ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Enhancing resilience of communities to climate change in Shirak Marz leveraging best practices of the pilot project implemented in Artik community

Country: Republic of Armenia

Thematic Focal Area:

Type of Implementing Entity: National Implementing Entity

Implementing Entity: **"**Environmental Project Implementation Unit" State Agency

Executing Entities: **"**Environmental Project Implementation Unit" State Agency

Amount of Financing Requested: **4.472.630** (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 45,000 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

Stage of Submission:

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Country overview

Armenia is a land-locked country within the Caucasus region between Europe and Asia. The majority of the country is at high altitude (greater than 1,000 meters above sea-level), including a freshwater Lake Sevan, with a surface area of 1,279 km^2 and the Seven River Basin with a surface area of 4,721 km^2, spans approximately one sixth of the nation's total land area. As of 2022, Armenia's population was estimated at 2.78 million people[1] and its GDP at $ 19.5 billion[2]. Around one third of the nation's population lives in its capital city, Yerevan[3].

Over the past decade, Armenia has transitioned from an industry-dominated to a service-dominated economy. As of 2016, the service sector constituted 48.8% of the labor force. Agriculture remains a major employer with a labor market share of 35.3% and there remains a relatively high rate of unemployment (18%) as well as net out-migration. GDP is distributed less evenly than employment, with around 52,8% originating in the service sector, 26,64% in the industry and only 11,34% in agriculture. Poverty persists, affecting around 26,5% (2021 data) of the population based on the national poverty line[4].

Climate baseline

Overview

Armenia's climate can be described as highland continental, with large variation between summer highs (June to August) and winter lows (December to February). The country also experiences large climatic contrasts because of its intricate terrain, and the climates range from arid to sub-tropical and to cold, high mountains. Summer highs in Armenia's capital Yerevan average around 30°C−33°C while the average in winter is 1°C−3°C. The more mountainous regions experience lower average temperatures and prolonged periods of snow cover. The average annual precipitation is low at 526 mm. Precipitation intensity is greater in Armenia's high-altitude regions with May and June the wettest months. For Armenia, altitude is the strongest controlling factor determining the spatial distribution of temperatures and precipitation in Armenia. Sub-zero average temperatures are common in Armenia's mountain ranges while its highest average temperatures are experienced in the relatively low-lying western plains. Similarly, Armenia's highest peaks may receive up to 1,000 mm of annual precipitation while precipitation can be as low as 200 mm in the western plains.

Due to the sharply intersected relief and the development of the slope processes,

[1] World Bank data portal - Armenia
[2] World Bank data portal - Armenia
[3] Republic of Armenia – Fourth National Communication on Climate Change to the UNFCCC
[4] "Armenia – Country Risk Climate Profile", joint publication by World Bank and Asian Development Bank, 2021

Armenia is characterized by active external processes. High frequency and magnitude of hazardous hydrometeorological phenomena (HHP) are characteristic for Armenia, which trigger droughts, landslides, mudslides, forest fires etc. and inflict significant losses to the population and the economy[5].

Key trends

Temperature - Armenia's NC4 reports that it experienced an average temperature rise of 1.23°C between 1929–2016. This historical rise in temperatures has resulted in the rapid shrinking of the glaciers in Armenia's mountain regions, with spatial extents retreating at around 8 m per year. Trends suggest climate variability is increasing and in 2018, Yerevan experienced a new record July temperature, reaching 42°C.

Precipitation - Armenia's NC4 reported a 10% reduction in average annual precipitation volume was documented over the period 1935–2012. The spatial distribution of precipitation changes is irregular: the northeast and central regions have become more arid. However, precipitation has increased in the southern and northwestern regions and in the western region of the lake Sevan basin. Additionally, the number of days with heavy rainfall and hailstorms has increased.

Climate future

Temperature

The model ensemble's[6] estimate of average warming in Armenia under the highest emission pathway is an average temperature increase of 2.8°C by the 2050s and 5.8°C by the 2090s. Ensemble estimates of warming under the lowest emission pathway also present an average temperature increase of 1.2°C by the 2050s and maintain through the end of the century. Both of these temperature increases represent greater rates of increase than the global average. By the 2090s, temperatures are projected to have increased around 35% to 40% higher than the global average. Under all scenarios, except for the lowest emission pathway, the number of summer days is expected to increase, and the number of frost and ice days are expected to fall dramatically by the end of the century.

In the case of Armenia, the rate of warming in maximum temperatures, is 5.8°C by the 2090s, which is notably faster than the warming in monthly average temperature. This points towards an increase in the intensity of temperature extremes and is among the some of the largest margins of warming projected anywhere on Earth. The seasonality of future temperature changes holds some uncertainty on lower emissions pathways. However, projected warming is strongest in the summer months from June to September. The months of July, August, and September are projected to see around 50% faster warming than the winter months from November to April under the highest emissions pathway.

Precipitations

[5] National Action Program of Adaptation to Climate Change and the List of Measures for 2021-2025

[6] Climate projections referred are derived from datasets available through the WB's Climate Change Knowledge Portal. These datasets are processed outputs of simulations performed by multiple General Circulation Models (GCM).

While considerable uncertainty surrounds long-term projections in regional precipitation trends, global trends are evident. The intensity of sub-daily extreme rainfall events appears to be increasing with temperature, a finding supported by evidence from different regions of Asia. However, as this phenomenon is highly dependent on local geographical contexts further research is required to constrain its impact in Armenia. For Armenia, additional uncertainty remains around future changes in average annual precipitation, as well as for changes in seasons. Model ensemble estimates are not statistically significant across all emissions pathways. However, the trend indicated, which is consistent with historical climate behavior and most models, is towards a decline in average monthly precipitation. Under all emissions pathways, an increase in the precipitation associated with a maximum 5-day rainfall event is expected more predominantly in the northern and eastern areas of Armenia. Under all emissions pathways, precipitation reductions are projected in the western regions, and under lower emissions pathways reductions are also expected in the arid northern regions. These changes match global trends, which suggests the intensity of sub-daily extreme rainfall will increase as temperatures increase, a finding supported by evidence from different regions of Asia.

Climate related natural hazards

Armenia faces significant disaster risk levels and is ranked 101 out of 191 countries by the 2019 Inform Risk Index. This ranking is driven strongly by the exposure component of risk. Armenia has high exposure to natural hazards, including, riverine, flash, and coastal, and very high exposure to tropical cyclones and their associated risks. Drought exposure is also significant. Disaster risk in Armenia is elevated due to its moderate levels of social vulnerability and the country's decent coping capacity. The risks of disasters resulting from these drivers are likely to increase as the severity and frequency of extreme climate event increases. In recent decades the annual number of events designated as hazardous hydro-meteorological phenomena (such as hurricanes, snowstorms, heat waves) has increased.

Heatwaves: Armenia regularly experiences high maximum temperatures, with an average monthly maximum of around 13.2°C and an average August maximum of 27.5°C. The current annual probability of a heat wave (defined as a period of 3 or more days where the daily temperature is above the long-term 95th percentile of daily mean temperature) is around 3%. The model ensemble projects that the annual probability of a heatwave could increase from 5% to 18% (depending on emission scenarios) by the end of the century. The country is also projected to experience a significant increase in the number of very hot days (Tmax > 35°C). However, these increases primarily reflect the continual rise in temperatures against the model baseline period of 1986–2005.

Droughts: two primary types of droughts may affect Armenia, meteorological (usually associated with a precipitation deficit) and hydrological (usually associated with a deficit in surface and subsurface water flow, potentially originating in the region's wider river basins). When low hydrological flows also coincide with imperfect crop choices and land management practices, agricultural drought can also result. At present, Armenia faces a significant annual probability of severe meteorological drought, as defined by a standardized precipitation evaporation index of less than 2.

The 2001 drought highlighted the vulnerability of the rural poor to drought. Agencies working in the region reported more than 25,000 poor households affected, the majority of whom were dependent on local food production which was severely damaged by the drought. The model ensemble projects a dramatic increase in the annual probability of drought increasing from 20% to over 80% (depending on emission scenarios) by the 2090s. Global overview of changes in drought conditions under different warming scenarios supports extreme projections, suggesting that the West Asia region could experience a considerable increase in the frequency of extreme drought. Under 1.5°C of warming what is currently a 1-in-100-year event may return every 20 years, and under 2°C of warming such an event may recur every 10 years or less[7].

Extreme Precipitation, Flood, and Landslide: heavy rainfall events are known to trigger landslides and floods in rural areas of Armenia, often affecting poorer and more isolated rural communities. River levels in Armenia are particularly variable, and high flows often hit communities without forewarning, resulting in flood disasters. Flooding can result in damage to subsistence agriculture and increase the incidence of poverty and health issues. Floods also represent a risk to national economic productivity particularly when affecting the capital city, Yerevan. While most climate models project a small increase in the intensity of extreme precipitation events, uncertainty remains in precipitation projections and model ensemble estimates. The general shift in the seasonality of precipitation away from the summer months, combined with the projected loss of many of Armenia's glaciers will likely intensify extreme events and highlight a need for disaster risk reduction measures. However, research and development in the climate modelling arena is needed to support decision makers and planning efforts, specifically more reliable downscaled modelling and additional work will be needed in order to better understand and map rural exposure and vulnerability.

Climate change impacts

Natural Resources

Water: uncertainty remains around the precise trajectory of future change in the availability of water resources in Armenia and river flows are expected to reduce dramatically. While vulnerability for basin and watersheds vary, under a "worst-case scenario", average decrease in river flow is estimated at 39% by the end of the century[8]. These changes would have a significant impact on the levels of Armenia's lakes and reservoirs, with implication for society potentially coming from the resulting damage to fish stocks and decline in water levels and water quality. However, caution should be applied as these projections are derived from a single climate scenario; other scenarios provide less consistent trends. More recent analysis of runoff from Caucasus Glaciers suggests a significant increase in the short-term (up to 2022) as melting intensifies, but near total loss of glaciers and glacial meltwater towards the end of the 21st century.

A likely impact of the loss of Armenia's mountain glaciers is an increase in variability of water flows as glaciers typically act to smooth runoff over the year. Water scarcity

[7] Global Changes in Drought Conditions Under Different Levels of Warming, Naumann, G., Alfieri, L., Wyser, K., Mentaschi, L., Betts, R. A., Carrao, H., . . . Feyen, L. (2018).
[8] Republic of Armenia – Fourth National Communication on Climate Change to the UNFCCC

towards the end of summer (August, September) is likely to increase. Armenia has already experienced declines in annual precipitation and desertification has been documented around the nation, including in the Ararat Valley, an important agricultural production area[9]. More information is needed to understand the potential threat of a broader restructuring of the nation's ecosystems, particularly whether tipping points threaten the viability of current agricultural operations.

Soil and Land Cover: a key route through which climate change may lead to soil and land degradation is through its impact on soil moisture. With very large increases in the frequency and intensity of drought projected over Armenia, the potential for declines in soil quality are significant. The Caucasus region is among many regions where an expansion of the arid and semi-arid area is projected, with the affected area growing rapidly over the 21st century under higher emissions pathways. Such changes will reduce ecosystem productivity resulting in species range shifts, and potential loss of biodiversity.

Linked to issues of land degradation and drought are potential changes to Armenia's forest cover, Armenia's NC4 estimates a potential loss of 14,000–17,500 ha (around 3%–4%) by 2030 as a result of changes to ecosystems and growing conditions, as well as increased frequency of forest fire, pest and disease outbreaks, and invasive species. Armenia has already begun to enact adaptation and restoration plans to reduce deforestation through its National Forest Policy and Strategy, improved wildfire management policies and specific area action plans such as the City of Yerevan 5-Year Plan (2019–2023) to restore the city's buffer forest layer by 40 hectares. A general trend of species range shifts towards higher altitudes is expected and conversion of lower altitude land cover to arid forest types, steppe, and semi-desert. Armenia's National Strategy and Action Program to Combat Desertification was ratified in 2015 to increasing the effectiveness of land management, raising public awareness on desertification issues and their solutions, as well as international cooperation[10].

Regional context

Shirak province (marz) administrative district where the project is envisaged to be implemented is located in the north-west of the Republic of Armenia bordering Turkey in the west and Georgia in the north. "Arpi lake" national park is located in this marz. The climate of the marz is mountainous with cool summers and severe and long winters. Annual precipitation is 500-600 mm. The absolute minimum temperature in Armenia was recorded in this area which was -46˚C.

Shirak marz in known for its reserves of tufa, pumice, and limestone mines, especially Artik region which is located in the southern part of the marz. The region is located on the volcanic plateau and foothills and is known for its favorable conditions for grain crop and livestock development. For years exploited stone pits have had negative impact on the environment. Previously, more than 60% of the total volume of construction stone products of the country was produced in Artik and its adjacent communities. Many mines were closed due to reduction of construction stone consumption volumes; however, no conservation and reclamation works of these closed mines have been carried out thus

[9] Republic of Armenia – Fourth National Communication on Climate Change to the UNFCCC
[10] National Strategy and Action Program to Combat Desertification in the Republic of Armenia

causing many environmental problems. Hundreds of hectares of agricultural and natural landscapes were degraded and lost its natural way of restoration due to the exploitation of mines. Dust through strong winds and solid remnants through snowmelt and rainfall spread over great distances polluting natural agro landscapes. As a result, there is a decrease in the yield of agricultural crops, crop quality, and adaptation level of natural landscapes to climate change.

Another problem is increasing the frequency of severe floods in the last 20 years, which is due to the spring temperatures that are not typical for the region. If until 1980s the air temperature reached 20-250C within one and a half months, now it is rising quickly and unevenly. As a result, this accelerates snowmelt causing the emergence of strong floods. The negative impact of such climate change is also lies in the fact that industrial waste of the mines is dumped into two storm canals passing through Artik city territory significantly reducing their capacity. During intense spring snow melt and heavy rains, flood waters overflow residential and public buildings, lands, gardens, streets, and yards. This phenomenon is repeated every year. Flood that occurred in June 2016 caused more than 210,000 USD damage to Artik city infrastructures and population. The elimination of the consequences of such floods cannot be done only by means of the city budget. The budget of the city and adjacent communities does not allow implementing procedures to eliminate negative impact of repeated floods and other issues created by the closed stone pits to the environment.

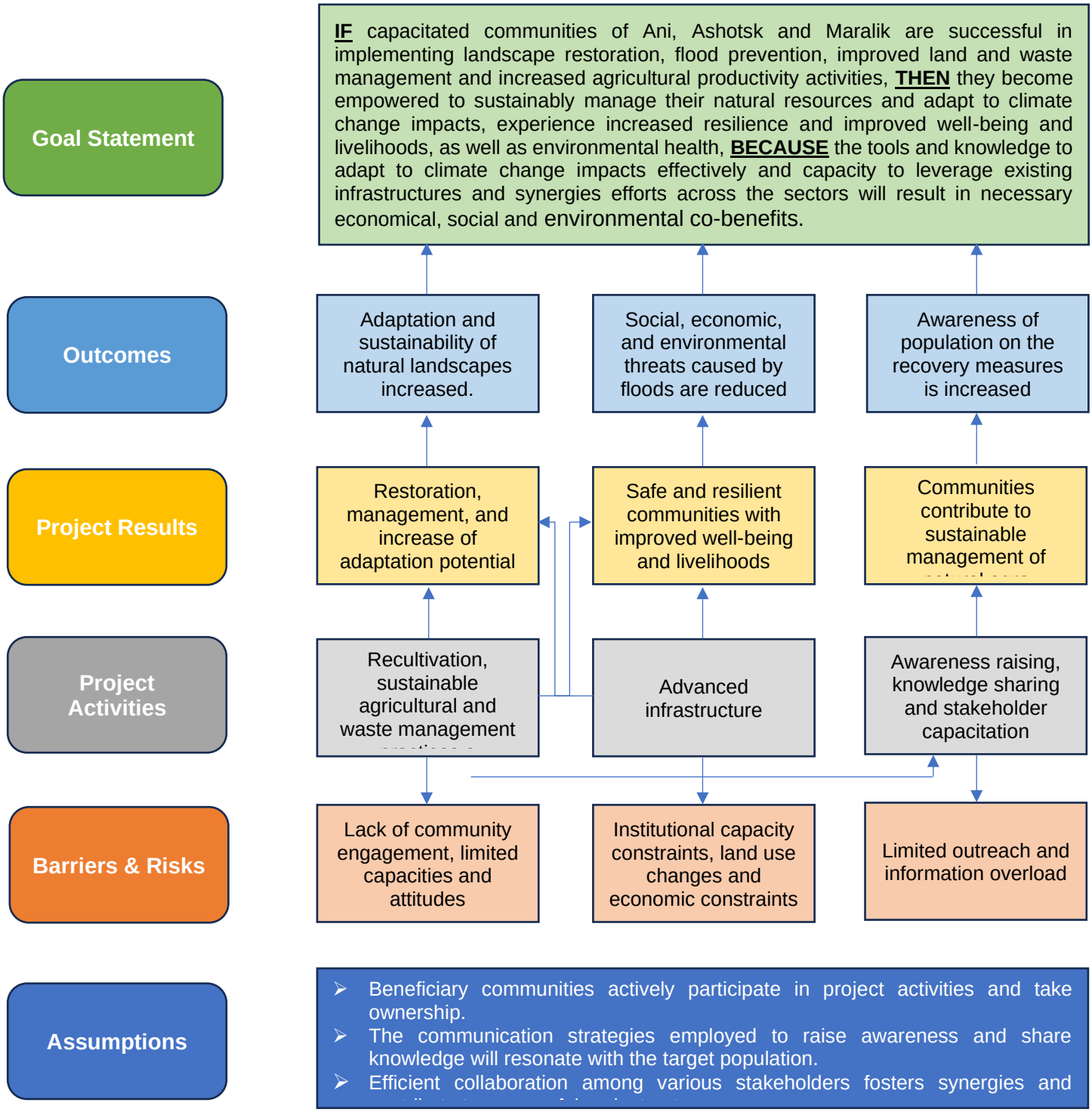
Project/Programme Objectives:

List the main objectives of the project/programme.

The objectives of proposed Project are the following:

- Increase adaptation level of natural and agricultural landscapes;
- Prevent floods and eliminate their consequences,
- Restore the natural landscape of the area affected by climate change and anthropogenic impacts, at the same time to demonstrate the possibilities of adaptation level increase of degraded natural landscapes,
- Improve the adaptation potential of community producers, institutions, and other relevant stakeholders regarding climate change under current climate change conditions;
- Replicate and scaleup good practices achieved during implementation of the pilot project “Artik city closed stone pit waste and flood management pilot project”;

TOC Diagram of the Project:



TOC description of the Project:

At the heart of this project is a transformative vision to enhance the resilience and well-being of vulnerable communities in the Ani, Ashotsk, and Maralik regions of Armenia, in the face of increasing climate change impacts. The Project's Theory of Change (TOC)

outlines a strategic pathway that connects its interventions to the desired outcomes, leveraging a holistic approach that integrates restoration, climate-resilient agriculture, flood prevention, and awareness-building initiatives.

The "if-then-because" logic driving the TOC envisions a series of interrelated steps that culminate in lasting change. **IF** capacitated communities of Ani, Ashotsk and Maralik are successful in implementing landscape restoration, flood prevention, improved land and waste management and increased agricultural productivity activities, **THEN** they become empowered to sustainably manage their natural resources and adapt to climate change impacts, experience increased resilience and improved well-being and livelihoods, as well as environmental health, **BECAUSE** the tools and knowledge to adapt to climate change impacts effectively and capacity to leverage existing infrastructures and synergies efforts across the sectors will result in necessary economical, social and environmental co-benefits.

The Project recognizes the central role of communities in this process. By engaging local communities and enhancing their capacity through tailored interventions, the Project aims to empower them to sustainably manage their natural resources. This engagement, combined with targeted knowledge-sharing, will equip communities with the tools to adapt to climate change impacts effectively. If communities are actively involved and empowered, then they will contribute to enhanced well-being because they will diversify their livelihoods, mitigate risks, and secure essential resources.

Furthermore, the project's alignment with National Adaptation Plan, Sectorial Adaptation Plans (for water and agriculture sectors) and Marz Adaptation Plans and their focus on fostering collaboration among stakeholders are integral to achieving sustainable outcomes. The synergy between Project activities and broader policies will lead to cohesive resource allocation and increased project impact. If the Project leverages existing structures and promotes collaboration, then it will contribute to the achievement of broader development goals, amplifying the benefits of its interventions.

The implementation of concrete measures, including improved land management practices, increased agricultural productivity, enhanced waste management, and reduced flood risks, will result in direct positive changes for communities. This transformation will be visible through increased crop yields, better health outcomes, and reduced property damage. If communities experience these improvements, then their social well-being, livelihoods, and environmental health will significantly benefit, enhancing the sustainability of their ecosystems.

As the project journey progresses, its aim is not just to generate short-term impacts but to lay the groundwork for long-term resilience. Through effective interventions, if the project establishes self-sustaining ecosystems of resilience through effective interventions, then communities will not only adapt but thrive economically, socially, and environmentally in the face of evolving conditions. The key "because" factor lies in the strengthened local capacities, improved resource management, and adaptive practices that communities will have cultivated, creating a legacy of sustainability.

The TOC underscores the importance of understanding and addressing potential risks and barriers that might impede the desired outcomes. Through community engagement,

adaptive management, and strategic planning, the project aims to mitigate these challenges to ensure its success.

In summary, the Theory of Change for this project paints a compelling picture of how concerted efforts in restoration, climate-resilient agriculture, flood prevention, and awareness-building will converge to build resilient communities. This journey involves empowering communities, fostering collaboration, aligning with national strategies, and creating lasting change that goes beyond adaptation to create thriving ecosystems of resilience. Through these steps, the project seeks to foster a future where vulnerable communities in Armenia are not just surviving but thriving in the face of a changing climate.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions / projects.

N	Project/Program Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1.	**Component 1:** Restoration, management, and increase of adaptation potential of natural landscapes of the area affected by climate change and anthropogenic factors.	Output 1.1 Soil cover of mine adjacent to Maralik community is recultivated *(10 ha of forest cover will be created)*; Output 1.2 Forest grove established with support of previous project is taken care of and became sustainable; Output 1.3 Sowing areas of perennial plants are created reducing rangeland degradation in Ani, Ashotsk and	**Outcome 1:** Adaptation and sustainability of natural landscapes of the area affected by climate change and anthropogenic factors increased.	**466.320** **180.000** **450.000**

		Maralik communities *(900 ha of perennial sowing area established)*; <u>Output 1.4</u> Crop yield and crop quality of the adjacent agro-landscapes is increased in Ani, Ashotsk and Maralik communities *(45 ha hay meadows and arable lands 570 ha pastures)*; <u>Output 1.5</u> Waste collection practices are introduced in Ani, Ashotsk and Maralik communities *(garbage tracks, bins and collection) and* pilot program for integrated management of household waste in the village of Vardakar is implemented; <u>Output 1.6</u> Mapping of all degraded lands in Shirak region is implemented; <u>Output 1.7</u> Infrastructure for piloting high value agriculture models (including new types of climate resilient crops) at 100 ha of degraded land is implemented with the commercial lending from private financier engaged (construction of the facilities); <u>Output 1.7</u> Demonstration sites for intensive orchards in all		**300.000** **220.000** **25.000** **250.000**

		beneficiary communities are constructed (10 ha in each community); <u>Output 1.8</u> Architecture and design work for all components are carried out; <u>Output 1.9</u> Index insurance piloted in beneficiary municipalities		**900.000** **70.000** **100,000**
Subtotal for the Component 1.				**2.961.320**
2.	**<u>Component 2:</u>** Prevention and management of floods	<u>Output 2.1</u> Infrastructure constructed during the pilot project is maintained <u>Output 2.1</u> Road infrastructure (two small bridges and renovation of existing road) is advanced to divert the heavy-duty vehicles away from the adjacent to the mine communities;	**<u>Outcome 2:</u>** Social, economic, and environmental threats caused by floods as a result of climate change is reduced	**800,000**
Subtotal for the Component 2.				**800.000**
3.	**<u>Component 3:</u>** Raising awareness and knowledge level of population for the management of stone pit wastes and floods	<u>Output 3.1</u> The level of knowledge on effective recovery methods of degraded natural and agro landscapes will be increased <u>Output 3.2</u> The knowledge level of the population on natural and agro landscape adaptation to climate change will be increased	**<u>Outcome 3:</u>** Raising awareness and knowledge level of population on the recovery of agro landscapes and flood risk reduction	**300,000**

		Output 3.3 Increasing of the knowledge level of the population on the occurrence and prevention possibilities of floods Output 3.4 Promoting the importance of the sustainable thinking related to the landscape adaptation to climate change in communities Output 3.5 The involvement of local media and environmental NGOs in the process of mitigating the negative effects of climate change will be increased		
Subtotal for the Component 3.				**300.000**
Total: Project Components				**4.061.320**
	Project/Programme Execution cost			60.920
	Total Project/Programme Cost			4.122.240
	Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			350.390
	Amount of Financing Requested			**4.472.630**

Projected Calendar:

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

Milestones	Expected Dates
Start of Project/Programme Implementation	01 September 2024
Mid-term Review (if planned)	01 September 2026

Project/Programme Closing	01 September 2028
Terminal Evaluation	10 December 2028

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The project will improve resilience of highly exposed communities of Shirak region (Artik, Ani and Ashotsk municipalities) of Armenia to hydrometeorological threats that are increasing in frequency and intensity as a result of climate change.

Component 1:

Restoration, management, and increase of adaptation potential of natural landscapes of the area affected by climate change and anthropogenic factors.

This pivotal component of the project is dedicated to restoring, managing, and increasing the adaptation potential of the natural landscapes in the Ani, Ashotsk, and Maralik regions, which have been impacted by the dual forces of climate change and anthropogenic activities. The component encompasses a diverse array of activities, all working in harmony to rejuvenate ecosystems, strengthen their capacity to withstand climate stressors, and empower local communities.

Through dedicated efforts, the project will recultivate soil covers in areas adjacent to communities, creating 10 hectares of new forest cover. This act of reforestation is not just an environmental endeavor but a means to build resilience against climatic changes. Additionally, the establishment and sustainable management of a forest grove, supported by previous initiatives, will be nurtured to fruition, providing a lasting resource for communities.

The project extends its restoration focus beyond forests to include the creation of sowing areas for perennial plants. Covering 900 hectares in communities such as Ani, Ashotsk, and Maralik, this initiative aims to combat rangeland degradation, fostering adaptable agricultural practices that thrive amidst climate challenges.

Agricultural productivity will be further enhanced through the establishment of 45 hectares of hay meadows and 570 hectares of pastures. This effort directly contributes to increased crop yields and improved crop quality, ensuring both food security and economic stability for the beneficiary communities.

The project takes a comprehensive approach to waste management as well, introducing waste collection practices in communities and piloting integrated waste management solutions in Vardakar village. By addressing waste, the project safeguards both environmental health and community well-being.

Furthermore, the creation of demonstration sites for intensive orchards in beneficiary communities adds a practical dimension to the component. These orchards showcase the potential for sustainable agricultural practices, contributing to the overall goal of enhanced

adaptation potential.

In alignment with the project's broader aims, financial support from private financiers is leveraged to implement high-value agriculture models across 100 hectares of degraded land. This not only diversifies local livelihoods but also injects economic resilience into the community.

Lastly, the architectural and design groundwork for all components is meticulously carried out, ensuring a cohesive and effective implementation. The piloting of index insurance in beneficiary municipalities adds an innovative dimension, further enhancing the resilience of communities against climate-induced challenges.

Outputs 1.1 -1.9

- Soil cover of mine adjacent to Maralik community is recultivated *(10 ha of forest cover will be created)*;
- Forest grove established with support of previous project is taken care of and became sustainable;
- Sowing areas of perennial plants are created reducing rangeland degradation in Ani, Ashotsk and Maralik communities *(900 ha of perennial sowing area established)*;
- Crop yield and crop quality of the adjacent agro-landscapes is increased in Ani, Ashotsk and Maralik communities *(45 ha hay meadows and arable lands 570 ha pastures)*;
- Waste collection practices are introduced in Ani, Ashotsk and Maralik communities *(garbage tracks, bins and collection) and* pilot program for integrated management of household waste in the village of Vardakar is implemented;
- Mapping of all degraded lands in Shirak region is implemented;
- Infrastructure for piloting high value agriculture models (including new types of climate resilient crops) at 100 ha of degraded land is implemented with the commercial lending from private financier engaged (construction of the facilities);
- Demonstration sites for intensive orchards in all beneficiary communities are constructed (10 ha in each community);
- Architecture and design work for all components are carried out;
- Index insurance piloted in beneficiary municipalities

Component 2:

Prevention and management of floods.

At the heart of this project's holistic approach lies Component 2, which focuses on the essential task of preventing and effectively managing floods in the vulnerable areas of the Ani, Ashotsk, and Maralik regions. This component recognizes the pressing need to mitigate the social, economic, and environmental threats posed by floods due to climate change, ensuring the safety and resilience of local communities.

Central to this component is the maintenance of previously constructed infrastructure,

ensuring that the flood prevention measures initiated during the pilot phase continue to function effectively. These measures are a testament to the project's commitment to creating lasting change.

In a strategic move to divert heavy-duty vehicles away from flood-prone areas, the component advances road infrastructure. This enhancement not only safeguards communities but also fosters sustainable development by preserving vital roadways.

The envisioned outcome of this component is a reduction in the multifaceted threats posed by floods. Socially, communities will experience improved safety and reduced vulnerabilities, while economic stability will be bolstered as a result of safeguarded infrastructure and livelihoods. From an environmental perspective, the project aims to minimize the environmental damage caused by floods, ensuring the health of ecosystems.

By proactively addressing the flood-related challenges through carefully designed infrastructure and preventive measures, this component aligns seamlessly with the broader project goal of building resilient communities. Through the synergy of effective flood management and innovative road infrastructure improvements, Component 2 serves as a cornerstone of the project's commitment to enhancing community well-being and environmental sustainability.

Outputs 2.1 – 2.2

- Infrastructure constructed during the pilot project is maintained
- Road infrastructure (two small bridges and renovation of existing road) is advanced to divert the heavy-duty vehicles away from the adjacent to the mine communities;

Component 3:

Raising awareness and knowledge level of population for the management of stone pit wastes and floods.

Aiming to empower communities with the information and understanding needed to navigate the challenges of managing stone pit wastes and floods, Component 3 plays a crucial role in promoting informed decision-making and fostering sustainable practices.

Central to this component is the goal of increasing the awareness and knowledge levels of the local population. Through strategic efforts, the project seeks to elevate understanding of effective recovery methods for degraded natural and agro landscapes. By equipping communities with insights into the significance of adapting to climate change impacts, the project aims to build a foundation for long-term resilience.

The dissemination of information about the occurrence and prevention of floods is a pivotal aspect of this component. By educating communities about flood risks and mitigation strategies, the project seeks to empower them to make informed choices that enhance their safety and preparedness.

In parallel, the component strives to promote the importance of sustainable thinking related to landscape adaptation to climate change. Through engaging educational campaigns, it aims to instill a mindset of stewardship and proactive engagement in communities.

Crucially, local media and environmental non-governmental organizations (NGOs) are invited to join the endeavor, amplifying the outreach and effectiveness of awareness campaigns. Their involvement is instrumental in ensuring that the project's messages resonate widely.

The overarching goal of Component 3 is to raise the awareness and knowledge levels of the population. This outcome translates into increased community engagement, the adoption of climate-resilient practices, and the enhancement of local adaptive capacity. By enhancing awareness about the management of stone pit wastes and floods, the project contributes to the overall well-being of communities, fortifying them against environmental challenges and fostering a sustainable future.

Outputs 3.1 -3.5

- The level of knowledge on effective recovery methods of degraded natural and agro landscapes will be increased;
- The knowledge level of the population on natural and agro landscape adaptation to climate change will be increased;
- Increasing of the knowledge level of the population on the occurrence and prevention possibilities of floods;
- Promoting the importance of the sustainable thinking related to the landscape adaptation to climate change in communities;
- The involvement of local media and environmental NGOs in the process of mitigating the negative effects of climate change will be increased;

Operational arrangements:

To ensure effective project implementation, a robust governance structure will be established, comprising key stakeholders and dedicated entities responsible for decision-making, coordination, and oversight. This structure is designed to promote transparency, accountability, and the successful execution of project activities. The governance structure includes:

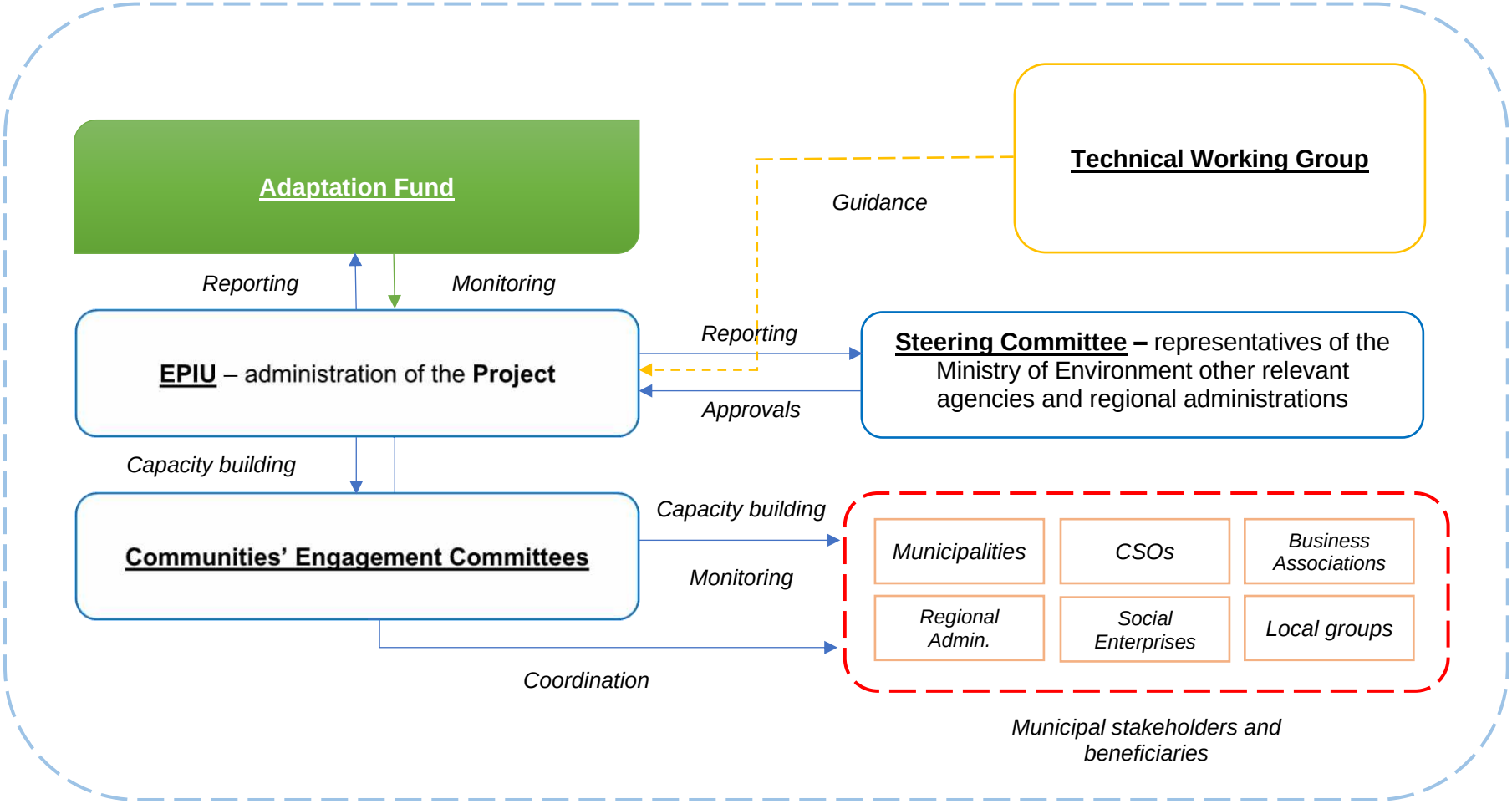
1. **Project Steering Committee (PSC):** The Project Steering Committee will serve as the highest decision-making body, providing strategic guidance, approving major project decisions, and ensuring alignment with national priorities. The committee will include representatives from relevant government ministries, project partners, community representatives, and the implementing entity.
2. **Project Advisory Committee (PAC)** will be established to provide valuable insights, guidance, and recommendations throughout the project's lifecycle. Comprised of key stakeholders representing a range of sectors and interests, the PAC will play a pivotal

role in enhancing the project's strategic direction, ensuring alignment with broader goals, and optimizing outcomes.

3. **Project Management Unit (PMU):** The EPIU will serve the function of the Project Management Unit and carry out day-to-day management and execution of project activities. EPIU Director will assign technical experts, project managers, and administrative staff overseeing various components. The EPIU will report to the Project Steering Committee and ensure that activities are implemented according to the approved work plan.
4. **Technical Working Groups (TWGs):** Where necessary, Technical Working Groups will be formed to provide specialized expertise and guidance in specific areas, such as restoration, agriculture, flood management, and awareness campaigns. These groups will comprise experts from relevant fields, government agencies, NGOs, and academia, collaborating closely with the PMU.
5. **Community Engagement Committee:** At the communities' level, engagement committee will be established to facilitate local participation, ownership, and decision-making. This committee will ensure that community voices are heard, priorities are addressed, and project benefits reach the most vulnerable.
6. **Gender and Social Inclusion Focal Points:** Gender and social inclusion focal points will be designated (from EPIU responsible staff members) to mainstream gender considerations and promote social equity throughout the project. They will ensure that project interventions are responsive to the needs and priorities of all community members.

Through this governance structure, the project will foster collaboration, streamline communication, ensure compliance with policies and regulations, and facilitate effective resource allocation. By involving diverse stakeholders, technical experts, and community representatives, the governance structure will contribute to the project's success in enhancing resilience, promoting sustainable development, and empowering vulnerable communities.

Organigram of the Project implementation:



B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Economic Benefits:

- Output 1.1, 1.2, and 1.3 focus on the restoration and management of natural landscapes, including afforestation and sowing areas of perennial plants. This will lead to increased productivity and economic opportunities in agriculture and forestry sectors, benefiting local farmers and communities economically.
- Output 1.4 aims to increase crop yield and crop quality, leading to improved livelihoods for farmers and higher income generation.
- Output 1.7 focuses on piloting high-value agriculture models and climate-resilient crops. This can lead to the development of new markets and agricultural practices, creating economic opportunities in the agricultural sector.
- Output 1.9, the pilot of index insurance, can help farmers manage risks and reduce economic losses due to climate-related events.

Social Benefits:

- Output 1.5 introduces waste collection practices in communities, promoting better sanitation and reducing health hazards. The implementation of integrated waste management in the beneficiary municipalities will improve the living conditions of its residents.
- Output 2.1 aims to prevent and manage floods, reducing social disruptions, displacement, and loss of life and property caused by climate-related disasters.
- Output 3.1 to 3.5 in Component 3 focus on raising awareness and knowledge levels of the population, empowering communities to make informed decisions about landscape adaptation and disaster risk reduction. This awareness can lead to more resilient communities that can better cope with the impact of climate change.

Environmental Benefits:

- Output 1.1, 1.2, and 1.3 focus on restoring and recultivating degraded lands and creating forest groves. These efforts will enhance biodiversity, ecosystem services, and carbon sequestration, contributing to overall environmental health.
- Output 1.4 aims to increase crop yield and quality sustainably, reducing pressure on natural habitats and promoting sustainable agricultural practices.
- Output 2.1 focuses on flood prevention and management, which can reduce erosion, protect natural habitats, and preserve valuable ecosystems.

- Output 3.1 and 3.2 in Component 3 emphasize the recovery of agro landscapes and adaptation to climate change, which will lead to more sustainable land management practices.

Consideration for Vulnerable Communities and Groups:

- The project specifically targets vulnerable communities, including Ani, Ashotsk, and Maralik, which may be more affected by climate change impacts due to their geographical location or socioeconomic status.
- Output 1.6, mapping all degraded lands in Shirak region, helps identify areas where vulnerable communities are most impacted, ensuring targeted interventions.
- Output 1.5 introduces waste collection practices in the mentioned communities, which can alleviate environmental and health risks for vulnerable groups living in those areas.
- Output 3.5 aims to involve local media and environmental NGOs in the process of mitigating climate change effects, promoting inclusivity and giving a voice to vulnerable communities.

Gender Considerations:

The project aims to integrate gender considerations to ensure the equitable distribution of benefits and opportunities among men and women. While the table does not explicitly mention gender-sensitive activities, the project can adopt the following approaches to address gender considerations:

- Conducting a gender analysis to identify the specific needs and roles of women and men in the targeted communities.
- Ensuring women's participation and representation in decision-making processes related to project implementation and management.
- Designing training and capacity-building programs that are accessible and beneficial to both men and women.
- Encouraging the establishment of women's self-help groups or cooperatives to enhance their economic and social empowerment.
- Promoting gender-sensitive land-use planning to ensure that both men and women benefit from sustainable land management practices.

Avoiding or Mitigating Negative Impacts:

The project can take several measures to avoid or mitigate negative impacts on the environment and local communities:

- Conducting thorough environmental and social impact assessments to identify potential risks and negative consequences before project implementation.
- Implementing measures to minimize soil erosion and water pollution resulting from land restoration activities (e.g., afforestation and sowing areas).
- Ensuring proper waste management practices are in place to prevent adverse effects on the environment and human health.

- Engaging with local communities and stakeholders to address their concerns and seek their input during the project planning and implementation stages.
- Establishing monitoring and evaluation systems to track the project's impacts and make necessary adjustments to mitigate negative effects.

Overall, the project's focus on landscape restoration, flood prevention, and awareness-raising can contribute to sustainable development, improved livelihoods, and enhanced resilience for vulnerable communities, including vulnerable groups within those communities. The integration of gender considerations will further ensure equitable benefits and opportunities for men and women.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The detailed cost-benefit analysis will be carried out during the Full Proposal preparation stage to compare the costs and outcomes of different projects or interventions. In the context of the proposed Project, the cost-effectiveness will be evaluated based on the following key aspects:

- **Project Scale and Scope:** The overall budget and scope of the project play a significant role in determining its cost-effectiveness. A well-planned and appropriately sized project that addresses the most critical vulnerabilities in the regions can be more cost-effective than larger, unfocused initiatives;
- **Prioritization of Vulnerable Areas:** If the project focuses on the most vulnerable regions and communities within Armenia, it is likely to have a higher impact and cost-effectiveness. Identifying and targeting areas with the highest climate risks can lead to better outcomes;
- **Integrated Approach:** Projects that adopt an integrated and cross-sectoral approach to climate adaptation tend to be more cost-effective. By addressing multiple challenges simultaneously and seeking synergies between sectors, the project maximizes the use of resources;
- **Innovation and Technology:** The integration of innovative technologies and practices can enhance cost-effectiveness. Climate-resilient and sustainable technologies may reduce long-term maintenance costs and increase the project's impact;
- **Involvement of Local Communities:** Engaging local communities in project design and implementation can increase cost-effectiveness. Locals often possess valuable knowledge, contributing to the project's success while ensuring ownership and long-term sustainability;
- **Monitoring and Evaluation:** Establishing a robust monitoring and evaluation framework enables continuous learning and improvement, optimizing cost-effectiveness over time;
- **Leverage of Funding:** The ability to attract co-financing and support from various sources, such as international donors, government budgets, **private sector**, and climate funds, can improve the project's overall cost-effectiveness.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

Proposed Project is architected around key national development strategies and aligned with relevant sectorial policies, frameworks and strategies at the national and sub-national levels. More specifically, the alignment is demonstrated through:

- **National Adaptation Plan (NAP), Sectorial Adaptation Plans (SAPs for Water and Agriculture), and Marz Adaptation Plans (MAPs)**: The project is aligned with the triangular adaptation building framework comprised of NAP, SAPs and MAPs that provides a roadmap for adapting to climate change, identifying priorities, and integrating adaptation into national planning processes. The Project is aligning its objectives, activities, and outcomes with the priorities and goals outlined in the NAP, SAPs and MAPs;
- **National Development Plans:** The Project is aligned with the country's national development plans (e.g. Government Strategy for 2022-2026), which outlines the government's overall development objectives and strategies. By aligning with this document, the Project can contribute to the achievement of broader national development goals and ensure coherence in resource allocation;
- **Sectoral Strategies and Plans:** The Project is aligned with the "Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of the Republic of Armenia for 2020-2030", other relevant sectoral strategies and plans, such as that forestry, water resources, and disaster risk reduction. This alignment ensures that the project contributes to the resilience and sustainability of key sectors;
- **National Communication N4 to UNFCCC:** The Project considers the climate vulnerabilities and adaptation priorities outlined in the country's National Communications N4 to the United Nations Framework Convention on Climate Change (UNFCCC). These communications provide an overview of the country's climate change vulnerabilities, adaptation efforts, and capacity-building needs;
- **Stakeholder Consultations:** Engagement with national and sub-national stakeholders, including government agencies, local authorities, and civil society organizations, has been crucial to understand their priorities and ensuring the Project's alignment with their needs and aspirations;
- **Policy Integration:** The Project explicitly communicates how its objectives and activities contribute to the achievement of national and sub-national sustainable development objectives. It also outlines how it aligns with existing policies and how it complements other ongoing initiatives;
- **Reporting and Coordination:** The project will report its progress and outcomes to relevant government authorities, ensuring transparency and accountability. Coordination with existing development partners and projects will help to avoid duplication and enhance synergies;
- **Long-Term Vision:** The Project's design is structured around the long-term vision of the country's sustainable development. By embedding adaptation efforts within broader development goals, the project contributes to lasting impacts and sustainability;

Demonstrating alignment with national and sub-national sustainable development strategies enhances the Project's credibility, fosters collaboration with government agencies and stakeholders, and increases the likelihood of sustained support for the Project's implementation and its long-term benefits to the country's development goals.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

Compliance with the national standards will be described in detail in the Full Funding Proposal.

Ensuring alignment with Adaptation Fund's Environmental and Social Policy require that projects supported address the adverse impacts of climate change while avoiding unnecessary environmental and social harms. The relevance of the Project to the ESP can be described as follows:

Environmental and Social Management Commitment: The Project demonstrates a strong commitment to environmental and social management by incorporating an environmental and social management system. The implementing entities involved in the project will be responsible for assessing and addressing potential environmental and social risks throughout the project cycle. They will identify measures to avoid, minimize, or mitigate these risks, ensuring that the project aligns with the principles outlined in the ESP.

Compliance with Environmental and Social Principles: The Project adheres to the environmental and social principles set forth in the ESP. It ensures compliance with applicable domestic and international laws and respects human rights, gender equity, and the rights of marginalized and vulnerable groups. The project's design prioritizes fair and equitable access to benefits, while minimizing adverse effects on public health and cultural heritage. Additionally, the Project promotes the conservation of biodiversity and efficient use of resources, including pollution prevention and resource efficiency.

Environmental and Social Assessment and Management: The Project implements a screening process to identify potential environmental and social impacts and categorizes projects/programmes based on their severity. Category A projects/programmes with significant adverse impacts and Category B projects/programmes with less adverse impacts are subjected to a thorough environmental and social assessment. The assessment includes identifying risks and proposing measures for mitigation and management. Implementing entities are responsible for monitoring and reporting on the status of these measures throughout the project's life.

Stakeholder Engagement and Grievance Mechanism: The Project incorporates stakeholder engagement and consultation to ensure the informed participation of all relevant stakeholders. It allows affected communities and individuals to voice their concerns through a grievance mechanism, which provides a transparent and accessible process for addressing complaints related to environmental or social harms caused by the project.

F. Describe if there is duplication of project/programme with other funding sources, if any.

Comprehensive desk research and rigorous stakeholders' consultation made sure that there is no duplication of efforts with other projects and initiatives. However, to avoid duplication with other funding sources in the future, the Project will implement several strategies to ensure coordination and collaboration with existing initiatives. Here's how the Project can take steps to prevent duplication:

Stakeholder Mapping: Identify all relevant stakeholders, projects, and programmes operating in the target area. This includes government agencies, non-governmental organizations, international organizations, and other development partners;

Engage in Consultations: Initiate consultations with relevant stakeholders to understand ongoing and planned projects. This will help to identify areas of alignment and potential overlaps;

Coordination Mechanisms: Establish coordination mechanisms, such as regular meetings, workshops, and working groups, to share information and updates with other projects. This will encourage collaboration and ensure that everyone is aware of each other's activities;

Information Sharing: Develop a platform or system for sharing information about the Project's goals, activities, and progress with other relevant projects. This transparency will help to avoid unintentional duplication;

Gap Analysis: Conduct a thorough analysis to identify gaps or areas not covered by existing initiatives. Tailor the proposed Project's activities to address these gaps, ensuring that resources are used effectively;

Complementary Activities: Collaborate with other projects to identify areas where activities can complement each other. For instance, if another Project is focusing on water resource management, this Project could focus on sustainable agriculture practices;

Resource Pooling: Explore opportunities for sharing resources, expertise, and capacities with other projects. This will lead to more efficient utilization of resources and avoid duplication of efforts;

Clearly Defined Roles: Clearly define the roles and responsibilities of each project and ensure that there is no overlap in terms of geographical coverage, target beneficiaries, and activities;

Joint Planning: Engage in joint planning sessions with other projects to develop a coherent and integrated approach to addressing common challenges;

Regular Monitoring and Feedback: Maintain regular communication and feedback loops with other projects to monitor progress and adjust activities if needed to prevent overlap;

Scale and Scope: Ensure that the scale and scope of the proposed Project aligns with the specific niche it aims to fill, and that it doesn't duplicate efforts that are already being adequately addressed by other initiatives;

Reporting and Evaluation: Include reporting requirements that detail how the project is coordinating with other initiatives to prevent duplication. Regular evaluation can help

assess the effectiveness of coordination efforts;

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

A learning and knowledge management component is essential for any project or program to capture, analyze, and disseminate lessons learned throughout its implementation. It allows for continuous improvement, better decision-making, and sharing of best practices among stakeholders. Here's how the proposed project can incorporate a learning and knowledge management component:

- **Knowledge Capture:** The project should establish a systematic process to capture knowledge and information from various stages of implementation. This can be done through regular project evaluations, assessments, and monitoring activities. Lessons learned should be documented in a structured manner, including successes, challenges, and best practices.
- **Knowledge Sharing Platforms:** The project should create platforms and mechanisms to share knowledge and lessons learned with relevant stakeholders. This may include workshops, seminars, webinars, conferences, and online portals. Information should be disseminated in a user-friendly format to ensure accessibility to all stakeholders.
- **Community of Practice:** Establishing a community of practice comprising project staff, beneficiaries, local stakeholders, and experts can foster collaboration and peer-to-peer learning. Regular meetings and knowledge-sharing events can facilitate the exchange of experiences and solutions to common challenges.
- **Case Studies and Reports:** The project should develop case studies and reports that highlight successful interventions and outcomes. These documents can serve as valuable resources for other projects with similar objectives or regions facing comparable challenges.
- **Capacity Building:** Implementing partners and stakeholders should receive capacity-building support to enhance their skills in knowledge management, documentation, and dissemination. This can enable them to contribute actively to the learning process.
- **Evaluation and Feedback Mechanisms:** The project should regularly evaluate the effectiveness of the learning and knowledge management component. Feedback from stakeholders can help identify areas of improvement and fine-tune knowledge-sharing strategies.
- **Integration into Project Activities:** Knowledge management should be integrated into project activities and not treated as an add-on. Learning and improvement should be an integral part of project planning, monitoring, and evaluation.
- **Continual Learning Cycle:** The project team should continuously learn from experiences and adapt strategies accordingly. The knowledge management component should facilitate a feedback loop that drives continuous improvement.
- **External Partnerships:** Collaboration with other organizations, research institutions, and development partners can enrich the learning process. Engaging with external stakeholders allows for cross-learning and exchange of ideas.

- **Legacy Planning:** Towards the end of the project, a legacy plan should be developed to ensure that the knowledge and lessons learned continue to be accessible and utilized even after the project's completion.

By incorporating a robust learning and knowledge management component, the proposed project can create a culture of learning, enhance project effectiveness, and contribute to broader knowledge sharing in the field of climate adaptation and sustainable development.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

During the Project appraisal stage, extensive consultations have already been carried out with key stakeholder groups, including relevant national agencies, representatives of regional and municipal authorities, civil society organizations (CSOs), academia, and representatives of vulnerable communities. These preliminary consultations have been instrumental in understanding the significance of the Project and have provided valuable insights that helped shape the initial long list of sectors and sub-sectors described in the proposal. It is important to note that these initial consultations will be followed by rigorous and comprehensive consultations during the full proposal design stage to further refine and validate the Project's approach.

The engagement of these diverse stakeholder groups has been critical in ensuring that the Project addresses the needs and priorities of sectors and sub-sectors identified as critical for intervention and already visualized throughout the document. National agencies and regional authorities have shared their expertise and provided context-specific information on climate vulnerabilities and adaptation requirements. Representatives of municipal authorities have contributed valuable insights into the local-level impacts of climate change and the specific challenges faced by communities.

CSOs have played a pivotal role in advocating for the inclusion of vulnerable communities and marginalized groups in the decision-making process. Their inputs have helped identify targeted interventions to enhance the resilience of these communities. Academia has contributed with research-based knowledge and technical expertise, enriching the project's design with innovative solutions and best practices.

The consultative process has also placed a strong emphasis on gender considerations, ensuring that the perspectives and needs of women and other vulnerable groups are taken into account. Through these consultations, the Project preparation team has gained a deeper understanding of the differentiated impacts of climate change on different genders and demographics.

Overall, the inclusive and participatory nature of the consultations has reinforced the importance of the Project and its potential to address the adverse impacts of climate change effectively. The initial long list of sectors and sub-sectors identified during these consultations serves as a starting point, providing a comprehensive foundation for the

subsequent rigorous consultations during the full proposal design stage. This iterative approach ensures that the Project is well-tailored to the specific needs and priorities of the communities it aims to benefit, maximizing its positive impact on climate resilience and adaptation.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The funding requested for the proposed project is justified based on the full cost of adaptation reasoning. Adaptation to climate change is crucial for building resilience and reducing vulnerabilities in communities and ecosystems. The following justifications support the funding request:

- **Scope and Complexity of the Project:** The proposed project aims to restore and manage natural landscapes, prevent floods, and raise awareness on climate change adaptation in multiple communities. The project's comprehensive scope and complexity require substantial funding to address various challenges effectively.
- **Vulnerable Communities:** The project targets vulnerable communities in Ani, Ashotsk, Maralik, and the Shirak region that are disproportionately affected by climate change and anthropogenic factors. Investing in these communities' adaptation efforts is crucial to protect their livelihoods, well-being, and sustainable development.
- **Environmental Benefits:** The project's activities, such as afforestation, sustainable land management, and flood prevention, offer significant environmental benefits, including biodiversity conservation, carbon sequestration, and ecosystem restoration. These benefits contribute to the global effort to combat climate change.
- **Social and Economic Benefits:** The project's outputs, such as improved agricultural productivity, waste management practices, and enhanced infrastructure, provide substantial social and economic benefits. They contribute to poverty reduction, food security, and improved living conditions for the target communities.
- **Cost-Effectiveness:** While the total project cost may seem significant, it should be viewed in the context of the long-term benefits and cost-effectiveness of adaptation measures. Investing in proactive adaptation now can avoid more significant costs associated with climate-related disasters in the future.
- **Leveraging Private Financing:** The project aims to leverage private financing for implementing high-value agriculture models and climate-resilient crops. This approach can attract additional funding and ensure the sustainability of project interventions beyond the funding period.
- **Capacity Building and Knowledge Sharing:** The project includes a learning and knowledge management component, which is crucial for building institutional capacity and sharing best practices. The long-term impact of the project can be amplified through the dissemination of lessons learned.

- **Demonstrative Impact:** The pilot initiatives, such as index insurance, flood prevention infrastructure, and waste management practices, can demonstrate the feasibility and effectiveness of climate adaptation measures. Successful pilots can serve as models for replication in other regions.
- **Climate Resilience:** By enhancing the adaptation potential of natural landscapes and promoting climate-resilient agriculture, the project contributes to climate resilience at the local and regional levels. Resilient communities are better equipped to cope with climate change impacts.
- **Co-Benefits:** The proposed project delivers multiple co-benefits, including improved health outcomes through better waste management, reduced soil erosion, and enhanced water resource management. These co-benefits add value to the project's investment.

The funding requested for the proposed project is justified considering its comprehensive approach, targeting vulnerable communities, and delivering multiple environmental, social, and economic benefits. Climate adaptation is a long-term investment, and the funding will help build resilience and ensure the sustainable development of the project beneficiaries in the face of climate change challenges.

And finally, preparation works of this concept note were also informed by the results of interim and final monitoring and evaluation carried out by international expert. Summary of recommendations is provided below:

Recommendations

The recommendations (some of them coming from Mid-Term Evaluation Report) include those addressing the necessity of the follow up actions related to the Project, general and methodological suggestions on the quality improvement for similar project preparation, specific recommendations on project sustainability addressed to the project implementing organization, stakeholders and beneficiary communities, and finally suggestions and requests deemed and articulated by the beneficiaries.

I. As the road used by heavy trucks passes through the town of Artik, which is a severe source of dust and thus a threat to the population health, an alternative road construction is critical for the situation improvement.

   Per initiative of EPIU, the Ministry of Environment has communicated request to the Ministry of Territorial Administration and Infrastructures to consider including construction of the mentioned road into the list of the roads construction of which will be financed from the state budget. There is no progress yet and this should be revisited and reviewed while discussing the budget for 2024.

II. Based on the primary goal of the Project to prevent dust generated from mines from having a negative impact on human health, pastures and water pollution, it is proposed to rehabilitate other abandoned mines in the vicinity of the communities including soil recultivation, decontamination and afforestation, based on the lessons learned from the pilot project implementation.

III. Another recommendation is to consider construction of a solid waste landfill in the region as the last chain of the solid waste cycle.

EPIU director has ordered its staff to design the project and implement fundraising activities for construction of the pilot waste processing facility in Vardakar community. Negotiations with the regional administration aimed at identification of the respective land and handover for the implementation of the pilot are underway.

IV. Considering the mandate of the project implementation unit and the current priorities of international development partners in the climate domain, it is recommended to initiate and undertake a Waste-to-Energy pilot project.

V. For future projects to be designed by EPIU it is recommended to carry out stakeholder engagements using available international best practices and certain adjustment must be taken care of in the methodology of project design. Target indicators and goals must be formulated more clearly, by designing the achievement of specific results rather than description of activities. Primary goals should be clearly distinguished from sub-goals and finally, goals and targets must be achievable and possible to quantify. Finally, in order to get the project design process on the strong methodological track, it is advised to organize training on climate project design and management principles on a regular basis.

VI. Ensuring sustainability is a critical domain in implementing projects like this, so the recommendations thereof have been piled up in a separate block. The first bunch of recommendation on increasing sustainability is aimed at the implementing organization. In particular, it is advised to get ready for possible funding from international climate funds and development partner organizations by drafting and submitting a project proposal for waste-to-energy pilot project. Besides, they are advised to initiate other activities in the target communities within new climate programs or partner organizations (for example, "**Promoting Green Rehabilitation in Armenia:** Strengthening Forest Infrastructure in Armenia). Finally, the project implementation unit is recommended to continue to provide professional capacity building (e.g, various training courses) to support target communities and stakeholder organizations through various participatory initiatives.

VII. The second bunch of recommendations aimed at ensuring project sustainability is for the beneficiary community leadership. Specifically, they are advised to initiate and implement awareness-raising activities aimed at preservation of forest parks, recreation areas and canals set up within the framework of the project. It is strongly recommended to engage non-commercial and civil society organizations in the implementation of the above-mentioned measures. Besides, it is suggested to pay a special attention to the garbage collection and the protection of property donated within the framework of the project, in order to rule out the accumulation of garbage in the streets, rivers and gutters. Also, smooth functioning and maintenance of the system established for the irrigation of forest parks must be ensured. Finally, community leaders are advised to regularly discuss the effectiveness of the use of organic fertilizers and the possibility of obtaining them on their own with the residents of the beneficiary communities.

VIII. The final bunch of measures to increase project sustainability is aimed at other stakeholders. Specifically, it is advised to assist the community administration in the effective operation and maintenance of the project outcomes (forest parks, recreation areas, canal protection, garbage collection etc.). Some of the stakeholder might also want to get involved in contributing to the implementation of a constant and effective dialogue between the beneficiaries and the community, in order to discuss the issues of concern with the residents, by creating premises for the solution of the existing problems. Stakeholders might also be interested in helping the farmer beneficiaries introduce modern agricultural technologies (including effective use of organic fertilizers).

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

The sustainability of the project/programme outcomes has been taken into account during the design phase to ensure that the project's benefits continue beyond its implementation period. Several factors have been considered to enhance the sustainability of the project outcomes:

- **Community Engagement and Ownership:** The project has involved the target communities, including Ani, Ashotsk, Maralik, and others, from the beginning. Their active participation in decision-making and implementation fosters a sense of ownership and responsibility for the project's success, increasing the likelihood of sustained efforts beyond the project's duration.
- **Capacity Building:** Capacity building activities have been integrated into the project to enhance the skills and knowledge of local stakeholders. Training and skill development in sustainable land management, flood prevention, and climate-resilient agriculture empower the communities to continue implementing these practices effectively even after the project ends.
- **Institutional Strengthening:** The project focuses on building the capacity of local institutions, such as government agencies, community-based organizations, and NGOs. Strengthening these institutions ensures that they have the knowledge, resources, and systems to continue the project's activities and sustain the outcomes in the long term.
- **Knowledge Management:** The project includes a learning and knowledge management component that documents lessons learned and best practices. This knowledge sharing will enable stakeholders to replicate successful interventions in other regions and projects, contributing to the sustainability of adaptation efforts.
- **Policy Integration:** The project considers policy integration to ensure alignment with national and regional development plans and strategies. By embedding project outcomes in existing policies and frameworks, there is a higher chance of continued support and funding for sustained implementation.
- **Monitoring and Evaluation:** Robust monitoring and evaluation mechanisms are in place to track progress, assess the effectiveness of interventions, and identify areas for improvement. This data-driven approach allows for adaptive

management and informed decision-making, supporting the long-term sustainability of the project.

- **Leveraging Private Financing:** The project seeks to leverage private financing for certain activities, such as implementing high-value agriculture models. By engaging private financiers, the project aims to establish economically viable ventures that can continue beyond the project's funding period.
- **Collaboration with Partners:** Collaboration with various stakeholders, including other organizations, government agencies, research institutions, and NGOs, enhances the project's sustainability. Partnerships can contribute resources, expertise, and ongoing support, extending the project's impact.
- **Demonstration Sites:** The establishment of demonstration sites for climate-resilient agriculture and flood prevention allows communities to witness firsthand the benefits of sustainable practices. These tangible examples can inspire broader adoption and replication.
- **Legacy Planning:** The project incorporates legacy planning to ensure that the knowledge, infrastructure, and capacity built during the project's implementation endure. Specific measures are put in place to continue and maintain the project's outcomes beyond its lifespan.

By considering these sustainability factors in the design and implementation of the project/programme, it aims to foster lasting changes, enhance resilience, and contribute to the long-term well-being of the target communities in the face of climate change and environmental challenges.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	All activities of the project are in line with RA laws and regulatory acts. No further assessment of potential impacts and risks is required for compliance with the law, since the project complies with all relevant national legislation and policies	

	on agriculture, water management, climate change adaptation, land tenure, public procurement and others.	
Access and Equity	The project will provide fair and equitable access to the project beneficiaries and will facilitate access to robust institutions, sustainable livelihoods, knowledge, as well as in decision making processes. The compact area affected communities makes it easier to share information and transfer knowledge using intermediary community groups such as, youth and women organizations, beneficiary farmer and family groups. No further assessment of potential impacts and risks is required for compliance access and equity, since the project planned activities will not reduce or prevent communities in the target areas from accessing basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions and land rights.	
Marginalized and Vulnerable Groups	Project activities do not have a negative impact on marginalized and vulnerable groups. Within this group there are people with disabilities and families	

	living with persons with disability, the elderly, as well as people with a very low income and with limited access to resources to help them in their normal everyday living. In the targeted region, elderly and poor families receiving benefits from the state are considered marginalized and vulnerable.	
Human Rights	The Chapter 2 of the Armenian Constitution recognizes fundamental human rights and freedom that exist and shall continue to exist without discrimination by reason of race, national origin, color, religion, opinion, belief, or sex. The project's activities are structured in the manner with no negative impact on human rights and infringement on the right of any person during implementation.	
Gender Equality and Women's Empowerment	Well-established traditions in the Republic of Armenia prevents negative perception on the role of women in society. Also, women are empowered in villages, and they are involved in day to day activities and decision makings in the field of family and village affairs.	Gender Action Plan will be designed and submitted with Full Proposal to make sure that gender sensitivity considerations are mainstreamed throughout all activities of the Project.
Core Labour Rights	Labor rights (including those related to the child labour) are protected by the Constitution and Civil Code of the RA. During summer	

	vocations children typically provide assistance to their parents by performing light activities, which could be considered as training for future farming activities. Desk research and stakeholder consultations revealed no occurrences of child labor in the Project area. Even in most vulnerable communities in Armenia education of children and adolescents in schools and universities is considered as mandatory. However, this does not mean that children do not help their parents with cultivation of their land plots. This carries a learning element and gives children an opportunity to get acquainted with the basic knowledge on framing activities.	
Indigenous Peoples	Armenia's population is homogeneous (around 96%), so there is no issue of potential violation of the rights of indigenous people.	
Involuntary Resettlement	Project implementation does not include any resettlement of residents. No further assessment is required for involuntary resettlement.	
Protection of Natural Habitats	There are no protected areas in the project area and the Program will not involve unjustified conversion or degradation of critical	

	natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by the Government for their high conservation value, including as critical habitat. In Shirak marz the only specially protected nature area is “Arpi Lake” national park located in the northern part of the region. It consists of 5 settlements which are located away from beneficiary communities.	
Conservation of Biological Diversity	Project activities will not have a negative impact on biodiversity conservation as within project design activities will ensure that the flora and fauna within the project area is conserved.	
Climate Change	The project does not have a negative impact on climate change. It will not generate significant and / or unjustified increase in greenhouse gas emissions or any other cause of climate change. Moreover, the creation of forested park will contribute to CO^2 absorption and milder microclimate. No project interventions are expected to contribute to release of gases responsible for CC and thus are not expected to contribute to GHG emissions.	

Pollution Prevention and Resource Efficiency	Project is not expected to generate any environmental pollution and aims for higher resource efficiency for better management of available natural resources. Industrial wastes are stone residues that originate from quarrying. During the exploitation of quarries, the environment has been polluted by dust particles. The residents of the areas adjacent to floodplains crossing the town dump garbage into the floodplain, due to insufficient number of bins causing clogging during heavy rains and snowfall and causing floods thus creating anti-sanitary conditions that can cause infectious diseases during hot summers.	
Public Health	The stability of ecosystem balance will contribute to the improvement of public health. Thus, no adverse impact on public health related issues is envisaged.	
Physical and Cultural Heritage	During site assessments, heads of communities were consulted to make sure any cultural sites and sites with unique natural values are identified. As a result of this, EPIU has determined that there are no physical and cultural heritage sites in interventions envisaged	

	by the program: closed quarry, gorges, natural, and agricultural landscapes. The activities envisaged by the Project are not implemented in such sites where there are physical and cultural heritage monuments	
Lands and Soil Conservation	Restoration activities are envisaged to help in land and soil conservation and will not create any damages to land and soil resources.	

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Increase adaptation level of natural and agricultural landscapes;	Project interventions contributed towards reduction of the spread of dust, and increase of adaptation of natural and agricultural landscapes	**Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress	
2. Prevent floods and eliminate their consequences,	Advanced infrastructure in the vicinity of beneficiary municipalities contributed towards adaptation to extreme hydro meteorological events posed by climate change	**Outcome 1:** Reduced exposure to climate-related hazards and threats	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	
3. Restore the natural landscape of the area affected by climate change and anthropogenic impacts, at the same time to demonstrate the possibilities of adaptation level increase of degraded natural landscapes,	➢ Quality of land increased; ➢ The level of erosion decreased; ➢ Anthropogenic factors affecting natural and agricultural landscaped reduced;	**Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress	
4. Improve the adaptation potential of community producers, institutions, and other relevant stakeholders regarding climate change under current	Costs of flood damage is reduced.	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in	

climate change conditions;		people in targeted areas	support of individual or community-livelihood strategies	
5. Replicate and scaleup good practices achieved during implementation of the pilot project “Artik city closed stone pit waste and flood management pilot project”;	➢ **N** of best practices replicated; ➢ **N** of communities benefited; ➢ **N** of people benefited; ➢ **%** of women engaged	**Output 4:** Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Adaptation and sustainability of natural landscapes of the area affected by climate change and anthropogenic factors increased.	➢ 10 ha of forest cover will be created; ➢ Forest grove established; ➢ 900 ha of sowing areas of perennial plants are created reducing rangeland degradation in Ani, Ashotsk and Maralik communities; ➢ Crop yield and quality at 45 ha of hay meadows and 570 ha of pastures is increased in Ani, Ashotsk and Maralik communities; ➢ Waste collection practices introduced in Ani, Ashotsk and Maralik communities ➢ Pilot program for integrated management of household waste in the village of Vardakar	**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	**2.961.320**

	is implemented; ➢ Degraded lands in Shirak region are mapped; ➢ 100 ha of degraded land has benefited from constructed infrastructure for piloting high value agriculture models (including new types of climate resilient crops), as well as commercial lending from private financier is implemented; ➢ 10 ha of demonstration sites (in each community) for intensive orchards in all beneficiary communities are constructed; ➢ Architecture and design work for all components are carried out; ➢ Index insurance piloted in beneficiary municipalities;			
Social, economic, and environmental threats caused by floods as a result of climate change is reduced	➢ Infrastructure constructed during the pilot project is maintained; ➢ Road infrastructure (two small bridges and renovation of existing road) is advanced to divert the heavy-duty vehicles away from the adjacent to the mine communities;	**<u>Output 1:</u>** Risk and vulnerability assessments conducted and updated at a national level **Output 4:** Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	1.2 Development of early warning systems 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change 6.1 Percentage of households	**800.000**

		Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	and communities having more secure (increased) access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient livelihoods	
Raising awareness and knowledge level of population on the recovery of agro landscapes and flood risk reduction	➢ Increased level of knowledge on effective recovery methods of degraded natural and agro landscapes; ➢ Increased level of knowledge of the population on natural and agro landscape adaptation to climate change; ➢ Increasing level of knowledge of the population on the occurrence and prevention possibilities of floods; ➢ Promoting the importance of the sustainable thinking related to the landscape adaptation to climate change in communities; ➢ Increased involvement of local media and environmental NGOs in the process of mitigating the negative effects of climate change;	**Output 3.1:** Targeted population groups participating in adaptation and risk reduction awareness activities **Output 3.2:** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.1.1 No. of news outlets in the local press and media that have covered the topic 3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	**300,000**

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. **Record of endorsement on behalf of the government**[2] *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:*

Hakob Simidyan *Minister of Environment of the Republic of Armenia*	18 August 2023

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 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.

[6] 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.

Name & Signature **Armen Yesoyan**, Director, "Environmental Project Implementation Unit" State Agency Under the Ministry of Environment of the Republic of Armenia	
Date: **18 August 2023**	Tel. and email: info@cep.am, +37410651631
Project Contact Person: Armen Yesoyan, Acting Director of "EPIU" SA Armen Khojoyan, Acting Deputy Director of "EPIU" SA	
Tel. And Email: info@cep.am, +37410651631 armenkhojoyan@epiu.am, +37410361351	

ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ
ՇՐՋԱԿԱ ՄԻՋԱՎԱՅՐԻ ՆԱԽԱՐԱՐ
REPUBLIC OF ARMENIA
MINISTER OF ENVIRONMENT
РЕСПУБЛИКА АРМЕНИЯ
МИНИСТР ОКРУЖАЮЩЕЙ СРЕДЫ

№ 1/08.5/12087

«18» «08» 2023

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the project "Enhancing resilience of communities to climate change in Shirak Marz leveraging best practices of the pilot project implemented in Artik community"

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

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by the "Environmental Project Implementation Unit" State Agency of the Ministry of Environment of the Republic of Armenia and executed by the same Agency.

Sincerely,

18.08.2023

X

ՀԱԿՈԲ ՍԻՄԻԴՅԱՆ

Signed by: SIMIDYAN HAKOB 3004840588

Mr. Hakob Simidyan

International Cooperation Department
Ani Khachaturyan, +37411 818 508

ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ
ՇՐՋԱԿԱ ՄԻՋԱՎԱՅՐԻ ՆԱԽԱՐԱՐ
0010, ք.Երևան, Հանրապետության հր., Կառավարական տուն 3
3 Government Bld., Republic Sq., Yerevan, Armenia, 0010

ADAPTATION FUND

Project Formulation Grant (PFG)

Submission Date: *18 August 2023*

Adaptation Fund Project ID:

Country: *Republic of Armenia*

Title of Project/Programme: *Enhancing resilience of communities to climate change in Shirak Marz leveraging best practices of the pilot project implemented in Artik community*

Type of IE *National*

Implementing Entity: *"Environmental Project Implementation Unit" State Agency*

Executing Entity: *"Environmental Project Implementation Unit" State Agency*

A. Project Preparation Timeframe

Start date of PFG	**01 December 2023**
Completion date of PFG	**01 April 2024**

B. Proposed Project Preparation Activities ($)

Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Development of the Full Funding Proposal	Full Funding Proposal	20,000
Implementation of the needs assessment and mapping of beneficiary communities against intervention framework	Needs assessment and map of beneficiary communities against intervention framework	15,000
Design of the gender action plan	Gender action plan	5,000
Carrying out ESS Assessment	ESS Assessment	5,000
Total Project Formulation Grant:		**45,000**

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation:

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Armen Yesoyan, *Director*, "Environmental Project Implementation Unit" State Agency		18 August 2023	**Armen Yesoyan,** *Director*, "Environmental Project Implementation Unit" State Agency **Armen Khojoyan,** *Deputy Director*, "Environmental Project Implementation Unit" State Agency	+374 10 651631	info@cep.am armen.khojoyan@epiu.am