

AFB/PPRC.20/8 20 February 2017

Adaptation Fund Board
Project and Programme Review Committee
Twentieth Meeting
Bonn, Germany, 14-15 March 2017

Agenda Item 8 c)

**PROPOSAL FOR ARMENIA (2)** 

#### **Background**

- 1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully-developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.
- 2. The Templates approved by the Board (Annex 5 of the OPG, as amended in March 2016) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

- 3. The first four criteria mentioned above are:
  - (i) Country Eligibility,
  - (ii) Project Eligibility,
  - (iii) Resource Availability, and
  - (iv) Eligibility of NIE/MIE.
- 4. The fifth criterion, applied when reviewing a fully-developed project document, is: (v) Implementation Arrangements.
- 5. It is worth noting that since the twenty-second Board meeting, the Environmental and Social (E&S) Policy of the Fund was approved and since the twenty-seventh Board meeting, the Gender Policy (GP) of the Fund was also approved. Consequently, compliance with both the ESP and the GP has been included in the review criteria both for concept documents and fully-developed project documents. The proposals template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the ESP and the GP.
- 6. In its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

- 7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.
- 8. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.
- 9. The following project concept titled "Sustainable management of adjacent ecosystems of specially protected nature areas of the RA and capacity building in communities" was submitted by the Environmental Project Implementation Unit (EPIU) of the Ministry of Nature Protection of Armenia, which is a National Implementing Entity of the Adaptation Fund.
- 10. This is the first submission of the proposal using the two-step submission process. It was received by the secretariat in time to be considered in the twenty-ninth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number ARM/NIE/Forest/2017/1, and completed a review sheet.
- 11. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with EPIU, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.
- 12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted.
- 13. Lastly, EPIU has submitted a Project Formulation Grant Request, which is also available as an addendum to this document.

#### **Project Summary**

<u>Armenia (2)</u> – Sustainable management of adjacent ecosystems of specially protected nature areas of the RA and capacity building in communities

Implementing Entity: EPIU

Project/Programme Execution Cost: USD 178,000 Total Project/Programme Cost: USD 2,273,000

Implementing Fee: USD 210,000 Financing Requested: USD 2,483,000

#### Project Background and Context:

The Republic of Armenia is a mountainous, landlocked country with 76.5% of its territory situated on altitudes of 1000-2500 m above sea level. The climate is continental, with hot summers and cold winters, and an annual average precipitation that varies from 200-600mm. Armenia hosts exceptionally rich and globally significant biodiversity, but due to intensive nature use the level of anthropogenic changes of natural landscapes in the country is high. The proposed project concept is based on the idea that specially protected nature areas are important areas for enhancing ecosystem and landscape resilience to climate change and have environmental, social, health and scientific value. The project therefore plans to enhance the adaptability of natural ecosystems under climate change conditions by strengthening capacities of "Khosrov Forest" State Reserve and "Dilijan" National Park adjacent communities, decreasing anthropogenic pressure on ecosystems and their components and by increasing the efficiency of management specially protected natural areas

Component 1: Communities capacity building under climate change conditions (USD 1,895,000)

This component will focus on the reduction of anthropogenic pressure on ecosystems by improving degraded community adjacent pastures and hayfields, creation of a sustainable base for fodder, agricultural crop diversification, agricultural products processing, introduction of alternative heating system, and the recovery of degraded community areas and infrastructure (Midfield roads leading to the pastures and meadows). Farmers will be trained in the operation, maintenance and repair of equipment and a union of stakeholders in the communities will be created. The component will also focus on the dissemination of best practices in the farm enterprise and public sector.

<u>Component 2</u>: Raising public awareness and the level of knowledge under climate change conditions (USD 200,000)

This component aims to build a knowledge base on the increase of ecosystem adaptation level and the interconnection of community capacity building, and will focus on increasing the knowledge and awareness of various target groups of the population. The component will develop training programs targeting specific groups within the communities such as teachers, specialists of regional agricultural support centers, and municipal employees. The training program will use a Lecturer-listener based model for awareness raising.



# ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project Concept

Country/Region: Armenia

Project Title: Sustainable management of adjacent ecosystems of specially protected nature areas of the RA and

capacity building in communities

AF Project ID: ARM/NIE/Forest/2017/1

IE Project ID: Requested Financing from Adaptation Fund (US Dollars): 2 483 000

Reviewer and contact person: Farayi Madziwa Co-reviewer(s): Fareeha Iqbal

IE Contact Person: Mr. Samvel Baloyan

Review Criteria	Questions	Comments 27 January 2017	Comments 14 February 2017
	Is the country party to the Kyoto Protocol?	Yes	
Country Eligibility	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes	
Project Eligibility	Has the designated government authority for the Adaptation Fund endorsed the project/programme?	No. The letter of endorsement is not provided. Also, the name in Part IV, Section A, of the project template (the record of endorsement) is different from the name of the Designated Authority (DA) on record with the Adaptation Fund Board secretariat, and there is no accompanying letter of endorsement.  CAR1: Please submit a letter of endorsement signed by the Designated Authority (DA) to the Adaptation Fund. Please note that the DA the secretariat has on record is Mr. Aram Harutyunyan, Minister of Nature Protection.	CAR:1: Not addressed. The letter of endorsement for the project has been completed by a different individual to the Designated Authority (DA) who is on record with the

Should the DA have changed, please send | Adaptation Fund Board secretariat. the secretariat formal notification from the Please clarify whether the DA has government of Armenia appointing the new changed and if so, follow the DA. The notification should be made in procedure for appointment and writing and signed by either a Minister, or by | notification for a new DA according an authority at cabinet level, or by the the Fund's operational policies and Ambassador of Armenia.

You can find more information on the process of nomination of a Designated Authority for the Adaptation Fund in paragraphs 20-22 of the Fund's Operational Policies and Guidelines available on the following link: https://www.adaptation-fund.org/wpcontent/uploads/2016/04/OPG-amended-in-March-2016.pdf

quidelines.

2. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

Unclear. The project seeks to reduce anthropogenic pressures on the Khosrov Forest State Reserve and Dilijan National Park ecosystems emanating from the two communities living adjacent the protected areas. While the project also seeks to "produce a model for in situ conservation of globally important biodiversity" (page 12) and at the same time "put in place policies and regulatory frameworks that have been lacking in the area of ecosystem resilience under climate change conditions", the challenges facing the two protected areas seem to be from human caused stressors and it is not clear what the climate conditions are, that is, the role climate change and variability have contributed, or are currently contributing to these challenges. The proposal does not identify the specific climate change related threats and vulnerabilities faced at project sites.

It is also not clear what prevailing socioconditions exist within the economic protected areas and within the two communities and what concrete activities will be implemented by the project to address current and future climate threats.

Lastly, activities under component 4 seem to be split responsibilities under the project team and the implementing entity and in both cases there are management costs and fees that are already set aside for the project.

**CR1:** Please describe the historic climate trends for the two protected areas and the trends have been provided but it is

CR1: Partially addressed. Climate

adjacent communities to the protected areas (project area) have been, including the anticipated climate impacts and risks from continued climate change. Please also clarify how the climate trends and climate variability is related to the project problem.

CR2: Please also provide more specific information on the proposed beneficiary communities and what exactly the project will help them adapt to. It is difficult to discern whether this is a project to arrest biodiversity loss (see threats stated on p.4), build needs to first provide information on, resilience of community agriculture, or both. The sub-component on "alternative heating system" does not appear to have context elsewhere in the document.

**CR3:** The project objectives and project components are mostly to do with capacity building and knowledge management. Please the planned capacity clarify the concrete adaptation activities and describe how project outputs are directly related to the activities and would result in tangible results, and increased resilience to climate change and variability for the communities and ecosystems in the project area.

CR4: Please justify why activities under CR4: Addressed.

unclear how they relate to the project problem. Please clarify how the changes in projected climate translate into vulnerability on the ground, and for whom or which elements?

CR2: Not addressed: It is still unclear whether this is a project to arrest biodiversity loss, build resilience of community agriculture, or both. Essentially, the concept "climate vulnerability of what/who, to what?", and then make the case for which adaptation measures are needed and how the project will deliver these. Additional information has been included on alternative heating and energy efficiency, but it is still unclear how they are related to the adaptation issues.

CR3: Not addressed: Please clarify for the project, and in particular for building aspects under component 1, what the concrete outputs of the project are and what the planned activities linked to the outcomes are.

Component 4 are not counted as part of the project execution costs or implementing entity fees.	

3. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Unclear. As a general comment, the relevant sections of the project proposal template need to be filled properly. While the project objectives identify that the adaptability of the targeted natural ecosystems will be enhanced by strengthening the capacity of the Khosrov Forest State Reserve and Dilijan National Park communities, it is not clear what vulnerabilities exist within these communities. It is also not clear whether vulnerabilities are associated with a changing climate. Please also note that while the project assumes a relationship between reduced positive anthropogenic pressure on the protected areas and adaptability of the protected areas. this relationship might not be the case and would depend on the rate of climate change, frequency of weather extremes and other factors, despite little or no human interference with the natural systems. Please see CR 1, 2 and 3 above. Without a clear understanding of the climate change related threats to be addressed, and understanding of the vulnerabilities that will be reduced through the proposed adaptation actions, it is not possible determine the socio-economic environmental benefits.

**CR5:** Please complete the relevant sections of the proposal template, taking into account the instructions provided under Annex 5 of the Adaptation Fund Operational Policies and Guidelines. See: https://www.adaptationfund.org/wp-content/uploads/2016/04/OPG-ANNEX-5-\_project-template\_amended-in-Oct-2016.pdf

General comment still applies in the sense that without a clear understanding of the vulnerabilities that will be reduced through the proposed adaptation actions, it is not possible to determine the socioeconomic or environmental benefits.

CR5: Not addressed. The proposal does not follow the format provided in the project template and does not provide the content described in Part II of the proposal template. Please complete the relevant sections of the proposal template and refer to the instructions provided under Annex 5

of the Adaptation Fund Operational Policies and Guidelines available via Fund's the website on: https://www.adaptation-fund.org/wpcontent/uploads/2016/04/OPG-ANNEX-5- projecttemplate amended-in-Oct-2016.pdf. **CR6:** Taking consideration of CR5 above, CR6: Not addressed. Without a please provide a description of the socioclear description and articulation of economic and environmental benefits of the the climate change adaptation impacts, the planned activities and project the concrete project outputs, it is difficult to ascertain the socioeconomic and environmental benefits of the project. The project should consult the instructions provided under Annex 5 of the Adaptation Fund Operational Policies and Guidelines. See CR2, 3 and 5. CR7: Please also briefly discuss gender CR7: Partially addressed. While the considerations as they relate to this project activities of women in and clarify whether a gender analysis will be communities have been described, it undertaken for this project? is unclear whether there are any existing vulnerabilities for women and if there are, whether it is intended that the project outputs and outcomes address these. See the Fund's Gender Policy available in Annex 4 of the Adaptation Fund Operational Policies and Guidelines available: https://www.adaptationfund.org/documentspublications/operational-policiesquidelines/

4.	Is the project / programme cost effective?	No. The proposal should identify concrete adaptation options for the project.  CR8: Please provide a description of how the planned adaptation options compare to identified alternatives, that is, discuss the proposed adaptation solutions in contrast with alternative measures that could be taken to achieve the same objectives. In so doing, please consider CR2 and 3 above. Also note that specific calculations are not required at this stage.	CR8: Not addressed. Please complete the relevant sections of the proposal template and include a brief discussion of how the proposed adaptation solutions contrast with alternative measures that could be taken to achieve the same objectives. See CR5
5.	Is the project / programme consistent with national or sub- national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	Yes. However, only the National Biodiversity Strategy Action Plan and the Strategy and national Action Programme to Combat Desertification are mentioned.  CR9: Please provide further information including but not limited to, the Third National Communication of the Republic of Armenia to the UNFCCC which identifies country priorities that are in alignment with the project, and any other national or subnational climate change related strategies, plans or assessments.	CR9: Addressed.
6.	Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund??	Unclear. While the project intends to put in place policies and regulatory frameworks (page 13) it is not clear what those policies and regulatory frameworks are. Also, it is not clear what concrete project activities have been identified and whether it would be necessary for the activities to get authorization and/or licencing in line with domestic law. See CR2, 3 and 5 above.	

7. Is there duplication of project / programme with other funding sources?	Not demonstrated. See CR 5.	
8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes. However, at the full proposal stage, further explanation should be given on the knowledge to be generated and how the knowledge will be managed, including the targeted audience and process of dissemination.	
9. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	No. The project proposal does not identify any stakeholders to be consulted nor mention any consultation that has taken place with project beneficiaries and other interested stakeholders regarding the project.  CR10: Please provide a description of the level and extent of initial stakeholder consultation that has taken place for the project and any other that is planned, including how stakeholder engagement will be ensured throughout project implementation. Also, please see CR5.	CR10: Not addressed. Of the identified stakeholders, consultation is referenced to have taken place with community leaders. However, a description of the consultative process itself that was followed is unclear, and in particular with regards to vulnerable groups, and including gender considerations. Please clarify whether there has been initial consultation with other identified stakeholders.
10. Is the requested financing justified on the basis of full cost of adaptation reasoning?	Partially. While the concept presents a full cost of adaptation reasoning, it does not clarify the climate change related vulnerabilities that will be reduced, and how the proposed measures will serve to do so. See also CR2 and 3 above.  CR11: Please clarify how proposed activities are relevant in addressing the identified adaptation needs and how the project	clarify how proposed activities are

	components put together will lead to achievement of the adaptation objectives of the project. Also, please see CR5.  adaptation needs and how the project components put together will lead to achievement of the adaptation objectives of the project. Also, please see CR5
11. Is the pro aligned w framewor	AF's results
12. Has the s the project outcomes into accord	tainability of orogramme sub-components on capacity building, which, if effectively done, will contribute to

		including what role they will play.  (ii) Clarify how the policies, governance arrangements, the knowledge generated and the built capacities from the project will be maintained beyond the life of the project, including identifying who would maintain the various aspects and where the funds for implementation will come from e.g for operation and maintenance of the planned community-to-community networks.  (iii) Clarify how the knowledge base will be updated and managed after project completion	
	13. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	Unclear. The description of the project activities needs clarification to allow for environmental and social risks identification.  CR12: Please note that the ESP also requires that projects be categorized according to their potential environmental and social impacts. Please provide an initial assessment of whether the project is expected to be Category A, B, or C in accordance with the Fund's ESP, and accordingly, whether the project will develop a plan to manage potential risks.	CR12: Not addressed. Please consider CR2 and 3 above and subsequently provide an initial identification of environmental and social impacts and also provide an initial assessment of whether the project is expected to be Category A, B, or C in accordance with the Fund's ESP.
Resource	Is the requested project	CR13: Please describe the gender dynamics for the project and clarify gender considerations as they relate to the project in line with the Fund's Gender Policy.  Yes	CR13: Partially addressed. Please clarify whether there are any existing vulnerabilities for women and if there are, describe how the project outputs and outcomes would address these. See CR7

Availability	/ programme funding within the cap of the country?		
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	No fee has been charged.  CR14: Please confirm that no implementing entity fees will be requested by EPIU. Also, please see CR4.	CR14: Partially addressed. A fee of 9.2% has been included which is higher than the cap of 8.5%. Please revise the fee to fall within the cap.
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	Yes. The fee is 7.8%	
Eligibility of IE	4. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes. EPIU is an accredited national implementing entity.	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a (Not required at Project Concept stage).	
	<ul><li>2. Are there measures for financial and project/programme risk management?</li><li>3. Are there measures in</li></ul>	n/a (Not required at Project Concept stage).  n/a (Not required at Project Concept stage).	

place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?		
4. Is a budget on the Implementing Entity Management Fee use included?	n/a (Not required at Project Concept stage).	
5. Is an explanation and a breakdown of the execution costs included?	n/a (Not required at Project Concept stage).	
6. Is a detailed budget including budget notes included?	n/a (Not required at Project Concept stage).	
7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a (Not required at Project Concept stage).	
8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the	n/a (Not required at Project Concept stage).	

M&E function?		
9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a (Not required at Project Concept stage).	
10. Is a disbursement schedule with time-bound milestones included?	n/a (Not required at Project Concept stage).	

# Technical Summary

The proposed project aims to reduce anthropogenic pressure on the Khosrov Forest State Reserve and the Dilijan National Park by strengthening the capacities of communities living adjacent the two protected areas. Through this approach, which includes increasing the efficiency of management measures, the project intends to enhance the adaptability of natural ecosystems under climate conditions. However, as a general comment, the relevant sections of the project proposal template need to be filled properly. More specifically, the concept needs to provide more context on (i) beneficiary areas or communities, (ii) where the vulnerabilities to climate change lie, and (iii) how the proposed adaptation measures will serve to enhance climate resilience. More information is also requested on how the activities will be implemented, including a brief discussion on stakeholder engagement, sustainability and gender considerations.

The initial technical review found that the proposal had not included a letter of endorsement by the Designated Authority (DA) to the Fund and had not followed the format provided in the project proposal template. A number of clarifications with significant consequences to the proposal were requested regarding the concrete activities, outputs and outcomes of the project, project context, initial stakeholder consultation, gender considerations, and the initial identification of environmental, social and gender risks including the subsequent categorization of the project in line with the Fund's environmental and social policy (ESP).

The final technical review finds that the revised document has not adequately addressed a considerable number of the initial clarification requests. While the revised concept has reduced the project components from four contained in the initial proposal to two that are contained in the current document, the concept still needs to demonstrate the underlying adaptation reasoning of the project, and with that, provide a clearer description of whether the project is

for protected natural ecosystems, agriculture ecosystems, or both, and also clearly outline what the concrete adaptation activities, concrete outputs and outcomes of the project are, as well as how they are related to each other. The following observations are made, to be addressed by the proponent: (a) Please clarify whether the Designated Authority (DA) for the Adaptation Fund has changed and if so, follow the procedure for appointment and notification for a new DA according the Fund's operational policies and quidelines. (b) Please clarify for the project, and in particular for the capacity building aspects under component 1, what the concrete adaptation activities of the project are and how these activities are related to concrete outputs, including how they contribute to climate resilience. (c) Please complete the relevant sections of the proposal template, and refer to the instructions provided under Annex 5 of the Adaptation Fund Operational Policies and Guidelines. (d) Taking the Fund's Gender Policy into consideration, please clarify whether there are any existing vulnerabilities for women and if there are, whether it is intended that the project outputs and outcomes would address these. (e) Taking into consideration (b) and (c) above, please provide an initial identification of environmental and social impacts and also provide an initial assessment of whether the project is expected to be Category A. B, or C in accordance with the Fund's ESP. (f) Please revise the Implementing Entity Management Fee to fall within the cap approved by the Board.

20 February 2017

Date:



# REQUEST FOR PROJECT/PROGRAMME FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat 1818 H Street NW MSN N7-700 Washington, D.C., 20433 U.S.A

Fax: +1 (202) 522-3240/5

Email: afbsec@adaptation-fund.org



#### PART I:PROJECT/PROGRAMME INFORMATION

Project/Programme Category: Regular project

Country/ies: Armenia

Title of Project/Programme: Sustainable management of adjacent ecosystems of specially

protected nature areas of the RA and capacity building in communities

Type of Implementing Entity: NIE

Implementing Entity: "Environmental project implementation unit" SA

Executing Entity/ies: Ministry of Nature Protection of RA

Amount of Financing Requested: US\$ 2. 483, 000

(in U.S Dollars Equivalent)

# **Project / Programme Background and Context:**

The Republic of Armenia is a mountainous, landlocked country neighboring with Azerbaijan(East), Georgia(North), the Islamic Republic of Iran(South) and Turkey(West).

The 76.5% of its territory is situated on the altitudes of 1000-2500 m above sea level. The lowest point is 800m in Ararat Valley, and the highest point is Mount Aragats, 4090 m. The average altitude of the territory is 1800m above sea level.

The country has an area of some 30,000 sq km, of which less than half is suitable for agriculture, and a population of 3.0 million.

The climate is continental, with hot summers and cold winters. Annual average precipitation varies from 200-600mm.

#### Annex 5 to OPG Amended in October 2016

The existence of all ecosystems typical to Caucasus, except humid subtropical is due to country's location at the intersection of three biogeographical regions. 6 climatic types and 10 landscape zones are distinguished in the territory of the country due to complex terrain and sequencing of apical zones. Landscapes are mainly plateaus and mountain ranges separating narrow plains. The Republic of Armenia belongs to the catchment basin of Aras and Kura rivers.

Only 11.2% of the country's territory is covered with forests.

As a result, Armenia hosts exceptionally rich and globally significant biodiversity. Due to intensive nature use the level of anthropogenic changes of natural landscapes in Armenia is high. More than 55.6% of the territory is under active agriculture, of which arable lands make 27 %, in semi-desert and mountainous steppe zones the figure reaches up to 80-90%. Overexploitation has resulted in reduction and pollution of the territories covered by wild biodiversity, loss of habitats of certain species and changes in the services provided by ecosystems.

The main factors contributing to loss of biodiversity that are directly or indirectly conditioned by anthropogenic influence are as follows:

- Reduction of habitats, natural populations and plant communities of crop wild relatives,
- Genetic erosion conditioned by introduction of new varieties as a result of the development of modern selection, as well as the illegal import of new crop varieties and hybrids,
- Disorganized gathering of medicinal, edible and decorative plants that leads to substantial reduction of natural supplies.
- Enlargement of the range of utilization of wild plant species for food and medicine and the scale of their trade and use as a result of higher market demand,
- Deterioration of natural grasslands as a result of continuous and intensive use.

\_Specially protected natural areas are considered as significant centers ensuring biosphere's environmental sustainability. Currently 3 reserves, 4 national parks and 27 sanctuaries (SPANs) operate in the Republic of Armenia restricting the use of natural resources by the residents of surrounding communities. On the other hand under climate change conditions the production of agricultural products is reduced which in its turn significantly effects on the population's living standards. There is a necessity to increase adaptation potential applying new methods of agriculture/Smart Agriculture/, as well as to increase ecosystem sustainable development and infrastructures of rural communities, reduce soil erosion due to increased water flow speeds.

There are few conflicts between the two protected areas situated in the impact zone of the community and the project caused by illegal logging, grazing, gathering of useful plants, which is

#### Annex 5 to OPG Amended in October 2016

mainly due to the high levels of poverty and low level of knowledge on the values of protected areas.

As a result of this and other actions prohibited by the law degradation of vegetative cover is caused which results in the decrease of ecosystem resilience to climate change. In this regard establishment of effective cooperation and further development between the communities and organizations implementing protected area management is highlighted.

The project concept is based on the idea that specially protected nature areas are important areas for enhancing ecosystem and landscape resilience to climate change and have environmental, social, health and great scientific value.

At the same time it is clear that it is not possible to enhance efficiency of specially protected nature areas without improving social conditions of communities' population, ecosystems restoration and increasing the efficiency of use within the administrative boundaries of the communities, as well as implementation of operations on increasing community awareness on the importance of protected areas. Communities must be considered not as impeding but contributing factors to protected area.

Within the frames of the project relevant trainings will be developed which will be addressed to the clarification and mitigation of the conflict between the community and the protected area, as well as to the formation of a stable perception on the importance of the value protected areas among the population.

#### Climate Change Observed in Armenia

#### Trends in ambient air temperature and precipitation changes

Changes in annual ambient temperature and precipitation in Armenia have been assessed for various time periods; the results were used in preparations for FNC and SNC. These results show that, in recent decades, there has been a significant temperature increase (see table 5-1 and figure 5-1).In the period of1929-1996, the annual mean temperature increased by 0.4°C; in 1929-2007by 0.85°C; in 1929-2012by 1.03°C.

Table 5-1.Annual meantemperature and precipitation changes in 1929-2012 changesrelative to the 1961-1990 average

Time period	Air temperature, ⁰C	Time period	Precipitation, mm(%)
1929-1996	+0.4	1935-1996	-35(-6)
1929-2007	+0.85	1935-2007	-41 (-7)
1929-2012	+1.03	1935-2012	-59 (-10)

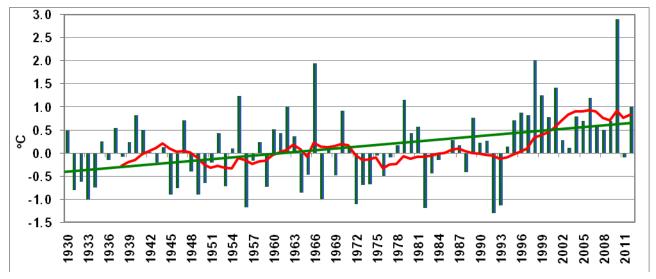
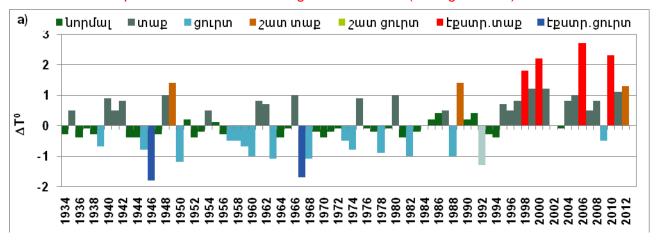


Figure 5-1. Deviations of average annual air temperature in the territory of Armenia from the average values for 1961-1990

On 31July 2011 the absolute maximum temperature 43.7°C for the whole period of observations in Armenia was recorded in Meghri region, which exceeded the previous record by 0.7°C. Over various seasons of the year ambient air temperature changes exhibit different trends. In 1935-2011 the summer average temperature increased by about 1.1°C, and extremely hot summers have been observed over the last 17 years (1998, 2000, 2006, 2010) (see figure 5-2a). Winter temperature changes look different: seasonal mean temperature increases are insignificant at 0.4°C (see figure 5-2b).



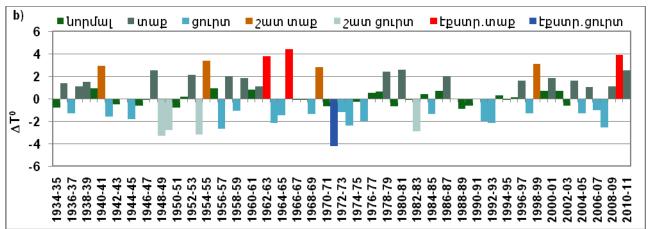


Figure 5-2.Deviation of summer (a) and winter (b) temperatures in the territory of Armenia in1935-2012 from the average values for 1961-1990

The comparison of changes in the assessment of precipitation amounts for different periods demonstrates that precipitation continues to decline. Observations showed that,in1935-1996, there was a 6% decrease in annual precipitation, while in 1935-2012 it was close to a 10% decline (see figure 5-3).

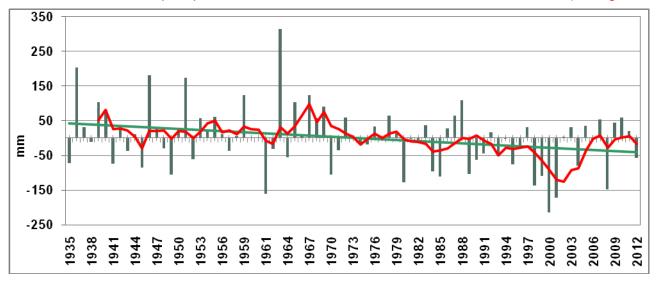


Figure 5-3. Deviation of annual average precipitation in the territory of Armenia from the average of 1961 -1990

The spatial distribution of changes in precipitation amounts is fairly irregular. Over the last 80 years, the climate in the northeastern and central (Ararat Valley) regions of the country has turned arid, while precipitation has increased in the southern and northwestern regions, as well as in the western part of the Lake Sevan basin.

#### Hazardous hydrometeorological phenomena

In recent decades, climate change has significantly increased the frequency and intensity of natural disasters both in Armenia and globally. The marginal values so far recognized characterizing these

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phenomena have also changed. Damage caused by hazardous hydrometeorological phenomena to the economy and to human life has increased. Extreme events (hail, frost, strong winds, heavy rainfall, floods, droughts, heatwaves) may be contributing to the generation of natural calamities (or their escalation), such as landslides, avalanches, mudflows, forest wildfires, rock-falls, outbreaks ofinfectious diseases, etc.

To reveal trends in extreme hydrometereo-logical events the dynamics of phenomena most frequently observed in Armenia from 1980-2012 were analyzed, including: frost, hail, strong winds, and heavy precipitation. The maximum aggregate number of 245 hazardous events was observed in 2004;the minimum number of 106 events in 2006. The amount of hail was greatest in Shirak valley; heavy precipitation was most common in Tashir and Ijevan regions; more frost events were observed in Ararat Valley and pre-mountainous regions.

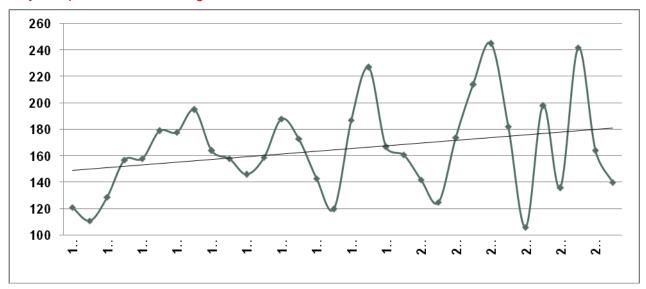


Figure 5-4.Number of extreme hydrometereological events (frost, hail, heavy rainfall and strong winds) observed in the territory of Armenia in 1980-2012

#### The analysis showed that:

- The number of frost events has increased significantly, which may have the following explanation: the annual mean temperature increase in Ararat Valley mostly occurs in March, which triggers the earlier start of vegetation; the sharp temperature fall in April consequently increases the frequency of frost events;
- The number of days with heavy precipitation and hail has increased. This is due to the higher frequency of penetration of high cyclones generating heavy rain and hail clouds.

#### **CLIMATE CHANGE PROJECTIONS**

Climate change in Armenia is assessed using the CCSM4 model in accordance with the IPCC recommended RCP8.5 and RCP6.0 scenarios for CO<sub>2</sub> emissions. Therefore, as per the RCP6.0 scenario (equivalent to the SRES B2 scenario) CO<sub>2</sub> concentration will be 670ppm by 2100 and it will be 936ppm according to the RCP8.5 scenario (equivalent to the SRES A2 scenario). Future change forecasts for ambient air temperatureand rainfall have been developed up until 2100. The results indicate that the temperature will con-tinue to increase in all seasons of the year (see table 5-2). However, according to the RCP8.5 scenario, starting from the mid-21<sup>th</sup> century (2041-2100) the temperature will rise at a more rapid rate. According to the RCP8.5 scenario, it is very likely that, by 2100, the average annual temperature in Armenia will be 10.2°C, which exceeds the baseline (1961-1990) by 4.7 °C.

Table 5-2. Projected changes in annual and seasonal average temperatures in the territory of Armenia compared to the average for1961-1990, °C

Seasons	1961-1990average	Scenarios	2011-2040	2041-2070	2071-2100
Winter	<b>5</b> 2	RCP, 6.0	1.4	2.6	3.6
Winter	-5.3	RCP, 8.5	1.7	2.8	4.4
Spring	4.3	RCP, 6.0	1.3	2.4	2.7
Spring	4.3	RCP, 8.5	1.4	2.7	3.9
Summer	15.7	RCP, 6.0	1.9	3.0	3.8
Summer		RCP, 8.5	2.1	4.0	6.0
Autumn	7.2	RCP, 6.0	0.8	2.3	3.0
Autumn	1.2	RCP, 8.5	1.4	3.2	4.4
Year	5.5	RCP, 6.0	1.3	2.6	3.3
	5.5	RCP, 8.5	1.7	3.2	4.7

Figure 5-5 presents spatial distribution maps for annual mean temperature for the 1961-1990 baseline, and projections for 2071-2100. It is expected that, by 2100, temperatures will increase in most regions of Armenia. Increased temperature in mountainous regions demonstrates an apparent retreat in negative temperatures (blue-coloured areas, see figure 5-5b). For instance, 2100 annual mean negative temperatures will be maintained only in the highlands of Aragats, Geghama, and the Zangezur mountains. In general, seasonal and annual temperature and precipitation change trends are similar. It should be noted that maximum temperature growth is observed during the summer

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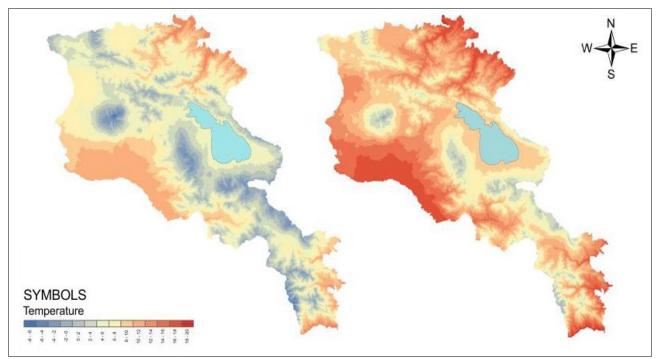


Figure 5-5. Distribution of annual average temperature in Armenia in (a) 1961-1990 and (b)projections for 2071-2100, RCP 8.5 scenario

Evaluation results for precipitation change show that, according to the RCP8.5 scenario, there might be 16.3% increase in annual precipitation in Armenia by themid-21<sup>st</sup> century. There will be no changes in precipitation according to the RCP6.0 scenario. However, according to both scenarios for the summer months there is an expected significant decrease in precipitation in all 3 periods:in 2011-2040 summer precipitation is expected to decrease by about 23% compared to the baseline (1961-1990) period.

The distribution of annual precipitation amount seen Armenia will not undergo significant change; however, in pre-mountainous and mountainous regions there will be a slight increase by the mid- 21<sup>st</sup> century.

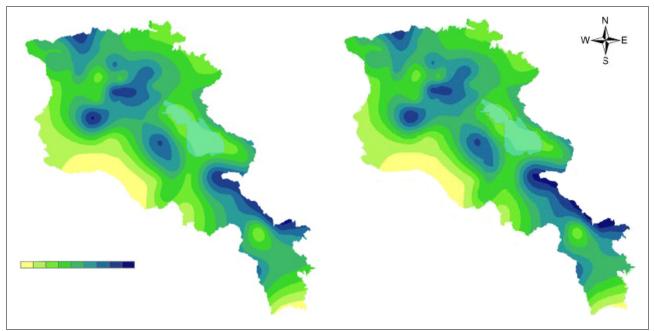


Figure 5-6. Distribution of annual average precipitation (mm) in Armenia in (a) 1961-1990 and (b) projections for 2071-2100, RCP 8.5 scenario

Summers in most of the regions of the country are usually characterized by hot and dry weather conditions. According to the model projections, these conditions will worsen, leading to a variety of problems in water resources, agriculture, energy, healthcare and other sectors.

Although the results of the CCSM4 model reproduce changes in temperature fairly well, there are large uncertainties in terms of precipitation. Additionally, the resolution of the model for the mountainous terrain of Armenia is insufficient.

#### Hrazdan, Azat, Vedi River Basins

Climate change impacts on river flowsvary for different river basins. For instance, it is projected that, by 2040, there will be a 2-3% increase in annual river flow in the Azat and Vedi River basins, while in upper streams of the Hrazdan river there will be a reduction of 2-3% (A2). In 2041-2070 there is a projected decrease in river flows for all three river basins: 3-4% in 2070 in the Azat and Vedi river basins, and 6-7% in the Hrazdan river basin; in 2100 the projected decrease will reach to 12-14% and 15-20% respectively.

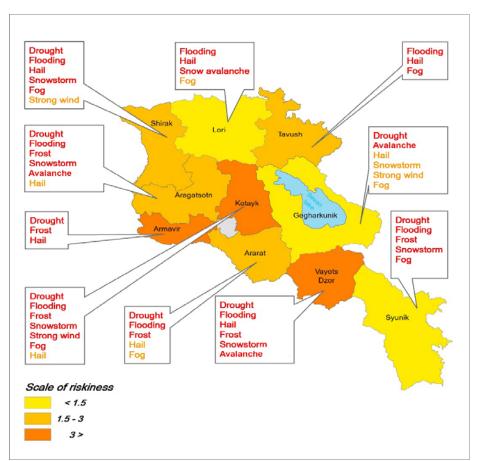


Figure 5-11. Vulnerability of Armenian marzes to hazardous hydrometereological phenomena

Source: Hydromet Service

During project concept development phase some data have been collected by us from project impact zone which gives some idea on social and demographic state of communities' population (see table).

The presented data indicate that in all communities there are high poverty level and low birth level which is close to the Republic's average level. Socially vulnerable target groups make up about 25 percent of the population. Based on community social and demographic situation and the preliminary consultations with community leaders, we have created a chain of activities each link of which will solve important social and environmental issue. The project highlights energy saving activities enabling communities to direct the saved funds to ensure the continuity of the project results.

For this purpose it is envisaged to install solar water heaters in public sector(kindergartens, medical centers) which will save will save a large amount of electricity which paid from the community budget. This event will also improve working conditions of public sector employees serving as a good example for the population to acquire solar water heaters for their own.

Improvement of degraded community adjacent pastures and hayfields, creation of a sustainable base for fodder, agricultural crop diversification, creation of opportunities for agricultural products

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processing (fruits, berries, vegetables, herbs, etc.), introduction of alternative heating system, recovery of degraded community areas and infrastructure (Midfield roads leading to the pastures and meadows) all these activities are interrelated and contribute to the improvement of the social, living and health conditions of the population. They will create the opportunity both to restore natural ecosystems, as well as to reduce the pressure on protected areas. Regulated and economical use of ecosystems will create conditions for increasing their resilience and adaptation to climate change.

# Agricultural losses in the RA Tavush marz due to natural disasters

January-February 2008, orchards of 24 communities of the region were affected by 20-100% causing a loss of about 900,000 USD.

May and August 2009, 21 communities of the region were affected by hail by 10-100%, causing a loss of 1 208 000 USD.

May and June 2010, 35 communities of the region were affected by hail by 10-100% causing loss of nearly 2 700 000 USD

### Agricultural losses in the RA Ararat marz due to natural disasters

2006-2007 the damage caused by winter colds, heavy rains and floods amounted to about\$ 28 000 000 USD to the region.

In 2008 the damage caused by the hail amounted to 6 600 000 USD.

In 2009 the damage caused by the hail amounted 1 870 000 USD.

Table 1
Adjacent communities to "Dilijan" National Park

N		Haghartsin	Teghut	Margahovit	Fioletovo	Gosh	Khachardzan
1.	The number of permanent residents of the community	4100	865	3551	1279	1137	371
	Male	2056	442	1794	646	583	182
	Female	2044	423	1757	633	554	189
	Preschool age (0-6 years)	90	94	315	108	47	36
	School age (7-17 years)	560	74	835	154	127	69
	Middle age (18-63 years)	2600	618	2297	890	708	245
	Over 63 years	540	93	525	127	64	33

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	Number of the families	925	202	1210	353	377	102
	Pensioners, from which:	600	110	640	105	187	38
	Disabled person (first, second, third group)	50	18	130	5	25	6
	Single-parent children	24	-	17	30	8	4
	Childhood disabled children	7	1	12	3	2	-
	Single pensioners	35	26	135	18	83	10
2.	Large families (with 3 or more minor children)	42	8	37	120	38	8
3.	The number of family allowance recipient and registered families	260	5	400	9	87	20

Table 2
Adjacent communities to "Khosrov Forest" State Reserve

		Urtsadzor	Lanjanist	Shaghap	Goght
1.	The number of permanent residents of the community	3320	175	1030	2062
	Male	1497	80	519	1053
	Female	1823	95	511	1009
	Preschool age (0-6 years)	260	8	115	37
	School age (7-17 years)	458	21	125	269
	Middle age (18-63 years)	2408	119	668	1468
	Over 63 years	310	19	60	166
	Number of the families	735	73	219	608
	Pensioners, from which:	433	19	134	226
	Disabled person (first, second, third group)	161	-	5	67

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	Single-parent children	9	-	18	6
	Childhood disabled children	6	-	2	18
	Single pensioners	-	-	-	1
2.	Large families (with 3 or more minor children)	65	•	30	38
3.	The number of family allowance recipient and registered families	117	3	38	26

Project concept has been developed based on the restricting features of specially protected nature areas, social-economic condition of communities, use of agricultural and natural ecosystems and anthropogenic pressure level, existence of natural resources in the food and for sale and increasing ecosystem resilience opportunities. Similar programs implemented both in Armenia and in other countries were studied. Our consultations with community leaders mentioned those main activities that under climate change conditions can contribute to ecosystem resilience. Naturally, the program can not solve all the problems, but these measures can significantly reduce the anthropogenic pressure on protected areas and natural ecosystems adjacent to communities.

The impact zone of the project Tavush marz is rich in forests, while Ararat marz in steppe soils and orchards. Preliminary discussions revealed a number of issues(such as high level of degradation of community adjacent pastures and hay meadows, difficult accessibility, Lack of use of energy efficiency and alternative means in public sector, highly insufficient level of processing wild and agricultural crops, low level of knowledge on the importance of ecosystem resilience to climate change, on the values of specially protected nature areas and their conservation) whose solution will contribute to enhancing the overall sustainability and adaptability of ecosystems.

Summarizing the results of studies and proposals from communities the program has focused on the main activities that the majority of the population believes can contribute to achieving the program objectives. Clearly, during the concept development phase it was impossible to calculate and discuss all alternative measures that would contribute to the conservation of project's outcomes.

The project will focus on developing a broader spectrum of actions as a number of professionals of the sector will be involved in this stage. It is expected that there will be new more effective proposals, as well as innovative changes for already proposed actions.

## **Project / Programme Objectives:**

The **project objective** is to enhance adaptability of natural ecosystems under climate change conditions by strengthening capacities of "Khosrov Forest" State Reserve and "Dilijan" National Park adjacent communities, decreasing anthropogenic pressure on ecosystems and their components and by increasing the efficiency of management specially protected natural areas.

# **Project / Programme Components and Financing:**

## Component 1. Communities capacity building under climate change conditions

The aim of this component is to develop a complex chain of events that will increase adaptation and stability of ecosystems under climate change conditions through increasing household incomes, raising the level of food security, increase energy efficiency in public and private sectors.

To address these problems, improvement of degraded community adjacent pastures and hayfields, creation of a sustainable base for fodder, agricultural crop diversification, creation of opportunities for agricultural products processing (fruits, berries, vegetables, herbs, etc.), introduction of alternative heating system, recovery of degraded community areas and infrastructure(Midfield roads leading to the pastures and meadows) will be carried out.

Single system of operations will unite the methods of community capacity building and ecosystem resilience increase under climate change conditions that will more effectively respond to anthropogenic and non-anthropogenic challenges.

Particular importance will be attached to the institutional capacity development of communities. It is planned to create union of stakeholders in the communities, which will be responsible for the use, maintenance and continuity of the project outcomes. Management plans will be developed for each community on a participatory management basis, which will reflect planned activities and implementation schedule.

The component will focus on the dissemination of best practices in the farm enterprise and public sector, which will improve their opportunities and as a result will contribute to the reduction of anthropogenic pressure on ecosystems under climate change.

# Component 2. Raising public awareness and the level of knowledge under climate change conditions

The aim of this component is to build, under climate change conditions, a knowledge base on the increase of ecosystem adaptation level and the interconnection of community capacity building. To increase work efficiency highly qualified specialists will be involved both from higher education institutions and regional centers of agricultural assistance. Through this method it will be possible combine the efforts of ecology and agriculture and to develop joint training program on the increase of the level of adaptation of ecosystems under climate change conditions.

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The 2rd component of the project proposal is related to the increase of knowledge and awareness of various target groups of the population. The program is based on the idea that the only people endowed with necessary knowledge can adopt project objectives and actively be involved in the implementation of all activities and outcome conservation. For this purpose the target groups will be finally specified in the communities, their needs based on which training programs will be developed. Particular attention will be paid during and upon completion of the project on the dissemination of knowledge. For this purpose individual target group will be formed in each community whose members (mainly teachers, specialists of regional agricultural support centers, municipal employees) based on the specifics of their work and willingness will be able to disseminate their knowledge among other interested groups. For other target groups the training program will focus on the clarification of the practical problems that are more interesting and are most in-demand for wide layers of the population. After each training program, effectiveness evaluation will be carried out by participants, and outcome analyses-by experts. Positive and incomplete aspects of the trainings will be revealed based on which recommendations will be developed to improve the effectiveness of such courses.

Knowledge and awareness component will also focus on the dissemination of best practice through mass media and local self-government bodies. This event will be supported by the elaboration, publication and dissemination of public information leaflets and booklets in the communities of the marz.

Since the program provides a wide variety of events, which ultimately should increase the level of adaptation of ecosystems to climate change specialists on agriculture, energy, sustainable management of natural and agricultural ecosystems will participate in the trainings whose involvement in the project will contribute to summarizing and disseminating best practice in other regions of the Republic. Summary report will be posted in the websites of EPIU, marz municipality and community to increase best practice accessibility on knowledge and awareness level.

The training program will be based on the idea of the correlation of agricultural and natural landscapes and on the importance of ecosystem adaptation under climate change conditions. The provision of knowledge on energy saving, increasing the productivity of agriculture, improvement and sustainable management of natural ecosystems will be highlighted.

The training program will provide a differentiated approach to the needs of social and different age groups developing knowledge raising programs for them.

In the trainings there will be involved protected areas cooperation issues, as protected areas are the areas ensuring environmental sustainability, which contribute to the adaptability of ecosystems to climate change.

Particular attention will be paid to the creation of groups possessing the necessary knowledge base, which will ensure the continuity of knowledge dissemination during and after the project closure. To increase work efficiency, thematic guidelines and public information booklets will be developed, published and provided to all interested parties.

Lecturer-listener based model will be used during awareness raising trainings which will make provided material perceptible through using different actions.

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The component will contribute to strengthening the capacity of local media and environmental NGOs, through their involvement project dissemination, propagation and implementation activities.

The whole process of project implementation will be available for all strata of society. Modern information dissemination tools will be used for this. Regular information on the progress and outcomes of activities will be provided through the websites of the Ministry of Nature Protection, regional administrations and EPIU. Whistleblower hotlines of Ministry of Nature Protection, regional administrations and EPIU will make it possible rapidly respond to all complaints with the participatory problem solving approach.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Communities capacity building under climate change conditions	1.1. Increased adaptation and resilience of natural and agricultural ecosystems under climate change conditions	1.1.1. Improved and accessible community pastures and hay meadows 1.1.2. Raised level of livestock fodder in communities 1.1.3. Production and product range of agricultural foods increased 1.1.4. Use of electricity and other fuels decreased in public sector 1.1.5. Improved living conditions and socioeconomic situation of households. 1.1.6. Decreased community budget expenditures in the public sector. 1.1.7. Decreased pressure on ecosystems and protected areas of adjacent communities	1. 895, 000

		1.1.8. Increased level of adaptation of natural and agricultural ecosystems.	
2. Component 2 Raising public and protected are stuff awareness and the level of knowledge under climate change conditions	2.1 Increased potential of rural communities and farm enterprises to resist the negative effects of climate change	2.1.1 Increased knowledge level on the correlation and interaction of agricultural and natural landscapes: 2.1.2 Increased level of knowledge on the application of new methods and technologies in agriculture 2.1.3 Increased the level of knowledge on alternative energy saving technologies 2.1.4. Stable thinking on the importance of ecosystem adaptation under climate change conditions formed 2.1.5 Increased involvement of local media and environmental NGOs in the process of mitigating the negative effects of climate change. 2.1.6. Project results are available for all interested parties	200000
3. Project/Programme Exec	178,000		
4. Total Project/Programme	2.273,000		
5. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			210000
Amount of Financing Requested			2. 483, 000

# \*Project preparation grant (PPG) – 30000 USD

## **Projected Calendar:**

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	September, 2017
Mid-term Review (if planned)	September, 2018
Project/Programme Closing	September, 2020
Terminal Evaluation	December, 2020

# PART II: PROJECT / PROGRAMME JUSTIFICATION Global environmental benefits

As highlighted above, the many environmental services and benefits that will be derived from this project will go beyond the country level and will contribute to a number of global environmental benefits. By promoting greater coordination, collaboration and enhancing capacity, the project will promote an exemplary enabling policy environment which will reduce many of the barriers to the successful mainstreaming of ecosystem resilience to climate change adverse effects. This will be done by developing principles for effective capacity building and institutional frameworks for sustainable management of natural and agricultural ecosystems. The project will produce a model for *in situ* conservation of globally important biodiversity, which connects wild and natural landscapes, by embedding wild plant species for food and medicine in both agricultural and conservation planning. The protection of Armenia's rich portfolio of globally important wild relatives, and associated evolutionary processes represents a global good of vital importance to the future of the planet and its inhabitants. Such unique germplasm harbours important genetic traits that can help the world cope with climate change and contribute to future

food security. In this respect it will identify and test 'best practices' which strengthen adaptability, stability and resilience of the natural resources. By generating local income and economic development that rewards the provision of ecosystem services in some of the most impoverished areas of Armenia the project will contribute to reducing poverty and enhancing well-being and thus reduce future pressure on vulnerable ecosystems. In addition to the direct benefits to Armenian agricultural biodiversity maintenance and mainstreaming and conservation of unique biodiversity, the project will provide global benefits through the links with the Platform for Agrobiodiversity Research which will make tools, experiences and methodologies, developed in the project, available globally as part of its ongoing commitment to supporting maintenance and use of agricultural biodiversity.

The project will create age and social groups endowed with the necessary amount of knowledge was upon completion of the program will be able to disseminate their knowledge in other communities concerned. The project will strengthen the capacity of local media and environmental NGOs.

The project will reduce anthropogenic pressures on ecosystems of "Dilijan" National Park and "Khosrov Forest" State Reserve.

Sustainability of project outputs will be ensured through embedding community biodiversity management approaches in the country through mainstreaming into relevant strategies and action plans including capacity building plans which will see for the first time in the country the benefits that community biodiversity management and community co-management can provide ecosystem sustainable management. Sustainability will be further supported through mainstreaming and cross-sectoral, multi-stakeholder recognition of the role that wild plant species for food and medicine can play in addressing many of the development challenges Armenia faces. The project goal and objectives are fully consistent with Armenia's National Biodiversity Strategy Action Plan, The Strategy and National Action Programme to Combat Desertification in Armenia, the Third National Communication of the Republic of Armenia to the UNFCCC, 2015-2018 Social-economic development program of the RA Ararat marz, 2014-2017 Social-economic development program of the RA Lori marz, 2012-2015 Social-economic development program of the RA Tayush marz and this contributes to financial stability beyond the project. The proposed project will put in place the policies and regulatory frameworks and linkages that have been lacking in the area of ecosystem resilience under climate change conditions.

Scaling-up will be achieved through the establishment of a network of communities trained and empowered in sustainable management of nature and agricultural ecosystems. Community-to-community networks and training will be established which will strengthen the capacity of farmers and communities to better conserve and use biodiversity. It will also be achieved in country through the inter-agency collaboration that will be established, and through collaboration and cooperation with other related projects and programmes. This project will provide the data and the methodology to enable Armenia partners to incorporate the use of ecosystem services into their ongoing work programmes. Linkages with technical and educational institutions will also support innovation, sustainability and scaling-up in these areas.

It is expected that stakeholder communities will have some inputs.

#### Selection of stakeholders

Given the Components' objectives and problem requiring solutions the activities will be mainly addressed to awareness and knowledge raising of those vulnerable groups that are directly related to project objectives, ways of achieving them, ensuring stability and continuity. Based on consultations with community leaders, Social-economic development programs of the RA Tavush and Ararat marzes, National Statistical Service data, the population structure of communities, as well as based on lessons learnt from the projects implemented by EPIU and other organizations initial stakeholder groups are community administration employees, members of farm households, teachers and high school students, the mass media and the staff of specially protected natural areas. The final list of target groups will be determined by the results of the needs assessment.

1. Community administration employees: In conformity with the law of the Republic of Armenia on Local Self-government community administrations have rather extensive rights to carry out environmental, reconstruction, health protective, construction and other activities within their administrative boundaries.

The program believes that raising the level of the knowledge of the municipal councils and staff members is a priority issue and will contribute to the effective implementation of the activities envisaged by the projects, outcome conservation and experience dissemination. At the same time decision-makers having the relevant knowledge will not make decisions in the future that would cause damage to the environment and in the result to community's interests.

- 2. Members of farm households: The impact zone of the project is mainly agricultural which is carried out relatively on small plots/1200-2500 cubic metre/. There are very few large farms, which are able to organize awareness and knowledge raising events for their employees. The selected target group is the most polynomial and vulnerable as unsatisfactory social conditions restrict their opportunities to get sufficient knowledge on urgent environmental problems and effective measures to solve them.
- 3. Teachers and high school students: This target group is highlighted by the fact that they are the direct bearer and transmitter of knowledge. Teachers endowed with sufficient environmental knowledge (focusing the objectives of the project) can form stable mindset among students on the importance of environmental events and biodiversity conservation, while among high school students both to disseminate knowledge and to decide on getting professional education.
- 4. Mass media: Great is the role of this target group on the dissemination of information on the project, coverage of events, outcome analyses, propagation of positive experience, transparency and mobilization of stakeholders. Special training program will provide mass media with the necessary knowledge and printed material for distribution ensuring continuity of the project.
- 5. The staff of specially protected natural areas: The program emphasizes the importance of increasing awareness of this group and fruitful relationship with the surrounding communities. The training program will focus on solving conflicts between SPNA and community, their solution ways, participatory management and benefit distribution issues. This target group is directly

connected with the surrounding communities and has all the possibilities to widely disseminate the results of the project and best practice.

The common idea for all target groups is that the humanity can fight not only to mitigate climate changes, as well as to develop effective measures to increase the level of natural and agricultural landscapes adaptation.

### Project area

The project will be implemented in the adjacent communities of "Khosrov Forest" State Reserve and "Dilijan" National Park.

"Khosrov Forest" State Reserve occupies a territory of 23359 ha. Reserve area is isolated from the basic infrastructure and only from south-west it borders densely populated Ararat valley. The area is characterized by unique semidesert, phryganoid, sparse forest 7 mountain-steppe landscape symbioses. Intrazonal wetland ecosystems are also represented in the area of the reserve along the river banks, as well as in vicinities of Mankuq nd Gyolaysor dwellings. 1948 species of vascular plants and 1783 species of animals of which 1500 species of invertebrates and 283 species of vertebrates are preserved in the reserve. "Khosrov Forest" State Reserve was awarded European diploma of protected areas. It is also included in the potential list of Emerald Network sites.

"Dilijan" National Park occupies a territory of 33765 ha. The area is typically covered with forests. Dilijan National Park is a unique site of Armenia's wildlife, which stands out by the wealth of original biodiversity, mesophile woodlands, separate ecosystems of scientific, educational and economic interest, as well as by its patrimonial, environmental, cognitive, curative and recreational assets. 1200 species of vascular plants and 1660 species of animals of which 1431 invertebrates and 229 species of vertebrates are preserved in the area.

"Khosrov Forest" State Reserve and "Dilijan" National Park and their adjacent ecosystems are important migratory routes for the main species registered in the Red Book of Armenia and the involvement of communities in the management of routes will significantly improve the efficiency of species conservation.

#### **Gender issues**

During project concept development phase EPIU relied on the specifics of the work and the level of women's involvement in them.

In All communities women are mainly involved in teaching, health service, agriculture, collection and processing of wild fruits, berries and mushrooms. more than 90 percent of the household work is carried out by women. In this regard, any action that will improve the community's socio-economic, agricultural and natural ecosystem and their accessibility status directly influence the improvement of women's working conditions.

For example:

- 1. The improvement of access conditions to pastures and hay meadows will ease women's movement and processing of livestock products, which will have a positive impact on women's health.
- 2. In public sector the use of energy saving and solar water heating systems will contribute to the improvement of women's working conditions

- 3. Construction of solar dryers will contribute to getting more processed products in short terms thus saving women's working hours, letting them devote more time for their children's education and increase family education.
- 4. Awareness and knowledge level raising will enable women to be more actively involved in decision making and their implementation
- 5. Women endowed with the necessary amount of knowledge have the opportunity to further enrich them and occupy higher positions

Within PFG development it is envisaged to carry out existing gender issue studies, while during PFG implementation- impact assessment, outcome summary and best practice dissemination upon completion.

Improving women's working conditions, knowledge level raising, empowerment of decision-making and implementation, poverty reduction level are in compliance both with the Environmental and Social Policy and Gender Policy of the Fund and the country's sustainable management strategy.

## **Brief description of communities**

## Adjacent communities of "Khosrov Forest" State Reserve

Communit	Number of	Number	of	Arable	Pasture	Hay
у	population	households		lands, ha	s, ha	meadows, ha
Urtsadzor	4600	1000		1200	12000	2000
Garni	7863	1605		782	6458	327
Goght	2058	606		305	3670	8
Total	14521	3211		2287	22128	2335

Urtsadzor community includes 3 rural settlements.

The population is mainly engaged in cattle breeding, plant cultivation and fruit growing. The pressure on "Khosrov Forest" State Reserve is mainly is mainly manifested in the form of illegal grazing, unplanned and irregular gathering of wild fruits and berries.

## Adjacent communities of "Dilijan" National Park

Community	Number of	Number o	f	Arable	Pasture	Hay
	population	households		lands, ha	s, ha	meadows,
						ha
Dilijan	7202	1995		743,06	7209,59	1125,71
Fioletovo	1300	365		25	135	50
Margahovit	4164	1376		440	3830	1800
Semyonovka	290	67		289	1458	275
Total	12956	3803		1497,06	12632,5	3250,71
					9	

Dilijan community includes 6 rural settlements.

The population is mainly engaged in cattle breeding, fruit growing, vegetable growing, beekeeping and plant cultivation.

The pressure on "Dilijan" National Park is mainly manifested in the form of illegal grazing, firewood harvesting, unplanned and irregular gathering of herbs, mushrooms, wild fruits and berries.

Checklist of environmental and social principles Checklist	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	In compliance with the requirements of RA laws on environment	Environmental law requirements are ensured
Access and Equity	Project access will be ensured through mass media, websites of the Ministry of Nature Protection of the RA and EPIU	Adjacent communities of protected areas are in close communication with government agencies in their efforts to conserve ecosystem integrity, illegal use of natural resources reduced, ecotourism and recreational infrastructures undertaken by communities developed
Marginalized and Vulnerable Groups	Population groups, dealing with the use of natural resources	Illegal use of natural resources is reduced or prevented
Human Rights	In the field of use of natural resources human rights are protected by the appropriate laws	Human rights are protected in accordance with the legislation in the field of natural resources, there are no complaints about the violation of human rights

Gender Equality and Women's Empowerment	The principle of equal gender rights are maintained in the field of use of natural resources	Women are involved in the use of natural resources as defined by the law
Core Labour Rights	Labor rights are protected by the Constitution of the RA and Civil Code of the RA are	Labor rights are protected and there are no complaints on the violations of the Constitution and the Civil Code
Indigenous Peoples	Mainly Armenians, minorities of Assyrians and Russians	National discrimination is excluded, everybody enjoy equal rights
Involuntary Resettlement	Project implementation does not provide for resettlement of residents	Project implementation contributed to the prevention of population resettlement
Protection of Natural Habitats	Conservation of biodiversity habitats is in compliance with the requirements of environmental legislation	Habitats stability contributed to the rise of ecosystem adaptation
Conservation of Biological Diversity	Ecosystem biodiversity conservation is in line with the principles of conservation of biodiversity in protected areas	The level of protection of biodiversity, in protected areas increased, the migratory routes of animals outside the protected areas are protected as a result of effective cooperation with communities
Climate Change	Implementation of the program	Ecosystem ecological balance is ensured, adaptation level

	contributes to raising the level of adaptation of ecosystems to climate change	increased
Pollution Prevention and Resource Efficiency	Effective cooperation with the communities for the prevention of pollution of the environment and efficient use of natural resources	Environmental pollution is prevented, and the use of natural resources regulated
Public Health	The stability of ecosystem balance contributed to the improvement of public health	Prevention of environmental pollution has contributed to reducing the amount of heavy metals in soils
Physical and Cultural Heritage	Implementation of the program contributes to the preservation of natural and cultural heritage	Natural heritage (species registered in the Red Book of Armenia, endemic and rare plant and animal species, natural monuments) and cultural heritage (historical and cultural monuments, traditions) are efficiently protected
Lands and Soil Conservation	Lands being ecosystems components are not exposed to degradation as a result of project implementation	Land degradation prevented

## PART III: IMPLEMENTATION ARRANGEMENTS

Six main strategic documents have been developed in Armenia which are directly connected with biodiversity and agrobiodiversity conservation and which relate to the proposed project intervention. These are: Second National Environmental Action Programme of the Republic of Armenia, which includes a number of actions concerning biodiversity conservation (inventory of biodiversity valuable areas, establishment of biodiversity monitoring system and database, assessment of the resources of the most significant flora and fauna species, genetic resources management etc.); Biodiversity Strategy and Action Plan of Armenia, the main goal of the strategy is to ensure conservation, sustainable use and regeneration of the landscapes and biological diversity of the Republic for sustainable human development, National Strategy and Action Plan of the Development of Specially Protected Nature Areas of Armenia (SPNAs), the main objectives of the in-situ conservation of biodiversity have been enlarged and clarified here. The action plan covers 5 chapters: improvement of legal field / legislation, improvement of management system, enlargement of SPNAs network, improvement of financial-technical mechanisms, and improvement of staffing; National Action Programme to Combat Desertification in Armenia, which will address pressures from habitat loss, land use change and degradation, and unsteady water use, reduced. Minimise the rate of loss and degradation of natural habitats. Promote, conserve and restore the main forest ecosystems. Promote, conserve and restore the main wetland ecosystems. Restore the landscapes and their biodiversity degraded due to industrial activity; Community Agroresources Management and Competitive Project (2010-2020), the action plan includes 4 components: community pasture and livestock management system; agricultural advisory and community animal health services; competitive grants program; and, project management and monitoring and evaluation. The project is envisaged to be implemented in 4 Marzes of the Republic (Tavush, Kotayq, Gegharkunik and Ararat); and finally, Development of Specially Protected Nature Areas of Armenia (UNDP-GEF medium-sized project), the objective of the project is to conserve globally important biodiversity of Armenia.

# **Stakeholders**

The major stakeholders of the project include as follows: Ministry of Nature Protection, Ministry of Agriculture and Ministry of territorial administration and development, Local communities - Community-based organizations, Women's Groups, Farmer's Organizations and Groups and Youth Groups and environmental NGOs, as well as domestic business entities.

#### Gender equality issues

The program is directly related to the solution of gender issues in the region. Most of the agricultural and cattle breeding activities is done by women. Women are also extensively involved in fields of medical services, pre-school and school education. Activities addressed to community capacity strengthening will contribute to improve working conditions for women and

increase efficiency which will enable them to spend more time to enhance knowledge and social activities. It is expected to involve women in implementing works that will contribute to the increase of their income, awareness raising and acquisition of new specialties.

It is planned to involve female representatives in the knowledge and awareness raising events. This approach of work organization will significantly improve women's knowledge and awareness level on adaptation measures on ecosystems under climate change and will enable them to be widely involved in other similar projects by the end of the project.

As a result the project we will reach the level that female representatives have sufficient knowledge about the features of ecosystem influence on the quality of life and advantages of sustainable use in the communities, and who can apply the gained knowledge in their future activities.

Female employment will be required by the end of the project as well, as this will open up opportunities to grow new crops, arrange their sale, as well as the sale of processed products. As the protected areas ensure the stability of the biosphere, which contribute to the maintenance of the ecosystem stability, so the insurance of the stability of the adjacent ecosystem will contribute to the stability of the protected areas. The insurance of the balance of ecosystems in the protected and adjacent areas is an important factor to increase the level of the adaption of ecosystem to the climate change. According to this the project aligns with the Results Framework of the Adaptation Fund.

Project Objective(s) <sup>1</sup>	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Communities capacity building under climate change conditions	Number of communities where activities envisaged by the project were implemented	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	4.1. Development sectors' services responsive to evolving needs from changing and variable climate  4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	1. 895, 000
Raising public and protected area stuff awareness and the level of	Number of communities and population who have sustainable knowledge on	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	200000

<sup>&</sup>lt;sup>1</sup> The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

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knowledge under climate change conditions	ecosystem adaptation measures under global climate change	reduction processes at local level	3.2. Modification in targeted population behaviour	
Project Outcome(s)	Project Outcome	Fund	Fund Output Indicator	Grant Amount
Outcome(s)	Indicator(s)	Output		(USD)
Increased adaptation and resilience of natural and agricultural ecosystems under climate change conditions	1.Area of pastures and hay meadows available for the population 2. Livestock forage supply level 3. The level of reduction of electricity use and other types of fuel in public sector 4. Number of households with improved quality of life 5. The level of reduction of community budget expenditures addressed to public sector 6. The level of reduction of anthropogenic pressure on natural and agricultural ecosystems	Output 5: Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability	5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets)	
Increased	Number of communities and their	Output 3: Targeted	3.1.1 No. and type of risk reduction actions or strategies	
potential of rural	population who have	population		

communities and farm enterprises to resist the negative effects of climate change	sustainable knowledge on agricultural and natural landscapes interconnectednes, new methods of agricultural management, on the importance of alternative energy technologies and adaptation of ecosystems under climate change conditions 2. Number of local mass media, environmental NGOs involved in the mitigation processes of climate change adverse effects	groups participating in adaptation and risk reduction awareness activities	introduced at local level  3.1.2 No. of news outlets in the local press and media that have covered the topic	
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# PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government<sup>2</sup> Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

Mr. Artsvik Minasyan, MInister	Date: (11.01.2017)
of Nature Protection of the	
Republic of Armenia	
•	

**B.** Implementing Entity certification Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans ("Second National Environmental Action Programme of the Republic of Armenia, "Biodiversity Strategy and Action Plan of Armenia", "National Strategy and Action Plan of the Development of Specially Protected Nature Areas of Armenia (SPNAs)" "National Action Programme to Combat Desertification in Armenia", "Community Agroresources Management and

<sup>&</sup>lt;sup>26.</sup> Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Competitive Project (2010-2020)", and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Name & Signature Mr. Gevorg Nersisyan

Implementing Entity Coordinator

Date: (11.01.2017) Tel. and email: +37410 651631

info@cep.am

Project Contact Person: Samvel Baloyan

Tel. And Email: +37410 651631, sbaloyan09@rambler.ru



# ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ԲՆԱՊԱՀՊԱՆՈՒԹՅԱՆ ՆԱԽԱՐԱՐՈՒԹՅՈՒՆ

#### ՆԱԽԱՐԱՐ

MINISTRY OF NATURE PROTECTION OF THE REPUBLIC OF ARMENIA

#### MINISTER

МИНИСТЕРСТВО ОХРАНЫ ПРИРОДЫ РЕСПУБЛИКИ АРМЕНИЯ **МИНИСТР** 

0010, р. Երևան, Հանրապետության hր. Կառավարական 3-րդ տուն 3 Government Bldg, Republic Sq, Yerevan, 0010, Armenia 0010, Армения, г.Ереван, Дом правительства, здание N3 t<sub>1</sub>.փпии /E-mail/ эл.почта: min ecology@mnp.am

Web page: www.mnp.am (374 11) 818 501 (374 11) 818 506 № 1/37/10073 «19» « 01 » 2017p.

## Letter of Endorsement by Government

To:

The Adaptation Fund Board

c/o Adaptation Fund Board Secretariat Email: Secretariat@Adaptation-Fund.org

Fax: 202 522 3240/5

Subject: "Endorsement for Sustainable management of adjacent ecosystems of specially protected nature areas of the RA and capacity building in communities".

In my capacity as designated authority for the Adaptation Fund in the Republic of Armenia, I confirm that the above national project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts and risks posed by climate change in the Armenia.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by SA "Environmental project implementation unit" and executed by the Ministry of Nature Protection of the RA.

Sincerely,

Artsvik Minasyan
GEF Political and Operational Focal Point
in the Republic of Armenia

