Provision of state forests to concessional management for the community organizations without competition" and support stakeholders in considering forests and biomass (fuelwood) within the sources of energy to maintain and manage to increase the energy security of the country and rural populations. The outputs under this component include approved guidelines by the Ministry of Environment to enhance the participation and engagement of communities in the sustainable and climate-adaptive management of forests, the establishment of a National Forest Monitoring and Assessment System (NFMA), the completion of the first inventory cycle, discussions with stakeholders, results mainstreamed into relevant policies and direct beneficiaries of the project informed, awareness raising and empowerment on climate adaptive silviculture, energy efficiency and climate change mainstreaming.

7. Using the Food and Agriculture Organization of the United Nations (FAO) Ex-Ante Carbon-balance Tool (EX-ACT), the project is expecting to reduce 19,975,387 tonnes of carbon dioxide equivalent (tCO_2eq) over a 20-year term, which means it has a mitigation potential of –7.1 tCO_2eq per hectare and per year compared to a business-as-usual (BAU) scenario. This accounts for the afforestation/reforestation actions of the project as well as the reduction in fuelwood consumption by 30 per cent, increase in the availability of energy-efficient appliances for rural households and the establishment of the enabling conditions for the biomass sector to develop sustainably and legally at both local and national level, all of which magnify impacts in terms of emission reductions.

8. The project mainly focuses on carbon sequestration in the agriculture, forestry and other land use (AFOLU) sector, with forest management and afforestation accounting for –19.8 million tCO_2eq (i.e. 99.12 per cent of the EX-ACT). Hence, there will only be marginal emission reductions in the energy sector through the introduction of improved stoves, contributing only –0.175 million tCO_2eq (i.e. 0.88 per cent) to the carbon balance.

9. The project will improve the management of 6,300 ha of public forests and 1,000 ha of agroforestry systems in municipal lands in eight years. Over a 20-year term, the project would increase national forest cover by 2.5 per cent, with a direct positive impact on about 143,800 ha.

10. In terms of adaptation, the project will target the rural population of two provinces: Lori (105 rural communities in 8 municipalities) and Syunik (102 rural communities in 7 municipalities), accounting for 377,308 people as direct beneficiaries. The project, via the practices and technologies introduced in component 1 and component 2, will create the enabling conditions for communities to participate in forest management in accordance with existing laws and regulations. The project will also create the enabling conditions for communities to organize sustainable and regulated biomass markets and the possible associated financial inclusion. Moreover, the project will support livelihoods, especially of women, with the introduction of adapted energy-efficient appliances, saving time and investment in heating their houses.

11. Considering the amount of project investment by GCF, the interventions in the forestry-energy-nexus approach will have clear impacts to address the Government's urgent priority to meet both climate change mitigation and adaptation targets holistically and synergistically.

1.2 Paradigm shift potential *Scale: N/A*

1.2.1. Innovation

12. The forestry and energy efficiency components of the project are not new and are not necessarily representing a paradigm shift. The project is trying to modify the BAU forestry and energy security management model in rural areas to target key challenges, including the inefficient management of forest resources, unsustainable fuelwood harvesting, a lack of law enforcement, as well as a lack of stakeholder participation in forest governance issues at all levels (national, regional, community).

13. Several countries have been involved in supporting technology transfer and capacity development to increase the efficiency of existing cooking and heating appliances. The technologies already exist, and the project is simply (i) trying to involve the private sector in producing or importing cost-effective technologies; and (ii) encouraging rural communities to invest in changing their appliances, contributing to a reduction of emissions. However, if the project can convince producers, sellers and end users to invest in more efficient appliances with the correct incentives and disincentives, the aggregated result could be of great value to Armenia.

14. Aside from supporting energy-efficient appliances, the project should tackle thermal insulation of houses as an important tool to decrease energy demand and hence fuelwood consumption. The GCF project "De-Risking and Scaling-up Investment in Energy Efficient Building Retrofits" in Armenia is supporting thermal insulation, but not in rural areas. According to FP010, the only programme at the moment supporting the retrofitting of rural households is a Habitat for Humanity programme that provides microfinancing with relatively low interest rates. However, the project could make the necessary arrangements with the government to analyse further incentives in energy efficiency for households in rural areas to further support thermal insulation of the selected rural households.

15. The project feasibility analysis explains that the prices of energy and gas are very high in the country, as most of the oil and gas is imported and therefore the rural communities opt to use fuelwood as source of energy. However, a paradigm shift could involve leap-frogging the energy alternatives to provide solar alternatives or connections to gas to communities. In response to the independent Technical Advisory Panel (TAP) question around this option, FAO responded that even though the majority of the villages in the country are connected to gas pipelines, about 74 per cent of the population cannot afford gas for heating and use it only for cooking. Solar heating systems are too expensive and complex in terms of maintenance for single houses and cannot provide sufficient energy to equal fuelwood, especially in harsh winter climates such as those in the project area. However, the independent TAP believes there could be an option to remedy this with a gradual shift to promote energy-efficient alternatives as envisaged in Armenia's Energy Efficiency Strategy.

16. On the other hand, forests are vital resources that ensure ecosystem services in small countries like Armenia, where communities are so dependent on forest resources. Therefore, in the context of Armenia, with a long history of state-controlled forests, ensuring technology transfer with best practices in forest governance and management involving communities could end up securing better forest and agroforestry management systems that constitute a paradigm shift. Moreover, ensuring a higher survival rate of forest investments could represent an important shift, as previous investments have failed to make the change.

17. As one of the answers to the independent TAP questions explains, while the current practice of using woody biomass energy is not sustainable in Armenia, other countries such as Austria and Finland have shown that, when properly managed, there is potential for sustainable rural development and energy use with woody biomass. In these countries, the increased use of woody biomass energy led to the reduction of overall GHG emissions through the substitution of fossil fuels while maintaining healthy forests. The Government of Armenia will co-finance the project with their own resources to strengthen the institutions involved in forest management,

such as Hayantar, and involve rural communities with a more open and strategic approach. The project could end up bringing about a paradigm shift if the forests of the country are better managed and the responsibilities are well balanced between the state and the communities.

18. The theory of change is very straightforward and simple. The investment in forestry with more resilient silvicultural systems and the promotion of energy efficiency with the engagement of private sector actors in rural areas to reduce the demand of fuelwood, together with better participation and governance, will lead to an increase of forest cover with adaptation and mitigation benefits for the country.

1.2.2. Potential for knowledge and learning and enabling environment

19. The project is proposing to engage in a programme of awareness-raising and community empowerment to tackle both forestry and energy goals. The proposal is to work with the Ministry of Education and Science (National Center for Vocational Education and Training Development) to introduce best practices and forestry technologies in the national curricula to ensure a change in behaviour that will end in long-term sustainability and the national appropriation of the importance of forest resources. As part of the project activities, a precise protocol to assess forests at the national level will be prepared, including the provisions for the development of the biomass market.

20. Current vocational training in Armenia does not include climate change-related training (e.g. climate adaptive forestry) or training on the production/assembling of energy-efficient stoves and other energy-efficient appliances. The project will work with the National Center for Vocational Education and Training Development of the Ministry of Education and Science. The training activity under the project will be conducted at national level and will include all vocational schools across the country. Technologies and practices introduced under components 1 and 2 will be integrated into the national curricula on “Light industry”, “Machine-building equipment and technologies” and “Energy.

1.2.3. Contribution to the regulatory framework and policies

21. The project will support the development and application of national standards to secure the quality and safety of heating appliances fuelled with wood. The aim is also to mainstream energy efficiency and biomass in fuel standards at the national level in order to strengthen Law 122 on energy saving and renewable energy, thus ensuring forest biomass is part of the energy equation of the country.

22. The project will also ensure the operationalization of the Armenia Forest Code, which enhances community participation in forest governance (as stated in Article 4 of the Code) as well as forest management for commercial purposes (fuelwood coppicing).

1.2.4. Scalability and replicability

23. The model to scale the production and use of energy efficiency appliances could be scaled up and replicated. The project will first enhance the capacities of local entrepreneurs and technicians to use and promote new energy-efficient technologies related to heating appliances. The project will also create incentives for end users (farmers) that are willing to shift from their old appliances to the new ones. Eventually, all rural houses in Armenia could end up understanding the benefits of using more energy-efficient appliances.

24. In terms of the demand for wood that is diminishing forest resources, the project will create an enabling environment for communities in rural areas to establish market mechanisms that will allow for the sustainable sourcing of fuelwood. There is potential to scale up the forestry model if the forests are well managed and if the agreements to allow the sustainable use of forest resources by communities are well established.

1.3 Sustainable development potential *Scale: N/A*

1.3.1. Environmental co-benefits

25. Planting trees and restoring landscapes will contribute to the retention of soil moisture, help reduce evapotranspiration and support soil fertility. Trees will also improve water catchment and will contribute to enhancing water cycles and reducing erosion and flooding.

26. Supporting national forests will also ensure the health of the ecosystems and the provision of environmental services such as pollination, water retention and biodiversity enhancement. Communities that rely on forest not only for fuelwood but also for non-wood forest products (berries, mushrooms, edible plants, nuts, wild fruits, etc.) will have a better provision of these fundamental food crops in their diets.

27. Diversifying the variety of trees planted will also avoid the recurrence of pests that are currently plaguing the forests in Europe. The enhancement of biodiversity will also help natural habitats support wildlife diversity and provide food and non-timber products. Managing forests and controlling fires will in turn ensure healthy forests.

28. The seedling production capacity of the project is of great value for the future management of the forests in Armenia.

1.3.2. Economic co-benefits

29. Supporting agroforestry systems in rural areas will ensure the availability of timber and non-timber products as well as improve food security, which enhances the livelihoods of the local communities. By ensuring the availability of wood fuel, the selected communities will be able to use their efficient appliances, spending fewer resources and doing so in a sustainable manner. By diversifying crop production from agroforestry systems, the communities will be able to have more stable income throughout the year.

30. The restored forests will provide non-timber products and wood fuel. Good governance will support the establishment of the equitable sharing of wood resources, which allows for quotas to maintain the forest resources.

31. The initial investment in energy-efficient appliances will relate to a more upfront payment that will ultimately lead to saved resources for the selected communities in the medium and long term. Energy efficiency will allow savings of at least 30 per cent of the total cost of heating with fuelwood, corresponding to about 12 per cent of annual income per household.

32. Additionally, the project could increase the number of job opportunities in rural areas from both its forestry investments and the transformation of enterprises to produce better appliances.

1.3.3. Social co-benefits

33. Different communities will be involved in the forestry activities as well as the energy-efficiency component. Rural women will save resources and effort in heating their households and will also have additional health benefits through the reduced levels of smoke. The women will also be more empowered to lead a transformation to energy efficiency.

34. The selected municipalities will benefit from the restored ecosystem services that sustain agroforestry systems to support the livelihoods in the communities in the medium and long term.

35. The local manufacturing of stoves is a potentially lucrative economic activity and can contribute moderately to employment generation in rural areas (especially for youth).

1.3.4. Gender-sensitive development

36. The Armenian constitution gives equal rights to both men and women, and women generally attain a high level of education. However, women are virtually excluded from administration and development processes. The correlation between gender imbalance and the country's competitiveness is reflected through the World Economic Forum Global Gender Gap Index, which ranks Armenia 97th out of 144 countries (2017).[1]

37. The gender assessment and action plan of the project provides a series of recommendations, including that all women in the project areas should be involved as project beneficiaries by participating in capacity-building activities and receiving vocational education. The project also places special consideration on the demographic structure of rural communities and the vulnerability faced, particularly by the elderly, suggesting that special attention should be given to lonely elderly people.

38. The project has a target of women (or women groups) making up at least 30 per cent of Hayantar beneficiaries. The project will ensure that at least 30 per cent of participants involved in sensitization and empowerment activities on climate-adaptive silviculture, energy efficiency and climate change mainstreaming are women, including the training of trainers on sustainable climate-adaptive silviculture and training and awareness-raising activities. The project will also ensure that at least 60 per cent of the staff of the main implementing partners trained in gender mainstreaming issues.

39. The project will make an assessment and provide recommendations to mainstream gender aspects in the main national policies on energy efficiency and practices.

1.4 Needs of the recipient *Scale: N/A*

1.4.1. Vulnerability of the country and vulnerable groups

40. According to the project proposal, Armenia is already experiencing the effects of the changing climate on nature and on its people. Currently, the country is experiencing the non-sustainable use of natural resources and significant land degradation (from overgrazing, soil pollution and erosion).

41. The Armenian economy has progressed from the substantial drop after the collapse of the Soviet Union during the 1990s and early 2000s to substantial growth. However, the public dept is above 61 per cent of the gross national product (GDP), and 23 per cent of the population lived below the national poverty line in 2018. As of 2018, according to the Statistical Committee of Armenia, the country needs AMD 63.2 billion (1.1 per cent of its GDP) to overcome poverty, in addition to funds already earmarked for social assistance, assuming that social assistance will be targeted at the poor only.[2]

42. Agriculture constituted about 20 per cent of GDP in 2015, and the contribution of the sector has remained at that level for several years despite suffering from a drop-in growth in 2016–2017. The sector, including livestock and downstream processing of agricultural products, is the main source of livelihood for rural communities.

43. The United States Agency for International Development and the World Bank estimate that agricultural yields are forecasted to decline by 8–14 per cent by 2030, and pastures by 4–10 per cent. Projected climate changes will increase the need for irrigation and contribute to increasing water scarcity.

[1] See <http://www3.weforum.org/docs/WEF_GGGR_2017.pdf>.
[2] See <https://hetq.am/en/article/110402>.

44. Only about 9.3 per cent of the country is covered by forests, mostly located on difficult-to-reach terrain, either on steep hillsides or in ravines, with major implications on the country's overall forest resources. Over the past decade, the Government of Armenia has undertaken several initiatives to address the issue of overexploitation and related further deterioration with challenges around illegal fuel wood cutting, forest grazing and forest fires.

45. Armenian forests are expected to suffer significant growth losses caused by insects under climate change. Severe and repeated pest infestations can lead to increased tree mortality, which also contributes to the accumulation of drying, dead organic matter in forests, which increase the risk of wildfires.

46. In terms of the energy sector, Armenia has no fossil fuel resources and imports all of its gas resources from the Russian Federation (80 per cent of imports) and the Islamic Republic of Iran. According to the national GHG inventories reported in Armenia's Second Biennial Update Report, the energy sector represents the most significant share of net emissions (67.1 per cent) of Armenia's total GHG, followed by the AFOLU sector of the region (19.6 per cent). Therefore, the project will help lower emissions in the main sectors of the country.

47. Approximately one third of the final energy consumption is attributable to the residential sector, making it the largest consumer overall. The increasing costs of natural gas and electricity pose a problem, especially for low-income households. In the last decade (2007–2017), the price of electricity rose by 94–112 per cent, while the natural gas price rose by 250 per cent. Up to 50 per cent of the income of poor families is spent on heating during winter months. Therefore, villages rely mainly on wood fuel as a primary source of heating, with the consequence of over-exploitation of forest resources.

48. The selected marzes are very vulnerable, specially Lori, which is home to about 15 per cent of Armenians living below the poverty line. Additionally, in both cases the target population is very vulnerable to climate change, as the living conditions in the high mountains make them dependant on forests that have been degraded, which affects their livelihoods and food and energy security. Moreover, 15.2 per cent of the nation's poor live in the project areas, with 28 % of single women-headed households of which about 44 per cent are poor.

49. Therefore, the needs of the recipients are high, and the selection of the project activities is in line with the social, environmental and economic situation of the Lori and Syunik marzes.

1.5 Country ownership *Scale: N/A*

1.5.1. Alignment with national climate strategy

50. Armenia submitted its INDC in 2015, highlighting the need to address both adaptation and mitigation. The country communicated its intention to limit its GHG emissions to 633 million tCO_2eq at an aggregate level by 2050, with the support of adequate (necessary and sufficient) international financial, technological and capacity-building assistance. The nationally determined contribution (NDC) emissions quota is based on Armenia's 1990 estimate of global average emissions of 189 tonnes per capita, multiplied by Armenia's 1990 population of 3.35 million.

51. The INDC also states that the country will pursue an "ecosystem-based approach" to adapting to climate change. An ecosystem-based approach is key for Armenia to adapt to the changing climate and seeks out opportunities to maximize the synergies between mitigation and adaptation actions. The approach also aims to identify synergies with other international environmental conventions and treaties, and to lay the groundwork for facilitating inter-sectoral coordination and cross-border cooperation. Armenia's Third National Communication submitted in 2015 to the United Nations Framework Convention on Climate Change highlights gaps in implementing actions, including the lack of a climate change adaptation concept with an

ecosystem-based approach and, as a result, the absence of state action plans (Government of Armenia, 2015b).[3]

52. In terms of forestry and biodiversity, Armenia has signed and ratified 26 international environmental agreements, which are currently part of the legal system of the country. Forestry is mainly regulated by the Constitution of the Republic of Armenia, the Civil Code, Forest Code and Land Code. The Forest Code regulates aspects of sustainable forest management (guarding, protection, rehabilitation, afforestation and rational use of forests and forest lands) as well as forest stocktaking, monitoring and control, and forest lands. Even though the Forest Code states that forests and forest lands can be under state, community and private ownership, forests are considered state property and managed by state entities.

53. The Forest Code clarifies the competences of the Government of Armenia, state authorized bodies, territorial bodies and local self-governing bodies in the field of sustainable forest management. However, as explained in the feasibility study of the project, the law enforcement mechanisms are not clearly defined in forest-related bylaws and regulations, and stakeholders lack clear guidelines and the technical capacity to effectively engage communities in forest governance.

54. The forestry sector has seen several regulations since 2004. The latest reform was conceptualized in a document prepared by Hayantar in September 2017 to address "Basic Principles and Forestry Reform" in Armenia. The recommendations led to changes in administrative structures and responsibilities.

55. In terms of the energy sector, Armenia has had a Law on Energy Saving and Renewable Energy since 2004 that lays down the principles of the Government of Armenia's policy and governance structure supporting energy efficiency and provides for energy efficiency standards, audits and awareness-raising. However, it does not include fuelwood under its alternative sources of energy or the needs of 74 per cent of the rural population that is currently using wood to heat houses. There is therefore a need to fill the gap of the current legal frameworks to include fuelwood and energy-efficiency standards for wood-fuelled appliances.

56. The Government of Armenia adopted the 1st National Energy Efficiency Action Plan (NEEAP) in 2010 and the 2nd NEEAP in 2017; these aim at paving the way for energy efficiency in Armenia until 2020.

57. The rural population is heavily dependent on wood fuel as the cheapest energy option for heating purposes. This leads to unsustainable practices and to a high consumption of wood, exacerbated by the utilization of inefficient wood stoves in houses with poor thermal insulation. As a result, total wood fuel consumption in Armenia corresponds to an estimated 2 million cubic metres per year, which is higher than the gross annual increment.

58. The Government of Armenia is aware of the unsustainable situation and has implemented programmes on fostering sustainable renewable energy and energy efficiency. Besides the above-mentioned regulations, some of the most important strategy papers of the sector are the "Energy security concept", the "Development Strategy for 2012–2025" and the "Scaling Up Renewable Energy Program", which all aim at improving energy security and affordability and increase the use of the country's own energy sources. With regard to wood fuel, the Government of Armenia appears to concentrate on offering alternatives and incentives for switching to other energy carriers, for example through the extension of the gas pipeline and by incentivizing solar water heaters. The project feasibility analysis affirms that what seems to be entirely lacking are strategies directly aiming to increase the efficiency of wood fuel or improve the efficiency of energy end use in the rural sector. Rural energy (fuelwood) is also not addressed in the 1st and 2nd NEEAP. Therefore, the country will need to revise these plans.

[3] See <https://www.oecd.org/environment/outreach/Armenia_Financing_Climate_Action.Nov2016.pdf>.

59. With regard to its NDC targets, boosting energy efficiency and ensuring forest restoration and the provision of sustainable fuel wood appear to be sensible strategies to tackle both mitigation and adaptation challenges. However, the Government of Armenia will need to (i) revise its means of supporting rural communities in eventually shifting to smarter energy sources such as solar heating appliances; and if possible (ii) subsidize gas and other energy alternatives that will lead to lowering emissions more quickly in order to reach the NDC targets.

1.5.2. Capacity of accredited entities and executing entities to deliver

60. The Ministry of Environment (national designated authority) is the Armenian institution responsible for environmental protection and biodiversity conservation matters including responsibilities over all forests and forest lands in Armenia. The Ministry has long-standing experience with international projects and manages all of the baselines concerning forest, climate change and environment in general. The Ministry of Environment will execute the project via its Environment Project Implementation Unit (EPIU). The EPIU was established in 2001 with the objective of efficiently implementing the Government of Armenia's environmental sector projects. The EPIU is accredited by the Adaptation Fund and has been accredited to the GCF since February 2019. A list of past and current initiatives managed by the EPIU is not presented in the proposal, but its webpage contains this information.

61. FAO is the GCF accredited entity responsible for supervision and the provision of technical backstopping during project implementation. FAO has extensive experience in the field of climate change Adaptation and mitigation, fuelwood management and forestry. With more than 138 climate and resilience projects worth over USD 600 million, including the GCF-approved projects in El Salvador and Paraguay, the organization has the experience and technical capacity to manage the requested grant and properly support Armenia in the forestry sector.

62. Since 1993, FAO has built a vast and long-standing reputation in Armenia with over 30 projects executed and investments amounting to over USD 70 million. FAO has produced several publications and implemented several projects that relate to sustainable forest management in the Caucasus region.

63. In addition, the Austrian Development Agency (ADA) will provide additional support, especially in component 2 of the project, via its Climate Change Advisor in Vienna and its Coordination Office in Yerevan. ADA was accredited to the GCF in October 2018. Moreover, the Autonomous Province of Bolzano in Italy will also be involved in supporting the energy component of the proposal.

64. The project will establish a project steering committee (PSC) as the ultimate decision-making body on policy and other issues affecting the achievement of the project's objectives. The PSC will provide policy guidance, review results-based annual/semi-annual work plans and budgets, and provide recommendations for resolving any constraints faced by the project. The PSC will be composed by the Ministry of Agriculture, Ministry of Economy and Innovation, Ministry of Energy Infrastructures and Natural Resources, Ministry of Environment, Ministry of Finance, Ministry of Territorial Administration and Development, Governors of Lori and Syunik Marzes, ADA, Bolzano, the FAO Representation in Armenia and WWF.

65. What remains unclear to the independent TAP is the amount of experience FAO and the Ministry of Environment have to draw on to execute the energy efficiency part of the project. Even though the Ministry of Energy is involved in the PSC, the Ministry of Energy should play a greater role in transitioning the energy matrix of rural communities to use more efficient energy technologies, including the thermal insulation of houses.

1.5.3. Engagement with civil society organizations and other relevant stakeholders

66. The proposal contains a chapter on stakeholder engagement in annex 10 on the environmental and social screening. Three one-day national consultations took place in June and October 2017 and in September 2018.

67. Two consultations were done in the marzes. The first one took place on 4 September 2018 in Lori. This stakeholder dialogue workshop was held with the municipality, community representatives, non-governmental organizations and state forest staff. Participants included the heads of eight communities, representatives of Gugark, Tashir and Yeghegnut forest enterprises, representatives of Lori marzpetaran, the Department of Agriculture and Nature Protection, women's groups and FAO.

68. The second marz consultation took place on 5 September 2018 in Syunik. Participants included representatives from the Ministry of Agriculture, Ministry of Economy and Innovation, Ministry of Finance, Ministry of Nature Protection, the Chamber of Commerce and Industry, Energy Saving Foundation, Environmental Protection Advocacy Center, FAO, Hayantar, Syunik marzpetaran, World Bank, WWF, donor agencies (e.g. Asian Development Bank, the Swiss Agency for Development and Cooperation and non-governmental organizations (e.g. Armenia Tree Project, Armenian Women for Health and Healthy Environment).

69. In both cases, stakeholders were presented with a progress update, followed by hearings and clarifications, and a confirmation of cooperation.

70. As part of the stakeholder engagement plan, the plan is to continue engaging stakeholders throughout the duration of project implementation at the national, marz and community levels. The project will apply a new approach to monitoring, ensuring the participation of target beneficiaries and stakeholders in the process. Special attention will be given to community participation in ecosystem-based forest management, and the consultations will also provide space to discuss all project activities, including the grievance redress mechanism.

1.6 Efficiency and effectiveness *Scale: N/A*

1.6.1. Cost-effectiveness and efficiency

71. The total project budget is USD 18,704,730, from which USD 10,000,000 is expected to be grant from GCF. Co-financiers include ADA with EUR 1,500,000, FAO with USD 764,758 and WWF with USD 200,000 in technical assistance. The administration of the Autonomous Province of Bolzano will contribute USD 203,750 to components 2 and 3 of the project to facilitate technology transfer relating to energy efficiency standards and technologies as well as sustainable fuelwood management in Armenia.

72. The Ministry of Natural Protection of the Republic of Armenia will contribute USD 5,904,680 in in-kind support and planting material for afforestation and reforestation to be grown in the greenhouses of Hayantar. This is very important as Hayantar manages 75 per cent of the forest lands in Armenia and there has been an imperfect institutional setup in the forestry sector, a duplication of control functions and unclearly defined law enforcement mechanisms, combined with a lack of financial, human and technical resources. The project aims to strengthen the role of Hayantar in being able to fulfil its main duties, namely to control, protect, restore, re/afforest and make efficient use of state forests, and conserve biodiversity. The allocation of this budget to hire additional staff to serve in Hayantar local branches, together with the enforcement of the new law in relation to illegal logging, will be instrumental in providing the country with the needed monitoring tools and enhancing community participation in forest management and monitoring.

73. The budget is well distributed among the different components of the proposal, with around (i) 55 per cent allocated to component 1, including the development of nurseries and

forestry and agroforestry systems in 7,300 ha, with trainings and capacity-building in adaptive silviculture; (ii) 20 per cent to component 2, including the design and approval of energy-efficient heating appliances, testing, coaching of manufacturers, training curricula and technology grant support for the adoption of the energy-efficient appliances; and (iii) 21 per cent to component 3 to establish the National Forest Monitoring and Assessment System, including the completion of an inventory cycle. This component receives a lower proportion of investment as it mostly addresses needs relating to institutional and behavioural changes, which are critical to ensure project sustainability, but less demanding in terms of investment capital.

74. An well economic and financial analysis was developed, taking into consideration the three financial schemes around forestry investment, the use of energy-efficient stoves, and small-scale economic activities associated with forest use (nursery development, beekeeping coppicing).

75. The high effectiveness of the forestry-related investment reflected in the internal rate of return is demonstrated not only by the overall cost of the CO_2eq reduction of the project (USD 9.2/tCO_2eq for component 1 only), but especially by the project's capacity to produce seedlings for an incremental 1,000 ha /year of reforestation. With the increased seedling capacity (1.8 million seedlings/year), the country will be able to cover between 8 and 10 per cent of the NDC reforestation target by 2050.

76. The adoption of improved energy-efficient stoves will generate at least a 30 per cent reduction in fuelwood consumption compared to BAU, which corresponds to savings of up to one third of the annual income of a rural household. The project has created a concessionality scheme that represents between 50–60 per cent of the costs of the new, imported energy-efficient appliances that would allow the beneficiaries to enjoy net savings from reduced fuelwood consumption from the second year after investment already. The project will also support local manufacturers with a 20 per cent level of concessionality (US 50 per stove), which will allow beneficiaries with the lowest purchasing power to pay back the investment within one year.

77. The access to financial products is a precondition for the sustainability of the investment under component 2. In this respect, the fluidity of the financial sector in the country represents a significant asset. The banking sector and credit organization provide financial services to a large share of the population (over half of the adults borrowed in 2017). While the agricultural sector represents only about 5 per cent of the total portfolio (which has been steadily growing in the last years), the overall access to credit is quite high (the share of adults borrowing to start a farm or business grew from 9 to 17 per cent between 2014 and 2017), with manufacturing and trade representing over a third of it

78. The project-aggregated benefits include forest investment in 7,300 ha (including 1,300 ha under sustainable coppicing), the adoption by at least 9,000 households of improved energy-efficient stoves, and the establishment of at least 35 additional private enterprises for stove manufacturing, 40 new nurseries, 100 new beekeeping operations and reduced forest degradation in at least 135,000 ha. The financial analysis shows a 20-year internal rate of return for about 13 per cent, and a corresponding net present value (NPV) of USD 7.2 million. The economic analysis (which includes a valuation of USD 40/tCO_2eq) shows a very high economic internal rate of return (101 per cent), with a USD 268.6 million NPV.

79. Overall, the project will introduce economically and financially sustainable afforestation and forest restoration practices and techniques that will sustain cost effectiveness and efficiency in the continuous action towards forest-related NDC targets. Moreover, the shift towards more efficient wood stoves will ensure economic benefits to communities, and the project's efforts on the policy and regulatory framework will reduce the incentives for

unsustainable practices (e.g. illegal logging) and strengthen the economic opportunities related to the forestry and energy sectors.

II. Overall remarks from the independent Technical Advisory Panel

80. The independent TAP recommends that the Board approve the project.

Response from the accredited entity to the independent Technical Advisory Panel's assessment (SAP014)

Proposal name:	Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation
Accredited entity:	Food and Agriculture Organization of the United Nations (FAO)
Country/(ies):	Armenia
Project/programme size:	Small (simplified approval process)

Impact potential
FAO takes note of the assessment.
Paradigm shift potential
FAO takes note of the assessment.
Sustainable development potential
FAO takes note of the assessment.
Needs of the recipient
FAO takes note of the assessment.
Country ownership
FAO takes note of the assessment.
Efficiency and effectiveness
FAO takes note of the assessment.
Overall remarks from the independent Technical Advisory Panel:
FAO thanks the iTAP for its review of the proposal.

GENDER ASSESSMENT AND ACTION PLAN

FOREST RESILIENCE OF ARMENIA, ENHANCING ADAPTATION AND RURAL GREEN GROWTH VIA MITIGATION

PROJECT

2020

CONTENTS

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List of Abbreviations and Acronyms

ADB	Asian Development Bank
ADHS	Armenia Demographic and Health Survey
AMD	Armenian Dram
AWHHE	Armenian Women for Health and Healthy Environment
CEDAW	Convention on Elimination of all Forms of Discrimination Against Women
FAO	Food and Agriculture Organization of the United Nations
FHH	Female Headed Households
GCF	Green Climate Fund
GDP	Gross Domestic Product
GG	Gender Gap
GHG	Greenhouse Gas
HDI	Human Development Index
HH	House Holds
IFAD	International Fund for Agricultural Development
NDC	Nationally Determined Contribution
NFMA	National Forest Monitoring and Assessment System
NGO	Non-Governmental Organization
NSS	National Statistical Service
OECD	Organisation for Economic Co-operation and Development
RoA	Republic of Armenia
TVET	Technical and vocational education institutions
UNDP	United Nations Development Program
USD	United States Dollar ($)
WEF	World Economic Forum

I. Introduction

"Gender equality is central to the Food and Agriculture Organization of the United Nations' (FAO's) mandate. FAO can achieve its goals only if it simultaneously works towards gender equality and supports women's diverse roles in agriculture and rural development. Gender equality is not only an essential means by which FAO can achieve its mandate, it is also a basic human right."[1]

Gender equality is a key to eliminating poverty and hunger, as it has been demonstrated by the FAO throughout its research across the world. The FAO is committed to contribute to the reduction of gender inequalities through its interventions, and this assessment has been implemented as part of its efforts on generating evidence and knowledge in compliance with the FAO Policy on Gender Equality.

The FAO Policy on Gender Equality[2] identifies gender mainstreaming and women-targeted actions as a twin-track strategy for the achievement of gender equality in the agricultural and rural sector. In this regard, the Policy sets out a number of minimum standards for gender mainstreaming. These include a requirement to undertake a country gender assessment for the formulation of country programmes established between FAO and member country governments, articulated as Country Programme Frameworks (CPFs) and to carry out gender analysis at the identification and formulation stages of technical assistance projects[3].

At the same time as countries begin to turn their commitments under the Paris Agreement on Climate Change into actions, the GCF is focused on ensuring that a gender-responsive approach is fully integrated into the design and implementation of all projects and programmes. In fact, the GCF is the climate fund mechanism that put gender mainstreaming in the corner of its operations.

This assessment presents the major gender issues including gender inequalities found within available data from studies conducted by the Armenian National Statistical Service, international and local organizations and research institutions. The assessment was conducted with a view to fostering the understanding of the gender situation, identification of the gender issues that are relevant to the project, and proposing opportunities for gender mainstreaming and women's empowerment.

The Assessment is largely based on the report titled "Gender, Agriculture and Rural Development in Armenia", produced by FAO in 2017, based on official data and statistics,

[1] FAO Policy on Gender Equality http://www.fao.org/docrep/017/i3205e/i3205e.pdf
[2] ibid
[3] This is also in line with the recommendations of the FAO Guide to the Project Cycle (2012), which calls for gender analysis in the preparation of programme and project concept notes, and of the REU/SEC Stocktaking Report carried out in 2012, which recommends that a gender assessment should be carried out before any project is formulated to be a baseline gender-related information on the sectors of competence of FAO

interviews and Focus Group Discussions (FGD)s. The report is available online and is the first of its kind produced in the country. The report analysed gender issues in rural context of the country and identified key challenges which largely served as a base in preparation of the current proposal. The GAP also includes data from a specific survey commissioned by FAO to the Armenia NGO - Armenian Women for Health and Healthy Environment. The survey targeted women in project areas to understand energy needs at the rural household level and climate change vulnerability of rural households.

This Gender Assessment will serve as a resource for the Project Implementation Unit, FAO country office and the Government of the Republic of Armenia during the project implementation and some elements will be used as an awareness-raising tool for the wider public. In addition to the work conducted during the preparation of the funding proposal, a series of consultations with diverse groups, including grass root women's groups, women farmers and women from female headed households will be held under various project components throughout the project cycle. Similarly, the surveys planned at mid-term and conclusion of the project will ensure that the questionnaires are developed in a gender sensitive manner, and gender analysis is conducted based on the survey results. Consultations with diverse groups, including grass root women's groups, women farmers and women from female headed households will be organized prior to the survey, and for validating its results.

II. Proposed Project

Armenian forests are among the most impacted ecosystem by Climate Change and main engines of carbon sequestration. Reduced productivity and degradation, due to limited adaptation capacity of rural population and incomplete policy frameworks, are preventing the country to fulfil its NDCs and sustainable development targets. FAO and its partners will support Armenia in (i) reaching targets via tailored investments in forestry and forest, (ii) reducing forest degradation drivers (fuel wood foraging) and (iii) creating an innovative and enabling governance framework to secure fulfilment of commitments and creating conditions for low emission sustainable development pathways maximizing synergies between mitigation and adaptation in rural environment.

The main root causes and barriers to address are:

(a) extreme rural poverty where - according to the World Bank (2015) - 29,9% of the population is poor, 10.4 % very poor and 2% extremely poor

(b) lack of alternatives for rural populations that are degrading forests to fulfil their primary energy and livelihood needs with inefficient and costly practices and appliances;

(c) gender vulnerability in rural areas is acerbated by seasonal and permanent male migration with women becoming de facto heads of the households but becoming more vulnerable due to dependency from male remittances and lower wages than men;

(d) lack of technical capacities and institutional coordination of institutions to address climate change in the forest sector and ensure law enforcement;

(e) lack of adequate policy frameworks to apply the NDC's aimed ecosystem approach and ensure stakeholders participation in forest's governance; communities and local administration are not yet included in the policy framework.

The project will address each of the reported barriers and will partner with existing initiatives active in the Climate Change domain in Armenia and in the region.

III. Existing Gender Inequality in Armenia

Gender situation in Armenia is characterized, on the one hand, by a de jure favorable legislative framework in terms of equal rights of citizens as enshrined in the Armenian Constitution, in the *RoA Gender Policy Concept Paper*[4] and in the RoA *Law on provision of equal rights and equal opportunities for women and men* adopted in 2013 and, on the other hand, by a de facto lack of the mechanisms tasked with ensuring the attainment of gender equality goals declared by the State. It is explained mainly by a lack of political will as well as absence of functional and efficient gender equality mechanisms and national machinery in the public administration system that would be responsible the formulation and implementation of the national gender equality policies based on the principles outlined in international and national documents.

Armenia is a member of more than 40 international organizations, including the United Nations; the Council of Europe; the Asian Development Bank; the Commonwealth of Independent States; the World Trade Organization; World Customs Organization; the Organization of the Black Sea Economic Cooperation; and La Francophonie. During the independence Armenia signed and adopted almost all the international documents and treaties on gender equality. Below is the list of Republic of Armenia legally-binding laws and political commitments to reduce gender inequalities ratified by the country:

Year	International Instruments and actions and national Laws
1993	Accession to the Covenant on Civil and Political Rights, and its optional protocol
1994	Accession to the Convention on the Elimination of All Forms of Discrimination Against Women
1994	Ratification of the Equal Remuneration Convention
1998	Decree No. 242 "On the Basics of the Programme for the Improvement of the Status of Women in the Republic of Armenia"
1998	Decree No. 406 "On Approving the National Plan for the Improvement of Women's Status and Enhancement of Their Role in the Society for the Period 1998-2000 in the Republic of Armenia."
2002	Ratification of the Convention for the Protection of Human Rights and Fundamental Freedoms
2003	Ratification of the United Nations Convention against Transnational Organized crime and related protocols
2004	Adoption of the "National Action Plan on Improving the Status of Women and Enhancing Their Role in the Society for the Period 2004 -2010."
2006	Accession to the Optional Protocol to the Convention on the Elimination of all Forms of Discrimination Against Women
2008	Republic of Armenia Government Program for 2008-2012
2010	*RoA Gender Policy Concept Paper*
2011	Protocol Decree № 19 "On approving the '*Republic of Armenia Gender Policy Strategic Action Plan for 2011-2015*
2013	*Law of the Republic of Armenia on provision of equal rights and equal opportunities for women and men*
2015	Amendments to the Constitution

[4]*RoA Gender Policy Concept Paperapproved by the Armenian Government in February 2010*
http://www.gov.am/u_files/file/kananc-xorh/Gender-hayecakarg.pdf

2015	Commitments at the Global Leader's Meeting on Gender Equality and Women's Empowerment in September 2015 on Beijing +20
2015	Republic of Armenia´s commitment to the Sustainable Development Goals

Despite women's high educational level, they are virtually excluded from administration and development processes. Such situation is characterized as ineffective use of human resources and as a deficit of democracy[5], which has a direct impact on the country's development processes and on its competitiveness.

The 2017 UNDP Human Development Index (HDI) scored Armenia as 0.743, falling within the high human development category and placing it in 85th place out of 188 countries[6] and 2015 OECD Social Institutions and Gender Index[7], which ranked Armenia a country with very high discrimination score for son bias.

The correlation between gender imbalance and the country's competitiveness is reflected through the Gender Gap / Inequality Index[8], according to which Armenia ranks 97th among 144 countries (2017).[9] As evidenced by the indicators, the best situation is in education sector. The smallest gap in the country is in the access to education, thereby securing Armenia the 42th rank in the WEF ranking.

The most problematic in the Gender Gap Index are spheres of economy, politics and health. In "health and survival" sector, where differences in life expectancy and in sex ratio at birth are also taken into consideration, Armenia ends up with the 143rd (out of 144) rank[10] because of the practice of sex-selective abortions. Nevertheless in this area some positive changes took place. The reported boy preference has decreased significantly, being replaced by a response favoring no gender for any future child. According to the National statistical service data for 2017, unlike 2011, when 59.3 percent explicated reported believing that the environment (that is the reference network) preferred a boy over a girl, this number has declined to a level of 36.7 percent. The real situation has been also changed: in 2016, the birth ratio of boys to girls dropped to 112 boys per 100 girls instead of 115 boys per 100 girls, as it was five years ago[11]. However, for the shift in social norms there is a need for reframing of girl child image as now a girl child is still

[5] "Democratic deficit" is the absence or underdevelopment of key democratic institutions, but it may also be used to describe inadequate participation of citizens in policy making and lack of mechanisms of representation and decision making. https://www.britannica.com/topic/democratic-deficit

[6] http://hdr.undp.org/en/countries/profiles/ARM

[7] http://genderindex.org/sites/default/files/datasheets/AM.pdf

[8] The Index is calculated by the World Economic Forum (WEF) in four key areas of economy, politics, education and health. The index reflects most accurately the problem of ineffective use of human capital and proves that the countries that make ineffective use of the half of their labor resources risk diminishing competitiveness.

[9] http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

[10] ibid

[11] Women and Men in Armenia, Statistical Booklet, NSS 2017, p. 27

regarded as a loss, instead of being associated with the winner's image.

Table 1. Demographic statistics disaggregated by sex [12]

Demographic profile	Women # (in thous.)	Men # (in thous.)	Women %
Total population	1 567 380	1 418 771	52,5
rural	549 995	534 703	50,7
urban	1 017 385	884 068	53,5
Life expectancy at birth - rural	78,1	71,3	
Life expectancy at birth - urban	78,4	71,7	
Total births 2016, girls and boys	19 147	21 445	47,1
Number of pensioners	285 151	183 377	61,0

Women have a higher life expectancy at birth – 78.3 years compared to 71.6 years of men.

Studies demonstrate that men more rarely realize their exposure to the risk of getting ill, infliction of traumas and emergence of different problems with health than women. In spite of the fact, that men's risk of developing drug addiction or alcoholism is much higher, men of all ages underestimate, to a large degree, the risks associated with smoking and use of alcohol and narcotic substances. Contemporary researchers consider one of the social factors of men's morbidity to be the traditional masculine ideology which ascribes to men and expects from them a certain standard of behavior: not to turn to doctors, not to accept one's weaknesses, to avoid self-revelation, etc[13].

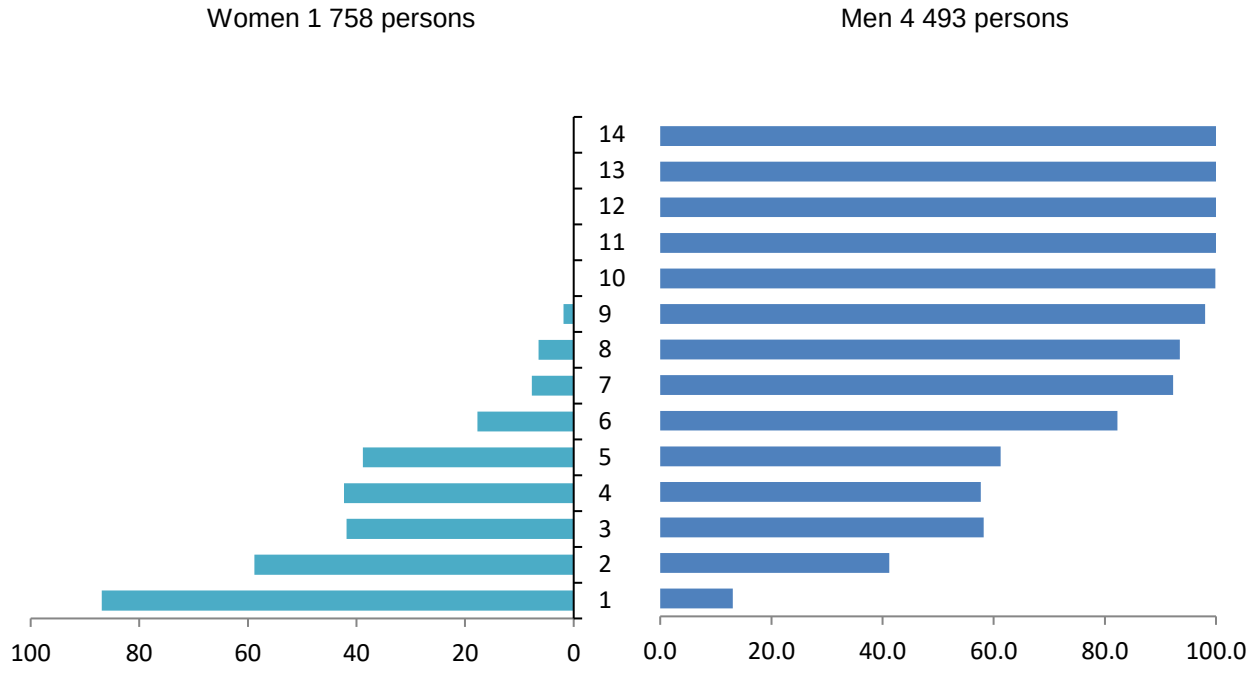
According to the RoA NSS, the 2016 poverty headcount ratio, percentage of the population living below the national poverty line, was 29.4 percent[14], which means that almost every third person lived in a household below the upper poverty line of **40 867** AMD/month (or USD 85.1/month)[15]. This indicator, nevertheless, exceeds the pre-crisis period data of 27.6% (2008), including in terms of the gap and severity of the poverty[16]. The poverty gap and poverty severity in 2016 was still at a higher level than in 2008 (4.3% and 1.1 % versus, respectively, 5.1% and 1.4%)[17]. Women comprise 56.6 %

[12] Women and Men in Armenia, Statistical Booklet, NSS 2017, p. 13-27
[13] Men and Gender Equality in Armenia, Report, UNFPA 2016, P.187
[14] World Bank, Armenia Overview, http://www.worldbank.org/en/country/armenia/overview
[15] The poor are defined as those with consumption per adult equivalent below the upper total poverty line; the very poor are defined as those with consumption per adult equivalent below the lower total poverty line, whereas the extremely poor or the undernourished are defined as those with consumption per adult equivalent below the food poverty line. In 2015, the total – both upper and lower – and the extreme ore food poverty lines per adult equivalent per month were estimated to be AMD 41 698 (or USD 87.2), AMD 34 234 (or USD 71.6) and food poverty line AMD 24 109 (or USD 50.4), respectively.). In 2015 the nutritious monthly food basket was prescribed as AMD 30 742 (USD 64.2)` per person, 2412 kcal per day
[16] Social Snapshot and Poverty in Armenia, Yerevan: NSS, 2017 http://www.armstat.am/file/article/poverty_2017_a_2.pdf
[17] Ibid

of the poor population, men 43.4%.[18]

According to the ADB[19] "*Armenia exhibits gender parity in enrolment rates from primary to higher education, with the only significant deviation occurring when students enter vocational or professional education. Boys more often enter vocational education after having completed basic or general education*".

Table 2. Students in Preliminary Vocational Educational Institutions by Specialization, 2016/2017[20]



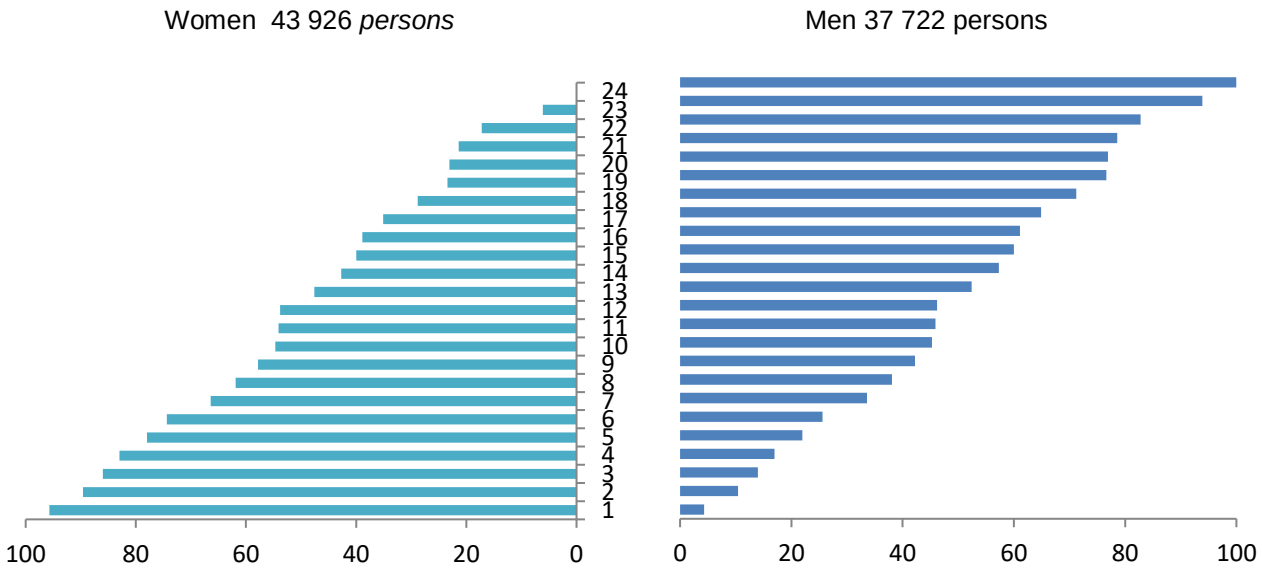
1. Light industry
2. Services
3. Food production
4. Economics and management
5. Informatics and computer engineering
6. Art and design
7. Extraction of minerals
8. Construction and public service
9. Agriculture
10. Means of transport
11. Forest resources reproduction and recycling
12. Radio-electronic equipment and communication
13. Machine-building equipment and technologies
14. Energy

The situation is different at Higher/ University education level, where women make up to 54% of enrolled persons. However, despite women's high level of educational attainment, this has not resulted in corresponding gains in the labor market. As with employment, there are clear gender patterns in subjects of study at the postsecondary level. Young women dominate the "traditionally female" areas of study (i.e., education, social sciences, services, and health) while young men are concentrated in technical fields (i.e., energy,

[18] Social Snapshot and Poverty in Armenia, Yerevan: NSS, 2017 http://www.armstat.am/am/?nid=82&id=1988
[19] Asian Development Bank. Armenia country gender assessment. Mandaluyong City, Philippines: Asian Development Bank, 2015
[20] Women and Men in Armenia, Statistical booklet, NSS, 2017, p.57

transport, and construction). These technical fields generally correlate with jobs in higher-paying sectors, while the humanities lead to work in lower-paid public sector jobs.

Table 3. Students in Higher Educational Institutions by the Specialization, 2016/2017[21]



1.Philological sciences
2. Social work
3.Journalism and information sciences
4. Biological sciences
5. Chemistry
6. Education
7. Art
8. Healthcare
9. Personal services
10. Mathematics and statistics
11. Social and behavioural sciences
12. Humanities
13. Business and administration
14. Veterinary
15. Law
16. Earth sciences
17. Environment
18. Information and communication technologies
19. Physical sciences
20. Security services
21. Industry and technology
22. Architecture and construction
23. Engineering
24. Agricultural sciences

Among the numerous young women who complete higher education, many do not become employed after graduation, either because their qualifications do not meet labor market demands or because they marry and are expected to take on a family focused role.[22]

Stereotypes remain influential in Armenia. For instance, overwhelming majority of the public surveys indicated that 85% of respondents agreed with the statement that “a man

[21] Women and Men in Armenia, Statistical booklet, NSS, 2017, p.58
[22] Asian Development Bank. Armenia country gender assessment. Mandaluyong City, Philippines: Asian Development Bank, 2015

should normally be the breadwinner" (only 14% thought this role should be shared equally and 1% that this was women's role).[23]

As to the indicators of a gender imbalance in the economic sphere (employment rates for men and women, men's and women's pay for equal work, the proportion of men and women among specialists and technical staff), Armenia ranks 71th.[24]

The total share of women in labor resources is bigger than that of men. However, only 52.5 % of women are economically active, while among men the percentage is 71.2 % Women comprise 47.5% and men 52.5% of the total employed population. At the same time women make up 62% of the Long-term unemployed and 67,8% of the officially registered unemployed in the Republic of Armenia, whereas labor migration occupies a significant place in the employment structure of men[25].

In 2016 gender gap (GG) in activity rates of women and men is 26.4 percent. GG is especially high in the 25 to 34 age groups (in average - 40%), mainly due to engagement of women in family responsibilities (pregnancy, childbirth, child care, etc.)[26]. Married men are more than twice as likely as married women to be employed (89% versus 42%). Employed men are more likely to be paid in cash (87%) than employed women (65%). Similarly, employed women are more likely to be unpaid (9%) than employed men (1%)[27].

At the same time the situation on the Armenian labor market[28] is characterized by the existence of *vertical* (unequal access to career hierarchies) and *horizontal* (in jobs and employment spheres) segregation of the labor market, which brings about a significant gender pay gap. According to the 2016 data, the women's average wages was about 66,4% of men's wages [29]. The gender pay gap is not always reduced due to women's high level of educational attainment because of obstacles to women's career growth. Thus, vertical segregation remains even in the spheres where women's employment traditionally predominates such as health care, education, culture, social welfare and agriculture.

In 2016, 67% of women and 33% men were economically inactive. The difference of 1.7 times between inactivity rates of women and men is equivalent to 39.4 percent gender gap (GG) in inactivity rate. GG is especially high in the 25 to 49 age groups (64,9% - 71,5%), mainly due to engagement of women in family responsibilities (pregnancy,

[23] Caucasus Research Resource Centers–Armenia and UNDP. 2011. 2011 Social Cohesion Survey. http://www.crrccenters.org/20598/ Social-Cohesion-Survey
[24] Gender Cap Index http://www3.weforum.org/docs/WEF_GGGR_2017.pdf
[25]Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2017; P.56-65 http://www.armstat.am/am/?nid=82&id=1976
[26] Women and Men in Armenia, Statistical Booklet , NSS, Yerevan 2017P.64; http://www.armstat.am/am/?nid=82&id=1976
[27] 2015-16 Armenia Demographic and Health Survey (ADHS), P.16 http://armstat.am/file/article/adhs-himnakan-2015-english.pdf
[28] The problematic nature of the labor market in Armenia is revealed by the 2013 Human Capital Index. As to the Index, according to the *Human Capital Report 2013* of the World Economic Forum (WEF) (http://www.weforum.org/issues/human-capital http://www3.weforum.org/docs/WEF_HumanCapitalReport_2013.pdf) Armenia ranks 73rd out of 122 countries. This is accounted for by an extremely low (113th) rank in the "workforce and employment" category.
[29] Global Wage Report 2016/17 https://www.ilo.org/global/research/global-reports/global-wage-report/2016/lang--en/index.htm

childbirth, child care, household workload, etc.).[30]

A gender analysis of the unemployment also reveals high rate of unemployment among youth. Almost 47% of female and 23% of male youth aged 15 to 29 are neither in education, nor in employment.[31]

Here it is important to point out that the youth in Armenia is defined as the citizens aged 18-30 and according to the National Statistical Service the number of young people living in Armenia is 905.2 thousand people which accounts for 27.9 % of the population. The ratio between male and female is accordingly 49.4 and 50.6 per cent, and the ratio of urban and rural youth is 62 % to 38 %. The major challenges Armenian youth is facing now are the high level of poverty (20.4 per cent of poor and 3.1 per cent of extremely poor) and unemployment. The high rate of youth unemployment (55.9 %) is connected not only with the hard socio-economic situation of the country but also with the inconsistency between education system's products and the requirements of the labor market.

Similarly, according to the official statistics, the proportion of elderly people (65+) in Armenia currently is at 11.8 % . While currently much lower than the levels seen in Western European countries, the proportion of older persons in Armenia is rapidly catching up, and this fast rate of increase makes the changes especially challenging. According to expert estimates, by 2050, almost one third (31.5 percent) of Armenia's population will be over 60. A high degree of vulnerability can be observed among older people living alone, especially women. A significant factor that has quickened the pace of change is the massive emigration of young people: around two thirds of Armenians live outside of the country and net migration out of the country is about 0.5 per cent of the total population each year. Combined with a total fertility rate of 1.74 children per woman — well below the level of about 2.1 required for long-term generational replacement — and a gain in life expectancy of almost six years since 1990, the phenomenon of demographic ageing in Armenia is now striking .

The state measures to support women to balance work and -family responsibilities, are minimal. As a result, there are 2.4 times more men in managerial positions as compared to women[32]

Table 4. Employed population by types of economic activity, 2016[33]

Economic sector	Percent of women and men in the sector out of total	Proportion of women and men within the

[30] Women and Men in Armenia, Statistical Booklet , NSS, Yerevan 2017 P.56-73; http://www.armstat.am/am/?nid=82&id=1976
[31] Women and Men in Armenia, Statistical Booklet , NSS, Yerevan 2017 P.56-73; http://www.armstat.am/am/?nid=82&id=1976
[32] Women and Men in Armenia, Statistical Booklet , NSS, Yerevan 2017 P.56-73 NSS, http://www.armstat.am/am/?nid=82&id=1976
[33] Women and Men in Armenia, Statistical booklet, NSS, Yerevan, 2017, p.62

	employed (%)		sector (%)	
	W	M	W	M
Agriculture	37	31	52	48
Industry	8	15	30	70
Construction	0.2	8	3	97
Trade and repair, Transport and storage, Accommodation and food service activities	14.4	19.5	40	60
Information and communication	1.2	2.4	32	68
Financial and insurance activities	1.5	1.1	54	46
Real estate activities	0	0.2	0	100
Professional, scientific and technical activities; Administrative and support service activities	2.3	1.5	58	42
Public administration, education, human health and social work activities	30.9	18	61	39
Other services	4.6	3.6	54	46
Total	100.0	100.0	48	52

Approximately 35 %[34] of all employed population are involved in the area of agriculture, of which 52% are women, moreover, in men's employment structure the share of agriculture stands at 31% and in women's employment structure it comprises 37%, which makes women a rather important actors in agriculture development. In addition, the number of women engaged in non-formal employment in agriculture is 82 percent.

In family farming, a strong gender-based segregation of tasks exists. Men tend to be more present in those tasks that are capital-intensive, involving higher amount of machinery and technology, and in those tasks that are better paid. Women from rural communities are strongly involved in livestock farming, particularly in dairy production (including milking, milk processing, and the marketing of milk and other dairy products). Poultry production in Armenia is also almost completely the responsibility of women, including feeding, watering, slaughtering and trade in small scale (of both poultry and eggs). Both women and men are deeply involved in the crop production sector, with clear-cut roles and responsibilities. Women are generally responsible for seeds - including buying, sowing and marketing, and are strongly engaged in harvesting of most crops where this is done by hand, as they do not usually drive tractors or operate other agricultural machinery. Regarding the two main cash crops cultivated in Armenia, apricots and grapes, women are mainly responsible for picking up the apricots and putting them in boxes and for processing apricots, producing dry fruits, juices and jams.[35]

[34] Labour market in the Republic of Armenia, 2011-2015 http://www.armstat.am/file/article/6.trud_2016_1.pdf P.12

[35] Even though there is no official statistic, the fact was registered by different research conducted throughout Armenia, including Gender assessment report of the "Development of Agriculture in Syunik marz" project ACDI/VOCA, and Gender approaches of "Water to market" activity, MCA-Armenia, January 2011, as well as voiced by the participants of the focus groups conducted within the framework of the Assessment.

In its Concluding observations on the combined fifth and sixth periodic reports of Armenia, the UN CEDAW Committee[36] expressed concern by the lack of social, health and economic infrastructure in rural environments, as well as by the concentration of rural women in the informal sector.

Also, in Armenia recognition of violence against women (VAW) as a serious problem was prompted by the findings of the first Nationwide Survey on Domestic Violence against Women in Armenia (2008-2009)37 , UN CEDAW Committee's Concluding Observations regarding the combined third and fourth periodic reports of Armenia[38] as well as the last Nationwide survey on Men and Gender equality (2016)[39.] According to these official research VAW in Armenia vary from 1% of sexual violence and 8% on physical up to 24% on psychological violence and 61% of controlling behaviour.

The main gender differences in employment status relates to employer status, with only 16.2 percent of registered employers being women, and the category 'other' which would include unpaid family workers and informal employment.

Table 5. Employed population by status in employment, 2016[40]

	Proportion of total # of men and women (%)		By sex (%)	
	W	M	W	M
Wage-earner (employee)	59	57	48	52
Employer	0.4	2	18	82
Own-account worker	31.7	37	43	57
Contributing family worker	8.9	4	69	31
Total	100.0	100.0	48.0	52.0

The Government regards the advanced development of the entrepreneurship, in particular of small and medium size businesses, as an effective way for solving employment and social problems. According to the Republican Union of Employers of Armenia, women account for not more than 10 percent among entrepreneurs in small and medium sized and big businesses. In micro businesses, the number of women constitutes 20-25 percent[41].

[36] Concluding observations to the 5th and 6th Armenia's State Periodic Reports Armenia CEDAW/C/ARM/CO/5-6, Distr.: General, 25 November 2016, http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CEDAW/C/ARM/CO/5-6&Lang=En

[37] *Report on Nationwide Survey on Domestic Violence against Women in Armenia (2008-2010)*. Yerevan: UNFPA and RoA NSS, 2011.

[38] *Concluding Observations of the Committee on the Elimination of Discrimination against Women: Armenia*. Geneva, 2009. UN Document CEDAW/C/ARM/CO/4/Rev.1

[39]Report on Nationwide survey on Men and Gender equality in Armenia, UNFPA, Yerevan 2016, https://armenia.unfpa.org/en/publications/men-and-gender-equality-armenia

[40] Women and Men in Armenia, Statistical booklet, NSS, Yerevan, 2017, p.67-68

[41]Gender policy in Armenia and the right of women entrepreneurship http://employers.am/News.aspx?NewsId=39&lang=eng

The obstacles that women have to overcome before they go into business include lack of confidence and risk management skills, the lack of business contacts, entrenched and perpetuated stereotypes about women's role and their participation in economy and in business in particular. Objective reasons include limited access to funds, difficulties in obtaining loans, the absence of savings and property for collateral, burdensome interest rates, unfavorable business environment and informal payments to officials to facilitate business[42].

In its Concluding observations on the combined fifth and sixth periodic reports of Armenia, the UN CEDAW Committee recommended to reinforce measures to expand women's access to microfinance and microcredit at low interest rates, enabling women to engage in income-generating activities and to start their own businesses[43]. Due to the limitations towards women employment and their discrimination in the labor market, Armenia suffers an annual GDP loss equal to 50-60 million dollars[44].

According to the Global Gender Gap Report 2017, with respect to the political empowerment indicator (which is based on gender representation in decision-making structures) Armenia is ranked 111th. Meanwhile as a result of the parliamentary elections, the representation of women in the National Assembly of Armenia increased to 18 percent, improving in the rating list of the Inter-parliamentary Union, from 160 to 110, in the list of 193 countries. This result may be considered as one step forward in the elections if not the expectations from the quota of at least 25 percent representation of each sex stipulated in the Electoral Code that was not met again. In this regard, this quota provision worked more effectively in Yerevan municipal elections with 28 percent% of women elected to Yerevan city council.

Although the number of women MPs has increased as compared with the previous convocation from 14 to 18, nevertheless, only 2 women were elected in the National Assembly's leading positions[45].

In April 2018 as a result of a series of anti-government protests in Armenia, a new Prime Minister was appointed. Armenia's new government is a technical cabinet to administer the country until new parliamentary elections. Almost all the officials of the former government were changed and it provided opportunity to women to be appointed to some decision making positions. Nevertheless, there are only 2 women (11.7 %) in the political

[42] Gender Assessment USAID/Armenia. http://pdf.usaid.gov/pdf_docs/PDACR978.pdf
[43] Concluding observations to the 5th and 6th Armenia's State Periodic Reports Armenia CEDAW/C/ARM/CO/5-6, Distr.: General, 25 November 2016, http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CEDAW/C/ARM/CO/5-6&Lang=En
[44] Gender Gap: analysis of the discriminatory approaches towards women (Գենդերային ճեղքվածք. Կանանց նկատմամբ խտրական դրսևորումների ախտորոշիչ ուսումնասիրություն) // 2016 // UNFPA http://www.un.am/up/library/Gender-Gap_arm.pdf
[45]Information-analytical portal Womennet.am
http://womennet.am/%D5%AB%D5%B6%D6%86%D5%B8%D5%A3%D6%80%D5%A1%D6%86%D5%AB%D5%AF%D5%A1/

position (Ministers) [46] and 10 women (16%) in discretionary positions of a Deputy Minister in the executive branch of the Government. There are no women among the governors (marzpets)[47], with only 5 of women out of 29 Deputy Regional Governors, and only one woman acting as a head of urban communities. Other data available points to only 1.6 percent of heads of rural communities, 11.7 percent of local council members, 27.6 percent of the Yerevan City Council[48] and 24 percent in the city council of Gyumri being women. In the project target areas (provinces of Syunik and Lori), women comprise only 1.0 percent of community leaders and 4.0 percent of City Council members.

Table 6. Women in leadership and decision-making positions, 2017

	# women	# men	% women
Number of Deputies in the National Assembly of RA[49]	19	86	18
Ministers and Deputy Ministers[50]	12	80	15
Judicial bodies at national level - Judges[51]	58	173	25
Judicial bodies at national level - Lawyers[52]	656	925	41
Members of the Constitutional Court[53]	2	7	22
Council members of the Central Bank[54]	0	5	0
Ambassadors and Permanent Representatives[55]	4	44	9
The highest posts of the Civil Service[56]	20	100	17
Members scientific councils, state/non-state universities[57]	623	1063	37

Table 7. Women in regional (provincial) administrations

Provincial offices' staff, 2018	Chief[58]		Deputy chief [59]		Chief of Staff[60]		Staff[61]	
	W	M	W	M	W	M	W	M
	-	10	5	29	0	9	534	698

During the 20 years of the existence of local self-governance bodies in Armenia, women's number among community heads has almost remained unchanged staying within 2%

[46] As to the Armenian legislation, the hierarchy in the public administration system includes 3 categories: political, discretionary positions and civil servants.
[47] Head of regional authority in Armenia
[48] After Yerevan Municipal Elections, held on September 23, 2018
[49] http://parliament.am/deputies.php?lang=arm
[50] http://gov.am/am/structure/
[51] Women and Men in Armenia, Statistical Booklet , NSS, Yerevan 2017, p.92
[52] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2015, p.145
[53] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2017, p.92
[54] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2017, p.98
[55] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2017, p.96
[56] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2015, p.153
[57] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2015, p.153
[58] According to the 2018 data http://www.mtad.am/hy/
[59] Ibid
[60] ibid
[61] Women and Men in Armenia, Statistical Booklet, NSS, Yerevan 2015, p 155

limits over the years. During the same period, women's number among councilors has almost doubled. According to the results of local elections held in 2016 women make up 11.7% of the total number of the elected members of the local councils. At the same time all the local elections taken place in cluster communities in 2016 resulted in two-threefold decrease of women community heads and councils' members. According to the 2018 data, only 8 out of 502 rural communities are headed by women (1.6%) and 10% of the municipal councilors were women.

Table 8. Local self-governance bodies 2002 -2016 the

	2002		2005		2008		2012		2016	
	W	M	W	M	W	M	W	M	W	M
Members of the local councils	6.1	93.9	6.2	93.8	6.1	93.9	9.6	90.4	11.7	88.3
Heads of Communities	2	98	2.1	97.9	2.5	97.5	2	98	2.1	97.9

During the entire period of the democratic transition women never ran for the position of the Armenian President and never held a position of the Prime Minister or Speaker of the National Assembly.

Thus, the governance pyramid, which is primarily male-oriented and which does not reflect the existing gender balance in the society, inequality of women's and men's rights and opportunities in political, economic and social spheres and the maintained and even constructed by some media outlets[62] the division of gender roles hinders the processes of societal democratization and is an obstacle to the country's full-fledged integration into international structures.

IV. Legal and Administrative Framework on Gender Equality in Armenia

Since independence, the Government of the Republic of Armenia has been steadily incorporating the international *acquis* on gender equality, and establishing a number of laws and policies to address gender inequalities. In 1998, the Armenian Government issued Decree No. 242 "On the Basics of the Programme for the Improvement of the Status of Women in the Republic of Armenia" and Decree No. 406 "On Approving the National Plan for the Improvement of Women's Status and Enhancement of Their Role in the Society for the Period 1998-2000 in the Republic of Armenia." In April 2004, the Armenian Government adopted the first National Action Plan on Improving the Status of

[62] *Woman's image as represented in Armenian media*. Analytical report on monitoring. ProMedia-Gender NGO with support from UNFPA, 2011. http://www.unfpa.am/publications-women-image-in-media.

Women, and, since then, increased efforts have been carried out to contribute to the reduction of gender inequalities in the country.

The main document that reflects current Armenia's commitment to gender equality policy is the *RoA Gender Policy Concept Paper* approved by the Armenian Government in February 2010[63]. The mission of the *Gender Policy Concept Paper* is to facilitate *gender mainstreaming* in all spheres of socio-political and socio-economic life and in policies at all levels of government *as a tool for* ensuring sustainable democratic development of the society and for consolidating democratic, open and just civil society and the rule-of-law State.

On 20 May 2011, the Armenian Government adopted the Protocol Decree № 19 "On approving the '*Republic of Armenia Gender Policy Strategic Action Plan for 2011-2015*"[64]. The Action Plan was in line with the main directions of the *RoA Gender Policy Concept Paper* and set, *inter alia,* an objective of "improving agricultural and rural infrastructures and of expanding women's opportunities for participation in socio-economic development of rural communities".

Of great significance for gender policy implementation and for addressing the issues of imbalanced rights and opportunities was the *Law of the Republic of Armenia on provision of equal rights and equal opportunities for women and men*[65] that was adopted in 2013. It regulates the issue of ensuring equal rights and equal opportunities to women and men in the fields of politics, public administration, labour and employment, entrepreneurship, health care and education.

In line with the recommendations established by the Committee on the Elimination of Discrimination against Women in 2010[66], amendments to the Constitution made in December 2015 included important articles and provisions such as: *General Equality before the Law* (Article 28), *Prohibition of Discrimination* (Article 29) and *Equality of Rights for Women and Men* (Article 30)[67].

In the recommendations of 2010 of the Committee on the Elimination of Discrimination against Women[68], worse discrimination of women in rural areas was raised, and called to make specific efforts to reduce gender stereotypes and socially implicit and accepted subordination of women in rural areas, as well as improving access of women and girls from rural areas to education, healthcare and economic empowerment. The General Recommendation number 35 on the rights of rural women, approved by the Committee

[63] *RoA Gender Policy Concept Paper*, 2010(in Armenian) http://www.gov.am/u_files/file/kananc-xorh/Gender-hayecakarg.pdf
[64] http://www.un.am/res/Gender%20TG%20docs/national/2011-2015_Gender%20Policy_NAP-Eng.pdf
[65] Armenian version http://www.parliament.am/legislation.php?sel=show&ID=4761
[66] http://www.refworld.org/publisher,CEDAW,,ARM,52dd05054,0.html
[67] Amendments to the Constitution of the Republic of Armenia, December 2015, Armenian version http://www.president.am/hy/constitution-2015
[68] Ibid

on the Elimination of Discrimination against Women the 4th March 2016[69], is a useful guideline to support the government of the Republic of Armenia in pursuing gender equality in rural areas.

In the context of the Beijing +20 and the establishment of the new Sustainable Development Goals, the government of Armenia made a commitment at the Global Leader's Meeting on Gender Equality and Women's Empowerment in September 2015 to ensure the effective implementation of the Law of the Republic of Armenia on "Equal Rights and equal opportunities of women and men", and to sign the Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence.

The 2010-2020 Strategy of Sustainable Development of Armenia's Agriculture is the main current framework for development of the agricultural sector and rural areas, and identifies the following as major priorities for the development of the country's agro-food sector[70]:

In 2014, based on the results of the Mid-Term Review of the Strategy of Sustainable Development of Armenia 2010-2020, a new Strategy for Sustainable Agricultural and Rural Development for 2015-2025 was developed. The draft version of the Strategy passed through gender mainstreaming and was submitted to the RA Government for approval at the time of the finalization of this report. The interlinkage between the National Gender Action Plan and the Strategy for Sustainable Development needs to be strengthened in order to ensure effective implementation of the National Gender Action Plan in rural areas.

All these documents are important because they not only provide a framework for promoting gender equality and women's empowerment but also advocate gender mainstreaming and demonstrate how the gender component can be integrated into the national policies and programs.

Since independence, also amended were other laws and Codes that aim to protect exclusively women's rights as well as to secure gender equality. It is unfortunate that insignificant and occasional amendments have not yet brought about a dramatic change in the situation. The real practices do not match the broad rights of women that are codified in legal norms. The mismatch between the rights and opportunities is a main obstacle to ensuring equality. Thus the existence of functional and efficient gender equality mechanisms and National machinery in the public administration system is

[69] http://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/1_Global/INT_CEDAW_GEC_7933_E.pdf

crucially important for the formulation and implementation of the national gender equality policies grounded in the principles outlined in international and national documents.

According to the CEDAW Committee General Recommendation No. 6, the machineries should be endowed with professional capacity and authority to be able to advice on the impact on women of all government policies, to monitor the situation of women comprehensively and to help formulate new policies and effectively carry out strategies and measures to eliminate discrimination[71].

During the independence several institutional mechanisms were set upon the initiative of the RoA Government:

- *the Division on Family, Women's and Children's Issues*, *which was established in the Ministry of Labor & Social Issues (in 1997);*
- *the Women's Council, which was established under the Prime Minister's Decree in 2000 as an advisory body acting on a pro bono basis;*
- *by the Prime Minister's Decree in 2000 the functions of a Deputy Minister included also coordination of activities related to women's and gender issues;*
- *by the 9 June 2005 RoA Prime Minister's Protocol Decision № 747 in each Ministry and Agency a Deputy Minister (only in two instances a Head of a Division) and in each regions (including the city of Yerevan) a Deputy Regional Governor was appointed a focal point for the implementation of the National Action Plan*.

After the 49th Session of the UN Commission on the Status of Women (held in New York in February-March 2005) the Armenian Government took additional measures to improve effectiveness of the existing institutional mechanisms or to establish new ones:

- *In 2006, the existing at Regional Governors' Offices "Child Protection Departments" were renamed as "Departments for Children's, Family and Women's Issues",*

- *In 2011, the gender policy implementation commissions were established by the Government Decree in the Yerevan City Hall and in the country's Regional Governors' Offices; the commissions are headed by the Deputy City Mayor and the Deputy Regional Governors respectively.*

Even despite the fact that in 2014 the *Council on Issues of Equality between Women and Men in the Republic of Armenia* was established under the Prime Minister[72] none of these structures could be accepted as national machinery. As a result of the absence of the

[71] General recommendations made by the *Committee on the Elimination of Discrimination against Women*. General Recommendation No. 6 "Effective National Machinery and Publicity" (seventh session, 1988). http://www.un.org/womenwatch/daw/cedaw/recommendations/index.html

[72]Established by the Prime Minister's 2 decrees : №1152–A dated November 19, 2014, and № 178-A dated March 9, 2015

national machinery and existing situation with institutional mechanisms the fulfilment of the obligations under the international instruments is held back, effective implementation of the national documents on gender equality is slowed down, coordination of operation of the existing institutional mechanisms is impeded, Awareness raising and PR actions to promote gender equality and equity meet with logistical and organizational predicaments, and finally gender dynamic is not tracked and the emergence of problematic situations is not given due consideration.

Therefore there is a growing realization that the national machinery is absolutely indispensable and, hence, that it has to be established to perform its main function to effectively mainstream a gender perspective into legislation, state policies, national programs and projects.

V. Gender Issues in the target area of the project

The Foundation of Doing Business[73] by World Bank Group has traditionally assumed that the entrepreneurs or workers discussed in the case studies were men. This was incomplete by not reflecting correctly the *Doing Business* processes as applied to women—which in some economies may be different from the processes applied to men. Starting this year, *Doing Business* measures the starting a business process for two case scenarios: one where all entrepreneurs are men and one where all entrepreneurs are women. Within the registering property indicators, a gender component has been added to the quality of land administration index. This component measures women's ability to use, own, and transfer property according to the law.

Armenian law provides equal property rights to women and men, but in practice women are in more unequal situation due to the following reasons/peculiarities: 1) Since independence the Government of Armenia privatized land in 1991 and 1992 by dividing it among households. Land ownership was awarded to the person who was identified as the "head of the household". Although in the context of Armenia, both women and men play equally important role as breadwinners, the majority of land was registered on the name of men as "household head by default". Women received land titles only in case of absence of a male head of the family. As a result of this situation only 1/3 of women headed households have land property in Lori and Syunik provinces. 2) Limited knowledge by women and whole communities about women's ownership rights over land contributed to the problem. This includes limited knowledge about rights and of the

[73] The Foundation of Doing Business by World Bank Group measures aspects of business regulation affecting domestic small and medium-size firms defined based on standardized case scenarios and located in the largest business city of each economy. Doing Business covers 11 areas of business regulation across 190 economies. WBG, 2017 http://www.doingbusiness.org/~/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB17-Chapters/DB17-About-Doing-Business.pdf

consequences of not having land registered also in their name; 3) another reason is "inheritance practices" widely accepted in Armenia. - parents usually grant the house, vehicle and other property to sons, and daughters are having nothing or less from their parents and almost nothing from the husbands' families; 4) women have limited access and control over financial resources that's why are less able to purchase land and other property than men; 5) Lack of control over their own earnings - only 34 in urban and 11 percent of women in rural areas decide about their earnings.[74]

Households headed by men are more likely to keep livestock, and to have a larger number of animals across all categories, than female-headed households. When female headed households have livestock, they tend to have cattle and poultry, possibly because dairy farming is traditionally "female" work or because selling extra milk and eggs is a relatively simple way to supplement the household income. Men have greater involvement in grazing, feed production and purchasing and sales of livestock.[75]

Limited access to productive resources is a serious constraint to rural women's agricultural activity. For instance, rural women have little or no direct access to farm equipment such as tractors, combines and harvesters. Traditionally, these are operated only by men. Even female heads of household do not personally use these resources, they hire in assistance or ask male relatives to help.[76]

Markets accessibility depends greatly on the mobility of the producer or the accessibility of the community. Cars and machinery are rarely owned by women. In rural areas, in more than 95 percent of car and machinery owners are men, as are 100% of agricultural machinery operators in the marzes. Female car owners and female drivers are increasingly prevalent in urban areas, especially in Yerevan, but continue to be rare in rural areas.[77]

Lack of access to transportation impedes women's income earning opportunities, through sale of their agriculture and other production. Dairy products are mostly sold at place rather than in other rural or urban markets. In the absence of dairy products collection systems, there is a need to take the products directly to the urban market. As a result, women, and mostly lonely women and even women heads of households have no opportunity to do that due to stereotypical practices and lack of transportation.[78]

Women are known as primary users of forests and main gatherers of forest products. They play an important role in the protection of forests, though it goes unnoticed most of

[74] Prevalence of and Reasons for Sex Selective Abortions in Armenia, UNFPA 2012, http://unfpa.am/sites/default/files/Sex-selective_abortions_report_Eng.pdf ; Sex Imbalances at Birth in Armenia: Demographic Evidence and Analysis Report, UNFPA 2013, http://unfpa.am/sites/default/files/Sex_Imbalance_report_Eng_final-with%20cover-final.pdf ; Missing Girls in the South Caucasus, World Bank, CRRC 2014.

[75] ACDI/VOCA "Development of Agriculture in Syunik marz" project documents, 2011

[76] From the gender analysis of the project on "Water-to-Market Activity (2006-2011)" carried out in 2007 within the framework of the Millennium Challenge Account: http://www.mca.am/files/publications/13079458990.pdf

[77] ibid

[78] "Gender and Transport" Background materials of the 2011 International Transport Forum, Leipzig, Germany, 2011

the times. This is because women are aware of the adverse effects of forest destruction and its negative impact on their lives. Though women play such an important role in the protection of forests, their participation and presence in decision making bodies is often seen to be insignificant. [79]

According to the household survey commissioned by the FAO and conducted by the *Armenian Women for Health and Healthy Environment* (AWHHE) NGO for this particular project proposal[80] wood is the most widely used fuel for heating and coooking. Despite the fact that, generally, gas is used more than wood for cooking during the summer and warm seasons the use of gas, electricity and liquid gas during the cold season is reduced due to wood consumption. The women from both gasified and non gasified villages usually use woodfuel during the cold season, in order to parralel heating and cooking and to reduce expenses.

At the same time the biggest challenge for women participation in the forest and pasture management is the lack of awareness as well as low level of public and particularly women participation in issue related decision-making.

In provinces women seem to be more active in decision-making in the following circumstances: (a) when women have to assume responsibility as head of the household, (b) when women are employed or are engaged in public activities, and as a result are more indepenent; (c) when there is a participatory setting in the culture of decision-making in an individual family.

According to the National Statistical Service women constitute 53.8 % of Lori and 48.8% of Syunik province population. The number of women headed households in the project targeted marzes makes average 29.2%.The prevalence of women headed households increased in Armenia due to high rate of long-term labor migration of men, as well as divorce factor. In 2016 the share of women headed households was 34.3% (in urban areas 37.7 and in rural 27.8%)[81]. Given the more limited range of employment and income opportunities for women, particularly in rural areas, and continuing gender inequality in income and salary levels, female-headed households are more likely to be in extreme poverty than other households (in 2016, 39,8% of women-headed households with children is poor, and 4.1% is extremely poor, which exceeds the average indicator by almost two times). It might partly be the result of the more limited range of income opportunities for women, but mostly because female headed households tend to be single

[79] ACHARYA, B.P. 2007. Practice and implementation of community forest certification in Nepal: Case study from some CFUGs in Dolakha district. Master thesis. University of Natural Resources and Applied Life Sciences, Vienna.

[80] The survey was conducted in 28 villages in three Armenia's marzes: Tavush, Lori and Syunik. The selection of interviewees was made based on village/ household structure as well as location of the villages compared to forested areas. A total of 280 people were interviewed of which 140 people were interviewed in 14 villages in location in proximity of relevant forest resources and 140 people interviewed in 14 villages, where forest resources were not available in the radius of 15 km. Among respondents were also the representatives of local public authorities. The survey was conducted on a one-to-one individual basis addressing women as the main target (appx 65% of all respondents were women).

[81] Social Snapshot and Poverty in Armenia, National statistical service. 2017;p.57; http://www.armstat.am/file/article/poverty_2017_a_2.pdf

headed households, what limits the number of persons in working age who can contribute to income generation of the family. Female-headed households in 2016 comprised 30% and 27% of, respectively, of the poor population and the total population. Within female-headed households, those with children up to 6 years of age were exposed to a higher risk of poverty (by 1.4 times) compared to the national average. The risk of poverty for such families in urban communities was lower than in rural communities (39.8% and 48.4%, respectively)[82]. Thus, in rural communities of Lori and Syunik provinces the poverty rate among women headed households makes 47.5%.

In most of the households the husband is the main decision-maker. However, the Decision-making at household level can vary - there are also households where decisions are taken jointly by the husband and wife.

Only twenty-eight percent of women are the main decision makers about their own *health care*, 14% decide mainly themselves about major *household purchases*, and decisions about *visits to the woman's family or relatives* are also mostly made jointly (80 percent), with 13 percent of women making this decision by themselves, - in all other cases the decision are taken jointly.[83]

Women's participation in decision making can vary in accordance with age, residence, and education.

- The percentage of women participating in all three decisions increases with age from 51 percent among women age 15-19 to 89 to 92 percent among women age 35-49;
- Participation in all three decisions is somewhat lower among women in rural areas (79 percent) than among those in urban areas (84 percent);
- The proportion of women who participate in all three decisions increases from 69 percent among women with basic education to 84 percent among women with secondary special or higher education.[84]

The significance of community managed forests is its participatory approach and equal benefit sharing among the forest users. In other words equal rights and opportunities to use the forest products, share the benefits and participate in decision making. However, in Armenia where the structure of the society is predominantly hierarchical and patriarchal, exclusion of some disadvantaged groups of people such as women, young and poor people exists. According to AWHHE survey more than 35% of female and 20% of male respondents believe that community participation in decision making on the issue is important and most important.

[82] Ibid
[83] Armenia Demographic and Health Survey 2015-16, Report, National Statistical Service Armenia, Yerevan 2016, *Table 15.8*
[84] Ibid

Table 9. Community participation in decision making

IMPORTANCY		RESPODENT SEX		Total
		Male	Female	
not important at all	% within	41.70%	58.30%	100.00%
	% of Total	1.80%	2.50%	4.30%
not important	% within	27.90%	72.10%	100.00%
	% of Total	4.30%	11.10%	15.40%
may be important	% within	21.70%	78.30%	100.00%
	% of Total	4.60%	16.80%	21.40%
important	% within	41.00%	59.00%	100.00%
	% of Total	15.40%	22.10%	37.50%
most important	% within	33.30%	66.70%	100.00%
	% of Total	6.80%	13.60%	20.40%
No answer	% within	66.70%	33.30%	100.00%
	% of Total	0.70%	0.40%	1.10%
Total	% of Total	33.60%	66.40%	100.00%

Moreover, almost 58% of respondents (females), underlined the importance of fair and equal access to forest products for all member of the community.

Table 10. Fairness/ equity in access to forest products

IMPORTANCY		RESPODENT SEX		Total
		Male	Female	
not important at all	% within	57.10%	42.90%	100.00%
	% of Total	1.40%	1.10%	2.50%
not important	% within	12.50%	87.50%	100.00%
	% of Total	0.40%	2.50%	2.90%
may be important	% within	23.10%	76.90%	100.00%
	% of Total	1.10%	3.60%	4.60%
important	% within	29.50%	70.50%	100.00%
	% of Total	10.00%	23.90%	33.90%
most important	% within	35.90%	64.10%	100.00%
	% of Total	19.60%	35.00%	54.60%
No answer	% within	75.00%	25.00%	100.00%
	% of Total	1.10%	0.40%	1.40%
Total	% of Total	33.60%	66.40%	100.00%

Another group of answers given by the AWHHE' s survey participants provided with the opportunity to judge about *Women's readiness to be involved in forest use management processes.*

Table 11. Women participation in forest use management

RESPODENT SEX		YES	NO	DON'T KNOW
Male	% within	48.90%	21.30%	29.80%
	% of Total	16.40%	7.10%	10.00%
Female	% within	52.70%	12.40%	34.90%
	% of Total	35.00%	8.20%	23.20%
Total	% of Total	51.40%	15.40%	33.20%

Thus women have a desire and the right to participate in decision making in the communities as well as in forest use management processes, but are lacking the opportunity to do so.

Decision making in the community level depends on the following three aspects, and women face discrimination in all. These areas are as follows:

1) *Cultural norms and stereotypes* which affect women's participation in the decision making: Women are not generally prominent in local community-level decision making, and are very rarely elected as members of community councils. The Gender assessment conducted by USAID in 2010 pointed out that while "there is evidence that societal views of the "appropriate" roles for men and women are quite rigid and influenced by patriarchal traditions"[85], there is significant variation within Armenia, and some marzes appear to be more socially conservative than others in relation to gender roles and women's status. Nevertheless, the perception of men as the main decision-makers and leaders in society is prevalent and influences women's access to political positions and participation in public life overall. The influence of traditional roles affects women's own confidence and perception of what is appropriate.

2) *Knowledge:* on management and productive farming is depending on the level of education and/or experiences, accessibility to consultancies; on average, women enjoy less education than men; consultancies focus in general on men. There is no Government policy in place to promote women education in management and entrepreneurship. No efforts have been made to offer training, retraining or vocational education to women to equip them with adequate skills and competence and to match those with the existing challenges and opportunities. The Government policies to promote small and medium businesses have yet to become gender-sensitive.

3) *Access to financial resources*, and financial independence. Given the more limited range of employment and income opportunities for women, particularly in rural areas, and continuing gender inequality in income and salary levels. The overall level of professional qualification of rural women is low in comparison with urban women. Veterinarians and

[85] Gender Assessment, USAID/Armenia, Yerevan 2010

agronomists are mostly men. Apart from the agricultural sector, rural women are also employed in educational and in health care institutions - mainly in middle-level posts, yet in low paid sectors. The main causes of gender inequality in rural areas could be considered cultural norms and stereotypes which affect women's participation in the labour market. In fact, some husbands do not allow their wives to work, even if a household could use the additional income. Women face more difficulties in receiving a loan and in having access to the family budget. Sometimes women have no own funds even to register her candidacy for the local elections, which means that they should check their availability with other members of the family.

VI. Recommendations

- The analysis of the existing gender inequalities, men labor migration, as well as demographic situation in the rural areas showed that it is highly recommended to involve women, into the process of the project implementation. Women's participation in the project will be twofold: 1) Women will be considered as agents and main advocates for behaviour and attitude change in the families, as well as on community and at the national level. This function *inter alia* could be paralleled with monitoring activities implemented by them; and 2) Women will be involved in the project as active participants: staff and/or providers of the planting material through tree nurseries and farming cooperatives organized and administered by them. Both functions shall be based on their participation in educational and awareness raining activities.
- Women shall be also involved as project beneficiaries - participating in capacity building activities and receiving vocational education, as well as FHHs will be among recipients of the special equipment and knowledge on wood/ non wood fuel usage. While the risks of escalating the level of VAW due to the project implementation are assessed as low, to avoid any negative implications, caused by the involvement of women in the project activities, the project should dedicate specific attention to a profound awareness raising work with communities and families, especially men. Media resources will be also used for this purpose and profound awareness raising on VAW will be integrated into the overall community level work.
- Considering the demographic structure of rural communities and the vulnerability faced particularly by elderly and young female Armenians, the project shall pay special attention to the involvement of lonely elderly, especially women as beneficiaries. Similarly, the proposed intervention will work with the National educational institutions to introduce a curricula on new technologies and practices among the long term vocational education area, shall inter alia increase education and employment opportunities for rural youth.
- In this context, the project implementation shall ensure periodic collection of sex and age disaggregated data and analysis in the area (e.g. study in Gender-responsive Action, to identify gender issues in energy efficiency in Armenia), as well as use of gender expertise to further develop gender balanced approaches and to adjust the proposed Gender action plan.
- The project team shall follow the UN principles and standards, as well as FAO requirements that are outlined in the Environmental and Social Management Guidelines. In particular, the Environmental and Social Standard 8 (ESS 8) on Gender Equality, which has an objective to: - "Provide equal access to and control over productive resources, services and markets; - Strengthen women and men's participation in decision-making in rural institutions; - Ensure that all stakeholders benefit equally from development interventions and that inequality is not reinforced or perpetuated".
- The project shall set a minimum target at 30 percent of all beneficiaries of the project to be women, as this is the UN recommended quota to ensure critical mass of women's representation. However, this represents just a target, and not a goal. The goal should be 50

percent or even more depending on demographic representation in the project area. Also, actual participation can be higher, and the project team will apply all possible efforts to achieve that.

- The project shall recruit a national gender expert who will work in close collaboration with the project team, under technical guidance of the Gender team based in the FAO Regional office for Europe and Central Asia. Gender expert will be providing support to the project team in mainstreaming gender concerns into the project activities and provide support in gender-specific activities.
- The guidelines produced within the framework of the project shall be based on gender analysis and explicitly address gender considerations and constrains, recognizing multiple vulnerabilities of project participants, beneficiaries and community members, as women, youth and the elderly.

Based on this assessment, a Gender and Social Inclusion Action Plan (GAP) was prepared to implement the gender strategy and to ensure inclusion of disadvantaged groups (poor families, elderly, single-headed households and youth). The GAP is in line with the overall project implementation plan and timeline, thus all activities are incorporated into the relevant components of the project.

Gender Action Plan

***Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation* project**

Goal: By 2030, contribute to achieving ecosystem neutral GHG emission with clear and monitorable adaptation co-benefits.

Specific Objective: *By Y8, CO2 removals from the forests subsector are increased by at least 7% via sustainable climate adaptive forestry investments and fuelwood energy efficiency with effective involvement of communities*

Outputs	***Gender Responsive Action***	***Performance Indicator***	***Project Target***	***Additional Notes***	***Budget[86]***	***Timeframe (year of implementation)***								***Responsible***
Component 1: Climate change mitigation and adaptation through forest investments and technology transfer **Outcome 1:** By Y8, at least 2.5% of degraded forestland is restored and sustainably managed following a climate adaptive methodology						***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	
Output 1.1: By Y2, at least 3 nurseries are operational in the production of climate adaptive seedlings and Hayantar staff capacitated Output 1.2: By Y7, at least 7,300 ha of forest investments are secured in project areas with sustainable	A. Ensure sex disaggregated statistical data on the targeted communities in order to equally involve male and female population in project activities and enjoyment of the results	Availability of sex-disaggregated statistical data and indicators and their use in monitoring and reporting	100% of all project documentation contain data disaggregated by sex, and where possible by age.	The project set minimum target at 30 percent of all beneficiaries of the project to be women, as this is the UN recommended quota to ensure critical mass of women's representation. However, it is just a TARGET, and not a GOAL. The goal should be 50 percent or even	M&E related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 3,200 USD TOTAL resources: 20,700 USD	***x***								Project Implementation Unit (PIU) Director, Regional Authorities, NSS
	B. Identify the women activists/groups to support the project	Percent of Hyantar target women beneficiaries	At least 30% of Hayantar beneficiaries are women, or women groups		Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines):	***x***								PIU Director, Local self-governance bodies

[86] Such figures reflect the estimated incremental budget that the project earmarked and will dedicate to ensure gender mainstreaming and implementation of the GAP's Gender Responsive Actions.

and climate adaptive approaches and practices Output 1.3: By Y6, at least 1,700 people (of which 30% women) from Hayantar, local authorities, private sector and civil society are trained in sustainable and climate adaptive silviculture		activities e.g. planting, rehabilitation, re-forestry.	# of women groups and CSOs involved in the Output 1.3		more depending on demographic representation in the project area.	GCF resources: 5,700 USD TOTAL resources: 15,400 USD									
	C.	Identify and involve women-leaders and community activists in Training of Trainers (ToT) on sustainable climate adaptive silviculture	Percent of women - participants of the ToT on sustainable climate adaptive silviculture.	At least 30 % of the participants of the ToT are women		Related to women participation in forestry activities. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 9,400 USD TOTAL resources: 11,900 USD	***x***	***x***	***x***	***x***	***x***	***x***	***x***	***x***	PIU Director, Local self-governance bodies
	D.	Collaborate with both women and men in organization of Training and awareness raising activities	# and % of women and men participating in training and awareness raising activities	At least 30 % of participants in trainings and awareness raising activities are women	The project will ensure that women are reached, to be part of the training programs, and benefit from improved access to skills and learning. A needs assessment will be conducted prior to the training, and measures undertaken to ensure that women have equal access to the trainings. In addition, the	Related to capacity development of targeted beneficiaries. Estimated related resources (portion of existing budget lines): GCF resources: 7,400 USD TOTAL resources: 14,000 USD	***x***	***x***	***x***	***x***	***x***	***x***	***x***	***x***	PIU Director, Local self-governance bodies
	E.	Contribute with gender awareness raising sessions to community level trainings, as well as sectoral trainings	# of gender awareness raising sessions introduced in the community level trainings and % of women and men participating in those gender sessions of the trainings	At least 80% of the community / sectoral level trainings include a gender awareness session At least 30 % of participants in the community		Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 1,200 USD TOTAL resources: 2,300 USD									

			level trainings are women	contents of the training will include provisions that substantiate the need for sex-disaggregated data collection and gender analysis.										
	F. Target the staff of the main implementing partners for the training on gender sensitization, mainstreaming and women empowerment issues.	# and % of women and men members of the main implementing partners trained on gender mainstreaming issues	At least 60 % of the staff of the main implementing partners trained on gender mainstreaming issues		Related to training and capacity development. Estimated related resources (portion of existing budget lines): GCF resources: 14,800 USD TOTAL resources: 28,000 USD	***x***	***x***	***x***	***x***	***x***				PIU Director, implementing partners.

Outputs	***Gender Responsive Action***	**Performance Indicator**	***Project Target***	***Additional Notes***	***Budget***	***Timeframe (year of implementation)***								***Responsible***
Component 2: Promoting forest sustainability reducing forest degradation drivers **Outcome 2:** By Y6, fuelwood dependency of targeted rural communities is optimized and decreased by at least 30%						***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	
Output 2.1: By Y2, National Standards for energy efficiency of heating related appliances are approved and EE companies are trained on how to incorporate them in their operations	G. Review of the main national policies on energy efficiency and practices to assess if gender concerns are adequately mainstreamed, and provide recommendations, based on stakeholders' consultations that solicit the views and opinions of women and men on the ground.	National policies and standards on energy efficiency are gender-responsive and address the needs of both women and men.	Gender perspective is duly mainstreamed in at least 2 national policies on EE	Produced polices and guidelines will be gender responsive, and the staff will be trained on how to use them and will be also exposed to awareness raising and sensitization. Focal points appointed at national and local	Related to Policy dialogue. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 13,500 USD TOTAL resources: 33,900 USD	***x***	***x***	***x***	***x***	***X***	***x***	***x***	***x***	PIU Director, Government bodies

Output 2.2: By Y5, at least 15 private EE companies are involved in wood-stoves assembling, installation and maintenance and dispose ofskilled labor in project areas Output 2.3: By Y6, at least 9,000 HH (of which at least 25% women are single women headed) use increased EE wood stoves in project areas and are trained on fuelwood management				institutions – in line with the national commitments of the country - will be made aware of the project commitments, activities and expected results. The M&E team of the project will monitor the process through gender lens.										
	H. Ensure participation of women in the project management committee, planning and activity meetings	# and % of women and men staff participating in the project management committee, planning and activity meetings	At least 30% of the participants of the project management committee are women	Based on the survey done at project design stage, there are no women run EE companies, information on the share of women working in EE was also not made available. This is practically male-dominated field. Nonetheless, the project team, working	Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 11,400 USD TOTAL resources: 30,800 USD	***x***	***x***	***x***	***x***	***X***	***x***	***x***	***x***	PIU Director Local self-governance bodies

				under technical guidance and assistance provided by the Project' Gender expert and FAO Gender experts, will ensure constant monitoring of the situation and update of the baseline Advocacy, communication and awareness raising activities foreseen under the project will address the issues of occupational segregation and break widespread stereotypes of EE, highlighting it as an area potentially beneficial for women's engagement.									

	I. Secure the effective participation of women in the projects monitoring activities	# and % of women and men staff participating in the project monitoring and evaluation	At least 30% of the staff participating in the project monitoring and evaluation activities are women	The project will encourage participation of women in Project monitoring activities.	M&E related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 5,300 USD TOTAL resources: 34,500 USD		***x***	***x***	***x***	***X***	***x***	***x***	***x***	PIU Director, regional authorities, implementing partners.
	J. Conduct awareness raising to attract more female students to study forest management/energy efficiency / renewable energy in Vocational education institutions.	# and % of women and men students on forest management/energy efficiency / renewable energy in Vocational education institutions.	At least 30% increase in numbers of female students enrolled in relevant studies in vocational education schools and institutions	As already mentioned in the above, the project team will consult with national partners and will make every possible effort to encourage involvement of young women to trainings and ensure that at least 30 percent of trainees are represented by them. Specific measures are envisaged under the GAP to ensure greater enrolment of female students to non-traditional spheres of	Related to training and capacity development. Estimated related resources (portion of existing budget lines): GCF resources: 11,100 USD TOTAL resources: 21,000 USD		***x***	***x***	***x***	***X***	***x***	***x***	***x***	PIU Director, regional authorities, TVETs

				vocational education, including on EE technologies.										
	K. Include women headed households into the list of beneficiaries	Percent of women headed households in the project area benefited from the project/Share of FHH among the project beneficiaries	At least 30 % of women headed households in the project area benefited from the project	The project gives major emphasis to the selection criteria and includes gender variable as one of the key criteria - priority to female-headed households that constitute at least 25% of rural households.	Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 2,900 USD TOTAL resources: 7,700 USD	***x***	***x***	***x***	***x***	***X***	***x***	***x***	***x***	PIU Director Local self-governance bodies

Outputs	***Gender Responsive Action***	***Performance Indicator***	***Project Target***	***Additional Notes***	***Budget***	***Timeframe (year of implementation)***								***Responsible***
Component 3: Strengthening governance of Forest resources and climate change's impact management at community, as well as local and central government levels Outcome 3: By Y8, relevant stakeholders are enabled to adopt effective governance and adaptive management of forests and related ecosystem services						1	2	3	4	5	6	7	8	
Output 3.1: By Y5, the guidelines to enhance participation and engagement ofCommunity in sustainable	L. Build the capacity and technical expertise of the project staff, project beneficiaries and partners	"No exclusion policy" is in place to ensure women - beneficiaries and implementing partners are	At least 60 percent of the project staff and key partners are sensitized in gender, and trained in gender analysis, and gender-responsive M&E.	The project will ensure that there will be no gender based discrimination in the selection process of staff, training	Staff training – related to capacity development. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 3,700 USD	x	x	x	x	x	x	x	x	PIU Director, Government bodies

and climate adaptive management of forest and related ecosystem services are adopted Output 3.2: By Y8, a National Forest Monitoring and Assessment System (NFMA) is established, the first inventory cycle completed, discussed with stakeholders and results mainstreamed into relevant policies Output 3.3: By Y7, at least 300,000 people (of which 52% women) from 207 rural communities in project areas are informed, sensitized and empowered		on gender analysis, and gender responsive M&E	trained on gender sensitive and responsive issues.		and project beneficiaries and, where feasible, that women and women in need (according to Armenia social security standards) are given higher priority. Implementation of the gender aspects will be facilitated by the recruitment of a Gender Expert who will be working in close collaboration with the rest of the project team, and under technical guidance of FAO regional gender team, to ensure proper implementation of social safeguards.	TOTAL resources: 7,000 USD									
	M.	Develop and disseminate gender sensitive	Number of gender sensitive materials produced and distributed	At least 2 relevant gender sensitive materials are produced (in Armenian) and widely disseminated	The project will target printed /published media, but also other forms of	Related to communication material. Estimated dedicated resources (portion of existing									PIU Director, Local self-governance bodies

on climate adaptive silviculture, Energy Efficiency and climate change mainstreaming	information materials			media, including social networks, TV and radio broadcasts. Awareness raising activities will be implemented for all, meanwhile, the project will apply every effort to overcome the stereotypes associating forestry and environment protection with men's occupations and will closely collaborate with women-oriented media, including on-line platforms.	relevant budget lines): GCF resources: 3,900 USD TOTAL resources: 10,400 USD									
	N. Conduct advocacy campaign, collaborating with media resources, to raise women's and men's awareness on at community and decision-making level, addressing gender-based stereotypes.	Number of issue related articles published in the women-oriented media sources	At least 5 relevant media products published/disseminated annually		Related to communication material. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 4,700 USD TOTAL resources: 12,700 USD	x	x	x	x	x	x	x	x	PIU Director
	O. Support women to ensure their participation in decision making on the regional and community level.	# and % of women and men involved in regional and community level councils	At least 30% of people involved in regional and community level councils is women	The project will advocate for women's greater participation in forestry and natural resource management	Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 4,900 USD TOTAL resources: 13,100 USD		x	x	x	x	x	x	x	PIU Director, regional authorities, implementing partners.

	P. Ensure women participation in sensitization and empowerment on climate adaptive silviculture, Energy Efficiency and climate change mainstreaming	# and % of women and men involved in sensitization and empowerment on climate adaptive silviculture, Energy Efficiency and climate change mainstreaming	At least 30% of participants involved in sensitization and empowerment activities on climate adaptive silviculture, energy efficiency and climate change mainstreaming are women	at community, local and national level. In all its work, the project team will be guided by the UN norms and principles. In particular aiming to at least 30 percent target of all participants to be women.	Community mobilization related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 3,700 USD TOTAL resources: 10,000 USD		x	x	x	x	x	x	x	PIU Director, regional authorities, implementing partners.
	Q. Collect sex disaggregated data on the participants of all the activities implemented, training offered, planning and information awareness meeting implemented	Annual reports contain sex disaggregated data	100% of all project documentation contain data disaggregated by sex, and where possible by age.	The project implementation shall ensure periodic collection of sex and age disaggregated data and analysis in the as well as use of gender expertise to further develop gender balanced approaches and to adjust the proposed Gender action plan.	M&E related. Estimated dedicated resources (portion of existing relevant budget lines): GCF resources: 2,100 USD TOTAL resources: 13,800 USD	x	x	x	x	x	x	x	x	PIU Director

PMC: Management of procurements and activities of the projects.

1. **The management and coordination** of the project will be organized in a way to provide secure and enabling work environment to all employees, a place of work that is gender sensitive and recognizes the role of men and women as equal players, agents and leaders of change in their families, communities and society.

The following principles shall be kept:

a) **Staff Policies**: All staff policies, rules and regulations will be guided by the principles of equal right and opportunities, as prescribed by the UN and FAO, and will be reviewed periodically.
b) **Recruitment:** Will seeks gender balance in staffing. Women candidates will be encouraged to apply for all vacancies including management and leadership positions both at the field and head office. There will be adequate representation of women in recruitment and interview panels.
c) **Capacity building for gender sensitization**: Workshops, training programs and other capacity development activities for promoting and enabling a gender sensitive work culture will be organized. Also, regular trainings will be conducted on awareness and confidence building of field staff, with special focus on women staff.
d) **Harassment**: Anti Sexual Harassment policy is in place and is gender neutral according to FAO standards and practices.

2. Programme

a) Building skills and capacities on gender perspectives to enable greater participation of all sections of community will be one of our objectives of the project,
b) The project will promote equal participation of all stakeholders. To promote and assess inclusion of gender equality in the project, implementers will prepare and use a gender equality checklist.

VII. GAP planning and implementation

At the onset of the project implementation, the project with the technical support of the Gender Specialist and the guidance of the FAO Regional Gender Team, will organize a workshop to validate the proposed GAP and sensitize key stakeholders. This would be followed by briefings and capacity development activities on GAP for the project team, implementation partners and other relevant stakeholders (refresher training will be organized later on as and when appropriate). A gender focal point will be nominated for each implementing partner, who will coordinate all issues related to gender mainstreaming and social inclusion. Gender-responsive mobilization and communication channels will be developed to reach both women and men, including vulnerable groups (such as female-headed households, low income families, elderly, youth and unemployed). On the basis of the final GAP, the Gender and Social Development Specialist each year prepares an annual work plan and budget of GAP for submission to the Project Director.

1. Project Manager will be held accountable for gender mainstreaming and social inclusion of the project, technically supported by the Gender specialist. This specialist will coordinate all work on gender mainstreaming in collaboration with the gender focal points of partner institutions and other stakeholders, including the FAO Lead Technical Officer (LTO), FAO Regional Gender Team and other members of the project team.

2. Implementation of GAP will be supported by relevant FAO gender equality tools and assessments such as:

    - FAO Gender mainstreaming and human rights-based approach: guidelines for technical officers[87]
    - VGGT technical guide: governing land for women and men[88].
    - FAO's Policy on Gender Equality, the goal of which is to achieve equality between women and men in sustainable agricultural production and rural development, with the aim of eliminating hunger and poverty[89].
    - Environmental and social management guidelines (FAO, 2015)
    - Regional Gender Equality Strategy for 2019–2022 which represents a common vision of what FAO intends to achieve over the next four years in promoting gender equality and women's empowerment through its interventions in the region, and how[90]
    - Agri-Gender Statistics Toolkit[91]
    - Environment and Social Management Guidelines[92].
    - Developing gender-sensitive value chains. A guiding framework[93]

[87] FAO (2017) *gender mainstreaming and human rights-based approach. Guidelines for technical officers* (Available at: http://www.fao.org/3/a-i6808e.pdf)
[88] FAO (2015) *Governing land for women and men. A technical guide to support the achievement of responsible gender-equitable governance of land tenure.* (Available at: http://www.fao.org/3/a-i3114e.pdf)
[89] http://www.fao.org/3/i3205e/i3205e.pdf
[90] http://www.fao.org/3/ca4521en/ca4521en.pdf
[91] FAO (2016). http://www.fao.org/3/a-i5769e.pdf
[92] FAO (2015). http://www.fao.org/3/a-i4413e.pdf
[93] FAO (2016). http://www.fao.org/3/a-i6462e.pdf

- FAO-Adapt[94]
- Climate-smart agriculture[95]
- Gender, agriculture and rural development in Armenia. Country gender assessment series (FAO, 2017)

3. Also, the project team with the support of the Gender Specialist will follow the guidelines provided by the GCF in the Manual on Mainstreaming Gender in Green Climate Fund Projects (GCF/ UN Women, 2017)

4. To ensure women have equal knowledge about the project activities and have equal opportunities to raise concerns and queries about the impacts of those activities in their communities, the project will conduct an advocacy campaign, collaborating with media resources, to raise women's and men's awareness at community and decision-making level, addressing gender-based stereotypes and providing information on the defined grievance mechanisms according to the procedures and timeframe defined in the Environmental and Social Screening developed for this project (Annex 10 of the proposal).

[94] FAO-Adapt: http://www.fao.org/climatechange/fao-adapt/en/
[95] Climate Smart Agriculture: http://www.fao.org/3/a-i3325e.pdf