



## PROJECT INCEPTION REPORT ARTIK CITY CLOSED STONE PIT WASTE AND FLOOD MANAGEMENT PILOT PROJECT

Prepared by: "Environmental project implementation unit" SA

Country/Region:	Armenia/Eastern Europe		
Sector:	Urban development		
Grant Amount:	USD 1,435,100		
Transferred Amount:	USD 253,524		
Implementing Entity:	Environmental Project Implementation Unit		
Executing Entity:	Ministry of Environment of RA		
Approval Date:	10/12/2018		
Duration:	4 years		

Yerevan 2019

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## **1. EXECUTIVE SUMMARY**

"Environmental project implementation unit" State Agency has successfully mobilized a total of USD 1435100 from the Adaptation fund for the project "Artik city closed stone pit wastes and flood management pilot project". In August 2018 the full proposal was submitted to AF Secretariat and approved by the Adaptation Fund (AF) Board in October 2018 followed by the official signing of the Agreement between AF Board and EPIU on December 2018.

The project seeks to improve resilience of highly exposed Artik city of Armenia to hydrometeorological threats that are increasing in frequency and intensity as a result of climate change. The project will reduce the quantity of debris flowing to reservoir located down the Artik city and the pollution of agricultural lands (300 hectares of arable land 190 hectares of pastures, 15 hectares of hay meadows, 640 ha of artificial forests, 80ha of water reservoir and other natural landscapes) in the project impact area by increasing their resilience and adaptation to climate change.

The specific objectives of the project are:

- To improve and to promote self-recovery of more than 300 hectares of arable land 190 hectares of pastures, 15 hectares of hay meadows, 640 ha of artificial forests, 80ha of water reservoir and other natural landscapes.
- To reduce hazards caused by floods and to contribute to adaptation of natural and agricultural landscapes and ecosystems in the impact zone of floods.
- To raise awareness and knowledge level among decision makers and local population on the landscape and ecosystem adaptation to climate change and on efficient management of floods.

Following the project approval by the Adaptation Fund, the first meeting of the Project Interdepartmental Management Board (Board) took place in Artik city community administration office on July 04 2019. During the meeting the Head of EPIU Mr. Meruzhan Galstyan reported on the two issues included in the agenda: 1. Annual Project Performance Schedule and 2. Procurement Plan for 2019. Mr. Galstyan gave talks and represented the overall objective of the project and components. The meeting was accompanied by fruitful discussions, constructive remarks and vivid interactions after which the members of the Board decided to approve the Annual Project Performance Schedule and Procurement plan of the "Artik city closed stone pit wastes and flood management pilot project" which was recorded by corresponding decree.

Subsequently, "Artik city closed stone pit wastes and flood management pilot project" inception seminar was held on July 23, 2019. More than thirty-five participants from Ministry of Environment of Armenia, Artik city municipality and community administration office, academia, EPIU staff and non-governmental organizations attended the inception workshop. These stakeholders were informed of the purpose and scope of the project, implementation

arrangements, monitoring, evaluation and reporting as well as the project management oversight structure.

Printed version of the project, work plan and results frameworks were disseminated among all participants.

## 2. INTRODUCTION

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 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 lying 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.

#### 3. WORKSHOP OBJECTIVES AND EXPECTED OUTCOMES

## 3.1 Official opening

The workshop lead facilitator, Mr. Baloyan Baloyan, deputy of EPIU welcomed all participants by giving a short introduction on the Adaptation Fund, how the project was developed and highlighting the importance of the project. Mr. Baloyan's speech was followed by the official statement of the Minister of the Environment of Armenia conveyed by the deputy head of staff of the Ministry of Environment of Armenia, Mr. Ashot Avalyan. The deputy head of staff welcomed the participants and stated the importance of the project which in essence is the first environmental project that the Government of Armenia is implementing in the region. He mentioned that the Ministry of Environment treats the program with high responsibility and commitment and expressed a great wish to successful project implementation with fruitful results.

Afterwards Mr. Baloyan represented the agenda of the workshop followed by the keynote address of EPIU's director, Mr. Meruzhan Galstyan who welcomed everyone and congratulated on the official start of the project and reiterated the importance of the project through the specific three key components: 1. *Restoration, management, and increase of adaptation potential of natural landscapes of the area affected by climate change and anthropogenic factors; 2. Prevention and management of floods; 3. Raising awareness and knowledge level of population for the management of stone pit wastes and floods.* 

The head of EPIU mentioned that EPIU has launched a unique project in the region that is essentially a pilot one and, if successful, can be further implemented in other regions of the country. He briefly represented the objectives of the project, the outcomes and outputs envisaged by each component (Refer to Annex 6-3).

The head of Donor funded project implementation division of EPIU, Mr. Edik Voskanyan represented the objectives of the Adaptation Fund, its seven results and project result framework with specific examples (Annex 6-4).

## 3.2. Objectives

To begin project implementation, an Inception Workshop is an important first activity to assist all stakeholders and involved parties to understand and take ownership of the project, to understand its goals and objectives define roles and responsibilities, clarify technical and managerial aspects. The specific objectives of the inception workshop were that:

- The project was presented, discussed and understood by all stakeholders especially implementing partners to ownership to lead implementation;
- Stakeholders discussed and agreed on the project implementation modalities and oversight arrangements;
- EPIU clarified its roles and responsibilities for project's day-to-day implementation, management and oversight arrangements for stakeholders to get acquainted with.

### 3.3 Expected Outcomes

The expected outcomes from the inception workshop include:

- Improved understanding and agreement of project goals and objectives;
- Agreement on the project implementation modality at project sites in the selected provinces
- Overall understanding by stakeholders on the roles and responsibilities for project's day-to-day implementation, management and oversight arrangements.

## 4. PARTICIPANTS

The workshop was hosted by the Artik city community office with support from EPIU. Participants were invited from the Ministry of Environment, Shirak marz administrative territorial unit, Artik community office, members of the Council of Elders of Artik city, Heads of Harij, Nahapetavan, Vardakar communities, state institutions, Directors of schools, fine arts and football coaching schools, Civil Society Organizations from Shirak marz and Artik community, that directly or indirectly deal with climate change issues and are direct beneficiaries of project outcomes. A total of 35 participants (Refer to Annex 6-2) participated in the workshop.

## 5. PROJECT OVERVIEW

The aim of the session was to inform and educate the participants about the scope of the project followed by feedback from stakeholders. An overview of the project covering the overall key outcomes, outputs, indicators, targets, detailed activities and budget, risks management framework and management arrangements (Refer to Annex 6-5) were presented. The presentation led to the discussions and suggestions on the following issues:

## 5.1 Discussion of project components and activities

The participants reflected on project components mainly on construction and forestation activities to be carried out within the project. The concern was about the possibility of creation forested area in the territory of the abandoned mine, the selection of trees and shrubs, their number, soil scarcity and several other factors. It was explained by the director that given the natural climatic, soil conditions, as well as growth and development peculiarities specific trees and shrubs proposed for the region had been compiled. The wind protection, water protection, and aesthetic significance of forested area were considered to be primary. During the development of specific design-estimates by a selected company the number, species of trees and shrubs, soil composition and sites where the soil layer should be added would be specified and approved.

#### 5.2 Early Warning Systems and Index insurance system

Participants requested some information related to insurance schemes, particularly flood insurance scheme and the use of index. Beneficiaries emphasized the importance of the proposed interventions, especially the need to introduce early warning system, enabling to prepare for natural disasters and minimize the potential damage.

Index insurance system was explained to beneficiaries. It was mentioned that in developing countries flood index insurance is most commonly used to cover crop losses from rain and drought. Indemnities are carried out during periods of deficient (or excessive) rainfall, when the latter is below the set threshold during the insurance period, which cannot lead to loss of crops. Unlike traditional crop insurance, the insurance company does not consider it necessary to visit agricultural farms to assess losses and to determine payments. Instead, they use objective indicators such as rain gauges near the farm fields. If the data indicated that the number of precipitations was lower than the threshold, the insurance company performs compensation.

One of the benefits of index insurance is that the recoverable amount is not linked to the survival or destruction of the crop, so those engaged in agricultural activities tend to take steps as much as possible to save crops. One of the advantages of index insurance is the fact that insurance is based on objective criteria that could not be substituted by personal factors, resulting in the reimbursement process becoming more transparent and objective. In the introduction of index insurance attention should be paid to the fact that this type of insurance is completely new, and the private and public sectors whose involvement is mandatory in the process are not aware of it.

Therefore, the issue of informing relevant structures remains a major challenge. One of the key preconditions for the introduction of index insurance services is the availability of hydrometeorological statistics and deviations from established norms per administrative districts. The Government's interest is an important prerequisite for the introduction of index insurance. The implementation of index insurance is envisaged by 6 insurance companies operating in Armenia, which are financially stable and are controlled by the Central Bank with strict normative legal acts on Financial Soundness Indicators.

Since climate change and adaptation knowledge was low the participants expressed their readiness to participate in the trainings and use the gained knowledge in the future.

#### 5.3 Risks Management Framework

The stakeholders agreed that the risk level of land use disputes within the communities likely to affect implementation project of activities. In particular, ownership of the project was depended on the level awareness and education conducted through the initial consultation processes. This was highly likely to give people the opportunity to learn, understand the significance of the project and make informed decisions. The stakeholders concluded that the current level of risks being low should not be considered lightly and be carefully monitored during the implementation phase of the project. In addition, the risks and challenges can be

minimized during community consultation through the implementation modality at the provincial and community levels. A consensus was reached on the importance of promoting land use planning in the selected sites which is actually a key deliverable for the project.

### 5.4 Stakeholder Involvement

The stakeholder consultation approaches will improve peoples' level of responsibility and a sense of pride to take management of the environment, natural resources and their livelihoods seriously. All stakeholders repeatedly acknowledged the importance of promoting community ownership which their experiences show occurs from an adequate long-term awareness and engagement with the people on a regular basis using various communication tools and approaches. It was stressed that awareness done in the communities to use local knowledge, experiences or observations on the level of impact of climate change in their communities was also essential to drive the people to take necessary actions as part of their contribution to implement project activities.

EPIU's director stressed that stakeholders involved in the project and are invited to participate based on their mandates of their institution in relation to the project. Besides, the 3rd component of the project envisages carrying out awareness raising and capacity building both in secondary schools (establishment of eco-clubs in schools) Establishment of eco-clubs at schools in municipality and village communities. Moreover, there is also a possibility to create new jobs during the duration of the project and after its completion to sustain project results.

During project implementation relevant environmental and social, and gender specialists to be hired in the frames of the project would ensure participatory and integrated approach so that the direct project beneficiaries participated in all training modules and awareness campaigns.

Susanna Tonoyan, the president of the "Association of women with university education" NGO of Artik branch highly evaluated women representation in the project activities and expressed her willingness to participate and support project implementation.

Besides, the Deputy Head of the Ministry of Environment mentioned that the Board was established based on the principle of involving government and state institutions in the management of the project thus ensuring state support for the project implementation.

The importance of Grievance resolution mechanism was highlighted through which the concerns, complaints and grievances by affected persons would be directed to the Project Management Unit (PMU) where the Project Coordinator, Environmental and Social Safeguard (ESS) and Gender Specialists would be the focal points to receive, record, review, and address concerns in coordination with relevant stakeholders depending on the nature of the complaint.

## 5.5 Sustainability of Project

The sustainability of project was an equally important concern among the stakeholders. At the final stage of project document development an Agreement "On the maintenance of outcomes of the "Artik city closed stone pit wastes and flood management" pilot project drafted by EPIU

was discussed with the Ministry of Nature Protection and local authorities. As an important step for the implementation of the above mentioned purpose the representatives of concerned communities and the Ministry of Environment has signed the Agreements "On the maintenance of outcomes of the "Artik city closed stone pit wastes and flood management" pilot project making it possible to preserve the results beyond the life of the project.

The end of the workshop was marked by a dinner with all participants.

## ANNEX 6-1 AGENDA OF THE INCEPTION WORKSHOP

ON

## ARTIK CITY CLOSED STONE PIT WASTE AND FLOOD MANAGEMENT PILOT PROJECT

## Artik, 23 July 2019

Time	Activity	Facilitator, position
13:30–14:00	Registration of participants Welcome and opening	
14:00–14:30	Deputy head of staff of the Ministry of Environment of ArmeniaLeading Specialist of Nature Protection Division of Shirak marz regional administration	A. Avalyan S. Tumanyan
14:30–14:45	Presentation of Artik city closed stone pit waste and flood management pilot project	M. Galstyan, director EPIU
14:45–14:55	Questions and discussions	
14:55–15:10	Presentation of project team	M. Galstyan, director EPIU
15:10–15:20	Questions and discussions	
15:20-15:30	Presentation of work plan and shcedule	Edik Voskanyan, head of donor funded project implementation division of EPIU
15:35 – 15:45	Questions	
15:45-16:00	Presentation of monitoring and evaluation, budget and indicators	Edik Voskanyan, head of donor funded project implementation division of EPIU
16:25 – 16:35	Questions	
16:35 – 17:00	Speeches	
17:00 – 17:05	Signing of Agreements	
17:05-17:10	Closing	
17:20	Dinner	

## ANNEX 6-2. LIST OF PARTICIPANTS

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## **ANNEX 6-3. PROJECT OVERVIEW**



The project objectives are to:

- 1. Increase adaptation level of natural and agricultural landscapes,
- 2. 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 to climate change under current climate change



## **Project objectives:**

- Restoration, management, and increase of adaptation potential of natural landscapes of the area affected by climate change and anthropogenic factors
- 2. Prevention and management of floods
- Raising awareness and knowledge level of population for the management of stone pit wastes and floods

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

The following activities are to be carried out within this component :

 Restoration of 40 ha un-operated stone pit, establishment of forested park and recreational zone construction of irrigation system

Funds needed for the activities- 275 233 000 AMD

Drafting of design estimates- 23 520 000 AMD









2 . Increasing adaptive capacity of 300 arable lands, 190 ha pastures and 15 ha haymeadows to climate change

Funds envisaged for the activities- 78 265 000 AMD

The rehabilitation activities would contribute to the increase of fertility arable lands, pastures and hay meadows of Artik city, Harich, Vardaqar and Nahapetavan communities and increase productivity of agricultural systems.

## **Planned** activities

1. Increased fertility of arable lands

2. Increased adaptation of pastures

3. Increased adaptation of hay meadows

4. Restoration of vegetative cover of pastures

5. Restoration of vegetative cover of hay meadows

## Prevention and management of floods

Design activities- 16 800 000 AMD

The main objectives of the component are:

- To reduce social economic and environmental threats caused by floods
- To promote the adaptation of natural and agricultural landscapes

The following activities are to be carried out within this component:

- Water flow mitigation measures in gorges, reinforcement of earth dam and stability increase, Stabilization of the most degraded slopes, envisaged sum-137 690 000 AMD
- Introduction of early warning system, envisaged sum- 4 800 000 AMD
- Installation of garbage bins along storm sewers passing through Artik city, envisaged sum- 24 960 000 AMD
- Cleaning of storm sewer course beginning from Artik city, envisaged sum-2 640 000 AMD
- Renovation of Artik city meteorological station, envisaged sum-2 400 000 AMD







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

## Envisaged sum-57 600 000 AMD

The following activities via trainings are to be carried out within this component:

- · To promote community capacity building on climate change challenges.
- To promote awareness and knowledge of the population on climate change adaptation measures.
- To increase the population's knowledge about natural disasters, their prevention measures, and early response options.

- To involve mass media and non-governmental organizations in the implementation, promotion of project outcomes and sustainability provision, as well as in the coverage of methods and forms of providing relevant information to the public.
- To provide information related to insurance schemes, particularly flood insurance scheme and the use of index, which can be utilized by private citizens and other stakeholders.

## ANNEX 6-4. PROJECT OBJECTIVE INDICATORS

# The results architecture for the Fund is framed as follows:

Reduce vulnerability and increase adaptive capacity to respond to the impacts of climate change, including variability at local and national levels.

## **Expected Result of the Adaptation Fund**

Outcome 1: Reduced exposure at national level to climate related hazards and threats

Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses

**Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level

**Outcome 4:** Increased adaptive capacity within relevant development and natural resource sectors

**Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress

**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas

**Outcome 7:** Improved policies and regulations that promote and enforce resilience measures

## **Project objective indicators**

- Project investments have reduced the spread of dust, and to the increase of adaptation of natural and agricultural landscapes
- Water flows by the two gorges which lead to Artik city, have adapted to extreme hydro meteorological events posed by climate change
  - Water flows by the 1.1 two gorges which lead to Artik city, have adapted to extreme hydro meteorological events posed by climate change

Component 1: Restoration, management, and increase of adaptation potential of natural landscapes of the area affected by climate change and anthropogenic factors

**Outcome** - Adaptation and sustainability of natural landscapes of the area affected by climate change and anthropogenic factors increased

Indicator- total area of land rehabilitated and with increased adaptation capacity/ha

Baseline- degraded landscape

Milestone-(target, 1st year 10 ha of rehabilitated area (25%))

End of project target--30 ha of land (75%) rehabilitated

Means of verification - 6 monthly project reports, surveys

Responsibility- EPIU and target communities

Component 2 . Prevention and management of floods

Output - Restoring storm canals that carry heavy snowmelt and rain water

Indicator –Design estimates is prepared # m for the construction of canals # cubic meter earth dams reinforced with gabion constructions

Baseline- to be decided

Milestone - (target, year 1) - 1st year, 150 cubic meter

End of project target-300 m3

Means of verification - 6 monthly project reports, surveys

Responsibility- EPIU and target communities

## **ANNEX 6-5. MANAGEMENT ARRANGEMENTS**

## Project management

The project is managed by the Project Management Board and EPIU team consisting of two levels:

- 1. Project implementation level
- 2. Project execution level

## **Project implementation**

Project implementation is carried out by the following specalists:

- 1. Project manager
- 2. Project coordinator
- 3. Monitoring and evaluation specialist
- 4. Environmental and social safeguard specialist
- 5. Gender specialist

## Project implementation includes:

- 1. Organising partnership with the Secretariat of the Adaptation Fund and stakeholders
- 2. Organization of tenders for executing entities
- 3. Selection of international experts for project monitoring
- 4. Selection of audit company
- 5. Selection of Technical Supervisors

- 6. Conducting periodic reviews of the implementation
- 7. Ensuring project performance according to activities and shcedule
- 8. Ensuring quality and accountability of project results during and after project implementation
- 9. Monitoring of Budget Performance and Reporting

## **Project execution**

## Project execution is carried out by the following specialists

- Finance officer
- Procurement specialist
- Administrative support

## Project execution specialists ensure:

- Financial Accounting, preparation and presentation of current and final financial statements, financial flow management;
- · Procurement planning and implementation, organization of tenders
- Organization of project activities, the solution of administrative and organizational issues arising during implementation

#### ANNEX 6-6. PHOTOS FROM THE EVENT



Mr. A. Avalyan, Deputy head of staff of the Ministry of Environment; Mr. S. Baloyan, Deputy director of EPIU









Mr. M. Varagyan, major of Artik city signing the Agreements





Head of communities signing the Agreements





