Mitigation of Climate Change Risks of Rural Communities
Through Improved Local Development Planning
Country: Armenia

UNDAF Outcome 4: Environment and disaster risk management is integrated into national and local development frameworks.

Agency Outcome 4.1: Armenia is better able to address key environmental challenges, including climate change and natural resource management.

4.2: National capacities for disaster risk management strengthened.

Agency Output 4.1.4: National and local capacities to develop innovative policies and practices to address climate change mitigation and adaptation strengthened.

4.2.1: Capacities for disaster risk reduction are strengthened on national and local levels to prepare, mitigate and respond to national and technological hazards and public health threats.

Executing Agency: UNDP Armenia Country office

Responsible Partners: Ministry of Emergency Situations (MoES), Ministry of Territorial Administration, Ministry of Nature Protection, Ministry of Agriculture, DRR National Platform, CBOs and NGOs
With the increasing scale of climate-induced disasters projected for the 21st century, particular emphasis must be placed on the mitigation of disaster and climate risks since they are closely linked to the ability of communities and a country in whole to function appropriately, for the guarantee of economic growth and the potential of a country to develop and prosper. Disaster and climate risk reduction should continuously be a major priority in national and regional development strategies.

Armenia is one of the countries at risk of climate change impact and seriously suffers from natural disasters like earthquakes, landslides, mudflows, floods, hail, drought, and soil erosion. Various scientific researches show that climate change affects the frequency and the severity of natural hazards that lead to increased social vulnerability and enhanced losses. That’s why it becomes urgent to promote sustainable development by reducing the vulnerability associated with climate risk. The recognition of the climate change risks and considering the importance of strategies aimed at minimizing negative impacts on communities and economies fields, particularly in agriculture is of great interest for Armenia.

To assist countries in developing capacity to manage risks, to provide stakeholders with relevant decision-support information and tools to face the challenges highlighted by increased climate risks the United Nations Development Programme (UNDP) has been developed and adopted climate risk management framework (CRM) that integrates traditional approaches of disaster risk reduction and climate change adaptation and covers a broad range of potential actions such as strategic diversification, financial instruments, early-response systems, capacity building etc. It also aims to maximize opportunities in climate-sensitive economic sectors. Moreover, with the aim to promote CRM framework, UNDP has funded the Climate Risk Management - Technical Assistance Support Project (CRM-TASP) to enhance capacity to manage risks related to climate variability and climate change.

The proposed project is aimed to fill a critical gap in knowledge and considered to assess disaster and climate risk. The project’s activities will concentrate on the results and achievements of the CRM-TASP Armenia project that was initiated through an inception meeting at Bangkok, Thailand in October 2008. The duration of the current project will be 2 years (24 months) with the purpose to mitigate climate change risks of rural communities, mainstream climate risk management into agricultural sector, and strengthen the adaptive capacities of vulnerable communities to promote climate resilience. The project will support the integration of climate risk management in national DRR strategy to strengthen evidence-base for climate risk management at national and community levels, will support community development plans to enhance resilience, as well as will strengthen early warning systems.
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| Total Resources Required: | 500,000US$ |
| Total Allocated Resources: | 500,000US$ |
| • Regular |
| • Other: |
|   - BCPR: 500,000US$ |
| In-kind contributions: |
|   - Government of Armenia: 60,000US$ |
|   - UNDP CO: 50,000 US$ |

Agreed by UNDP:

Bradley Busetto
UN Resident Coordinator
UNDP Resident Representative

Signature: [Signature]
Date: 3/10/03
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ABBREVIATIONS

ARS  Armenian Rescue Service
APR  Annual Progress Report
AWP  Annual Work Plan
BAU  Business-as-usual
BCPR  Bureau for Crisis Prevention and Recovery
CBO  Community Based Organization
CC  Climate Change
CJSC  Closed Joint Stock Company
CO  Country Office
COP  Community of Practice
CPAP  Country Program Action Plan
CRM-TASP  Climate Risk Management Technical Assistance Support Project
CRM  Climate Risk Management
CSMT  Country Support Management Team
DIM  Direct Implementation Modality
DRR  Disaster Risk Reduction
DRRRRT  Disaster Risk Reduction Regional Team
EC  European Commission
EEG  Energy Environment Governance Portfolio
FAO  Food and Agriculture Organization
GIZ  Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GDP  Gross Domestic Product
GoA  Government of Armenia
HFA  Hugo Framework for Action
IPCC  Intergovernmental Panel on Climate Change
Ltd  Limited
MDGs  Millennium Development Goals
M&E  Monitoring and Evaluation
MoNP  Ministry of Nature Protection of Republic of Armenia
MoES  Ministry of Emergency Situations of Republic of Armenia
MoTA  Ministry of Territorial Administration
MoA  Ministry of Agricultural
NAP  National Adaptation Program
NC  National Communication
NGO  Non-governmental Organization
NIM  National Implementing Modality
NPD  National Project Director
NSS  National Statistical Service
POB  Project Outcome Board
PTL  Project Task Leader
QPR  Quarterly Progress Report
RA  Republic of Armenia
RDRA  Regional Disaster Reduction Advisor
SBAA  Standard Basic Assistance Agreement
SNCO  State Non-commercial Organization
TOR  Terms of Reference
UN  United Nations
UNDAF  United Nations Development Assistance Framework
UNEP  United Nations Environmental Programme
<table>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>USD</td>
<td>United States Dollar</td>
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<tr>
<td>V&amp;A</td>
<td>Vulnerability and Adaptation</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<td>WFP</td>
<td>World Food Program</td>
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I. BACKGROUND

The world’s scientific community agrees that climate change is already a reality. Over the past century, surface temperatures have risen, and associated impacts on physical and biological systems are increasingly being observed. Due to increased temperatures, and changes in precipitation patterns climate change will bring shifts such as sea level rise and movement of climatic zones, and will also increase the frequency and magnitude of extreme weather events such as droughts, floods and storms. As the frequency and scope of losses due to extreme climate events continue to increase, they place significant stress on societies and natural systems and there is growing need to explore options for meaningful risk management and mitigation. With the existing uncertainty in the projections concerning the exact magnitude, rate and regional patterns of climate change, its consequences will definitely affect and somehow change the lives of future generations. The impact of loss and damage associated with climate change is likely to increase the incidence and severity of poverty in countries most vulnerable to climate change. Poverty being the root cause vulnerability as low-income communities, individuals have fewer resources for absorbing the weather shocks.

While climate influences almost all aspects of life, the impact on agricultural production is likely to be of particular importance. The income and livelihood of rural populations is mainly generated from agricultural activities and is particularly exposed to the impacts of climate variability. Agriculture is highly dependent on specific climate conditions and the overall effect of climate change is difficult to assess in full scope. Changes in the frequency and severity of droughts and floods could pose challenges for farmers. Drought may threaten pasture and feed supplies and reduce the amount of quality forage available to grazing livestock. Some areas could experience longer, more intense droughts, resulting from higher summer temperatures and reduced precipitation. For animals that rely on grain, changes in crop production due to drought could also become a problem. Climate change may increase the prevalence of parasites and diseases that affect livestock. The earlier onset of spring and warmer winters could allow some parasites and pathogens to survive more easily. In areas with increased rainfall, moisture-reliant pathogens could thrive. Overall, climate change could make it more difficult to grow crops and raise animals in the same ways and same places as was done in the past. The effects of climate change also need to be considered along with other evolving factors that affect agricultural production, such as changes in farming practices and technology. It must also be considered that increase in temperature and carbon content can be beneficial for some crops in some places, but to realize these benefits, nutrient levels, soil moisture, water availability, and other conditions must also be met.

Understanding vulnerabilities and impacts of climate change on local livelihoods calls for integration of various methodologies of climate risk management. Information on the local factor that influence vulnerability and coping capacity, such as microclimatic variations, farming systems and socio-economic differences, should be combined with findings from climate impacts models to inform development planning and policy processes. Generally speaking, to enable assessments of vulnerability to climatic hazards, there is a need to link biophysical, social and economic data, as well as strong institutional capacity within Ministry of Territorial Administration (MoTA), Ministry of Emergency Situations (MoES), Ministry of Agriculture (MA), as well as affiliated specialized institutions is required to implement strong monitoring systems and generate and update the information on climate change risks, impact assessment, climate risk mapping and planning of mitigation activities both proactive as well as reactive.

Due to the uncertain nature of climate impacts, this has to be a dynamic process, involving integration of local and scientific knowledge and encourage field testing of this information.
by affected communities, farmers as well as policy-makers. Community empowerment and resilience of rural infrastructures and farming systems to climate change increase when information is effectively delivered to communities, thereby increasing their perception of ownership of the processes. Thus, to increase the resilience of livelihoods, local capacity development is a necessary investment in order to address recurrent disasters and prolong the positive results. On the other hand, implementation of agricultural good practices and successful solutions tailored to local conditions is a key principle for livelihood security. Therefore, in the local process of identification, prioritization and selection of good practices, effective mechanisms for stakeholder engagement are especially important. Risk management constitutes the next essential part of successful assessment of climate hazards. It can be said that disaster-prone communities are often well experienced in dealing with climatically induced hazards, but the expected increase in the frequency and magnitude of extreme climate-related events may exceed their coping capacity. In order to adopt mitigation measures effectively, communities need information to assess current vulnerabilities and future climate risks. Risk management and early warning systems are keys in reducing the impacts of climate-related disasters. Indigenous early warning systems, farming practices and coping mechanisms used by local people are important factors that should be analyzed.

Climate change presents a risk to livelihoods and to the economy and infrastructure. It is a crosscutting issue that cannot be addressed in isolation. Timely identification and development of measures for climate risk management will mitigate the negative effects of climate change; will reduce the damage from climate-sensitive natural disasters and will contribute to poverty reduction. Manage climate risk - means developing and learning how to apply a set of measures that minimizes damages resulting from climate-occurrence of natural disasters and enhancing communities’ resilience to current and future climate variability.

II. SITUATIONAL ANALYSIS

1. Climate and climate change in Armenia

The fact that Armenia is located in the subtropical zone of the ridges of the central part of the Lesser Caucasus does significantly effect on the climate of the country, in latitudes characterized by a manifestly arid and continental climate. It is characterized by a large number of solar energy and the strong variability of the weather. The climatic features of the country are determined by its mountainous terrain. Vertical climatic zonation is clearly defined.
Rainfall during the year is very uneven with the maximum occurrence in the spring and early summer. The annual amount of rainfall is 592 mm, where on the plains and lowlands falls 200 - 250 mm, while in mountain areas they reach 1000-1100 mm. The average annual temperature is 5.5°C, with the absolute maximum temperature of +43.8°C (recorded in Meghri, July 2011), and the absolute minimum temperature of -42°C (observed in Ashotsk, January 1961). During the period of June-August the average temperature ranges from 10°C in high areas to +26°C in the plains. Research data from the meteorological observations show that during the past decades in Armenia there is observed the temperature rise. Conducted studies show that for the period of 1935-2012, the recorded values of annual precipitation on the territory of Armenia decrease in relative to the baseline period of 1961-1990 (Fig. 2). Thus, the assessed changes show that during the past 80 years the increase in annual temperature by 1.03°C and reduction in precipitation by 10% are observed (Fig. 1).
**Figure 1.** Deviations of average annual mean air temperature (a) and precipitation (b) from the average values for 1961-1990.

**Figure 2.** Deviations of mean summer (a) and winter (b) air temperature from the average values for 1961-1990.
2. Risk of natural hazards in Armenia

Armenia faces major risks from earthquakes, droughts, floods, hail, mudflows, landslides, erosion and desertification. Back in 2005 World Bank’s report “Natural Disaster Hotspot – A Global Risk Analysis”, Armenia is listed in the top 60 countries exposed to multiple hazards. As early as in 2004, United Nations Development Programme (UNDP) report on reducing natural disaster risk revealed that during 1980-2000, Armenia averaged about 325 deaths per million inhabitants due to disasters, which makes factually more than 80% of Armenians at risk of exposure to catastrophic events. Although Armenia’s major risk is from earthquake (100% of the country is prone to earthquakes), 98% of the whole territory of the country is at risk of drought and 31% of the country is at risk of flooding.

Earthquakes: Armenia is situated in one of the world’s most seismically active regions and is the most vulnerable country to earthquakes, where the relative vulnerability is calculated as number of persons killed per million exposed.

Landslides: Landslide sites in Armenia cover more that 4% of country’s territory with about 35% of population located on landslide-prone areas. In general, landslides are triggered by heavy precipitation, however, according to the United Nations Environment Program (UNEP) report, water-logging resulting from poor operation and maintenance of irrigation, water supply, and sewage systems has contributed to landslide conditions in several towns of Armenia.

Mudflows: As several studies show, over half of Armenia is susceptible to mudflow, especially in medium-altitude mountainous areas.

Floods: Armenia does not have abundant flowing surface water; however, about 55-70% of annual discharge occurs in the spring due to melting snow. This could possibly increase water volume in several river basins by ten times and trigger seasonal flooding and cause severe damages to property and infrastructure.

Hail: Hailstorms are among the greatest natural hazards for the agricultural sector and cause tens of millions of dollars of damage for farmers each year.

Drought: According to the Hydromet Service, over the past thirty years, Armenia has an increase in mean temperature and decreased precipitation and humidity. Around 75% of the territory of the country is subject to desertification and aridization processes. Considering that most of agriculture lands are already exposed to atmospheric and soil drought, and the presence of persistent vulnerabilities (deterioration of irrigation and drainage infrastructure, and lower delivery efficiency and limitations on crop rotation and agronomy among fragmented, small landholdings), the consequences of climatic change could increase both incidence and severity of drought impacts.

Erosion: According to Armenian Rescue Service half of the country suffers from erosion.

Desertification: Desertification has increased due to climate changes and increased human activity. Lack of forest management and illegal woodcutting of local forests in 1990th lead to 20% loss of Armenian forest cover and threatens about 80% of Armenia.

3. Climate and disaster vulnerability

It is well known that key socio-economic sectors like agriculture, water, health, crop production, natural resources, environment and others are facing big problems due to

different climatic events that have wide-spread impacts and influences the sustainable development of the countries. Armenia’s variable climate is already contributing to its development and economy problems. The agricultural sector, being an important sector of the Armenian economy, is the most extremely exposed and highly vulnerable one. Being critical for the food supply, the crops and livestock that are grown and raised in Armenia contribute to at least 17% of the country’s GDP. In addition to that, 52% of the population is employed in the agricultural sector. The climate change impact on agriculture outputs is increasing the social vulnerability of rural poor, mainly having no other source of income, rather than subsistence agriculture.

Armenia with particularly one of the key development sectors as agriculture is prone to a variety of recurring climate related natural disasters and has been frequently hit by climate variability and natural disasters of hydro-meteorological origin that have enormous social and economic impacts. Changes in temperature, and the frequency and intensity of extreme weather could have significant impacts on crop yields as well as could affect animals. Droughts, flooding, winter frosts, hailstorms, and desertification lead to severe adverse consequences in the form of reduced crop production, death of livestock, and enhanced soil erosion, and causing thousands of dollars of damage for farmers each year and finally increasing food insecurity in rural areas. The World Food Program (WFP), the lead United Nations agency for emergency food relief, lists earthquakes, deforestation, desertification, erosion, winter frosts, floods and droughts as the top risks to food security in Armenia.

4. Disaster risk reduction and climate risk management: Institutional framework and capacity

After the 1988 devastating Spitak earthquake, the Armenian government has focused on improving risk reduction and emergency management systems by passing significant legislation and establishing the National Survey for Seismic Protection and the Emergency Management Administration in 1991. Nowadays, the disaster risk management in Armenia involves the following key agencies and institutions responsible for primary hazards, risk reduction and emergency management:

Ministry of Emergency Situations: Established in 2008 with three main priorities to develop a program for risk assessment and emergency preparedness; to carry out emergency response and recovery; and to coordinate government-wide policy on risk mitigation. Formerly independent organizations as the National Survey for Seismic Protection (NSSP); the Armenia State Hydro-meteorology and Monitoring (Hydromet) SNCO; anti-hail, and the State Reserves Agency; the National Center for Technical Security (NCTS); and the Armenian Rescue Service (ARS) are currently transferred under the structure and supervised by MoES.

Ministry of Nature Protection: The MoNP is responsible for coordination of UNFCCC implementation in the country, including coordination of mitigation and adaptation programs, and as well as for development of policies and measures for sustainable management of natural ecosystems. In connection to the elements of disaster management MNP has a role in flood, drought, and landslide mitigation, management of hazardous waste, its inventory and safe disposal. The Environmental Impact Monitoring Center is responsible for continues monitoring of air, water and soil pollution; State Inspectorate for Nature Protection supervises the implementation of nature protection legislation; Water Resources Management Agency, responsible for issuing and enforcing water use permits.
**Ministry of Agriculture:** The MoA is responsible for 8 functional areas including plant cultivation, forestry and flooding management, as well as landslides that affect water systems such as rivers or canals. The Landslide Mitigation and the Soil Utilization and Improvement Department units are within the responsibilities of MoA. The first unit is studying landslide mitigation options: the resettlement possibility of landslide-prone areas and engineering improvements; whereas the second one coordinating activities to improve land use; coordinating programs to prevent submergence, saturation, and flooding, as well as responsible for policy on agricultural land use and reclamation. The Ministry is coordinating the regional agriculture support centers and is monitoring the implementation of Food Safety Programme.

**Ministry of Territorial Administration:** The MoTA with its State Committee of Water Management regulates drinking water, irrigation, and land reclamation/drainage. The Ministry is coordinating the state policy implementation at local level connected with regional development.

**Ministry of Urban Development:** The Ministry is responsible for the critical function as spatial planning, as well as for improving urban development legislation. The Ministry of Urban Development is also responsible for development of spatial planning, recommendations on resettlement of landslide-prone areas and engineering improvements.

**Armenian Red Cross:** Having a nationwide structure for disaster management, its responsibilities include development and delivery of training on the basic rescue logistics and needs assessments.

At present, the country has a developed system responsible for natural disasters and responding to emergencies. However, there is an overlap and duplication in responsibilities and mitigation actions across the government agencies that need to be rationalized.

5. **Needs for mitigation of climate change risks**

As one of the vulnerable regions to the projected impacts of climate change, Armenia faces many challenges. It is known fact that many of Armenia’s natural disasters are caused partially by adverse weather and pose a serious threat to sustainable development of the country. However, national development plans, sector strategies in climate-sensitive sectors etc. have paid little attention to assessment of risks from climate variability and climate change.

Climate risk management is somehow practiced at various levels and with varying effectiveness. Thus, people in rural communities manage risks, including climate-related risks regularly as part of their everyday lives; using all information as they can get, farmers make decisions that aim to minimize climate risks and exploit climate opportunities. However, much more can be done. Since Armenian communities currently are not benefiting from all that climate science has to offer, it is becoming clear that what is needed is an approach that incorporates climate science into development planning and involving all primary stakeholders to ensure that their real needs are met. The climate tools used in such an approach will enhance stakeholders’ decision making by providing relevant information that they can incorporate into practice.

**III. BASELINE FOR UNDP INTERVENTION**

Disaster risk reduction is increasingly recognized as a major factor in achieving sustainable development, although the systematic integration of DRR into development planning and
activities remains a challenge. Investments in development are being wiped away and undermined by recurrent disasters, and these damages/impacts are being magnified by increasing socio-economic assets and development infrastructure as the country grows.

Climate change is recognized as an emerging risk that must be included in current DRR and development planning. Policy makers and practitioners working on climate change adaptation should benefit from the experiences and knowledge amassed by the DRR community in dealing with extreme weather events and recurrent hydro-meteorological hazards.

Including climate change in the disaster risk reduction framework enhances the analysis because climate change is likely to bring hazards for which there is no existing experience. Climate change, along with urban growth, economic globalization, and emerging health issues are all combining to rapidly change the nature of communities’ vulnerability.

To reduce human and economic losses, the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, commits countries and agencies to integrate DRR into sustainable development; develop and strengthen institutions, mechanisms and capacities to build resilience; and systematically incorporate risk reduction approaches into emergency preparedness, response and recovery programs. Armenia has expressed its commitment to disaster risk reduction by signing the HFA. Currently, RA Governmental Decrees “On Establishing National DRR Platform” and “On approving DRR National Strategy and Implementation Action Plan” are adopted with the major strategic goals to more effectively integrate disaster risk considerations into sustainable development policies and planning, to develop and strengthen the institution, mechanisms and capacities, and to systematically incorporate risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs. Special emphasis is given to disaster prevention, mitigation, preparedness and vulnerability reduction at the community level to systematically build resilience to hazards. The important developed mechanism for building capacities was initiated in 2012 the formation of DRR regional teams to ensure that the HFA and DRR strategy is working on the local level.

Till present the climate change issues might have been addressed indirectly in different areas of the country and mainly in response of the impact but not on the level of planning, or proactive coping capacity building. However, to address the complexity of climate change related impacts on a short-term as well as on a long-term basis, it is necessary that risks are identified, ranked, evaluated in terms of economic and, social impact. These are preconditions for planning and implementation of efficient and effective coping/mitigating measures in a systematic and integrated manner.

From 2007-2012, UNDP has supported the implementation of a “Strengthening of National Disaster Preparedness and Risk Reduction Capacities” project in Armenia to assist in the development of National DRR Strategy; to enhance public information capacity, and increase awareness of public at large; and to strengthen risk identification, assessment and monitoring systems to contribute to the overall early warning schemes. In 2012, Armenia recognized disaster risk reduction as *a priority in development process and included the DRR into National Security Strategy. In the Plan of Action 2012-2015, DRR Strategy is to be incorporated into sectoral development plans*.

UNDP has conducted socio-economic impact of climate change on 4 sectors of Armenian economy: energy, agriculture, water and forestry. The study was conducted in 2009 in cooperation with Stockholm Environmental Institute and the main conclusions were communicated to the national stakeholders. The main recommendation was “protect rural and low-income communities” and “prepare for natural disasters through prevention and emergency response readiness”. The guidelines were developed for climate proofing of
UNDP programmes, and applied for Community Development programme screening since 2009.

The Climate Risk Management Technical Assistance Support Project (CRM-TASP) was implemented in 2008-2012, in close collaboration with the Armenian State Hydro-meteorological and Monitoring Service of the Ministry of Emergency Situation of RA. The project conducted an assessment of current development conditions, climate variability and observable trends in the temperature increase and snow cover decrease, and projected climate trends of more frequent and severe extreme events with special emphasis on climate impacts and risks for agricultural sector. The report analyzed the current condition of climate risk management in institutional and policy arrangements and capacity assessment and emphasized the importance of climate risk management in agricultural and agro-processing sectors due to high vulnerability and sensitivity of sectors to climate induced risks.

IV. PROJECT STRATEGY

The proposed project will build upon the progress made in disaster risk reduction and climate change adaptation in Armenia in recent years, including the results of the CRM-TASP assessment, WB study on climate change risks for agricultural sector and will work in close collaboration and be mutually reinforcing with the UNDP funded “Strengthening of National Disaster Risk Reduction Capacities” (2013-2015). In particular, the proposed project will support further development of DRR and CRM policy and institutions at the national and local levels, capacity development at all levels, improvement of risk assessment, information management, and early warning, as well as the further enhancement of approaches to local level risk management elaborated and refined during 2009-2012. The project will utilize the expertise accumulated in UNDP Climate Change Programme working under close coordination of the Ministry of Nature Protection (MNP) since 1996. The MNP is national authorized body for UNFCCC implementation and is responsible for coordination of climate change action plan approved by the Government for each 5 year period. The studies undertaken under the framework of Climate Change Programme were aimed at development of climate change scenarios for the different regions of Armenia, assessment of socio-economic impacts of climate change, piloting adaptation measures for increasing resilience of mountainous forest ecosystems to climate change, vulnerability assessments of selected river basins, and regions, as well as preparation of First and Second National Communications of Armenia under UNFCCC.

The project will operate in key areas and entry points for climate risk management supporting the integration of climate risk management into national disaster risk reduction strategy adopted in 2012, improving planning process on local level, strengthening the early warning system by enhancing the capacities of the hydro-meteorological department and warning dissemination capacities and agricultural extension services; and implementing pilot climate risk management approaches and measures at community level and building on best practice examples.

The obtained knowledge of UNDP’s disaster risk reduction and risk management interventions will be used for the current project to ensure the sustainability of project interventions in the areas of risk assessment, planning, early warning, and community level disaster and climate risk management. The project will be implemented at national and community level. The project will establish multi-stakeholder partnerships in order to have an effective climate risk management and will closely cooperate with DRR National Platform. Active involvement of national and regional governmental and private institutions, as well as civil society will be promoted. The NGO network specifically addressing the women
inclusion in decision making and advocating for equal opportunities capacitated through the projects implemented by UNDP Democratic Governance Portfolio will be utilized. These will include different governmental institutions as Armenian State Hydro-Meteorological and Monitoring Service, State Academy of Crisis Management and other institutions of the Ministry of Emergency Situations, national research institutions and universities as State Agronomical Institute; different NGOs, since they work extensively at local level and often are the representatives of the vulnerable communities; and communities themselves, with the contribution and participation of people who are at first addressing the risks taking into account the actual community needs and secondly will be the final delivers of climate risk management into their communities.

Armenia is affected by climate variability and change, where the magnitude, frequency and severity of different natural hazards such as droughts, landslides and so on, seriously influence the traditional coping capacities of the rural population, with particular negative impact on socially disadvantaged; poor and extremely poor strata, women lead families, families whose income is totally dependent from agriculture outputs. The main principles of the project will be mainstreaming disaster risk reduction and climate risk management into regional development planning process, capacity development on local level, climate change risk mitigation and preparedness, and addressing the gender in climate and disaster risk reduction management.

The project will assist in promoting the mainstreaming of climate risk management by developing capacities to integrate CRM into local level development planning processes. Mainstreaming climate risk management and mitigation is highly dependent on the cooperation and support of local government units that carry out the direct implementation. The required collaboration and involvement of local leaders will be achieved through the consultation with government partners and community members, and the development of tailored training materials as well as pilot practices. The project will advise the local government about potential actions they can take in the development planning, and properly inform them of associated risks. The key achievement will be mainstreaming of climate change into local development policy and will consider the following major points as prioritization of climate change risk in local policy; mainstreaming climate change through local and regional partnership for sustainable development; supporting information, education, communication, and research and development; and promoting practices that will directly benefit local communities.

The project will coordinate the various stakeholders towards promoting efficient intervention on disaster preparedness and emergency response. This will made it easier for the different collaborating institutions implementing the project to build cooperation and participation with local stakeholders.

The project will facilitate continued capacity development at individual and community levels, and will promote information gathering and networking. It will enhance the institutional and technical capacities of local institutions to improve their management of climate related risks and promote local level preparedness against current and future natural hazards. The project will improve the livelihood resilience of farmers, highly vulnerable to frequent extreme climatic events by keeping them involved in the planning process and informed of the risks that may occur. For the implementation of climate change adaptation the project will assist in identifying the climate vulnerable communities, validate indigenous farming practices and coping mechanisms, and conduct trainings and provide pilot technical and financial support to implement risk reduction measures in climate affected communities. Will assist in promoting the understanding of climate risk management as the key strategy to
reduce the negative impacts of climate change and will assist in mapping the climate change risks and in use of early warning system. The project will work to empower women and address gendered vulnerabilities. Gender activities of the project are in the following main directions:

- Cross-cutting actions: ensuring that policy work is gender-sensitive; ensuring gender disaggregated analysis; targeting especially vulnerable social groups (including women in early warning and climate information actions).
- Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms: taking into account that women-headed households are increasing in agricultural sector due to men leaving for better income, the project will assist in mainstreaming of gender in capacity development activities as well as promote women participation in planned trainings.

V. PROJECT OBJECTIVE, OUTCOME, OUTPUTS AND ACTIVITIES

The main objective of the project is to enhance the climate resilience of Armenia in the highest risk sectors and areas and ensure national ownership through enhanced institutional knowledge and responsibility. Specific objectives are to mitigate the climate change risks of rural communities through mainstreaming climate risk management in the rural development planning process, applying/testing risk mitigation measures in agricultural practice, increasing stakeholders’ awareness on the threat to climate change on the agricultural sector, and strengthening the risk management and adaptive capacities of vulnerable communities.

The outcome of the project is: “Evidence-base for climate risk management strengthened on local level; promoted climate resilience of rural communities vulnerable to climate change risks”.

The objectives of the proposed project will be realized through the following outputs:

Output 1. Closer integration of climate risk management in national DRR strategy is supported and promoted in rural development planning.

Output 2. Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

Output 3. Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms.

Output 1: Closer integration of climate risk management in national DRR strategy is supported and promoted in rural development planning.

Activity 1.1: Examine risks associated with present day climate variability by designing CRM strategies; draw on experiences in dealing with climate variability and climate change induced risks and impacts in short-to-long term perspective.

The awareness of the need to integrate disaster risk reduction and climate change issues is increasing and encompasses an expanding set of activities by various development agencies and actors. They are involved in a range of initiatives including development, testing, and disseminating tools for screening and assessment of disaster and climate change risks. However there is certain gap in applying evidence based methodology that takes a risk management approach to the practical and efficient measures to integrate disaster risk reduction and climate change mitigation and adaptation into mainstream development activities.
The main implemented actions will be to conduct literature review on worldwide experience of climate variability and climate change risks, the data of national hydro-meteorological service and climate risk related impacts registered in Armenia so far and forecasted for short-, mid- and long-term, to identify high-impact measures and the main climate risk mitigation options to improve the resilience of rural communities and agricultural sector to climate change.

The approach will consist of climate risk survey and operations vulnerability analysis, identification and evaluation of risk-reduction strategies, and selection and implementation of risk-reduction measures, as well as in identification of main vulnerable groups which needs assistance and coping capacity enhancement. Information generated from risk assessment will be used to assist users in developing short and long-term risk reduction strategies. These strategies will involve the development of improved procedures, and improved emergency response plans. It will help to reduce and manage climate change induced risks and impacts in a practical and cost-effective manner, while addressing the needs.

**Activity 1.2: Hold consultations with broad group of stakeholders on climate risk perception in different communities; develop guidelines and conduct specialized training courses to facilitate development and integration of climate risk management plans.**

This activity will include conducting consultations with national and local government agencies, decision makers, planners, emergency response organizations, communities and other stakeholders to examine the existing plans to prepare, mitigate, and respond to natural disasters and to identify the main challenges in existing DRR programs.

The activity will also include development of a guide for identification and assessment of climate risk and integration of disaster risk planning for communities. As such, this guide will assist users in addressing climatic hazards, including droughts, floods, landslides, soil erosion, wind storms, hailstorms, and others. It will encourage and establish the synthesized and standardized guidelines on appropriate field observations and analysis on what reasonably can be expected of and be done. It will also provide guidelines for end-user communication to deliver observations, opinions and conclusions in a meaningful and actionable manner.

The facilitation of specialized training courses will be aimed at climate risk perception, and identified gaps and options for DRR-CRM interventions, and how CRM might be mainstreamed into current and planned development programs.

**Activity 1.3: Enhance risk reduction and adaptive capacity of vulnerable communities to understand, prepare and plan for climate-induced risks and impacts.**

Community members must be aware and understand local disaster hazards and their corresponding risks, and be encouraged to reduce their own risks and be responsible partners with government and other actors for the risks they are facing.

The impacts of climate change cannot be effectively dealt with without a clear plan for aligning agricultural policies with climate change and for developing key agricultural institution capabilities. Developing such a plan involves consultation with key stakeholders, farmers, particularly women lead ones and local agricultural experts. The most effective plans for adapting the sector to climate change will enhance agricultural sector. The project will also build ‘climate literacy’ of the farmer groups through targeted trainings and seminars.
Activity 1.4: Develop recommendations on integration of CRM issues into national DRR strategy and in spatial development planning.

The developed recommendations will be designed to give decision makers the framework and information for making informed decisions about investing in disaster and climate risk management measures. It will be structured to follow the decision-making process of existing planning and management practices and will help in evaluating financial and strategic planning priorities.

Output 2: Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

Activity 2.1: Provide guidance in identifying and ranking main climate change risks, evaluating socio-economic consequences of impact on agriculture and ecosystems on rural communities.

People need to understand their risks, and know how to protect themselves against natural and climate hazards. Thus, awareness messages must be relevant to people’s lives, and the given information should include practical actions what to do to reduce risk. With such information provided, the farmers will be able to protect themselves from recurrent hydro-meteorological hazards, as well as forecasted climate change scenarios. The identified and disseminated traditional and new techniques for risk reduction and disaster messages through educational materials will play an important role in public awareness increase.

Activity 2.2: Support national Hydromet agency and Ministry of Emergency Situation in improving data collection and analysis for short and long term forecast of meteorological hazards data such as drought; flood etc. to contribute to the climate resilient development in rural areas.

Farmers currently use hydro-meteorological forecasts available through television. However, these forecasts are far too broad in scale and do not provide adequate information for agriculture. Thus, the need for better local capabilities for hydro-meteorological data, particularly for short-term temperature and precipitation forecasts has become acute. Those capabilities are urgently needed in the short-term to support better farm-level decision-making. The economic analysis of the costs and benefits of a relatively modest hydro-meteorological investment, which includes training and annual operating costs, suggests that benefits of such a program are very likely to exceed costs. Improving the accessibility to farmers of agriculturally relevant weather forecasts will yield benefits as soon as they are implementing and provide a means for farmers to autonomously adapt their practices as climate changes.

The proposed project will assist the Hydro-meteorological agency in improving the availability and quality of climate information types such as: 1) historical data, which help elucidate trends, provide climate statistics, set a context for current data, and allow variability and the occurrence of extremes to be quantified; 2) real-time data, i.e. current climate observations; 3) climate forecasts, i.e. predictions of the climate, ranging from long-term weather forecasts to medium climate change projections. The Armenian Hydro-meteorological agency has a good database of historical data and network of observation stations. The current project will support in compiling and developing analysis based on existing and forecasted data, establishing two-way information flow on trends and impacts of extreme events, as well as strengthening coordination and communication between hydro-meteorological services, agricultural extension, and farmer groups.
Seasonal climate forecasts are potentially very useful for planning agricultural activities and for early warning and response planning. They can help agricultural decision making to enhance climate risk management. However, to make people trust in the forecasts will require enormous investments in education and development. To get the most from this technology will require improving the linkages between hydro-meteorological services and agriculture research and extension, integrating climate forecasts information into existing dissemination schemes, and linking forecasts with timely access to agricultural inputs. The challenge is to incorporate the probabilistic information with its explicit uncertainties into decision making. Possibility of cooperation with mobile operators for application with real time data, short and medium forecasts, depending on coverage and smartphone usage by beneficiaries/farmers will be assessed.

**Activity 2.3: Develop appropriate country and selected community scale climate and disaster risk maps based on historical loss data, hydromet data and climate risk prognoses; support in establishing a mechanism for yearly update and modifications of the maps.**

Hazard mapping is necessary in many municipalities and regions, and data collection in this process is the major challenge. The maps will help to plan the mitigation activities; they will be available on the MoES web-site and will supplement existing maps on seismic and landslide hazard zone maps.

**Activity 2.4: Create volunteering group of students from Yerevan Agricultural Institute to conduct analysis and research of climate and disaster related problems facing women, men and different age-groups in rural communities.**

The Climate Change Programme of UNDP has established network with Universities promoting the curricula update for incorporating climate change mitigation and adaptation courses. The specialists/lecturers are involved in gender and age-sensitive climate change impacts assessment and will mentor volunteer groups in undertaking the data collection and analysis process.

**Activity 2.5: Promote determination and implementation of global best practices in early warning system in Armenia. Conduct pilot application of selected early warning system in one disaster prone/climate-sensitive region (marz).**

Risk identification and early warning systems are the major and important mechanisms in managing the recurrence of natural disasters generated by climate change and in risk reduction strategies in vulnerable communities. The major component in community preparedness plays the warnings. The project will work on evaluating the global good practices and will develop guidelines for institutional partnerships in early warning systems, as well as will implement pilot early warning system in at least one disaster-prone community. Taking into account the climate variability, the project will try to determine and link the selected pilot to a possible long-term project to have more effective early warning system in the future.

**Activity 2.6: Strengthen early warning systems through enhanced capacities of hydromet and regional agricultural extension services for provision of tailored information for rural beneficiaries.**

The capacity of country’s emergency response system to respond adequately to disasters highly depends on the effectiveness of its early warning and emergency systems. And in order to have effective, efficient and timely preparedness and response to natural disasters, the early warning systems must be well established, strengthened
and tested. This requires support from the national government as well as from local communities, since they are the first responders to natural disasters in prone regions.

Early warning systems require coordination and collaborations across many levels and agencies: the short term forecast, obtained hazard data need to be analyzed to prepare risk information, and then it must be channeled through communication and dissemination mechanisms to conduct local disaster preparedness and early response actions. Therefore, there is need for improvement and investments in all components of early warning systems, from national government, who provides the DRR coordination mechanisms through capacity development and coordinated national agencies to local governments, who is responsible for emergency preparedness and response.

**Output 3: Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms.**

*Activity 3.1: Conduct focus group discussions on (stating) diagnosing the problems and determine feasible opportunities for coping mechanisms and diversification of agricultural activities with particular emphasis on women-headed households/farms.*

The most important part in filling the gap between the climate and agricultural communities is to provide useful climate information and advice to farmers. The UNDP/SGP vulnerability assessment tools will be utilized to conduct the initial community vulnerability assessment to determine the risks perceptive by different age and gender groups. However, taking into account that in Armenia a large number of households/farms in agricultural sector are led/managed by women and such households are tend to increase due to men continue leaving for better income, this activity will preferably focus on factoring in the perspective of women-headed farms for identifying feasible coping strategies and agriculture diversification. Within this activity the stakeholder consultations with local government officials, local experts and farmers concerning the identification of adaptation and mitigation options will be conducted. It is estimated that farmers in different communities have their own strategies and approaches for dealing with extreme climate events such as droughts, floods, etc. Thus, there are several adaptation and mitigation practices that could potentially be modified and used by other farming communities after thorough evaluation of their reliability.

The most important area with special emphasis on assisting women-headed farms or improving resilience to climate change and extremes is the irrigation. Specific consultations will be held to discuss the question of improvement of the existing irrigation schemes, improvement of water use efficiency by investing in drip and sprinkler irrigation, etc.

*Activity 3.2: Determine and implement pilot projects, focused on women headed households, which can mitigate climate risks to and impacts on agriculture output.*

To build effective and accountable disaster and climate risk management, the community-based approach need to be enhanced to provide evidence-based disaster and climate risk assessment system. Community-based risk assessments will be piloted after examining vulnerability and capacity gaps. Disaster risk analysis at the household and community levels might be combined into an integrated assessment. Similarly, assessments for disaster and climate change risks that share the same scope, approach and objectives might also be combined.

The project will determine and manage at least one pilot program to mitigate impacts from climate change risks. The pilot will be focused on the most vulnerable farms determined from the community-based vulnerability assessment, with the preference
given to woman-headed household. The project will also provide necessary trainings, corresponding advice and recommendations to increase farmers’ understanding and their ability to use climate related information. The capacity of the existing extension will be improved in agronomic practices at the farm level, including the access to better information on the availability and best management practices.

The results of the pilot assessments will be evaluated and presented to the local government to get legitimacy for various community-based risk assessment initiatives and innovations.

Activity 3.3. Conduct specialized trainings and seminars for farmers with greater focus on women-headed farms to enhance their capacities to mitigate climate change impacts.

Climate risk is not a new phenomenon, and climate risk management in the broad sense has long been practiced. Depending on different circumstances, people have a variety of risk management mechanisms available to them. Thus, farmers anticipate the rains using various indicators; if they install irrigation systems; reduce risk exposure by diversifying their livelihoods as far as possible. Agricultural scientists have developed drought tolerant crop varieties, and soil management practices to increase soil moisture-holding capacity. On the other hand, weather forecasts have been a major advance in helping people plan appropriately. However, there is still present a gap in the current coping mechanisms that occurs when all these mechanisms break down in the face of a changing climate and extreme weather shock.

The climate change risk requires a focused and appropriate agricultural development measures. Through the following specific points agricultural development can support climate risk management and adaptation: water resource management, crop breeding, economic diversification, access to forecasts and other climate information, etc.

One of the opportunities for diversification of agricultural activities is seed selection and the know-how to cultivate them effectively for high yield, since the most seedlings and plants used by farmers are not tolerant to weather changes. The farmers’ preference to produce and use their own seeds highlights the fact that those often not tailored to the specific climate and soil conditions of the given region. Conducted focus group discussions and trainings will provide opportunity to figure out heat and drought tolerant and marketable crops to address anticipated weather conditions. Improving and diversifying agricultural productivity, providing better access to market information, reducing the climate uncertainty will directly influence the farmers livelihoods, since they will be more risky in avoiding conservative management strategies and more confident in applying modern technologies.

Even if the extension service is active, well-funded, and accessible by men and women, few farmers use the trainings and other educational opportunities. Specialized trainings could improve limited information by the extension services and will provide demonstration plots that could potentially lead to the use of better technologies and greater access to information through extension. Taking into account that gender dimension is crucial in the agricultural sector, where gender inequalities in access and control over resources are present, the activity will seek to build women-headed farms’ capacity to identify, assess and implement risk reduction and adaptation measures to withstand climate change impacts on agriculture and to utilize the climate information disseminated by specialized agencies.
Activity 3.4: Develop and establish an organizational network for dissemination of good examples and practices in disaster prone communities by promoting a Community of Practice (CoP) for in-country DRR and CCA practitioners.

The disaster risk analysis and the assessment process in some cases are difficult to implement by community members on their own and could require the inclusion and collaboration of different external actors. Working in network will motivate the involved partners to do more for communities benefit. The efficacy will be achieved by working with community based organizations, local NGOs and users groups, who could be engaged in spreading awareness about DRR and CRM issues and in implementing appropriate measures. In addition, the volunteer’s teams can be increasingly used to raise awareness.

The Project will establish or enhance communication networks among local government institutions, local farmers and other interested stakeholders to develop information products for disaster risk management, based on local needs. It will also promote a Community of Practice (CoP) by addressing the regional climate risk management related issues.

Established network will turn the learning process into an awareness raising process for the other members of the community to reduce their own risks and increase preparedness. People will become more and more aware of the need to continuously enhance their capacity and disseminate the lessons learned and the knowledge they gained to the other communities.
VI. RESULTS AND RESOURCES FRAMEWORK

<table>
<thead>
<tr>
<th>Intended Outcome as stated in the Country Programme Results and Resource Framework:</th>
<th>Armenia is better able to address key environmental challenges, including climate change and natural resource management.</th>
</tr>
</thead>
</table>

**Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets.**

1) **Ind.**: No. of policy documents and instruments addressing climate change mitigation and adaptation issues; **B**: RA institutional and legal framework needs improvements; **T**: Climate change adaptation action plan developed and adopted

**Ind.**: Early warning system for major natural hazards is functioning; **B**: Lack of nation-wide early warning system and standardized risk information structures; **T**: Early warning systems for major hazards strengthened

**Applicable Key Result Area**: Enhancing climate change disaster risk management capabilities

**Partnership Strategy**: Ministry of Emergency Situations (MoES), Ministry of Territorial Administration, Ministry of Nature Protection, Ministry of Agriculture, DRR National Platform (DRR NP), CBOs and NGOs

**Project title and ID (ATLAS Award ID)**: Mitigation of Climate Change Risks of Rural Communities Through Improved Local Development Planning – Project ID 00075559, Output ID 00087401

<table>
<thead>
<tr>
<th>INTENDED OUTPUTS</th>
<th>OUTPUT TARGETS FOR (YEARS)</th>
<th>INDICATIVE ACTIVITIES</th>
<th>RESPONSIBLE PARTIES</th>
<th>INPUTS, USD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output 1</strong>: Closer integration of climate risk management in national DRR strategy is supported and promoted in rural development planning.</td>
<td><strong>Target for 2013</strong>: 1. Conduct literature review and determine global best practices in climate risk management. 2. Conduct consultations and meetings with government partners and community members. 3. Develop tailored training materials and specialized training courses.</td>
<td>Activity 1.1. Examine risks associated with present day climate variability by designing CRM strategies; draw on experiences in dealing with climate variability and climate change induced risks and impacts in short-to-long term perspective. Activity 1.2. Hold consultations with broad group of stakeholders on climate risk perception in different communities; develop guidelines and conduct specialized training courses to facilitate development and integration of climate risk management plans. Activity 1.3. Enhance risk reduction and</td>
<td>MoES, MoNP, DRR National Platform, MoTA, NGOs</td>
<td>103,500</td>
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*Baseline*: Limited incorporation of CRM in existing DRR policies and plans; weak institutional mechanisms for anticipatory planning and for ensuring communities resilience to current climate variability.
**Indicators:** CRM importance is recognized and incorporated in DRR strategy; guidance for CRM planning is developed and applied in 40 vulnerable communities.

1. Develop recommendations on CRM integration.
2. Mainstream climate change into local development policy and planning.
3. Publish and disseminate the updated guidance for CRM planning in vulnerable communities.

**Target for 2015:**
1. Develop recommendations on CRM integration.
2. Mainstream climate change into local development policy and planning.
3. Publish and disseminate the updated guidance for CRM planning in vulnerable communities.

**Output 2:** Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

**Baseline:** Limited capacity in national agencies in data processing, analysis and sharing. Limited capacities for analysis and warning generation, lack of proper communication of warning messages.

**Target for 2013:**
1. Assist in identifying the main climate change risks.
2. Assist agencies in meteorological data collection and analysis.
3. Determine the global best practice in early warning system applicable to Armenian community.

**Target for 2014:**
1. Conduct trainings on early warning systems in climate-
2. Conduct trainings and workshops to farmers (respecting the gender balance) and interested stakeholders in at least 40 vulnerable communities.
3. Conduct evaluation and monitoring of feedbacks.

**Activity 2.1.** Provide guidance in identifying and ranking main climate change risks, evaluating socio-economic consequences of impact on agriculture and ecosystems on rural communities.

**Activity 2.2.** Support national hydromet agency and Ministry of Emergency Situations in improving data collection and analysis for short and long term forecast of meteorological hazards data such as drought; flood etc. to contribute to the climate resilient development in rural areas.

**Activity 2.3.** Develop appropriate adaptive capacity of vulnerable communities to understand, prepare and plan for climate-induced risks and impacts.

**Activity 1.4.** Develop recommendations on integration of CRM issues into national DRR strategy and in spatial development planning.

**Activity 2.4.** Assist in identifying the main climate change risks.

**Activity 2.5.** Assist agencies in meteorological data collection and analysis.

**Activity 2.6.** Determine the global best practice in early warning system applicable to Armenian community.

**Baseline:** Limited capacity in data processing, analysis and sharing. Limited capacities for analysis and warning generation, lack of proper communication of warning messages.

**Target for 2013:**
1. Assist in identifying the main climate change risks.
2. Assist agencies in meteorological data collection and analysis.
3. Determine the global best practice in early warning system applicable to Armenian community.

**Target for 2014:**
1. Conduct trainings on early warning systems in climate-
2. Conduct trainings and workshops to farmers (respecting the gender balance) and interested stakeholders in at least 40 vulnerable communities.
3. Conduct evaluation and monitoring of feedbacks.

**Target for 2015:**
1. Develop recommendations on CRM integration.
2. Mainstream climate change into local development policy and planning.
3. Publish and disseminate the updated guidance for CRM planning in vulnerable communities.

**Output 2:** Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

**Baseline:** Limited capacity in national agencies in data processing, analysis and sharing. Limited capacities for analysis and warning generation, lack of proper communication of warning messages.

**Target for 2013:**
1. Assist in identifying the main climate change risks.
2. Assist agencies in meteorological data collection and analysis.
3. Determine the global best practice in early warning system applicable to Armenian community.

**Target for 2014:**
1. Conduct trainings on early warning systems in climate-

**Target for 2015:**
1. Develop recommendations on CRM integration.
2. Mainstream climate change into local development policy and planning.
3. Publish and disseminate the updated guidance for CRM planning in vulnerable communities.
**Indicators:** Developed system for regular climate risk assessment.
Usable climate risks map for Armenia are developed and a mechanism for periodic, preferably on yearly basis, update is established.
Determined and conducted a pilot application of early warning system in one disaster prone community and established a mechanism for warning information dissemination.

<table>
<thead>
<tr>
<th>Target for 2015:</th>
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<tbody>
<tr>
<td>1. Develop country scale climate and disaster risk maps.</td>
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<tr>
<td>2. Assist in establishing a mechanism for yearly update of the maps.</td>
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<tr>
<td>3. Disseminate the results of conducted pilot early warning system.</td>
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<tr>
<td>4. Establish a mechanism for dissemination of warning information.</td>
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</table>

**Target for 2013:**
1. Conduct consultations and meetings with stakeholders and community members.
2. Assist in identifying who is most vulnerable to climate in rural communities.
3. Assist in identifying appropriate coping and adaptive strategies.

**Target for 2015:**
1. Develop country scale climate and disaster risk maps based on historical loss data, hydromet data and climate risk prognoses; support in establishing a mechanism for yearly update and modifications of the maps.

Activity 2.4. Create volunteering group of students from Yerevan Agricultural Institute to conduct analysis and research of climate and disaster related problems facing women, men and different age groups in rural communities.

Activity 2.5. Promote determination and implementation of global best practices in early warning system in Armenia. Conduct pilot application of selected early warning system in one disaster prone/climate-sensitive region (marz).

Activity 2.6. Strengthen early warning systems through enhanced capacities of hydromet and regional agricultural extension services for provision of tailored information for rural beneficiaries.

**Output 3:** Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms.

**Baseline:** Limited knowledge on who is the most vulnerable to climate change risks.

| Activity 3.1. Conduct focus group discussions on (stating) diagnosing the problems and determine feasible opportunities for coping mechanisms and diversification of agricultural activities with particular emphasis on women-headed households/farms. |
| Activity 3.2. Determine and implement pilot projects-focused on the most vulnerable based on outcomes of MoES,, MoTA, Self-administration Bodies, MoA, National agencies, regional advisors, NGOs |

| 276,000 |
Limited knowledge on appropriateness of the coping and adaptive mechanisms employed by the vulnerable rural communities.

**Indicators:** A profile of who (men, women and different age and social groups) is most vulnerable to disasters at the community level is created to inform national policy.

Best practices of decreasing disaster damage and loss and tested coping and adaptive mechanisms for most vulnerable rural communities are documented, shared and replicated.

**Target for 2014:**
1. Conduct specialized trainings with particular emphasis on women-headed farms.
2. Provide pilot technical and financial support to implement climate and disaster risk reduction measures in climate affected community.

**Target for 2015:**
1. Establish multi-stakeholder partnership.
2. Publication of lessons learned and best practices.

<table>
<thead>
<tr>
<th>Output 4:</th>
<th>Project Management</th>
<th>37,000</th>
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<tbody>
<tr>
<td>TOTAL</td>
<td></td>
<td>500,000</td>
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</table>
VII. MANAGEMENT ARRANGEMENTS

Implementation arrangements

The Project will follow the Direct Implementation (DIM) modality led by UNDP Country Office and will be part of regional component of the global Programme and the national-level components. UNDP Country Office has developed the Project proposal in line with objectives of Global Programme and submitted it to BCPR allocation committee for approval. The country office is responsible for the project deliverables and will provide progress updates to DRRRT/BCPR through the RDRA and CSMT.

DIM modality will include controlling the expenditure and ensuring adequate financial management of resources provided for the programme, undertaking all necessary financial arrangements, processes, request for authorizations and payments with a view to ensure financial accountability.

The project will be implemented in full conformity with the UNDP Country Program Action Plan (CPAP) set up for the period of 2010-2015 and signed with the Government in June 2010. The CPAP is part of a broader development cooperation agenda, the United Nations Development Assistance Framework (UNDAF) for 2010-2015, developed and signed mutually with the Government on 24 July 2009. The document is formed in line with the targets and strategies outlined in the country’s Sustainable Development Program (2nd PRSP) signed in 2008 and other national priorities.

UNDP has a unique program execution modality with the Government of Armenia, which is an institute of National Directors at the level of Deputy Ministers. Since 2005, the Outcome Review Boards, composed of the indicated top level government officials and UNDP senior and middle management, jointly review the progress towards the program goals and agree on the next year activities.

The UNDP/CO in Armenia will consider implementing this project in line with the CPAP and the Annual Work Plans, developed and signed mutually by the UNDP and the National Director.

The Project Board will consist of UNDP DRR, UNDP Environment Governance Portfolio Analyst, National Director of the Environment Governance Portfolio, a focal person nominated from the responsible partner- the Ministry of Emergency Situations. This Project Board will provide consensus management decisions when guidance is required. The Project Board will also have final authority on matters requiring official review and approval, including annual work plans, budgets, and key hires. Expected responsibilities of the National Project Director and the Project Board are elaborated in detail in Annex 1.

Environment Governance Portfolio Manager will provide technical support to the project and guidance to the Project Coordinator. In addition, the Portfolio Manager will lead in the identification and assessment of risks, and formulate measures aimed at strengthening management of risks, and engage and negotiate with donor and international financial institution partners.

The day-to-day implementation of the project will be carried out through the well-established UNDP Climate Change Program Unit located at the Government bld. 3 (office space, means of communication, and other utilities as part of the government in-kind contribution): see Figure 3 for a graphic representation of the intended project management structure. The knowledge and expertise on implementation of UNFCCC in the country and well established relations with specialized national institutions and support structures will contribute in smooth start and implementation of the project.

A full time Task Leader (TL) technical expert will be brought in under the project to provide necessary management and technical backstopping to the Climate Change Program Coordinator.
The Task Leader will be fully responsible for the direct project execution and coordination of all project activities. He/she has a right to implement the planned activities in accordance with the AWP approved by the Project Board. A project team will be established and recruited on a competitive basis for project implementation. The project team will be managed by the TL, who will be accountable to the Programme Coordinator and UNDP for planning, implementation quality, timeliness and effectiveness of the activities carried out and the proper use of funds. The recruitment of the TL will be carried out by UNDP according to the established procedures. The TL will be supported by local support staff in the overall project management, including logistic support, circulation of discussion papers and draft reports, raising public awareness on project activities, coordinating and monitoring the work of the consultants and providing other support needed. The short-term national and international experts will be brought in for different technical aspects as needed.

The Project Management Team will be responsible for financial and technical reporting including preparation of progress reports; monitoring and evaluation; organization of training/workshop activities; and other tasks.

Three project components will be staffed by part-time teams of local experts working closely together.

**Support from the UNDP Country Office**

The UNDP and National Executing Partners have agreed that the UNDP Country Office will provide the following support services for the project activities:

(i) Identification and/or recruitment and solution of administrative issues related to the project personnel;

(ii) Procurement of commodities, labor and services;

(iii) Identification and facilitation of training activities, seminars and workshops;

(iv) Financial monitoring and reporting;

(v) Processing of direct payments;

(vi) Supervision of project implementation, monitoring and assistance in project assessment.

The procurement of goods and services and the recruitment of project personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. If the requirements for support services by the country office change during the life of a project, the UNDP country office support services list will be revised with the mutual agreement of the UNDP Resident Representative and the Implementing Partner in Armenia.

The relevant provisions of the Standard Basic Assistance Agreement (SBAA) between the Government of Armenia and the UNDP, and the United Nations Development Programme (UNDP), signed by the parties on 8 March, 1995, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services.

Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this document shall be handled pursuant to the relevant provisions of the SBAA.

The logos of the UNDP and Government should be equal and appear on all communication and other public materials.
Output 1: Closer integration of climate risk management in national DRR strategy is supported and promoted in rural development planning.

Output 2: Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

Output 3: Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms.

Main Beneficiary: Rural Communities, RA
Ministry of Emergency Situations

Senior Supplier: BCPR

UNDP Climate Change Programme Coordinator
Project Task Leader and Support Staff

UNDP EEG portfolio Analyst
Project Assurance

UNDP Executive: UNDP

Technical Advisory Committee

Main Beneficiary:
Rural Communities, RA
Ministry of Emergency Situations

Senior Supplier: BCPR

Technical Advisory Committee

Ministry of Emergency Situations of RA
Ministry of Territorial Administration of RA
Ministry of Nature Protection
Ministry of Agriculture
Local self-administration bodies (communities)
DRR National Platform

Ministry of Emergency Situations of RA
Hydromet Service, SNCO
Ministry of Nature Protection
Local self-administration bodies (communities)
Ministry of Territorial Administration of RA
CBOs and NGOs

Local self-administration bodies (communities)
Ministry of Territorial Administration of RA
Ministry of Agriculture
Agricultural Extension Services
Agricultural Academy
CBOs and NGOs
Donor Assisted projects (e.g. WB, GIZ, OXFAM, CARD, USAID, etc)

Reporting lines
Cooperation with stakeholders
VIII. MONITORING FRAMEWORK AND EVALUATION

Project start:

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDPCO and BCPR regional staff vis a vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.

b) Based on the project results framework and the relevant finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.

c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements.

d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.

e) Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

End of Project:

During the last three months the technical evaluation by BCPR will be conducted in order to reflect on achievements, lessons learned and development of next phase of this intervention. The project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project’s results.

Learning and knowledge sharing:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.
In general, in accordance with the programming policies and procedures outlined in the UNDP User Guide, the project will be monitored through the following:

**Within the annual cycle**

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table below.

- An Issue Log shall be activated in Atlas and updated by the Project Manager to facilitate tracking and resolution of potential problems or requests for change.

- Based on the initial risk analysis submitted (see annex 1), a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.

- Based on the above information recorded in Atlas, a Project Progress Reports (PPR) shall be submitted by the Project Manager to the Project Board through Project Assurance, using the standard report format available in the Executive Snapshot.

- a project Lesson-learned log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project.

- a Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events.

**Annually**

- **Annual Review Report.** An Annual Review Report shall be prepared by the Project Manager and shared with the Project Board and the Outcome Board. As minimum requirement, the Annual Review Report shall consist of the Atlas standard format for the QPR covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.

- **Annual Project Review.** Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. This review is driven by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

As part of its activities, the project will also conduct a quality management monitoring and evaluation to ensure the achievements of the project objectives.
### Quality Management for Project Activity Results

**OUTPUT 1: Closer integration of climate risk management in national DRR strategy is supported and promoted in rural development planning**

<table>
<thead>
<tr>
<th>Activity Result 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Atlas Activity ID)</td>
</tr>
<tr>
<td><strong>1.1:</strong> Examine risks associated with present day climate variability by designing CRM strategies; draw on experiences in dealing with climate variability and climate change induced risks and impacts in short-to-long term perspective.</td>
</tr>
<tr>
<td><strong>1.2:</strong> Hold consultations with broad group of stakeholders on climate risk perception in different communities; develop guidelines and conduct specialized training courses to facilitate dissemination of climate risk management plans.</td>
</tr>
<tr>
<td><strong>1.3:</strong> Enhance risk reduction and adaptive capacity of vulnerable communities to understand, prepare and plan for climate-induced risks and impacts.</td>
</tr>
<tr>
<td><strong>1.4:</strong> Develop recommendations on integration of CRM issues into national DRR strategy and in spatial development planning.</td>
</tr>
</tbody>
</table>

**Purpose**

To support incorporation of CRM in existing DRR policies and plans; to strengthen institutional mechanisms for anticipatory planning and for ensuring communities resilience to current climate variability.

**Description**

The activities will be focused on promoting climate risk management importance and its incorporation in national disaster risk reduction strategy at national and regional level. The guidance for climate risk management planning will be developed and applied in vulnerable communities through conducted trainings and workshops for different stakeholders. The concept of climate risk management will be more closely promoted in regional development planning to help reduce risks and increase climate resilience. The activities will be conducted in collaboration and coordination with national and regional governmental institutions, national and local technical advisors and local NGOs.

### Quality Criteria

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Quality Method</th>
<th>Date of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRM importance is recognized and incorporated in DRR strategy</td>
<td>Evaluation reports of conducted consultations with governmental entities and stakeholders.</td>
<td>Qr 3-4 of 2013</td>
</tr>
<tr>
<td></td>
<td>The CRM risk mitigation incorporated in DRR Action Plan</td>
<td>Qr 1 of 2015</td>
</tr>
<tr>
<td>Guidance for CRM planning is developed and applied in vulnerable communities</td>
<td>Reports and feedbacks of conducted training programs in 40 communities</td>
<td>Qr 1 of 2015</td>
</tr>
<tr>
<td>Developed guide for CRM planning</td>
<td>Published guide or manual for CRM planning in agricultural sector</td>
<td>Qr 2 of 2014</td>
</tr>
</tbody>
</table>
OUTPUT 2: Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.

<table>
<thead>
<tr>
<th>Activity Result 2 (Atlas Activity ID)</th>
<th>Purpose</th>
<th>Description</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1: Provide guidance in identifying and ranking main climate change risks, evaluating socio-economic consequences of impact on agriculture and ecosystems on rural communities.</td>
<td>To strengthen capacity of national agencies in data processing, analysis and sharing; to support capacity development for analysis and warning generation, and develop mechanisms for proper communication of warning messages.</td>
<td>The activities under this output will be focused on developing a system for regular climate risk assessment; strengthening the capacities of state hydromet and other agencies in climate information monitoring, analysis and application; development of usable climate risks map for Armenia and a mechanism for its periodic update. Recognizing the importance of early warning systems in the concept of climate risk management, the activities will also focus on undertaking the selected early warning system demonstration pilot in one at-risk community and will develop a mechanism for proper warning information dissemination. The activities will be conducted in close collaboration and coordination with the Armenian State Hydrometeorology and Monitoring (ASH) SNCO and the Ministry of Emergency Situations.</td>
<td>Oct, 2013</td>
<td>May, 2015</td>
</tr>
<tr>
<td>2.2: Support national hydromet agency and Ministry of Emergency Situations in improving data collection and analysis for short and long term forecast of meteorological hazards data such as drought; flood etc. to contribute to the climate resilient development in rural areas.</td>
<td></td>
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</tr>
<tr>
<td>2.3: Develop appropriate country and selected community scale climate and disaster risk maps based on historical loss data, hydromet data and climate risk prognoses; support in establishing a mechanism for yearly update and modifications of the maps.</td>
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<tr>
<td>2.4: Create volunteering group of students from Yerevan Agricultural Institute to conduct analysis and research of climate and disaster related problems facing women, men and different age-groups in rural communities.</td>
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<tr>
<td>2.5: Promote determination and implementation of global best practices in early warning system in Armenia. Conduct pilot application of selected early warning system in one disaster prone/climate-sensitive region (marz).</td>
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<tr>
<td>2.6: Strengthen early warning systems through enhanced capacities of hydromet and regional agricultural extension services for provision of tailored information for rural beneficiaries.</td>
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Quality Criteria

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Quality Method</th>
<th>Date of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established methods for regular climate risk assessment</td>
<td>Reports on climate risk assessment</td>
<td>Qr 2 of 2014</td>
</tr>
<tr>
<td>Developed usable climate risks map for Armenia</td>
<td>Published climate risks map</td>
<td>Qr 3 of 2014</td>
</tr>
<tr>
<td>Pilot application of early warning system in one disaster-prone community</td>
<td>Report of conducted pilot application</td>
<td>Qr 1 of 2015</td>
</tr>
<tr>
<td>Mechanism for warning information dissemination</td>
<td>Approved documents and formats on warning information sharing</td>
<td>Qr 2 of 2015</td>
</tr>
</tbody>
</table>
OUTPUT 3: Supporting implementation of selected CRM measures in rural communities with special emphasis on assisting women-headed farms.

**Activity Result 3** (Atlas Activity ID)

3.1: Conduct focus group discussions on (stating) diagnosing the problems and determine feasible opportunities for coping mechanisms and diversification of agricultural activities with particular emphasis on women-headed households/farms.

3.2: Determine and implement pilot projects, which can mitigate climate risks to and impacts on agriculture output.

3.3: Conduct specialized trainings and seminars for farmers with greater focus on women-headed farms to enhance their capacities to mitigate climate change impacts.

3.4: Develop and establish an organizational network for dissemination of good examples and practices in disaster prone communities by promoting a Community of Practice (CoP) for in-country DRR and CCA practitioners.

**Purpose**

To provide knowledge on climate change risk related coping mechanisms for farmers with special emphasis on woman-headed households in the rural communities.

**Description**

The activities will be focused on determining and testing the coping mechanisms to decrease losses in selected climate prone communities and to enhance climate change mitigation capacities of farmers. The activities will include implementation of pilots and specialized trainings for climate change impact mitigation. The activities will be conducted in close collaboration and coordination with the local government institutions, local NGOs, experts and existing community networks.

**Quality Criteria**

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Quality Method</th>
<th>Date of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized trainings courses</td>
<td>Reports and materials of training programs, evaluation and feedback from farmers and stakeholders</td>
<td>Qr 1-4 of 2014</td>
</tr>
<tr>
<td>Pilot applications of climate change impact mitigation in at-risk community</td>
<td>Report of conducted pilot application</td>
<td>Qr 2 of 2015</td>
</tr>
<tr>
<td>Established organizational network by promoting a Community of Practice (CoP)</td>
<td>Report of CoP on climate risk management</td>
<td>Qr 4 of 2014</td>
</tr>
</tbody>
</table>

**Start Date:** Oct., 2013  
**End Date:** May, 2015
IX. LEGAL CONTEXT

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Government of Armenia and the United Nations Development Programme (UNDP), signed by the parties on 8 March, 1995. The host country- implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the executing agency and its personnel and property, and of UNDP’s property in the executing agency’s custody, rests with the executing agency.

The executing agency shall:

(i) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

(ii) assume all risks and liabilities related to the executing agency’s security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The UNDP Resident Representative is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by BCPR Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;

b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

X. AUDIT CLAUSE

The Audit will be conducted in accordance with UNDP Financial Regulations and Rules and applicable audit policies on UNDP projects.
**XI. BUDGET***

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<td>Mitigation of Climate Change Risks of Rural Communities Through Improved Local Development Planning</td>
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<td>Responsible Partner:</td>
<td>Ministry of Emergency Situations of the Republic of Armenia</td>
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<p>| OUTCOME 2:             |                   |         |            |                             |                          |                        |                          |                          |             |              |
| MoES                  |                   |         |            |                             |                          |                        |                          |                          |             |              |
|                       |                   |         |            | 71200                       | International Consultants | -                      | -                        | 10,000                   | 10,000      |              |
|                       |                   |         |            | 71300                       | Local Consultants        | 3,000                  | 10,000                   | 5,000                    | 18,000      |              |</p>
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<thead>
<tr>
<th>Strengthening the national institutions capacity for evidence-based climate risk management at national and community levels.</th>
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<tbody>
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| TOTAL OUTCOME 4   | 8,500   | 17,000     | 11,500 | 37,000 |

| TOTAL PROJECT     | 46,000  | 330,000    | 124,000 | 500,000 |

* Deviation of expenses up to 15% is allowed between project activity budget amounts
XII. ANNEXES

Annex 1. Expected responsibilities of Project Board and National Director

1. General Conditions

1.1. The Project Board is to be formed on the basis of the project document for the project entitled “Mitigation of Climate Change Risks of Rural Communities” (hereinafter referred to as “the Project.”)

1.2. This document establishes the fundamental tasks, structure, organizational process, and meeting schedule of the Project Board, as well as the functions and rights of the Project Board.

1.3. This document applies to the activity of all members of the Project Board.

1.4. The Project Board is a group providing management and oversight, coordination functions, and political support to the Project.


1.6. The activity of the Project Board is based on the principles of free discussion and openness.

2. Fundamental Tasks of the Project Board

2.1. Oversight and coordination of the activities of the Project.

2.2. Creation of conditions for collaborative participation of local authorities with project staff and consultants, making possible the successful realization of project activity.

2.3. Review, assessment, and elaboration of recommendations, as well as consultative and expert delivery of suggestions on strategy, contents, volume, and timetables for concrete steps of the work of the Project.

2.4. Delivery of assistance in the realization of the work plans of the Project.

2.5. The Project Board is to be guided by this document with regard to its own activity.

3. Fundamental Functions of the Project Board

3.1. Overall direction of the realization of the project;

3.2. Definition of high-level directions of project;

3.3. Facilitation of collaboration with other complementary projects;

3.4. Facilitation of collaboration among government agencies, organizations, and other institutes for the successful realization of the project;

3.5. Provision of full access by the project to all documents and information in various government departments necessary for monitoring and realization of the project;

3.6. Delivery of methodological and practical assistance to the project on questions of realization of project activities;

3.7. Review and confirmation of Annual Work Plans, budget revisions, and staged financing;

3.8. Review and confirmation of annual reports on project activity;

3.9. Execution of the function of main coordinating body for promotion of the interests of the Project with regard to political, regulatory, legal, and financial support from the RA Government;

3.10. Continued effort to raise additional co-financing to support results and activities of the project after the conclusion of funding from the Global Environmental Facility.

3.11. Discussion and confirmation of rational for establishment of project’s Technical Advisory Committee and other working groups of the Project.
4. **Composition of the Project Board**

4.1. The Project Board includes representatives of the following organizations:
- EG portfolio National Director (First Deputy Minister of Nature Protection)
- RA Ministry of Emergency Situations (National Responsible Party),
- UNDP (country office in Armenia).

4.2. The general direction of the Project Board will be carried out by UNDP EEG portfolio.

4.3. For resolution of specific issues at Project Board meetings, various entities may be invited to attend, including representatives of scientific-technical institutes and academies, design companies, consultants, experts, and others.

5. **Role and Responsibilities of the National Director**

5.1. The National Director (ND) bears the responsibility for coordination of project in line with the Government of RA priorities.

5.2. The ND presents various forms of support for the successful execution of the project and corresponding steps after completion of the project, including the long-term persistence of project results, as well as dissemination of lessons learned.

6. **Organization of activity and scheduling of meetings of the Project Board**

6.1. The Project Board conducts its work at meetings convened at least once annually, or more often as needed.

6.2. Decisions may be made by the Project Board with a quorum of two of its three members in attendance.

6.3. The Project Board makes decisions by votes at meetings. Project Board members attending meetings must devote every effort to achieving consensus.

6.4. Decisions of Project Board meetings are formulated as protocols.

6.5. Project staff will carry out the following activities in support of Project Board meetings:
- Analysis of information provided by organizations, preparation of an agenda, and provision of necessary materials;
- Advance submittal of the draft agenda and accompanying materials with a cover letter for the review and approval of the Chairperson or his or her appointed delegate;
- Announcement of the time and location of the meeting and distribution of approved materials to the Project Board members no less than ten days before the meeting.
Annex 2. Risks and Mitigation Measures

To the success of the proposed project’s strategy, the assumptions on close partnership with the Government of Armenia, absence of major natural disaster during the implementation process, commitment and availability of personnel, as well as regional stability are critical. If these assumptions turn to the opposite, the strategy will have to be accordingly reviewed to ensure the continuation of necessary strategic adjustments.

The major strategic risks for the program development are identified and mitigation measures are proposed and presented in the following table.

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Date Identified</th>
<th>Type</th>
<th>Impact &amp; Probability (scale 1 min. - 5 max.)</th>
<th>Mitigation Strategies / Management response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CRM is not integrated in DRR strategy at national level.</td>
<td></td>
<td>Political, Strategic</td>
<td>The government may consider the mainstreaming of CRM issues into the national DRR strategy as being non-priority. I = 2 P = 1</td>
<td>Hold more discussions with government entities to ensure the necessity of CRM integration.</td>
</tr>
<tr>
<td>2</td>
<td>The CRM planning is not applied in communities.</td>
<td></td>
<td>Institutional</td>
<td>In some communities people and local government may not be cooperative and will not consider feasible CRM measures implementation. I = 1 P = 2</td>
<td>The project team will try to use evidence based arguments and best practice examples of other interested and concerned communities.</td>
</tr>
<tr>
<td>3</td>
<td>Implementation of selected mitigation pilots requires more resources than anticipated.</td>
<td></td>
<td>Financial, operational</td>
<td>The pilots particularly in early warning systems can be large and require for their implementation more funds than has been planned. I = 3 P = 2</td>
<td>Share information and cooperate with other donor agencies for leveraging additional finances.</td>
</tr>
</tbody>
</table>