



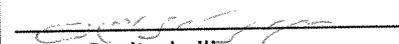
**Project Document for nationally implemented projects  
financed by the Green Climate Fund (GCF)**

<b>Project title:</b> Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia	
<b>Country:</b> Georgia	
<b>Implementing Partner:</b> Ministry of Environmental Protection and Agriculture	<b>Management Arrangements :</b> National Implementation Modality (NIM)
<b>UNDAF/UNSPS Outcome 8:</b> <i>Communities enjoy greater resilience through enhanced institutional and legislative systems for environment protection, sustainable management of natural resources and disaster risk reduction</i>	
<b>UNDP Strategic Plan Output:</b> <i>1.3: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented</i>	
<b>UNDP Social and Environmental Screening Category:</b> moderate as per <i>Annex H Environmental and Social Assessment Report</i>	<b>UNDP Gender Marker for the project output:</b> GEN2
<b>Atlas Project ID (formerly Award ID):</b> 00094354	<b>Atlas Output ID (formerly Project ID):</b> 00098463
<b>UNDP-GEF PIMS ID number:</b> 5846	<b>GCF ID number:</b> FP068
<b>Planned start date:</b> 01/12/2018	<b>Planned end date:</b> 30/11/2025
<b>PAC meeting date:</b> 08/11/2018	
<p><b>Brief project description:</b></p> <p>Due to the complex mountainous terrain and climate, Georgia is subject to both geological and hydro-meteorological hazards. According to Georgia’s 2nd and 3rd National Communications and other studies<sup>1</sup>, under climate change the frequency, intensity and geographical spread of extreme hydrometeorological hazards will increase. Georgia’s INDC estimates economic losses from climate-induced hazards without adaptation measures for the period 2021-2030 to be \$US 10-12 billion, while the cost of adaptation measures is estimated to be 1.5-2 billion USD<sup>2</sup>.</p> <p>To date, hydrometeorological hazard risk management has relied on the limited and expensive hard structural protection measures; emergency response with limited reliance on forecasts and early warning of the population; post event compensation and relocation of victims, resulting in eco-migrants; and post event recovery and risk reduction. In order to adapt to climate change, Georgia needs to adopt a proactive integrated climate risk management (CRM) approach centred around risk reduction, prevention, and preparedness through the establishment of a multi-hazard early warning system and an enhanced use of climate information in planning and decision-making across all sectors. This GCF project will address the main barriers to the establishment of a multi-hazard early warning system (MHEWS) and all other aspects of <i>a priori</i> climate risk management required to support an effective MHEWS.</p>	

<sup>1</sup> World Bank project: *Reducing the Vulnerability of Georgia’s Agricultural Systems to Climate Change*; USAID/GLOWS project: *Integrated Natural Resources Management in Watersheds of Georgia*; *Regional Climate Change Impacts for the South Caucasus Region* funded through ENVSEC (Environmental Security) initiative and commissioned by UNDP

<sup>2</sup> Georgia’s Intended Nationally Determined Contribution submission to the UNFCCC

The project will achieve transformative change in climate risk reduction and management in Georgia by development of a fully-integrated impact-based MHEWS system. In doing so it will introduce a standardised hazard, risk and vulnerability assessment and mapping methods and technologies and provide critical climate risk information to enable the implementation of nation-wide risk reduction policies. Importantly, it will develop long-term institutional and community capacities in climate risk reduction (CRR), climate change adaptation (CCA) and MHEWS. The project will thus catalyse a paradigm shift towards climate risk-informed and resilient development and will directly benefit up to 1.7 Million people (40% of the population) currently at risk from hydrometeorological hazards

<b>FINANCING PLAN</b>		
GCF grant		USD 27,053,598
<b>(1) Total Budget administered by UNDP</b>		USD 27,053,598
<b>PARALLEL CO-FINANCING (all other co-financing (cash and in-kind) administered by other entities, non-cash co-financing administered by UNDP)</b>		
	Government	USD 38,239,024
	Cash co-financing to be administered by UNDP	USD 5,000,000
<b>(2) Total co-financing</b>		USD 43,239,024
<b>(3) Grand-Total Project Financing (1)+(2)</b>		USD 70,292,622
<b>SIGNATURES</b>		
 <b>Levan Davitashvili</b> Minister of Environment Protection and Agriculture of Georgia	Agreed by Implementing Partner	Date/Month/Year: 7.12.2018
 <b>Louisa Vinton</b> Resident Representative	 Agreed by UNDP	Date/Month/Year: 5/12/2018

**Disbursement:** Government is aware of the conditions of disbursement ascribed to the first and subsequent tranches of the GCF funding as specified in the FAA (and in particular Clause 8 and 9.02 of the FAA). To the extent that these obligations reflect actions of the Government, the Government must ensure that the conditions are met and there is continuing compliance, and understands that availability of GCF funding is contingent on meeting such requirements and such compliance.

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## II. DEVELOPMENT CHALLENGE

### 2.1/ Country Situation and Development Context

***Climate Change (CC) and Disaster Risk Reduction (DRR) context.*** Georgia, as a country with transitional economy has undergone notable social-economic and political transformation since 2003. Despite the notable economic growth since 2003 poverty levels, particularly in rural areas, and income inequality, remains high. 43% of the population lives in rural areas, and 56% of people are engaged in mainly subsistence agriculture. Due to the diverse and complex terrain of the Caucasus mountains and the influence of the Black Sea and Caspian Sea on the climate and weather of the region, Georgia faces a number of climate-induced hazards including floods and flash floods, climate-induced geological hazards (including landslides, mudflow, debris flows), droughts, soil erosion, severe winds, hailstorms and avalanches.

There is a growing evidence that the frequency of climate-induced natural disasters and associated damages have been increasing over the past decades. According to Georgia's 2nd and 3rd National Communications to the UNFCCC, under climate change the frequency, intensity and geographical spread of extreme hydro meteorological hazards will increase, and may result in significant impacts on key sectors including agriculture, health, critical infrastructure, tourism and protection of culture heritage, environment, natural resources and ecosystems. Georgia's NDC (Nationally Determined Contribution) to the UNFCCC underlines the problem of intensifying climate-induced extreme events and states that the "establishment of Early Warning Systems for climate related extreme events is considered as priority measure by the Government". It also states that without international support the country is unable to deal with negative impacts of the climate change. CC scenarios show more extremes as prolonged rainfall events, concentrated in a short period of time with the potential to generate more runoff during these short periods, thereby increasing the potential for flash flooding (due to high peak river flows), mudflows and landslides. The trend of increasing average temperature for all seasons, decreasing precipitation and longer duration of dry periods, which will persist until 2050 in already dry areas will further increase the risk of droughts. By the end of the century, the trend will be more towards prolonged droughts rather than towards wet periods therefore, dry areas of the country already affected by the CC will become more vulnerable.

Over the last 21-year period total damages from climate-induced natural hazards were GEL 2.8 billion (\$1.2 Billion USD) at a cost of 152 lives (22 of which occurred in the Tbilisi flash flood of 2015). Floods, landslides and mudflows make up 60% of these damages/losses and 67% of loss of life. National disaster statistics indicates that there is growing trend in cumulative damages and losses of lives from climate-induced natural hazards over the last 20 years. Damages from single extreme events range from over 300 million GEL (\$121 Million USD) to 700 Million GEL (US\$ 283 Million). Economic assessment of the impact of climate-induced hazards under CC conditions, shows that 1.7 Million people (40% of the population) including the most vulnerable communities in remote rural and densely populated urban areas are at risk from the main hazards. Annual average damages (AAD) to properties from floods are estimated at 116.3 Million GEL (\$US51.2 Million) without climate change and at 282.7 Million GEL (\$US 124.4 Million) with climate change. The risk to agricultural land from all hazards is between 251,225 ha and 325,020 ha under baseline and climate change conditions respectively. Annual damages to agriculture from flooding alone would be 126.3 Million GEL (55.6 Million \$US) and 154.2 Million GEL (67.8 Million \$US) under baseline and climate change conditions respectively.

***CCA and Climate Risk Management (CRM) policy context.*** High current and future risks of climate-induced natural hazards as well as use of ad-hock reactive CCA/CRM approaches are listed among priority national issues in Georgia's Economic Development Programme until 2020, Georgian Basic Data and Directions for 2018-2021, 3rd National Environmental Action Plan (NEAP 3), Georgia's Nationally Determined Contribution (NDC) and, National DRR Strategy and Action Plan for 2017-2020. These documents contain a wide menu of both disaster response and prevention activities, emphasizing the higher importance of the latter over the first, suggesting implementation of such measures as improving risk knowledge through enhanced hydrometric monitoring and forecasting, hazard and risk assessment, establishment of early warning systems, increase in the resilience of institutions, communities and infrastructure, capacity building, awareness raising and education, etc.

## 2.2/ Baseline scenario

Despite the last decades' significant socio-economic transformation, Georgia is still a country in transition with around 2.7-2.9% annual GDP growth rate (2015 and 2016 official statistics), high internal and external indebtedness, negative export-import balance, 13% unemployment and particularly, high youth unemployment (26%), significant disparity between standard of living and incomes of rural and urban population and rural poverty, related to land fragmentation, soil degradation, low access to local capital and foreign markets, prevalence of subsistence and small-scale farming, outdated infrastructure, low capitalization and mechanization of agriculture sector, shortage of inputs and farmers' poor knowledge on good agricultural practices, etc. Moreover, in recent years due to various external shocks, the country's economic performance is worsening. Given this factor, the government was urged to curb its 2017 budget by 10%. Thus, Georgia is not currently in a position to fully deal with climate change and disaster risks. If conservatively, this socio-economic trend is maintained in the future, under predicted climate change scenario, existing financial gap between CRM investments and the needs will further increase. Thus, the country requires external financing to reduce current and projected climate-induced natural disaster risks.

To date, CRM has been dealt with an ad hoc and reactive manner, focusing on response, recovery and rehabilitation side of the CRM equation (e.g. use of engineering structures for flood, landslide and mudflow protection, post-event recovery and rehabilitation of damaged infrastructure, post-event compensation to victims, including relocation out of the hazardous areas) rather than on its preventive side (risk knowledge, including multi-hazard early warning, resilience of communities and systems, climate-informed land use zoning, spatial planning and development, etc.). Hard structural flood protection measures widely applied in the country are expensive to build, provide limited standard of protection and have a limited service life; emergency response once a disaster unfolds, has limited reliance on forecast of the event or satisfactory prior warning of the population, and limited centralized resources; Georgia lacks knowledge and capacities at system, institutional and individual levels to conduct multi-hazard, vulnerability and risk assessments, establish real-time monitoring, forecasting and early warning systems in order to make climate-informed decisions and implement climate-induced disaster risk management measures; the baseline financing of DRR/CCA by GoG is low and has been reducing over the years; the state budget has no specific DRR annual allocation, resource allocation is throughout different sectors which are not coordinated, prioritized, systematized or regularized; disaster response allocations are made through specific requests to the Ministry of Finance based on damage and loss assessments and calculations of costs, which are not made based on international standards<sup>3</sup>; the total amount spent on recovery and rehabilitation works annually is significant, but still is very small compared to annual average losses. This reactive approach to disaster risk management is neither efficient nor effective and would be even less so under the expected increased frequency and increased damages and losses that would result from CC. With annual losses from flooding alone estimate at 126.3 Million GEL, it is clear that the budgets of the key state institutions as well as the allocations from various funds are grossly inadequate to address the risk and potential losses from all hazards facing Georgia annually.

In the baseline scenario without GCF investment, Georgian population and economy will be facing increasing pressures from more frequent and severe climate-induced natural disasters due to climate change. Losses of lives and economic losses and associated impact on GDP and sovereignty credit rating will be increasing. Scaling-up of tested EWS will not be possible due to the existing financial gap between CRR needs and investments, underdeveloped national capacities for inadequate hazard and risk knowledge for all major basins in Georgia, as well as due to a lack of monitoring stations on which such risk knowledge relies.

The GCF project will address this reactionary approach to CRM. It will scale-up pilot activities and achievements of the UNDP project Developing Climate Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia (Rioni project) financed by the Adaptation Fund (2012-2017) as well as another UNDP project Strengthening National Disaster Risk Reduction System in Georgia. In addition, the GCF project will implement recommendations arising from the 2015 Tbilisi Disaster Needs Assessment Report prepared by the World Bank, UNDP and USAID experts and 2015 Tbilisi Disaster Recovery Vulnerability Reduction Plan supported by UNDP in particular, its soft components related to EWSs - risk knowledge, monitoring, warning and dissemination and

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<sup>3</sup> Unified disaster damage and loss assessment methodology is developed with UNDP support; finalization and consequent approval by the Government is planned by the end of 2018

response. The GCF project will scale up the prototypes piloted by the Rioni project (including the hazard mapping, floodplain modelling, floodplain zoning and EWS) to include the other river basins and regions of Georgia and to encompass a broader range of key climate-induced hazards.

Issues to be addressed by the project and its goals and objectives are in line with SDG (Sustainable Development Goal) 13: **Take urgent action to combat climate change and its impacts** and in particular, with its targets 13.1 through 13.3, calling for strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries (target 13.1), Integrating climate change measures into national policies, strategies and planning (target 13.2) and improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning (target 13.3). The project will contribute to the achievement of Outcome 1: **Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded** (output 1.3 and 1.4) and Outcome 5: **Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change** (Outputs 5.1- 5.4) of UNDP Strategic Plan as well as to the achievement of Outcome 8: **Communities enjoy greater resilience through enhanced institutional and legislative systems for environment protection, sustainable management of natural resources and disaster risk reduction** of UN Partnership Sustainable Development (UNPSD) for 2016-2020 and associated 4.1 and 4.2 outputs of UNDP Country Project Document (CPD) requiring improved policy, legal and institutional frameworks and knowledge base and information systems for environmental governance including CCA/DRR.

### 2.3/ Barrier analysis

Four critical barriers that the proposed project will overcome are as follows:

1. **lack of financial, technical and human capacities within the government to establish nation-wide multi-hazard hydro-meteorological and geological risk assessment, monitoring, modelling and forecasting** - lack of adequate real-time automatic observations due to inadequate hydrometric network; lack of human and financial resources to implement and maintain a national system for all appropriate climate-induced natural hazards and; absent definitive hazard, vulnerability and risk mapping for Georgia;
2. **gaps in legal, institutional and coordination frameworks for the Multi Hazard Early Warning System (MHEWS) and enhanced use of climate information** - lack of clarity with respect to roles and responsibilities for MHEWS; absent national protocol for the MHEWS; lack of clear and effective communication lines between different agencies; lack of Standard Operational Procedures (SOPs), communication protocols and Codes of Conduct for the various elements of the MHEWS and response; absent hazard, vulnerability and risk, including multi-hazard risk assessment mandates and methodologies; poor risk management and response capacities at municipal level, weak government capacities and knowledge for risk identification and assessment, risk prevention/mitigation, risk reduction, risk transfer, preparedness, CRM and CCA;
3. **climate information is not effectively delivered and utilized for the national, sectoral and local planning and decision-making** – absence of climate risk-informed sectoral strategies and activities due to the lack of comprehensive and definitive national hazard, vulnerability and risk mapping; absent climate forecasting and advisory products; absent planning platforms and methodological guidelines for multi-hazard risk management
4. **insufficient adaptive capacities and outdated risk reduction solutions for effective community-based disaster risk management (CBDRM), including Community-Based Early Warning System (CBEWS)** – presence of outdated flood defense infrastructure, heavy reliance on using hard structures as means of DRR and practically absent practices for using non-structural solutions, e.g. bioengineering methods – restoration of floodplain zones, integrated watershed management, agro-forestry; absent “last mile” communication and delivery of the warning to local communities and community-based risk reduction; limited CRM knowledge and capacities of local communities.

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## III. STRATEGY

### 3.1/ Adaptation alternative

In order to deal with the climate-induced natural hazards intensified due to CC, Georgia needs to move towards a more proactive integrated risk-informed approach centred around early warning, risk reduction, risk prevention, and preparedness. There is a need to support the commitment of the Georgian government to avoid losses of lives and to reduce economic and infrastructure losses caused by climate-induced natural disasters through the establishment of a multi-hazard early warning system and all associated risk management approaches.

A multi-hazard early warning system and effective hazard emergency response rely on effective forecasting and warning, knowledge of where and when the hazards will occur, engagement of all key players in the response, actions to be taken by each individual (or groups of individuals) and response/evacuation plans. Accurate and representative measurement of hydrometeorological variables is necessary for the provision of timely warnings to emergency responders and the population at risk. More accurate forecasts of the location and extent of the hazard will result in more effective warnings and response. For accurate forecasts and better strategic assessment of hazards, there is a fundamental need to expand and optimise the hydrometric monitoring by increasing the density of monitoring stations over the forecast basins, which will capture the large spatial and temporal variability in hydrometeorological processes that are characteristic of Georgian river basins. In addition, there is a need to have critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies for reducing exposure and vulnerability of the population and economic sectors to climate-induced hazards. There is a need to introduce and standardise hazard, risk and vulnerability assessment, modelling and mapping methods and technologies and build long-term institutional capacity for producing and updating hazard maps at a level of detail for all uses, such as spatial planning, resource planning, sectoral planning and decision making, and climate risk management. At community level, there is a need to improve community resilience and capacity to understand their vulnerabilities, adapt and respond to hazards, through the implementation of community-based early warning schemes and structural and non-structural community-based risk reduction measures.

The adaptation alternative will be achieved by: i) nation-wide scaling-up of the Multi-Hazard Early Warning System (MHEWS), ii) improving enabling environment and developing capacities for proactive CRM, including capacities for generation and effective distribution of climate information and embedding the use of climate risk information in sector planning and decision-making and, iii) reducing exposure of the most vulnerable communities to climate-induced hazards through community-based EWS, risk reduction measures and, public awareness and education activities.

### 3.2/ Paradigm shift potential and Theory of Change

The GCF project will address four critical barriers described in above sections towards implementing proactive integrated risk-informed CRM approach centred around early warning, risk reduction, risk prevention, and preparedness. It will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies for reducing exposure and vulnerability of the population, various sectors (e.g. agriculture, tourism, health, hydropower and rural development sectors), critical infrastructure (roads, bridges, electricity transmission lines, other power facilities, water supply and sanitation systems), natural resources and ecosystems to climate-induced hazards and private sector engagement. The project will thus catalyse a paradigm shift in the climate-informed national risk reduction and early warning approaches which will catalyse and scale up the use of climate-risk information and approaches across all government sectors. The project interventions are expected to have the following benefits to key sectors:

- *Critical Infrastructure.* Climate risk information developed through SDC funded interventions, will enable sector resilience planning for all critical infrastructure impacted by climate hazards. With climate risk information embedded into the planning, design, construction and management framework for critical infrastructure, there will be reduced impacts of hazards. Systematic and comprehensive assessment of the

risk to infrastructure and development of sector-specific resilience and response planning, will reduce the disruption of essential services resulting from hazards thus increasing efficiency of most sectors of critical infrastructure.

- *Energy.* Currently, the hydropower sector only uses (limited) hydrometeorological data in the design and construction phase of their projects. With more data being made available by the project (through expansion of the hydrometric network) and new climate risk products (multi-hazard maps and risk profiles developed through SDC funded interventions), hydropower companies would have enhanced information base to inform design management and operations of their installations. This could provide improvements in climate resilient design, and efficiencies in management and operations.
- *Insurance.* A weather index-based flood insurance scheme has been developed for the Rioni project. The risk and insurance model are developed but for national coverage and inclusion of other hazard it needs the multihazard and risk modelling that the SDC funded interventions for the GCF project will provide. Once this is completed, the insurance sector with the GoG can take this forward. Based on the Rioni project, there is currently a lack of enabling environment for this scheme to be implemented within the lifetime of the GCF project. However, the GCF project through examination of risk financing mechanisms has the potential to address these deficiencies to enable the insurance scheme to be part of the longer-term risk financing solution.
- *Agriculture.* The climate risk products to be developed will provide improved and climate resilient farming practices which will catalyse efficiencies for subsistence farmers and commercial farmers alike.
- *Natural resources and ecosystems.* Climate risk information and multi-hazard risk management plans at the river basin level for all 11 major river basins will allow for better protection of land, forest and water resources of the country.

The GCF project will develop basin MHRM plans and will implement some of the structural and non-structural intervention measures in selected high priority areas. These will provide strong replicability impact as they will establish the methods, standards and approaches that will work across Georgia and define these in guidance, legal and policy documents. The potential for scaling up these approaches is therefore significant. A total of 13 priority structural measures have been identified for implementation in 4 out of 11 river basins. There are many other locations where interventions will be need and these will be identified in the MHRM plans. There is therefore at least a threefold replication potential for the structural measures selected assuming there will be at least similar required in the selected basins, plus what would be required in the remaining basins.

The GCF investments will significantly improve capacities of the National Environmental Agency (NEA), Legal Entity of Public Law under the MoEPA to meet WMO standards. At present, NEA does not meet WMO standards in a number of categories. The project will up-scale the Rioni flood prototype EWS to cover the entire country and all climate-induced natural hazards. More specifically, it will expand hydrometeorological monitoring, hazard, vulnerability and risk assessments to 11 major river basins, to be conducted under SDC co-funded interventions, create multi-hazard and multi-level disaster risk management planning platforms, EWS and relevant capacities central, river basin, municipal and community levels also supported by SDC and support implementation of up to 13 priority structural measures to reduce flood and mudflow risks. Below on figure 1 is given a Theory of Change diagram with project (development) outcomes, immediate solutions, project outputs (underlying solutions), project activities (interventions) and assumption

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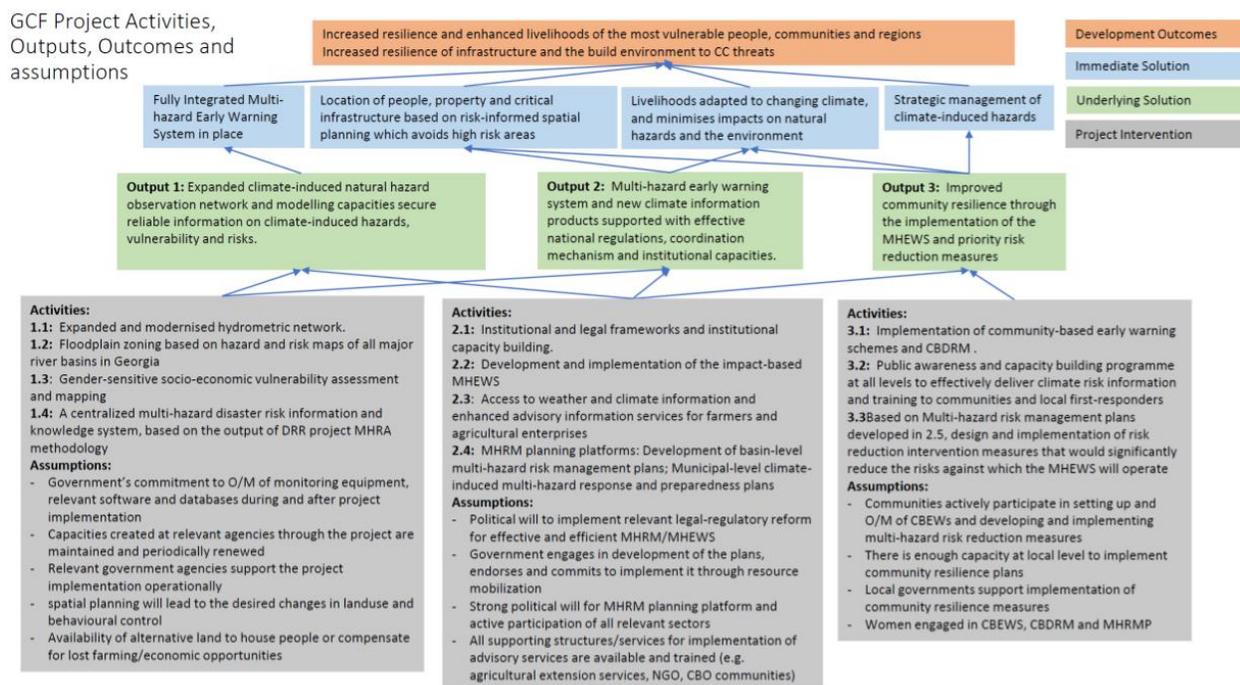


Figure 1. Diagram of Theory of Change (Source: GCF funding proposal)

**Adaptation impact potential.** The project will deliver following direct climate change adaptation benefits: i) Improved resilience of about 258,841 households, 1.71 Million people (0.89 Million women, 0.82 Million men) (47% of the population) who are at risk from all climate-induced hazards on an annual basis, including in the most vulnerable communities in mountainous rural areas as well as densely populated urban areas exposed; ii) savings of economic assets from expedient use and application of EWS with Present Value of \$58 million over 20 years; iii) reduced losses of lives: MHEWS could help reduce loss of life by half the current long-term average of 6.25 per year resulting in 62 lives saved and the PVB of \$22 million over 20 years; iv) protection of 3,500 properties through 13 structural measures for the total value of US\$ 13 million benefiting 6,500 people; v) protection of over 3,000 ha of agricultural land through 13 structural flood protection measures for the total value of \$6.5 million. Additional indirect benefits of the project to be achieved through enhanced climate information and advisories for agricultural sector, improved legal framework and floodplain development zoning, and enhanced adaptation planning. These project deliverables will reduce the risk from all hazards on 325,020 ha of agricultural land currently at risk and reduce the annual agricultural losses from flooding which are currently assessed at US\$ 67.8 Million, as well as reduce annual damages from the extreme flood events that are currently assessed at US\$ 189.9 Million.

Learning potential. The project will create a comprehensive knowledge basis and the state-of-the-art learning, research, monitoring and forecasting tools for climate-induced hydrometeorological hazards through embedded capacities within the legal entity responsible for environmental and climate training – the EIEC. Hence, the project will add CRM, climate-induced hazard risk management and aspects of MHEWS sessions to the trainings provided by the EIEC to improve the technical capacity and knowledge base for hazard and climate risk management, FFEWS and long-term adaptation planning. Moreover, the internal capacity for EIEC will be built in Training of Trainers (ToT).

**Contribution to the creation of an enabling environment.** The project will create an enabling environment at central, municipal and community level through improving legal-regulatory and policy framework for CRM/DRR with the interventions co-financed by SDC, including MHEWS, improving access to climate information and through and

enhancing systems and institutional capacity at all levels to use the climate information, tools and technology by practitioners and key government institutions.

**Socio-economic benefits, including livelihoods and income generation.** During the project implementation phase, temporary jobs will be created for members of at least 100 vulnerable communities, including women and in particular, the most vulnerable groups of women (e.g. single mothers, mothers with many children, etc.) by engaging them in on-the-ground activities. The afforestation measures could have significant economic effect to local communities, in case of high economic value plant species are used. The project will directly result in the safeguarding of livelihoods and income generation, due to the activities which will directly reduce exposure to hazards and provide early warning of impending disasters, thus reducing damages and losses, improving food production (through protection of agricultural land from hazards). This will have direct and indirect livelihood stabilization/protection and potentially income generation benefits. Multi-hazard early warning systems including improved advisory agricultural bulletins will vastly improve productivity of agricultural systems and will protect other economic activities currently at risk from the major hazards. In addition, municipal preparedness and response plans will safeguard key infrastructure, which enables economic activities to recover from, and continue during disasters. Structural and non-structural measures will provide direct protection from loss and damages to people and property in highest risk areas. The project has the potential to bring about long-term social and economic benefits in terms of avoided human and economic losses particularly, losses in agriculture sector, considered as one of the most vulnerable strategic sectors to climate change. The project will design and implement community impact evaluation surveys to monitor and measure change in the communities directly and indirectly targeted by the project.

**Environmental benefits.** The project will increase the resilience of vulnerable people, properties, infrastructure and economic sectors. Further the project will enhance the resilience of forest ecosystems, including protected areas and land resources as well as will protect streams and lakes from siltation and thus, aquatic fauna from increased turbidity. The project is addressing climate risks by introducing CRM and CCA measures. Specific environmental benefits include improved eco system functions through better spatial planning and the introduction of agroforestry which will improve the natural functions of the floodplains and watersheds within which they are implemented. Other environmental benefits include reduction in soil erosion and land degradation through the zoning of activities away from high risk areas as well as improved management. Improved agricultural practices that the project will catalyse, will also provide environmental enhancements. In the long-run the project will bring about significant environmental benefits by increasing the country's resilience to climate-induced natural disasters and thus, enabling its population to better protect national assets, including environmental assets (land, forest and land resources).

**Country's Ownership.** The project's long-term goal, immediate objectives and expected outcomes as well as planned activities are in line with CCA/DRR priorities of Economic Development Policy, BDD, NEAP-3, INDC, National DRR Strategy and Action Plan.

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## IV. RESULTS AND PARTNERSHIPS

### 4.1/ Expected Results

The project's objective is to reduce exposure of Georgia's communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The project will achieve this by nation-wide scaling-up of several projects and initiatives such as of the Rioni Basin flood forecasting and early warning system (FFEWS). The scaling up will be attained by delivering 3 concrete outputs and number of activities described below:

**Output 1: Expanded hydro-meteorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks** - Under this output, the project will apply a unified methodology and tools for multi-hazard mapping and risk assessment developed through SDC funded interventions and unified vulnerability assessment, monitoring based on the prototype developed through the Rioni project. The project will upgrade and expand the hydrometeorological and agrometeorological monitoring network, and support establishment of a centralized multi-hazard risk information and knowledge system, consisting of national e-Library, databases, information systems and knowledge portal. Local-level detailed hazard mapping and risk and vulnerability assessment will be developed.

**Activity 1.1: Procurement, installation and operationalization of new hydro-meteorological monitoring equipment**

- i) design and expansion of the hydrometric monitoring network to include the purchase and installation of the following equipment: 12 meteorological stations, 73 meteorological posts, 44 hydrological posts, 10 snow measurement stations, 20 inclinometers; 3 drones and additional corpus; 3 meteorological radars (co-financed), drone for flight control and thermal camera; visual computing appliance (VCA) for processing areal photos; geopositioning equipment; upper air sounding equipment (x2); 15 agrometeorological stations, 8 mobile discharge meters, 1 super computer for strengthening early warning system; telecommunication system equipment; the High Performance Computer (HPC) for the forecasting centre;<sup>4</sup> ii) technical assistance in the expansion of the network in the form of training, technical supervision and O&M.

**Activity 1.2: Climate sensitive hazard and risk maps used in planning and zoning**— i) development of hazard, risk and vulnerability maps for all hazards and all major river basins in Georgia, ii) introduction of modelling and mapping technology and methodologies in line with all relevant EU directives and following international best practice, iii) development of long-term capacity in hazard and risk modelling, iv) use of the hazard maps in development and implementation of spatial zoning policies. The activity will be implemented through SDC funded interventions.

**Activity 1.3: Identification and application of approach and tools for gender-sensitive socio-economic vulnerability assessments**

- i) introduction and implementation of methods and tools for the systematic gender-sensitive socio-economic vulnerability assessment for decision-making for prioritisation of resilience investments, ii) development and implementation of a GIS-based socio-economic risk and vulnerability model which integrates various spatial socio-economic data with the hazard maps, and produces risk and vulnerability maps, which will include economic losses and damages and loss of life estimates, iii) introduction of gender-sensitive community-based socio-economic survey technologies and techniques.

**Activity 1.4: Multi-hazard disaster risk data repository centralizing information management, applying relevant data protocols and with an accessible knowledge portal in place**

- development of national e-Library, databases, information systems and knowledge portal (web knowledge portal to increase awareness, provide interactive hazard maps, with integration with social media and possible mobile app to increase community engagement and allow two-way flow of information). To enable access and sharing of this information, a centralised information system and knowledge sharing platform will be developed as an integral part of the NSDI currently being developed for Georgia and provide the information access and sharing platform for geospatial information on hazards. While the

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<sup>4</sup> The hydrological stations would include solar panels, while meteorological stations, use a combination of solar panels and main connection, as the heater has been included for the rain-gauge requires the station to be connected to the electrical network (a solar panel and battery are not sufficient for the heater)

hazard-related part of the database will be hosted and maintained by NEA, as it is now, meta-database with socio-economic parameters, including vulnerability and risk assessments will be hosted by Emergency Management Service (EMS) having access to relevant data on disaster statistics, losses and damages and socio-economic vulnerability. Both meta-databases will be interconnected and integrated into existing GEOdata portal run previously by Emergency Management Agency under MIA and recently transferred to EMS.

**Output 2: Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities** - Under this output the project will address gaps in national coordination and institutional set up for effective EWS resulting in a functioning coordination mechanism and communication protocols for early warning. Capacities of decision-makers and national institutions involved in generating, processing, communicating and using the warnings and other climate information will be enhanced. National and local integrated Early Warning Systems by hazard and sectors will be developed and implemented.

**Activity 2.1: Policy, regulatory and legal frameworks in place and institutional capacities built for enhanced use of climate information and MHEWS** – i) improvement of policy and regulatory framework, including technical guidance for MHEWS and other elements of CRM, ii) support to integrating climate induced flood and droughts risks management into water legislation, iii) support the implementation of technical regulations and guidance on EWS, iv) finalisation of MHRA mandates and methodology, iv) clarification of roles, responsibilities and institutional arrangements for EWS at all levels, particularly the communication and dissemination of early warning where there is current ambiguity, v) development of necessary policy and legislative instruments to enforce the agreed-upon arrangements and standardized and institutionalized hazard, risk and vulnerability assessment methods for Georgia, vi) operationalization of nation-wide risk zoning policy based on risk and hazard maps, vii) establishment of clear communication lines between different agencies and development of Standard Operational Procedures, Communication Protocols and Codes of Conduct for each of the agencies responsible for the various elements of the MHEWS and response, viii) elaboration of roles of regional and local authorities, ix) trainings of decision-makers and CCA/CRM practitioners in multi-hazard gender sensitive vulnerability and risk assessments, MHEWS, CRM, etc. x) strengthening multi-stakeholder/multi-sector climate change coordination mechanisms and Georgia’s participation in regional climate forums, e.g. Climate Outlook. The activity will be implemented through SDC funded interventions.

**Activity 2.2: Design and introduction of MHEWS covering all 11 river basins of Georgia (including last-mile coverage)** – i) development of a fully integrated multi-hazard forecasting system to be implemented within NEA to cover the whole territory of Georgia, ii) Inclusion of the data from ground weather radars into the forecasting platform to provide for a finer spatial resolution of the precipitation area, the real-time data availability, and the ability to track approaching storms even before they reach the catchment of interest, iii) inclusion of a high resolution Digital Elevation Model (DEM) data from aerial photographs or LiDAR sources iv) inclusion of a forecast verification system, v) development of drought, landslides, avalanches, wind and hailstorm forecasting, v) design and implementation of the “Last-Mile” warning dissemination and communication system, vi) development of a link to the socio-economic risk model to be developed in Activity 1.3 to provide Impact-based forecast, vii) design and implementation of the National MHEWS Protocol, viii) monitoring and evaluation of the designed MHEWS and development of recommendations for the system enhancements, expansion and further development for long-term sustainability of the system.

**Activity 2.3: Access and use of tailored climate weather information products and advise to farmers/agricultural enterprises** – i) building upon the enhanced equipment and capacities of the agrometeorological observation network to be achieved through Activity 1.1. and further support to capacities of the national agricultural agencies and extension services to generate and deliver tailored climate and weather information and advice to the farmers, ii) building capacity within MoEPA and NEA in the use of climate information and climate change adaptation for the Scientific-Research Centre of Agriculture, National Food Agency and for the municipal Information and Consultations Centres, iii) Integration of climate risk and adaptation priorities into the agriculture sector plans, investments and budget frameworks, including the investment appraisal skills, economic valuation of climate change impacts, based on sector model, trade off analysis and cost-benefit assessments for a range of plausible adaptation options in agriculture, iv) development of guidance documents, methodologies and technical regulations for the agricultural

sector on climate risk assessment and management and the use of climate information, v) development of new climate information products for the agricultural sector (agro-climate maps, calendars, advisories, etc.) and delivery of these products to the farmers to help them make decisions related to timing, such as choosing the best planting dates and deciding when to apply fertiliser, vi) support to improvement of agrometeorological advisory services through the NFA, its regional service centres as well as through the Scientific-Research Centre of the MoEPA and its Information-Consultation Centres, altogether providing warning and/or extension services to farmers, vii) Capacity building and training for local farmers in the use the weather forecasts within their farming methods.

**Activity 2.4: Climate-informed multi-hazard risk management (MHRM) responsive system in place: including basin-level multi hazard risk management plans and municipal-level multi-hazard response and preparedness plans** – i) development of integrated multi-hazard basin risk management plans for 11 major river basins (with participation of all relevant stakeholders, ii) development of municipal-level climate-induced multi-hazard response and preparedness plans, including Multi-hazard response, preparedness and resilience plan for the City of Tbilisi, co-financed through SDC interventions.

**Output 3: Improved community resilience through the implementation of the MHEWS and priority risk reduction measures** – Under this output the project will secure delivery and use of the early warnings and climate advisories with end-users. Communities' capacity to effectively utilize the EWS information and products and respond to climate-related disasters through planning and implementing structural and non-structural resilience measures will be enhanced. In addition, the project will implement priority structural intervention measures in high risk areas addressing most vulnerable communities (based on sound cost-benefit analysis using the socio-economic risk model) to reduce the risks that the EWS will be designed to address.

**Activity 3.1: Participatory community-based adaptation planning reinforced through community-based early warning schemes and community-based climate risk management** – i) development of Community-based EWS and CBCRM schemes in at least 100 communities across Georgia based on full community engagement, ii) implementation of CBEWS where appropriate to complement the fully integrated national EWS, iii) implementation of CBCRM Process, including participatory planning and implementation of community-based adaptation interventions, iv) gender mainstreaming will be a key aspect of the CBDRM process, v) impact evaluation of the measures implemented by the project evaluated at baseline, year 4 and year 7 of the project.

**Activity 3.2: Public awareness and capacity building to effectively deliver climate risk information for communities and local first-responders** – i) enhancing the capacity already built within the EIEC, ii) capacity building at central, municipal and community levels on MHEWS and MHRM, iii) capacity building and awareness raising of municipal authorities, local NGOs, CBOs or non-CBO community members in Community-based Risk Assessment approaches, Community-based Early Warning Systems and gender-responsive Community-based Multi-Hazard Risk Management, iv) development and application of generic education materials and 5-year training programmes on DRR for schools and universities, v) networking and advocacy – annual community CBMHRM and CBEWS forums, CBO award competition, community-government and PPP dialogues, vi) youth engagement and, pre-school and school education on MHRM/DRR and CBEWS, vii) national-wide media campaign on gender-responsive MHRM and EWS.

**Activity 3.3: Implementation of project selected from 13 short listed sites for location specific priority risk reduction interventions** - implementation of priority risk reduction interventions for 13 selected areas where risk from climate-induced natural hazards is highest, including construction of embankments (using boulders or gabions), river bank protection (wire mesh lining), sediment extraction, removal of debris and vegetation, channel widening, ii) implementation of mitigation measures of Environmental and Social Management Framework developed during the design phase of GCF funding proposal.

#### **Partnerships and stakeholder engagement**

This GCF project was developed in close consultation with key stakeholders and based on this process, a Stakeholder Engagement Plan was developed (please refer to ***Annex I: Stakeholder Engagement Plan***). Moreover, Environmental

and Social Assessment Report (ESAR), together with structural measures to be implemented under the project and associated Environmental and Social Management Plan (ESMP) were discussed with representatives of local governments and affected communities. Details on the ESAR's stakeholder consultation is included in the **Annex H.2: – ESAR** to this project document.

This GCF project will be implemented under the NIM modality, with MoEPA (through its Environment and Climate Change Department) playing the role of project executing entity/implementing partner. The Project Board (PB) will be established for directing the project with participation of representatives of all key stakeholders, including MoEPA and its specialized agencies - NEA, National Food Agency (NFA), Agriculture-Scientific Research Centre and EIEC, EMS, MRDI, MIA, representatives of local authorities and civil society organizations. In addition, it will invite SDC to the board as one of the major co-financiers of the project. Extended PB meetings with participation of various international organizations (e.g. WMO), NGOs, private sector representatives may also be held where and when it is necessary to receive their expert's advice on concrete issues.

While the overall implementation of project will rest upon the MoEPA, concrete outputs and activities/sub-activities will be delivered by teams of international and local consultants and NGOs/firms through request for proposals as well as by various government entities as responsible parties, through Letter of Agreements (LoAs) between UNDP and responsible parties. More specifically, the project will engage following national partners in achieving project outputs: i) NEA – expansion of the hydrometeorological network, multi-hazard assessment and mapping, establishment of hazard metadata base, development of telecommunications system to support the new EWS and integration of telemetry system for near real-time dissemination and use of EWS, river basin multi-hazard risk reduction planning, ii) NFA – expansion and operations of agrometeorological network and its integration in existing system, enhancing access and the use of weather and climate information and agrometeorological information services by farmers and agricultural enterprises, iii) Agriculture Scientific-Research Centre – development of climate and agrometeorological information and advisory products and their effective delivery to end-users, iv) EIEC – public awareness, education and capacity building programme on CRM and training to communities and local first-responders; iv) EMS – vulnerability assessments, establishment and operations of risk database, “last” mile” communications and warning, iv) MRDI - design and implementation of risk reduction intervention structural measures as well as implementation of Environmental and Social Framework for these on-the-ground activities.

Activities related to the establishment and integration of community-based EWS systems as well as conducting Community-Based Climate Risk Management process will be implemented by a group/consortium of international and local NGOs, having grass-roots experience in the areas of community-level participatory disaster risk planning and management, integrated natural resources management, community mobilization and empowerment, small-grants making. This group/consortium of organizations will be hired by UNDP through open call – Request of Proposal.

Informal Technical Advisory Working Groups (TAWG) will support the project. They provide inputs to and endorsement of the design and quality of the project outputs. The TAWGs members will be drawn from government, private sector, academia and civil society to provide guidance and technical advice on the project. A balanced representation of women and men in the TAWGs will be ensured.

Under the public awareness and education component, it is planned to target both general public and specific groups of society, including selected communities, youth (e.g. through informal eco clubs), local governments, NGOs, media, education institutions.

Key means for stakeholder engagement other than participation in PB meetings and delivering concrete outputs as part of LoAs will be stakeholder workshops, trainings/ToT, information and promo campaigns, media and youth competitions, various networking events (e.g. community forums), internet and Facebook communications/forums.

During the inception phase of the project, the MoEPA working together with UNDP, will consult with all stakeholders, including vulnerable community members and local government and facilitate an understanding of the roles, functions, and responsibilities within the Project's decision-making structures, reporting and communication lines,

and conflict resolution mechanisms. Local community consultations councils will be established at target municipality and/or community levels to maintain dialogue with the local beneficiaries and stakeholders throughout the project implementation. The project Logic Framework (indicators, means of verification, assumptions) will be reviewed and the quarterly and annual plans will be refined engaging the communities from the targeted districts. The stakeholders will also be engaged during the mid-term and final evaluations to assess the progress of the project and enable adaptive project management in response to the needs and priorities of the communities.

Updates on the project progress will be released on a regular basis via print, radio, social media or formal reports. A publicized telephone number will be maintained throughout the project to serve as a point of contact for enquiries, concern, complaints and/or grievances, which will be recorded on a register. All published materials will be in English and Georgian as appropriate. A two-tier Grievance Redress Mechanism (GRM) will be established as a practicable problem-solving mechanism with voluntary good-faith efforts to resolve complaints and/or grievances on mutually acceptable terms. The first tier will involve the receipt of a complaint and/or grievance at the local level. A Community Project Implementation Committee will be formed to oversee the first tier of the GRM, composed of the Trustee of a Mayor/Local Governor to the Community, representative(s) of target community(ies), local woman's association/group, local youth group, local representative of the implementing and executing entity if applicable, PMU Safeguards Officer. The Grievance Redress Committee, chaired the Local Governor will be formed at every district level to address the grievance in the second tier. It will study the normally occurring grievances and advise PMU and PB on remedial actions to avoid further occurrences. The Grievance Redress Committee will hold the necessary meetings with the aggrieved party/complainant, record the minutes and communicate proposed responses to the complainant formally. Details of the Community Engagement and Grievance Redress Mechanism are given in **Annex H.2 – ESAR**.

#### **4.2/ Risks and Assumptions**

Risk factors associated with the project include institutional, policy, financial, technical and operational aspects to create and run properly MHEWS both national-wide and at community level; and social and environmental risks due to the implementation of climate-resilient livelihoods initiatives and construction of protective infrastructures against hydrometeorological risks. The absolute majority of risks, including environmental and social risks is of moderate nature. Details on the risk are included in **Annex K: UNDP Risk Log**.

For social and environmental risks associated with implementation of structural risk reduction measures in 13 locations of Georgia, ESAR was developed together with ESMP, based on which the project is expected to have spatially and temporally restricted moderate negative environmental and social impacts, including sediment movement, silting of water courses, temporary damage to local landscape, injuries during transportation of crew and materials as well as during construction activities, etc. Management Plans have been developed to avoid, and where not possible, to mitigate negative environmental and social impacts, including the development and implementation of an Erosion, Drainage and Sediment Control Plan (EDSCP). Concerning positive impacts, during construction phase temporary jobs for locals can be created as a short-term positive impact. However, the long-term sustainable positive social and environmental impacts of the project and in particular, flood defence structures will be avoided losses in human lives, assets, agricultural lands and ecosystems. In total, 1.7 million people will benefit from the initiative, of which 52% are women. Details on potential environmental and social impacts and risk mitigation measures are included in **Annex H: ESAR**.

Negative environmental impacts associated with operations phase are solely related to proper O/M of the structures. The lifetime of the structures is about 20 years and during this time span such measures, as cleaning canals from vegetation/weeds and sediments or conducting minor repairs may become necessary annually or within reasonable intervals. In case these structures are damaged/scoured/dilapidated as a result of improper aftercare, then damming the canals and flooding downstream areas can happen. Thus, it is necessary to follow O/M plan, developed during project feasibility phase. Importantly, the technical solutions for structural risk reduction interventions have been tested through a prototype EWS and flood risk management project in Rioni basin and there is evidence of positive impact on local environment over the medium to long term, thereby offsetting the short-term environmental impacts.

The non-structural community resilience measures, including agroforestry and floodplain/watershed restoration will have limited environmental and social impact. The project will carefully assess and select plant species during project design phase in terms of their conservation and economic values that are of local provenance and have high survival rate, etc. Moreover, during reforestation/afforestation activities, small scale sediment movement may happen and measures have to be taken to control erosion through the development and implementation of an EDSCP, including installing silt curtains to restrict sediment movement during implementation of structural and non-structural community resilience measures. Overall, community resilience measures will create temporary jobs for local community members, including women that can be considered as a short-term positive social impact. Moreover, if high economic value crops/plant species are selected, they may bring additional revenues for local and improve their livelihoods.

Thus, the non-structural interventions combined with expansion of existing hydrometeorological network are unlikely to have medium risk impacts. The project will ensure that all the equipment purchased meets international environmental, safety and technical standards. Efforts will be also made to minimize environmental footprint of project activities, by introducing internal paper-reduction, re-use, water and energy conservation/saving policies.

#### **4.3/ Gender equality and empowering women**

Gender mainstreaming will be a key aspect of the GCF project and in particular, CBCRM process. In engaging with the communities, the project will pay particular attention to inclusion of vulnerable groups and particularly, women to ensure that gender issues are considered. As outlined in the Gender Assessment and Gender Action Plan (**Annex J**), there are considerable differences in vulnerability to disasters between the genders in Georgia, in line with traditional gender roles. Men are 25% more likely than women to be employed, self-employed or engaged in contract work. In general, male-headed households have higher incomes than female-headed households and overall there is a considerable difference in the income of male-headed households, which emphasises the increased vulnerability of female-headed households. Pregnant and nursing mothers are particularly vulnerable because of their increased need for food and water and their decreased mobility. As the primary caretakers of their homes, women attend to the needs of children, elderly and the disabled. This increases their workload and reduces their mobility in cases where quick evacuations are required or where they live a long distance to water supply facilities. For effective climate and disaster risk management, the project will ensure that women are primary stakeholders and will therefore need to be involved in decisions on the types of solutions that are implemented in particular, during planning and implementation of non-structural community resilience measures as part of CBCRM process. Gender mainstreaming actions (e.g. ensuring representative women participation in project boards/advisory panels, two-tier GRM, consultations, meetings, networking events, etc.), capacity building (trainings, re-trainings, ToTs, etc.), awareness campaigns and tools (e.g. gender-sensitive vulnerability assessment and mapping) will be applied at various institutional levels (central government agencies, local government, community level), in particular, through the Activities 2.1, 2.2, 2.3, 2.4, 3.1, 3.2 and 3.3. Gender differentiated indicators will be used to monitor the projects performance in achieving the right gender balance. Gender Advisor will be hired throughout the project to ensure implementation of Gender Action Plan, including its monitoring and to provide proper advice to the project and broader stakeholder on gender issues. Please refer to the Gender Analysis and Action Plan (**Annex J**) for the description of gender mainstreaming actions to be supported through the project.

#### **4.4/ South-South and Triangular Cooperation (SSTrC)**

There are a number of initiatives in Georgia which envisage regional cooperation of South Caucasus and other developing countries in the areas of hydrometeorology, agrometeorology, water resources management, hazard mapping, disaster risk reduction, development of spatial data infrastructure based on EU standards, etc. These initiatives also include cooperation with various international organizations and development agencies in terms of knowledge sharing and application of their methodologies and standards. For instance, NEA closely cooperates with all WMO member countries and in particular, with countries of Black Sea region as well as with WMO itself for establishing and operating hydrometeorological observation and forecasting systems in line with WMO standards and protocols. The GCF project will further support this cooperation and will ensure that MHEWS, including observation networks established under the project fully meet WMO standards. Furthermore, on-going project

“Strengthening the Climate Adaptation Capacities in the South Caucasus” supported by SDC and implemented by the Scientific Network for the Caucasus Mountain Region (SNC-mt) through its Coordination Unit (Sustainable Caucasus) aims at reducing the population’s vulnerabilities towards climate-induced hazards and fostering regional co-operation on adaptation challenges in the Caucasus. Among various activities, the project plans: i) development of a hazard mapping and DRR university courses in leading universities of the South Caucasus based on EU and Swiss hazard assessment methodology; ii) development of spatial data infrastructure and regional knowledge generation - improvement of data geoprocessing capacities; capacity building of key local actors related to countries’ involvement in international and regional flagship initiatives through the Group on Earth Observation (GEO); as well as exploring opportunities for establishment of GEO System of Systems (GEOSS) for the Caucasus; iii) Regional training, exchange and capacity building of young scholars - Organization of regional summer schools for young scholars (master and PhD students), modelled after the Abastumani Summer School organized in September 2016 on DRR, ecosystem-based adaptation; establishing a SNC-mt supported Summer School alumni network; and fostering regional and inter-regional co-operation among young scholars; iii) Support to the continued development and maintenance of the online co-operation platform, including its resources section, thematic groups and online discussions. The GCF project and especially SDC funded component will closely cooperate with above SDC-supported project in sharing knowledge, development of unified methodologies for multi-hazard mapping and risk assessment, tools and scholars’ and practitioners’ networks of South Caucasus as well as in conducting joint trainings/forums if relevant.

Georgia is a member of the Southeastern Europe Climate Outlook Forum (SEECOF) which was the very first regional climate outlook forum in Europe, started in 2008 at Zagreb, Croatia. The countries participating in SEECOF are: Hungary, Slovenia, Croatia, Serbia, Bosnia, Montenegro, Albania, the Former Yugoslav Republic of Macedonia, Greece, Turkey, Bulgaria, Rumania, Moldova, Israel, Cyprus, Armenia, Georgia and Azerbaijan. Through the GCF project, Georgia will enhance its capacity to participate in the forum, and provide verification of the SEECOF climate outlook. At national level Georgia has an agricultural outlook forum which is will be enhanced by Activity 2.3 below. The GCF project will integrate with and strengthen existing regional and national climate outlook forums through the expansion of the observation network and the development of climate products that include seasonal forecasts.

#### **4.5/ Sustainability**

The GCF project will integrate new hydrometeorological and telecommunications equipment and EWSs in existing systems and institutions. These organizations currently have the required capacity to maintain such systems and the project will build additional capacity. For instance, NEA has long-term experience in hydrometeorological monitoring and has various divisions and units to collect, store, process, analyse/interpret data, make forecasts and provide technical maintenance. Moreover, in January-February 2017, as a result of organizational reform, NEA established a special EWS unit, composed of 7 staff members, who will be fully dedicated to EWS operations.

Various ministries to be engaged in the process, including MoEPA and its specialised agencies (e.g. NEA, EIEC, NFA, etc.) have significant experience in working with international donors particularly with UN agencies, including UNDP. Micro-hact assessments under on-going or recent UNDP programmes as well as a number of Letter of Agreements, certified audits and evaluations are available for a number of key agencies (e.g. NEA, EIEC, MoEPA) to be partnered under the given project indicating that these agencies are capable to implement complex projects with due diligence. For instance, Rioni Flood project has demonstrated that NEA is a trust-worthy partner for UNDP.

In terms of maintenance of infrastructure, under suggested project NEA is committed to provide proper O/M to expanded hydrometeorological network and newly created EWS systems during and after the end of the project. Furthermore, new agrometeorological stations will be integrated in existing agrometeorological network operated by the NFA under the MoEPA who will also take care of its operations and maintenance after the exist of the project.

Concerning structural measures, there is already a significant engineering knowledge and experience gained in the country to construct and provide adequate maintenance to flood defence structures. Hence, proper construction and O/M of relevant structures is not an issue. Furthermore, local governments commit themselves to cover O/M

costs of engineering structures to be built in their respective municipalities from their local budgets/transfers from central government (Please see co-funding letters from relevant LGs).

Concerning non-structural measures to be implemented at the community level, local contribution (either in-kind of cash) will be leveraged from target communities to implement on-the-ground activities and to gain greater ownership from their side. Besides, a significant capacity development and awareness raising programmes will be designed and implemented in target communities that will ensure the institutional sustainability of results to be achieved at community level.

The project will help NEA and other relevant authorities design and implement long-term sustainable programs for operations and maintenance of expanded observation system and will assist them to produce climate/weather products that may bring about additional revenues for these agencies (activity 2.1.2). The project will help all relevant authorities develop and implement a comprehensive short to long-term learning and training programs at all levels including community, municipality and state levels as well as for all age groups, including pre-school and school age children, university students, young and senior professionals. All these programmes will be integrated in existing education and training systems and will be regularly applied after the end of the project (activity 2.1.3). The system-level sustainability of institutional capacities created will be ensured by the development and adoption of relevant legal-regulatory and policy/planning frameworks for multi-hazard risk management and early warning systems (activities 2.1, 2.2, 2.3, 2.4). Common support, understanding and effective cooperation of various players will be achieved by establishing a multi-stakeholder project board and advisory council(s), where issues of various project components will be discussed and solved by the consent of all parties. Furthermore, planning processes at regional, municipal and community levels will apply a participatory approach, where key stakeholders will be engaged from the beginning to the end of each process.

The project, through SDC co-financed interventions, will address the legal frameworks, policies, governance structures and processes, which currently present barriers to sustainable hazard management, DRR, CCA and EWS in Georgia. Through enhancements to the legislative and institutional framework, the project will ensure that the required systems/mechanisms for accountability, transparency, and technical knowledge transfer for DRR, hazard management, CCA and EWS are in place. Importantly, the project will address key institutional arrangement barriers to effective and sustainable multi-hazard EWS.

Through the capacity building activities, the technical capacity of institutions will be enhanced and sustainability assured by embedding capacity across all of the relevant institutions. Specifically, in order to ensure sustainability, the project will seek to embed technical capacity in the government Institution for Environmental Information Education Centre (EIEC). This approach to capacity development is far reaching and more likely to ensure sustainability of technical capacity built. As part of the exit strategy, the project will prepare an end-of-project capacity report which will include evidence-based mapped capacity development which will feed directly into the long-term cross-section capacity development plan for GoG to take forward.

Overall, the common thread across the project outputs is the integration of enhanced climate risk information and application of best practices in broader planning, thereby ensuring sustainability and introducing a paradigm shift.

To ensure that financial and economic resources are available once the GCF assistance ends, the GCF project will provide the tools for government to better identify cost-beneficial risk reduction measures for the long-term management of hazards. This will be based on the cost-benefit analysis tool to be developed under Activity 1.3 which will allow GoG to more effectively plan hazard management and intervention measures, and will assist in annual budgeting and advocacy for funding, for these activities. In addition, the project will assist NEA and other hydrometric equipment owners in developing long-term O&M financial planning to ensure that equipment and systems purchased under the project will be maintained in the long-term. Specifically, the project will provide the following safeguards to financial sustainability: i) review budgetary requirements for long-term maintenance of

optimised hydrometric network and development of a financing model to be put forward to government for the long-term maintenance of networks (using cost-benefit modelling to support the financing model); ii) strengthening cross-agency cooperation in all CRM and DRR areas including DRR financing; iii) advise the government on optimum/efficient allocation of funds for DRR; Improve the donor coordination in the area of DRR; iv) strengthen the government capacity to mobilize resources from other sources; Organizing community-government and public-private dialogues around local risks and risk reduction strategies and their financing.

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## V. PROJECT MANAGEMENT

### 5.1/ Cost efficiency and effectiveness

The proposed project builds upon lessons learned and success of the past and on-going interventions, existing data/information, institutional and management frameworks and capacities and, communications and coordination mechanisms operational currently in Georgia in CC and DRR areas. Moreover, it will scale-up the outcomes of the prototype Rioni AF Flood project as well as other baseline projects. Therefore, expanding the scope of already attested and verified interventions with close participation of national-wide and local stakeholders is more cost-effective than the implementation of a completely new initiative.

Comparable efforts (EWs, climate information, and community-based DRM) showed effective impact related to saving of lives, assets, and livelihoods. In Nepal, the community based EWS directly benefit over 80,000 people in communities around river basin systems<sup>5</sup>. Advanced EWS systems are estimated to be 100% effective in reducing loss of life by cyclones, 60% effective for floods, and 20% effective in case of drought. (Teisberg and Weiher (2009)). In Bhutan, EWS project has enhanced capacities of district and local level authorities and communities in disaster risk and climate risk management<sup>6</sup>.

The project offers a cost-effective alternative to conventional/baseline reactive approaches to risk management that builds around ad-hoc recovery investment and compensations, predominance of large-scale hard defense infrastructure and limited community engagement. GCF project catalyzes shift to more cost-effective and efficient approaches to resilience building. The new approach is based on enhanced risk knowledge that allows proactive action to reduce exposure of people and economic assets to hazardous events, enhanced design of risk reduction investments, a combination of structural and non-structural measures, enhancing adaptive capacities of local communities.

### 5.2/ Financial viability

Without GCF funding, 1.7 Million people (40% of the population) including the most vulnerable communities in remote rural and densely populated urban areas remain at risk from the main hazards. Annual average damages (AAD) to properties from floods are estimated at 116.3 Million GEL (\$US51.2 Million) without climate change and at 282.7 Million GEL (\$US 124.4 Million) with climate change. The risk to agricultural land from all hazards is between 251,225 ha and 325,020 ha under baseline and climate change conditions respectively. Annual damages to agriculture from flooding alone would be 126.3 Million GEL (55.6 Million \$US) and 154.2 Million GEL (67.8 Million \$US) under baseline and climate change conditions respectively. The GoG and particularly, NEA does not have the capacity to manage hazard or provide essential warnings to the public.

The public goods nature of this project's outputs doesn't entail significant revenue generation or cost recovery from the project. Where deferred income generation opportunities exist, these apply directly to the beneficiaries (for instance, improved agricultural income) primarily as household income. Financial viability of the project investments is assured through a combination of elements that build ownership and the technical, financial, operational and institutional capacities of the national and sub-national governments and local communities to maintain and derive economic, social, environmental benefits from the proposed investments. The project relies entirely on grant finance as the proposed interventions are public goods and there is no revenue generating activity. As the proposed project is non-revenue generating, a traditional financial viability assessment is not appropriate.

### 5.3/ Economic analysis

The economic analysis of the proposed project was carried out in accordance with the *Guidelines for the Economic Analysis of Projects of United Nations Development Program*.<sup>7</sup> The economic efficiency of the investment was

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<sup>5</sup> [https://practicalaction.org/docs/region\\_nepal/early-warning-saving-lives.pdf](https://practicalaction.org/docs/region_nepal/early-warning-saving-lives.pdf)

<sup>6</sup> [http://cfapp2.undp.org/gef/documents/1/g3722/g2\\_16676/Final%20Technical%20Review%20and%20Social%20Impact%20Assessment%20GLOF%20FSP%20Epdf](http://cfapp2.undp.org/gef/documents/1/g3722/g2_16676/Final%20Technical%20Review%20and%20Social%20Impact%20Assessment%20GLOF%20FSP%20Epdf).

<sup>7</sup> UNDP. 2015. GUIDANCE ON THE CONDUCT AND REPORTING OF THE ECONOMIC AND FINANCIAL ANALYSIS OF CLIMATE CHANGE ADAPTATION AND MITIGATION PROJECTS AND PROGRAMMES. UNDP.

determined by computing the economic net present value (NPV) with an assumed 10% discount rate, and the economic internal rate of return (IRR). Economic values (costs and benefits) are all measured in real terms of 2017. Economic costs of the project are net of taxes, duties, and price contingencies. Furthermore, the analysis assumes a shadow wage rate of 1.00 for unskilled and semi-skilled labour in Georgia.<sup>8</sup> Benefits of the project were estimated using the August 2016 report “Upscaling of Rioni Flood Damages to all Georgian Flood Plains and an overview of the Impacts on Population, Property and Agriculture within Georgia from Other Hydro meteorological hazards”. The report was based on GIS modelling of spatial economic damages associated with hydro-meteorological hazards and quantified the following: i) Property and people currently at low, medium and high risk based on “Report on “MATRA” project of National Flood Susceptibility Map of Georgia, University of Twente, The Netherlands, 2011”; ii) Annual Average expected flood damage to property; iii) Annual Average expected flood damage to agricultural land taking the mean annual loss per hectare.<sup>9</sup> Based on project Cost-benefit analysis the net present value (NPV) of the project was estimated at US\$ 23.4 Million, with an internal rate of return (IRR) of 16.6%. The economic efficiency of the project remains favourable under a various set of alternative assumptions.

#### **5.4/ Project management**

The project will be managed by Project Management Unity (PMU) located in Tbilisi. The majority of project activities will be implemented at the national level. Risk reduction structural measures will be carried out in 13 selected locations of Kakheti, Shida Kartli, Samegrelo-Zemo Svaneti, Imereti and Ajara regions. CBEWS will be established and CBCRM process will be implemented in 100 most vulnerable communities to be selected based on hazard and risk mapping. Details of the project management arrangement are outlined in **Section VIII: Governance and Management Arrangements below.**

#### **5.5/ Agreement on intellectual property rights and use of logo on the project’s deliverables and disclosure of information**

To accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>10</sup> and the relevant GCF policy.

#### **5.6/ Disclosure of information:**

Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>11</sup> and the GCF Disclosure Policy<sup>12</sup>.

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<sup>8</sup> Provided that the economic cost of labour in Georgia is expected to be lower than the market wage rate (financial cost), this assumption leads to significantly over-estimating the economic cost of the project, and under-estimating the true net economic value of the project. As is common when undertaking the economic analysis of investment projects, numerous assumptions were used to delineate the “with project scenario” from the “without project scenario”. Assumptions were always made so as to under-estimate the true net economic value of the proposed investment project.

<sup>9</sup> Cost-benefit analysis adopted conservative assumptions, and by using only avoided annual average expected flood damages and thus, not counting the benefits to be accrued from avoided damages due to other hydrometeorological hazards. Benefits of improved data and knowledge and capacities were also difficult to quantify therefore, were not integrated in the CBA model, significantly deflating the expected net benefits of the investment project.

<sup>10</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>11</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>12</sup> See [https://www.greenclimate.fund/documents/20182/184476/GCF\\_B.12\\_24\\_-\\_Comprehensive\\_Information\\_Disclosure\\_Policy\\_of\\_the\\_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb](https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb)

## VI. PROJECT RESULTS FRAMEWORK

<b>This project will contribute to the following Sustainable Development Goal (s):</b> <i>SDG 13: Take urgent action to combat climate change and its impacts as well as the to the achievement</i>
<b>This project will contribute to the following country outcome included in the UNDAF/Country Programme Document:</b> <i>UNPSD 2016-2020 Outcome 8: Communities enjoy greater resilience through enhanced institutional and legislative systems for environment protection, sustainable management of natural resources and disaster risk reduction</i> <b>Country Programme Document 2016-2020 Outcome 4:</b> <i>Communities enjoy greater resilience through enhanced institutional and legislative systems for environment protection, sustainable management of natural resources and disaster risk reduction</i>
<b>This project will be linked to the following outputs of the UNDP Strategic Plan:</b> Output 1.3: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented
<b>GCF Paradigm shift objectives:</b> <i>to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazard through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyze paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communications solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modeling and forecasting; (d) (e) carrying out a comprehensive community, municipal and nation-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.</i>

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
<b>SDG indicators</b>	<b>Indicator 13.1.1:</b> <i>Number of deaths, missing persons and persons affected by disaster per 100,000 people</i>	<i>TBD</i>			
<b>FUND LEVEL IMPACT:</b>					
<b>Fund level Impact:</b> 1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions	1.1. Change in expected losses of lives and economic assets (US\$) due to the impact of extreme climate-related disasters	0	Protection/avoided expected loss of economic assets (properties and agricultural land) for US\$2 million through structural flood protection measures	Protection/avoided expected loss of economic assets (properties and agricultural land) for the value of US\$19.5 million over 20 years <sup>13</sup> through structural flood protection measures.  Avoided expected loss of life - 62 lives saved over 20 years through the introduction of the MHEWS	Structural and non-structural measures met their design standards in reducing the risks to populations and reduction in agricultural land losses

<sup>13</sup> 20-year duration refers to the lifespan for the investment of the assets, which is beyond the duration of the project implementation.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
	Total Number of direct and indirect beneficiaries; Number of beneficiaries relative to total population <sup>14</sup>	0	Direct 3,250 men and women benefit from flood protection <sup>15</sup>	<p>Direct 1.7M people (47% of population, 0.89M women and 0.82M men) in the vulnerable/ high risk communities and regions benefit from MHEWS</p> <p>Direct 6,500 men and women benefit from flood protection</p> <p>Indirect (including direct) 3.6M men and women</p>	<p>Capacities created at relevant agencies through the project are maintained and periodically renewed</p> <p>Spatial planning will lead to the desired changes in land use and behavioral control of the population to minimize exposure</p> <p>Political will to implement relevant legal-regulatory reform for effective and efficient MHRM/MHEWS</p> <p>Government engages in development of the plans, endorses and allocates resources to implement it</p> <p>Strong political will for MHRM planning and active participation of all relevant sectors</p> <p>All supporting structures for implementation of advisory services are available and trained (e.g. agricultural extension services, NGO, CBO communities)</p> <p>MHEWS results in effective awareness raising, early warnings and response actions of communities at risk</p>

<sup>14</sup> Total Georgian population (WB, 2017) – 1.94M women, 1.77M men

<sup>15</sup> Beneficiaries data gender disaggregation to be validated by mid-term based on municipalities selection.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
<b>PROJECT OUTCOMES:</b>					
A5.0 Strengthened institutional and regulatory systems access climate finance from the GCF and other funds	A5.2 Number and level <sup>16</sup> of effective coordination mechanisms	1 coordination mechanism  National MHEWS Protocol: Level 1  Multi-stakeholder CC coordination committee: Level 1  Agriculture outlook forum: Level 2	3 coordination mechanisms  National MHEWS Protocol: Level 2  Multi-stakeholder CC coordination committee: Level 3  Agriculture sector CRM coordination mechanism: Level 3	3 coordination mechanisms  National MHEWS Protocol: Level 4  Multi-stakeholder CC coordination committee: Level 4  Agriculture sector CRM coordination mechanism: Level 4	Coordination mechanism has relevant representation, participation in the coordination mechanism are at the appropriate decision-making level, the coordination mechanism meets with sufficient periodicity and consistently, the mechanism coordinates appropriate information flows and the mechanism monitors action on items/issues raised
A6.0 Increased generation and use of climate information in decision-making	A6.2 Use of climate information products/services in decision-making in climate-sensitive sectors by stakeholders	Absence of MHEWS across the country at all levels; Low public awareness of MHEWS, risk reduction and resilience measures;	Climate informed multi-hazard risk reduction and management planning frameworks (MHEWS +) and implementation capacities are in place	Adopted river-basin risk management plans, municipal risk management response and preparedness plans, agriculture sector plans integrate enhanced climate information.	Cooperation of relevant state agencies ensured to implement climate-informed planning frameworks; Government and sectoral agencies are committed to endorse, allocate resources and implement climate-informed planning frameworks integrating enhanced climate information products/services
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	A7.1 Use by vulnerable households, communities, business and public-sector services of Fund-supported tools, instruments, strategies and activities to respond to climate change and variability	0% of households  Absence of MHEWS across the country at all levels; Fully functional FFEWS exists only for Rioni; Low public awareness of MHEWSs, risk reduction and resilience measures; Absence of knowledge and standardized methodologies on hazard, vulnerability and risk assessments.	50% of Households, business and public sector services in Georgia with access to EWS services and relevant climate risk information	100% of Households, business and public sector services in Georgia with access to EWS services and relevant climate risk information	Government has political will, institutional capacity and necessary resources to support proper O&M of MHEWS  No staff and budget cuts occur at NEA to secure effective delivery of EWS services to vulnerable households

<sup>16</sup> Level 1 = no coordination mechanism; Level 2= coordination mechanism in place; Level 3 = coordination mechanism in place, meeting regularly with appropriate representation (gender and decision-making authorities); Level 4 = coordination mechanism in place, meeting regularly, with appropriate representation, with appropriate information flows and monitoring of action items/issues raised.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
	A7.2 Total Geographic coverage of climate related early warning systems and other risk reduction measures established/ strengthened	0 river basins with functional MHEWS; 0 high-risk settlements with established CBEWS	MHEWS established in 4 major river basins, and necessary institutional/ regulatory framework in place; CBEWS established in 30 high-risk settlements	MHEWS established in 11 major river basins, and necessary institutional/ regulatory framework in place; CBEWS established in 100 high-risk settlements	Target communities understand shorter-to-longer-term benefits of MHEWs and risk reduction interventions and engage on a voluntary basis in operations and maintenance of such systems

**PROJECT OUTPUTS:**

1. Expanded hydro-meteorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks	1.1. # of new hydro-meteorological monitoring equipment functionally operating	Hydrometric monitoring network outdated and inadequate	12 meteostations; 73 meteoposts; 44 hydrological posts; 13 snow measurement stations; 20 inclinometers; 8 mobile discharge meters; 3 radars; 2 drones; 2 upper air sounding equipment; 15 web based agrometeorological stations; 1 super computer for EWS operation; telecommunication system equipment	12 meteostations; 73 meteoposts; 44 hydrological posts; 13 snow measurement stations; 20 inclinometers; 8 mobile discharge meters; 3 radars; 2 drones; 2 upper air sounding equipment; 15 web based agrometeorological stations; 1 super computer for EWS operation; telecommunication system equipment	No delay in procurement and installation of hydro-met monitoring equipment; Government allocates necessary resources for adequate O/M of monitoring equipment, relevant software and databases are fulfilled on a continuous basis both during the project implementation and afterwards
	1.2 Number of river basins for which hazard and risk maps (covering landslides, mudflows, avalanches, hail storms and droughts), flood plain zoning and multi-hazard vulnerability and risk assessments <sup>17</sup>	0 hazard and risk maps, flood plain zoning and MH vulnerability and risk assessments	Hazard and Risk maps, flood plain zoning and multi-hazard vulnerability and risk assessments (covering landslides, mudflows, avalanches, hailstorms, and droughts) are in place for 7 river basins	Hazard and Risk maps, flood plain zoning and multi-hazard vulnerability and risk assessments (covering landslides, mudflows, avalanches, hailstorms, and droughts) are in place for 11 river basins	NEA's commitment and capacities in place to cover all 11 river basins for hazard map; Unified methodologies, developed with the Project support, are endorsed and used for mapping; Necessary data sets for developing hazard maps and risk models is available;

<sup>17</sup> SDC funded interventions will contribute to achievement of the indicator

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
	1.3 Level <sup>18</sup> of application for systemic gender-sensitive socio-economic vulnerability assessment in decision-making and resilience investment prioritization	Level = 0	Level = 2	Level = 4	Gender-sensitive socio-economic vulnerability assessment methodologies are endorsed and used by relevant agencies; Government allocates necessary human and technical resources to conduct vulnerability assessment; Decision-makers at selected state agencies (MoEPA, MRDI) use assessment data in prioritizing resilience measures in high-risk areas;
	1.4 Level of application of a centralized multi-hazard disaster risk information and knowledge system <sup>19</sup>	Level = 0	Level = 1	Level = 3	Relevant government agencies cooperate on and allocate resources for the implementation of the data management (MoEPA/NEA, MIA, SSCMC).
2. Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities <sup>20</sup> .	2.1 Level <sup>21</sup> of institutional capacity for implementation of MHEWS and delivery of climate information amongst key government agencies	Level = 0	Level = 1	Level = 2	Beneficiary and partner institutions are willing to cooperate and conduct regulatory and institutional reform; Capacities created at relevant agencies through the project are maintained and periodically renewed
	2.2 Status of the nation-wide MHEWS covering landslides, floods, mudflows, avalanches, hailstorms and droughts	MHEWS does not exist: institutional responsibilities and communication protocols for EWS, climate and disaster risk management are not properly defined. FFEWS is available only for the Rioni river basin.	Operational MHEWS for floods, landslides, mudflows, avalanches, hailstorms and droughts in place covering 4 river basins, including: multi-hazard forecasting platform, national warning communication protocols,	Operational MHEWS for floods, landslides, mudflows, avalanches, hailstorms and droughts in place covering all major 11 river basins, including: multi-hazard forecasting platform, national warning communication protocols, telecommunication systems, warning dissemination	Government has political will to implement relevant legal-regulatory reform for effective and efficient MHRM/MHEWS CMC and other relevant government units are willing to cooperate and conduct regulatory and institutional reform

<sup>18</sup> Level 0: No awareness or application of gender-sensitive socio-economic vulnerability assessment; Level 1: Introduction and training on gender-sensitive socio-economic vulnerability assessment methods and tools; Level 2. Gender-sensitive socio-economic vulnerability assessments are generated by EMS Level 3. Decision-makers (MoEPA/MDRI) consider gender-sensitive socio-economic vulnerability assessment in prioritization processes for resilience investments; Level 4. Investments align with findings/recommendations from gender-sensitive socio-economic vulnerability assessment.

<sup>19</sup> Level 0: No centralized multi-hazard disaster risk information and knowledge system in Georgia; Level 1: A multi-hazard information system/central data depository and knowledge portal designed; Level 2: A multi-hazard information system/central data depository and knowledge portal fully implemented; Level 3: Decision-makers apply high-quality information from the multi-hazard information system for reporting, analysis and planning purposes

<sup>20</sup> Activities co-financed by SDC will contribute to achievement of the output

<sup>21</sup> Level 0 = Baseline assessment to be conducted within year 1 of implementation; Level 1 = 25% improvement from baseline assessment; Level 2 = 50% improvement from baseline assessment.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
			telecommunication systems, warning dissemination systems. Warnings are tailored to the needs of vulnerable groups; Information on hazards delivered through multiple methods. Information is clear and not complex. Information is issued in understandable for the population languages.	systems. Warnings are tailored to the needs of vulnerable groups; Information on hazards delivered through multiple methods. Information is clear and not complex. Information is issued in understandable for the population languages.	
	2.3 % of farmers accessing improved climate forecasting services	0%	10% of farmers participate in piloting of weather/ climate advisories and climate information services.	75% of farmers access improved climate forecasting services	MoEPA and its specialized agencies transfer received know-how to farmers; farmers understand the benefits of climate advisories and engage in the programme eagerly; private sector is interested in developing and providing or receiving climate advisories
3. Improved community resilience through the implementation of MHEWS and priority risk reduction measures	3.1 Number and % of coverage for high-risk communities through CBEWS and CBCRM action.	0 ("last-mile" EWS communications not practiced in Georgia)	30 high-risk communities (%TBD) <sup>22</sup> are covered with the CBEWS and adopt gender sensitive CBCRM action. Community consultation groups with at least 30% representation of women; Ratio of women employed in CBDRM employment guarantee schemes at least 30%.	100 high-risk communities (%TBD) are covered with the CBEWS and adopt gender sensitive CBCRM action; Community consultation groups with at least 30% representation of women; Ratio of women employed in CBDRM employment guarantee schemes at least 30%	Communities actively participate in setting and operations/maintenance of CBEWS and corresponding implementation of multi-hazard risk reduction measures
	3.2 % increase of crop yields and household income for targeted communities due to	Baseline to be established in project Year 1 through 1st phase of community impact evaluation programme	0% increase in crop yields and 0% increase in targeted community's household income. <sup>23</sup>	10% increase in crop yields and 5% increase in targeted community's household income	HHs have enough means (manpower, time, financial) to apply better practices and increase crop yields/income

<sup>22</sup> % TBD to be validated by AE prior to midterm based on the hazard and risk maps and vulnerability assessment to be developed under project activities 1.2 and 1.3.

<sup>23</sup> No material changes in the indicator attributable to the project action is expected by midterm because changes in crops and household incomes are dependent on other project interventions, which may not be completed with sufficient time to record any changes by midterm. The progress towards the end-of-project target will be measured through the community impact evaluation programme implemented since year 1 of the project.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
	reduced losses and damages from hazards				
	3.3 Number of targeted beneficiaries reporting enhanced protection from climate related natural disasters resulting from Fund investments (disaggregated by gender).	0	3,250 beneficiaries <sup>24</sup> in 5 municipalities benefit from improved flood protection through 6 structural flood protection investments	6,500 beneficiaries in 11 municipalities benefit from improved flood protection through 13 structural flood protection investments	MRDI fully meets its commitment towards implementation of structural flood protection measures
	3.4 Change in Knowledge, Awareness and Perception (KAP) of beneficiaries on local climate risk management options (including use and impact of the options)	Baseline to be established in Year 1 of the project through KAP Survey	Midterm 30% increase over baseline	Final 70% increase over baseline	CEIE has relevant capacity and dedication to carry out education and outreach activities as all levels.  CEIE cooperates productively with EMA, Ministry of Education and Science, CMC and other agencies and NGOs in capacity building, outreach and education activities.
<i>While no project activities were included in the above resource's framework, this information can be found in section H.1. Logic Framework of GCF Funding Proposal</i>					

<sup>24</sup> Beneficiaries data gender disaggregation to be validated by midterm based on municipalities selection.

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## VII. MONITORING AND EVALUATION (M&E) PLAN

GCF funding will be used to ensure that monitoring and evaluation systems are put in place to track progress over the 7 years of project implementation towards the planned project outcomes and fund level impacts. This will be achieved through the means of verification outlined in Table H.1.2 above, where progress on each indicator from the baseline to the end-point targets for those indicators will be tracked. Additionally, through the results framework outlined in tables 1.1 and 1.2 the project impact will be assessed using the following 6 domains of impact:

- Impact on physical and financial assets
- Impact on Social Capital, Empowerment and change of behaviour
- Impact on Food Security
- Environmental Impact
- Impact on Institutions, policies, and the regulatory framework
- Impact on Gender

An iterative systematic gender-sensitive socio-economic vulnerability assessment (SVA) will be introduced through the Output 1, Activity 1.3. as a tool to measure and monitor change in socio-economic vulnerability of Georgian communities. The SVA tool piloted through the Rioni project will rely on a combination of census data, socio-economic parameters and field surveys. Initially, through the integration of hazard maps and maps of infrastructure (bridges, roads and buildings, hospitals, schools, power plants, critical infrastructure), land use (settlements, agriculture, grazing lands, and conservation areas), property and socio-economics data, the project will produce economic vulnerability maps for the river basins and establish baseline risk. The tool will be further used to monitor changes in vulnerability and risks from multiple hazards at municipal and national level.

Further, under the Output 2, activity 2.2. the project will carry out monitoring and evaluation of the designed MHEWS and development of recommendations for the system enhancements, expansion and further development (in the last year of the GCF project implementation). Under the same technical Output 2, activity 2.1 change in institutional capacities to implement MHEWS and manage climate information will be measured through the integrated institutional capacity assessment scorecard. Institutional capacity assessment will be conducted in the Years 1, 4 and 7 of the projects. Key agencies to be included in the institutional capacity assessment include but not limited to MoEPA/NEA, NFA, MIA, EMA. Monitoring, evaluation and risk tracking will be integrated into the climate-informed multi hazard basin risk management planning and in the municipal MHRM response and preparedness plans (Activity 2.4).

In order to examine the impacts of the project on rural communities, the review will examine whether the interventions implemented by the project have enhanced the value and derived benefits from existing community assets such as land, water, livestock and livelihoods. Impact on income generation and improvement in livelihoods will be key direct benefits to be examined while improved skill or health, education, and socio-economic conditions will be key indirect benefits to be examined. Impact on increased capacity of local communities to exploit potential economic opportunities and to develop stronger link with the markets and external partners, through the risk reduction and adaptation interventions provided by the project, will be examined. Efforts to strengthen local level organizations in the implementation of similar projects in the future will be a key impact as this will reflect whether the project has built local capacity to implement and use these new climate resilient measures in the long-term. Likely contribution of the project to food security will be examined. Key elements of food security are availability (production and trade), access (income, markets and prices) and stability (storage and other marketing arrangement at household and local level.

Environmental degradation very often contributes to non-resilience to climate change and increased risk from climate-related disasters. The extent to which the project contributes to rehabilitation of the environment (particularly of the agricultural resource base and watershed management) in areas currently affected by land degradation and at high risk of hazards, is strongly associated with poverty impact. This domain concentrates on the local level environmental impacts of the project, as well as any environmental consequences of the project. It is also concerned especially with those environmental aspects, which are under the control of, or are influenced by, the

rural communities. Environmental impacts may be negative as well as positive intended or unintended and all of these will be examined.

Existing institutions, policies and regulatory frameworks significantly influence the lives and resilience of the rural poor. This encompasses the change brought about in sectoral and national policies affecting exposure of local communities to hydrometeorological hazards. In addition, the degree to which the project impacts local-level decision making capacity, is also a relevant consideration and important to this project. Hence the effectiveness of the 'last mile' component of the EWS and particularly the CBEWS will be closely assessed. The review will examine the extent to which a contribution has been made to improving the national, and particularly local institutions to implement, and manage CBEWS and CBDRM which affects the lives and livelihoods of rural communities.

To monitor and measure the changes brought by the project, impact evaluation will be designed to assist the project team to collect baseline information/data, final survey to gain insights into developmental and adaptive impact of the interventions that will be carried out during the project. For this purpose, before any interventions take place, a robust baseline survey needs to be administered. During the project, it is expected follow-up surveys and final large survey will also be carried out at end of project. The impact of the project will be assessed by undertaking the following:

- A household survey targeting beneficiary households at least two times (baseline and final) during the project implementation;
- Analysis of the survey data;
- Follow-up survey which will be used by project staff; and
- Training of project staff on the follow-up survey methodology.

The impact indicators will include but should not be limited to: (i) extent to which structural measures and non-structural measures have reduced exposure to hazards (e.g. whether frequency of flooding has reduced etc.) (ii) changes in income from agriculture and related activities (changes in income should take into account the level of home consumption); (iii) yield from agricultural production for key produce; (iv) yield of home gardens; (v) migration for seasonal work; (vi) farm land left fallowed; (vii) freshwater availability for household use; (viii) change in family savings.

As part of the community survey a section will be included to monitor community involvement in the design and implementation of community-based EWS and CRM plans – tracking participation in paid work opportunities, as well as ongoing involvement in resilience building through in-kind commitment of time to maintenance and enforcement activities. This will include respondents' estimation of approximate number of hours per month spent on local resilience building actions, as part of the project Activity 3.1. Comprehensive capacity and awareness building to foster such engagement will be carried out by the project under Activity 3.2. All community capacity building, training and awareness activities will be accompanied with feedback collection/result monitoring tools. Finally, monitoring over the implementation and results of site-specific structural protection measures at 13 sites will be ensured as outlined in the ESMP.

Since the project impacts from many of the interventions are likely to be realized close to the end and after the project implementation, the impact evaluation methodology and tools will be embedded within responsible agencies to monitor in the long-term, thus ensuring regular surveying of the key impact and development indicators required for long-term assessment of project impact.

The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E

requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.

In addition to these mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.

### **7.1/ M&E oversight and monitoring responsibilities**

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. Environmental and social management plan, gender action plan etc.) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent mid-term evaluation and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the Annual Project Report and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. Annual Project Report quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

The UNDP Country Office will support GCF staff (or their designate) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF.

The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.

UNDP-Global Environmental Finance Unit (UNDP-GEF): Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies and the related arrangements agreed to in the Accreditation Master Agreement. Upon request, project audit reports (s) will be shared with the GCF (the donor).

## **7.2/ Additional GCF monitoring and reporting requirements**

A project inception workshop will be held after the UNDP project document has been signed by all relevant parties to: (a) re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation; (b) discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms; (c) review the results framework and discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E plan; (d) review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; (e) plan and schedule Project Board meetings and finalize the first year annual work plan. The Project Manager will prepare the inception report no later than one month after the inception workshop. The final inception report will be cleared by the UNDP Country Office and the UNDP Regional Technical Adviser, and will be approved by the Project Board. The inception report will be submitted to the GCF within six months of project start (i.e. project effectiveness).

GCF Annual Project Report (due 1 March each year of project implementation): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual project report covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance so that progress can be included in the report. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues. The annual project report will be due for submission to the GCF in the first quarter of each year for the duration of the project. The last APR will be due for submission within 3 months after the project completion date.

The Annual Project Report submitted to the GCF will also be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

Interim Independent Evaluation Report: An interim independent evaluation report will be completed by August 2022. The findings and responses outlined in the management response to the interim independent evaluation will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim

evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

Final Independent Evaluation Report: A final independent evaluation report will be completed by 31-Aug-2025. The final evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Final Independent Evaluation report is due for submission to the GCF within 6 months after the project completion date.

The Project Manager will remain on contract until the final evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final evaluation report will be publicly available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the management response to the public UNDP Evaluation Resource Centre (ERC) (<http://erc.undp.org>). Once uploaded to the ERC, the UNDP Independent Evaluation Office will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations.

UNDP will perform monitoring and reporting throughout the reporting period in accordance with the AMA and Funded Activity Agreement (FAA). UNDP has country presence and capacity to perform such functions. In the event of any additional post-implementation obligations over and above the AMA, UNDP will discuss and agree these with the GCF Secretariat in the final year of the project and will prepare a post-implementation monitoring plan and budget for approval by the GCF Board as necessary.

Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area 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 the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally. Detailed Learning and Knowledge Management Plan is included **in Annex N** to this project document

Final Report: The project's final Annual Project Report along with the final independent evaluation report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

### 7.3/ Mandatory GCF M&E Requirements and M&E Budget:

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>25</sup> (US\$)		Time frame
		GCF grant	Co-financing	
<b>Inception Workshop</b>	UNDP Country Office Project Manager CTA	USD 4,265.71	None	Within 6 months of project start
<b>Inception Report and baseline assessments</b>	Project Manager CTA Implementing partner PB – approval authority	None	None	Within 6 months of project start
<b>Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP</b>	Project Manager UNDP Country Office Implementing partner	None	None	Annually
<b>Risk management</b>	Project Manager UNDP Country Office Implementing partner PB – approval authority	None	None	Quarterly, annually
<b>Monitoring of indicators in project results framework</b>	Project Manager M&E staff CTA Implementing partner	None	None	Continuously
<b>3 Capacity assessments of national and local state institutions: initial, mid-term and final</b>	Project Team Consultants	None	SDC: USD 94,500	Initial assessment – 4 <sup>th</sup> quarter of the 1 <sup>st</sup> year of project implementation 2 <sup>nd</sup> assessment – 2 <sup>nd</sup> quarter of the 3 <sup>rd</sup> year of project implementation 3 <sup>rd</sup> assessment – 3 <sup>rd</sup> quarter of the 5 <sup>th</sup> year of project implementation
<b>Mid-term technical evaluation of MHEWS established under the project</b>	Project team Consultants	USD 28,050	None	1 <sup>st</sup> quarter of the 4 <sup>th</sup> year of project implementation
<b>Terminal technical evaluation of MHEWS established and operational</b>	Project team Consultants	USD 28,050	None	1 <sup>st</sup> quarter of the 7 <sup>th</sup> year of project implementation
<b>3 Community impact evaluations/surveys, including design and validation of the programme</b>	Project Team Consultants (international consultant – design and	USD 121,800	None	Initial evaluation – 4 <sup>th</sup> quarter of the 1 <sup>st</sup> year of project implementation Mid-term evaluation and validation – 4 <sup>th</sup> quarter of

<sup>25</sup> Excluding project team staff time and UNDP staff time and travel expenses.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>25</sup> (US\$)		Time frame
		GCF grant	Co-financing	
	validation and national company – survey			the 4 <sup>th</sup> year of project implementation Final evaluation and validation – 2 <sup>nd</sup> quarter of the 7 <sup>th</sup> year of project implementation
<b>GCF Annual Project Report</b>	Project Manager CTA UNDP Country Office and UNDP-GEF Unit Project Board – approving authority	None	None	Annually as per FAA
<b>Audit of Implementing Partner as per UNDP audit policies</b>	UNDP Country Office	Per year: USD 18,657.14 Total: USD 18,657.14*7 years = <b>USD 130,600</b>	None	As per UNDP Audit policies
<b>Lessons learned, case studies, and knowledge generation, including production of audio-video materials and organizing annual project presentations</b>	Project Manager CTA Consultants	Per year: USD 28,316.33 Total: USD 28,316,33*7 years= <b>USD 198,214.29</b>	EIEC: USD 110,000 total (in-kind)	Annually
<b>Monitoring of environmental and social risks and corresponding management plans and, addressing grievances</b>	Project Team Responsible party -MRDI Implementing partner – MoEPA National grievance mechanism – PB District-level grievance mechanism – District-level Grievance Redress Committee Community level grievance mechanism – Community Project Grievance Redress Committee	Per year: USD 76,571.43 Total: USD 76,571.43*7 years = <b>USD 536,000</b>	None	Continuously
<b>Monitoring of gender action plan</b>	Project Manager Gender Advisor UNDP CO	Per year: USD 10,200 Total: USD 10,200*7 years = <b>USD 71,400</b>	None	Continuously
<b>Monitoring of stakeholder engagement plan</b>	Project Manager Responsible party – MRDI Implementing partner - MoEPA UNDP CO	None	None	Continuously
<b>Project Board meetings</b>	Project Board	None	None	At least every six months

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>25</sup> (US\$)		Time frame
		GCF grant	Co-financing	
	UNDP Country Office Project Manager			
<b>Supervision missions</b>	UNDP Country Office	None <sup>26</sup>	None	Two per year
<b>Oversight missions</b>	UNDP-GEF Unit	None <sup>26</sup>	None	Troubleshooting as needed
<b>GCF learning missions/site visits</b>	UNDP Country Office and Project Manager and UNDP-GEF Unit			To be determined.
<b>Mid-term evaluation and management response (add additional lines if more than one interim evaluation is required)</b>	UNDP Country Office Project team UNDP-GEF Unit	USD 30,000	None	2 <sup>nd</sup> quarter of the 4 <sup>th</sup> year of project implementation
<b>Terminal evaluation and management response</b>	UNDP Country Office Project team UNDP-GEF Unit	USD 30,000	None	2 <sup>nd</sup> quarter of the 7 <sup>th</sup> year of project implementation
<b>Translation of evaluation reports into Georgian (reports will be developed in English)</b>	UNDP Country Office	USD 3,000	None	As required. GCF will only accept reports in English.
<b>TOTAL indicative COST</b> Excluding project team staff time, and UNDP staff and travel expenses		USD 1,181,380	USD 204,500	7 years

<sup>26</sup> The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GCF Agency Fee.

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## VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Georgia and the policies and procedures outlined in the UNDP POPP (see <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>).

The national executing entity - also referred to as the National 'Implementing Partner in UNDP terminology - is required to implement the project in compliance with UNDP rules and regulations, policies and procedures, including the NIM Guidelines. These include relevant requirements on fiduciary, procurement, environmental and social safeguards, and other performance standards. In legal terms, this is ensured through the national government's signature of the UNDP Standard Basic Assistance Agreement (SBAA), together with a UNDP project document which will be signed by the Implementing Partner/Executing Entity to govern the use of the funds. The SBAA was signed with the Government of Georgia in 1994.

The (national) Implementing Partner/Executing Entity for this project is the Ministry of Environment Protection and Agriculture (MoEPA) through its Environment and Climate Change Department, which is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. As stated in Financial Regulation 27.02 of the UNDP Financial Regulations and Rules, an implementing partner is "the entity to which the Administrator has entrusted the implementation of UNDP assistance specified in a signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in such document." By signing a project document an implementing partner enters into an agreement with UNDP to manage the project and achieve the results defined in the relevant documents. The accountability of an implementing partner is to:

- Report, fairly and accurately, on project progress against agreed work plans in accordance with the reporting schedule and formats included in the project agreement;
- Maintain documentation and evidence that describes the proper and prudent use of project resources in conformity to the project agreement and in accordance with applicable regulations and procedures. This documentation will be available on request to project monitors (project assurance role) and designated auditors.

UNDP, in agreement with the GoG, will provide implementation support (support to NIM) as agreed in the Letter of Agreement on Support Services signed between MoEPA on behalf of the GoG and the UNDP. UNDP will also provide oversight through the Country Office in Georgia, and BPPS/UNDP Global Environmental Finance Unit in Istanbul and HQ.

The Project Board (PB) will be composed of the representatives of: MoEPA, NEA, EIEC, EMS, MRDI, MIA, UNDP, SDC and representatives of the local governments (LGs) and civil society organizations (CSOs), including community-based organizations (CBOs). The PB is responsible for making, by consensus, management decisions. The PB's decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. The Project Board will meet every six months (or more often if required by PB members). Considering the programmatic approach of SDC and GCF funded interventions, the projects will share the Project Board (PB).

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;

- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

**Executive:** The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is: *Add who will represent the Executive for the project.*

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organization structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organize and chair Project Board meetings.

**Senior Supplier:** The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Supplier is: *Add who will represent the Senior Supplier for the project.*

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

**Senior Beneficiary:** The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is: *Add who will represent the Senior Beneficiary for the project.*

The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality

criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

The National Project Director (NPD) will execute the project on a day-to-day basis on behalf of MoEPA within the parameters laid down by the Project Board. NPD will be accountable to PB and will end his/her authority when the final project terminal evaluation report, and other documentation required by the GCF and UNDP, has been completed and submitted to UNDP. NPD is responsible for decision-making for the project. The National Project Director's prime responsibility is to ensure that the project produces results specified in the project document, meet required standard of quality, timeliness and cost criteria. In addition, the NPD will be a liaison between UNDP and the executing/implementing agency as well as will other key Ministries engaged in various components and activities as responsible parties/strategic partners. GCF funds will not be used to pay salaries of government, local government and CSOs' representatives in their Project Board functions, or the salary of the National Project Director (NPD) assigned by the MoEPA or the Informal Technical Advisory Working Groups (TAWG) members. The GCF and SDC funded projects will have one National Project Director.

International Chief Technical Advisor (CTA)<sup>27</sup> will provide regular technical guidance to the project management and technical teams in managerial and technical issues. He/she will be hired for a long-term during the entire project implementation period by UNDP based on UNDP recruitment procedures. Considering the inter-linkages of the interventions from SDC and GCF funded initiatives, one International Chief Technical Advisor will provide regular technical guidance to the project's management and technical teams in managerial and technical issues.

Project Manager (PM) will manage the project on a day-to-day basis. He/she will be hired by UNDP based on its national project staff recruitment procedures. The Project Manager's function will end when the final project terminal evaluation report and other documentation required by the GCF and UNDP has been completed and submitted to UNDP. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces and results specified in the project document, meet required standard of quality, timeliness and cost criteria. The annual work plan will be prepared by the PM, will be reviewed and cleared by the Regional Technical Advisor, Global Environmental Finance Unit of UNDP as part of the quality assurance and reviewed and approved by PB through a signature by the NPD. The Project Manager will also be responsible for managing and monitoring the project risks initially identified and will submit new risks to the project board for consideration and decision on possible actions if required and update the status of these risks by maintaining the project risks log according to the NIM Guidelines.

Project support will be hired through UNDP and will be composed of technical assistant, finance officer/accountant, administrative assistant, logistics/procurement assistant, driver and other relevant backstopping staff. The project will hire National Team Leaders (50%) to coordinate the work under concrete components.

While the overall execution/implementation of project will rest upon the MoEPA as an implementing partner, concrete outputs and activities/sub-activities will be implemented by consultant's teams and organizations through

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<sup>27</sup> Terms of references for key project staff are included in **Annex G** to this project document

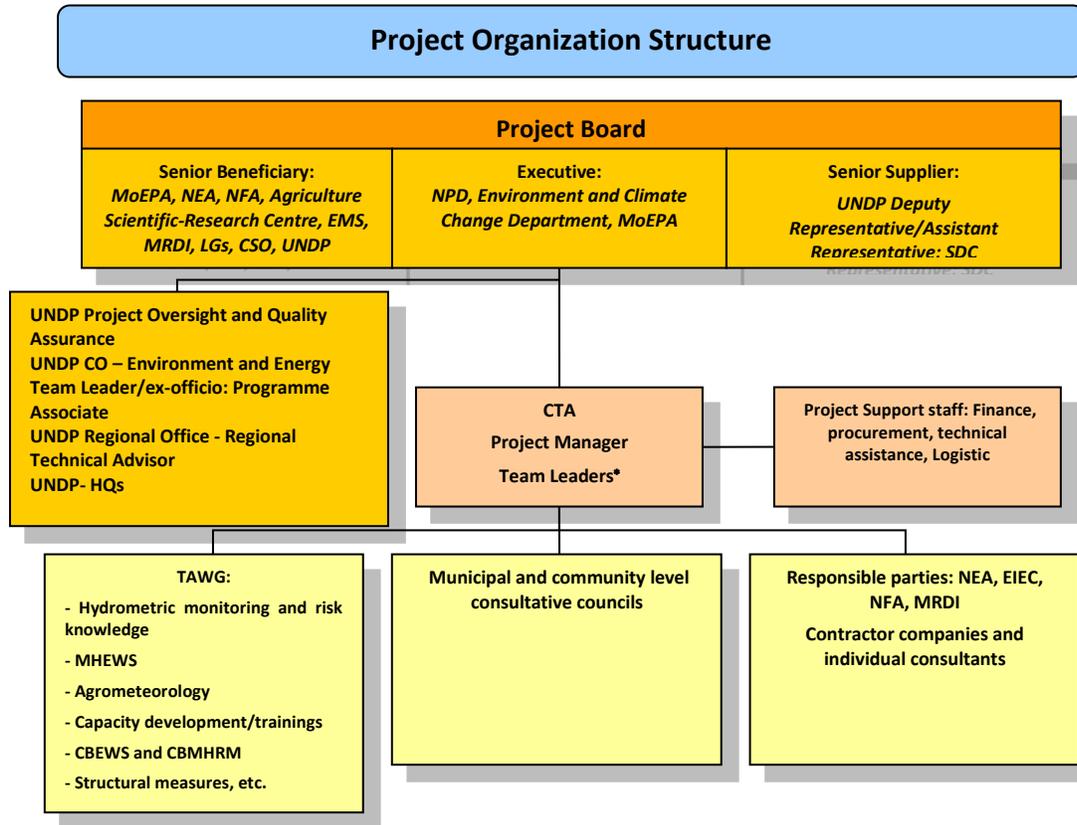
open competitions and request for proposals as well as by various government entities as responsible parties, through Letter of Agreements between UNDP and responsible parties. More specifically, the project will engage following responsible parties in achieving project outputs:

- LELP NEA, MoEPA – responsible party for the activities related to expansion of the hydrometeorological network, multi-hazard assessment and mapping, establishment of hazard meta-database, development of telecommunications system to support the new EWS and integration of telemetry system for near real-time dissemination and use of EWS, river basin multi-hazard risk reduction plans.
- LELP NFA, MoEPA – responsible party for expansion of agrometeorological network and its integration in existing system, enhancing access and the use of weather and climate information and agrometeorological information services by farmers and agricultural enterprises.
- EIEC – responsible party for public awareness and capacity building programme to effectively deliver climate risk information and training to communities and local first-responders.
- MRDI - Design and implementation of risk reduction intervention structural measures as well as implementation of ESMP.

The project will also closely work with EMS, the recent merger of EMA and SSCMC for vulnerability and risk assessment and mapping, establishing/expanding multihazard disaster database, developing MHEWS protocols, etc. as well with Agriculture – Research Centre on developing various climate information products and advisory services.

Activities related to the establishment and integration of community-based EWS systems as well as conducting Community-Based Climate Risk Management process will be implemented by a group/consortium of international and local NGOs, having grass-roots experience in the areas of community-level participatory disaster risk planning and management, integrated natural resources management, community mobilization and empowerment, small-grants making. This group/consortium of organizations will be hired by UNDP through open call – Request of Proposal. Technical guidance to and QA/QC of contractor’s work will be provided by an international consultant(s) hired by UNDP.

Informal Technical Advisory Working Groups (TAWG) will support the CTA and PM. They provide inputs to and endorsement of the design and quality of the project outputs. The TAWGs members will be drawn from government, private sector, academia and civil society to provide guidance and technical advice on the project. A balanced representation of women and men in the TAWGs will be ensured. GCF project Gender Advisor will be a member of all TAWGs to ensure that gender is adequately mainstreamed in all technical discussions. Local stakeholders and community members have a key role in the implementation and monitoring of the project. During the inception phase of the project, the MoEPA working together with UNDP, will consult with all stakeholders, including vulnerable community members, CBOs, and local government, etc. and facilitate an understanding of the roles, functions, and responsibilities within the Project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. Local community consultations councils will be established at target municipality and/or community levels to maintain dialogue with the local beneficiaries and stakeholders throughout the project implementation. The project Logic Framework (indicators, means of verification, assumptions) will be reviewed and the quarterly and annual plans will be refined engaging the communities from the targeted districts. The stakeholders will also be engaged during the mid-term and final evaluations to assess the progress of the project and enable adaptive project management in response to the needs and priorities of the communities. The TAWG will also serve the SDC-funded project.



\* Including a National Project Coordinator for SDC co-financed project as a Team Leader for corresponding technical activities

**Project Assurance:** UNDP provides a three – tier oversight and quality assurance role involving UNDP staff in Country Offices and at regional and headquarters levels in line with the requirements outlined in the AMA. This includes management of funds, programme quality assurance, fiduciary risk management, timely delivery of financial and programme reports to GCF and other requirements as per the AMA. The quality assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are completed and reported to the donor. Project Assurance must be independent of the Project Management function; the Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. The project assurance role is covered by the accredited entity fee provided by the GCF. As an Accredited Entity to the GCF, UNDP is required to deliver GCF-specific oversight and quality assurance services including: (i) Day-to-day oversight supervision, (ii) Oversight of project completion, (iii) Oversight of M&E plan project including reporting. UNDP, in its role as the Accredited Entity, has overall responsibility and oversight for the project including project preparation, project implementation and supervision, financial management and project reporting. UNDP’s responsibilities are outlined in the AMA that has been entered into between GCF and UNDP and will also be outlined in the FAA for this project. The FAA and AMA will govern UNDP’s responsibilities for GCF. The ‘senior supplier’ role of UNDP is to represent the interests of the parties, which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing) and is covered by the accredited entity fee provided by the GCF. The senior supplier’s primary function within the Board is to provide guidance regarding the technical feasibility of the project. Furthermore, as the Senior Supplier, UNDP provides quality assurance for the project, ensures adherence to the NIM Guidelines and ensures compliance with GCF and UNDP policies and procedures.

\* Including a National Project Coordinator for SDC co-financed project as a Team Leader for corresponding technical activities

As an Accredited Entity to the GCF, UNDP delivers the following GCF-specific oversight and quality assurance services: (i) day to day

project oversight supervision covering the start-up and implementation; (ii) oversight of project completion; and (iii) oversight of project reporting. A detailed list of the services is presented in the table below.

Function	Detailed description of activity	Typical GCF fee breakdown
Day-to-day oversight supervision	<p><b>1. Project start-up:</b></p> <ul style="list-style-type: none"> <li>• In the case of Full Funding Proposals, prepare all the necessary documentation for the negotiation and execution of the Funding Activity Agreement (for the project) with the GCF, including all schedules</li> <li>• In the case of readiness proposals, if needed assist the NDA and/or government partners prepare all the necessary documentation for approval of a readiness grant proposal</li> <li>• Prepare the Project Document with the government counterparts</li> <li>• Technical and financial clearance for the Project Document</li> <li>• Organize Local Project Appraisal Committee</li> <li>• Project document signature</li> <li>• Ensure quick project start and first disbursement</li> <li>• Hire project management unit staff</li> <li>• Coordinate/prepare the project inception workshop</li> <li>• Oversee finalization of the project inception workshop report</li> </ul> <p><b>2. Project implementation:</b></p> <ul style="list-style-type: none"> <li>• <u>Project Board</u>: Coordinate/prepare/attend annual Project Board Meetings</li> <li>• <u>Annual work plans</u>: Quality assurance of annual work plans prepared by the project team; issue UNDP annual work plan; strict monitoring of the implementation of the work plan and the project timetable according to the conditions of the FAA and disbursement schedule (or in the case of readiness the approved readiness proposal)</li> <li>• <u>Prepare GCF/UNDP annual project report</u>: review input provided by Project Manager/team; provide specialized technical support and complete required sections</li> <li>• <u>Portfolio Report (readiness)</u>: Prepare and review a Portfolio Report of all readiness activities done by UNDP in line with Clause 9.02 of the Readiness Framework Agreement.</li> <li>• <u>Procurement plan</u>: Monitor the implementation of the project procurement plan</li> <li>• <u>Supervision missions</u>: Participate in and support in-country GCF visits/learning mission/site visits; conduct annual supervision/oversight site missions</li> <li>• <u>Interim Independent Evaluation Report</u>: Initiate, coordinate, finalize the project interim evaluation report and management response</li> <li>• <u>Risk management and troubleshooting</u>: Ensure that risks are properly managed, and that the risk log in Atlas (UNDP financial management system) is regularly updated; Troubleshooting project missions from the regional technical advisors or management and programme support unit staff as and when necessary (i.e. high risk, slow performing projects)</li> <li>• <u>Project budget</u>: Provide quality assurance of project budget and financial transactions according to UNDP and GCF policies</li> <li>• <u>Performance management of staff</u>: where UNDP supervises or co-supervises project staff</li> <li>• <u>Corporate level policy functions</u>: Overall fiduciary and financial policies, accountability and oversight; Treasury Functions including banking information and arrangements and cash management; Travel services, asset management, and procurement policies and support; Management and oversight of the audit exercise for all GCF projects; Information Systems and Technology provision, maintenance and support; Legal</li> </ul>	70%

Function	Detailed description of activity	Typical GCF fee breakdown
	advice and contracting/procurement support policy advice; Strategic Human Resources Management and related entitlement administration; Office of Audit and Investigations oversight/investigations into allegations of misconduct, corruption, wrongdoing and fraud; and social and environmental compliance unit and grievance mechanism.	
<b>Oversight of project completion</b>	<ul style="list-style-type: none"> <li>• Initiate, coordinate, finalize the Project Completion Report, Final Independent Evaluation Report and management response</li> <li>• Quality assurance of final evaluation report and management response</li> <li>• Independent Evaluation Office assessment of final evaluation reports; evaluation guidance and standard setting</li> <li>• Quality assurance of final cumulative budget implementation and reporting to the GCF</li> <li>• Return of any un-spent GCF resources to the GCF</li> </ul>	10%
<b>Oversight of project reporting</b>	<ul style="list-style-type: none"> <li>• Quality assurance of the project interim evaluation report and management response</li> <li>• Technical review of project reports: quality assurance and technical inputs in relevant project reports</li> <li>• Quality assurance of the GCF annual project report</li> <li>• Preparation and certification of UNDP annual financial statements and donor reports</li> <li>• Prepare and submit fund specific financial reports</li> </ul>	20%
	<b>TOTAL</b>	<b>100%</b>

## IX. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is *USD 70,292,622*. This is financed through a GCF grant of *USD 27,053,598*, and *USD 43,239,024* in parallel/in-kind co-financing (*USD 5,000,000* from SDC to be administered by UNDP).

UNDP, as the GCF Accredited Agency, is responsible for the oversight and quality assurance of the execution of GCF resources and the cash co-financing transferred to UNDP bank account only.

### Project Financing

Output	Activity	GCF funding amount (million USD)	Co-financing amount (USD million)						Amount (for entire project) (USD million)
			Tbilisi Mayor's Office	MoEPA (former MoENRP)	MoEPA (former MoA)	SDC	MIA	MRDI	
<b>Output 1. Expanded hydro-meteorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks</b>	1.1 Procurement, installation and operationalization of new hydro meteorological monitoring equipment	5.663		9.520					15.183
	1.2 Climate sensitive hazard and risk maps used in planning and zoning			1.008		3.050			4.058
	1.3 Identification and application of approach and tools for gender-sensitive socio-economic vulnerability assessments	0.325							0.325
	1.4 Multi-hazard disaster risk data repository centralizing information management, applying relevant data protocols and with an accessible knowledge portal in place	0.305					0.063		0.368
<b>Output 2: Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities.</b>	2.1 Policy, regulatory and legal frameworks in place and institutional capacities built for enhanced use of climate information and MHEWS.	0.107	0.200	0.278		1.043			1.628
	2.2 Design and introduction of MHEWS covering all 11 river basins of Georgia (including last-mile coverage)	2.621		1.050			16.440		20.111
	2.3 Access and use of tailored climate weather information products and advise to farmers/agricultural enterprises	1.075			0.600				1.675
	2.4 Climate-informed multi-hazard risk management (MHRM) responsive system in place: including basin-level multi hazard risk management plans and municipal-level multi-hazard response and preparedness plans	2.261	0.800			0.400			3.461
<b>Output 3: Improved community resilience through the implementation of the MHEWS and priority risk</b>	3.1 Participatory community-based adaptation planning reinforced through community-based early warning schemes and community-based climate risk management	5.272							5.272
	3.2 Public awareness and capacity building to effectively deliver climate risk information for communities and local first-responders	1.447		0.710			0.034		2.191

Output	Activity	GCF funding amount (million USD)	Co-financing amount (USD million)						Amount (for entire project) (USD million)
			Tbilisi Mayor's Office	MoEPA (former MoENRP)	MoEPA (former MoA)	SDC	MIA	MRDI	
<i>reduction measures</i>	<i>3.3 Implementation of project selected from 13 short listed sites for location specific priority risk reduction interventions</i>	5.862						7.272	13.134
<b>Project Management Costs</b>		2.117	0.051	0.212		0.508			2.888
<b>Total Project Financing</b>		<b>27.054</b>	<b>1.051</b>	<b>12.778</b>	<b>0.600</b>	<b>5.000</b>	<b>16.538</b>	<b>7.272</b>	<b>70.293</b>

GCF Disbursement schedule: GCF grant funds will be disbursed according to the GCF disbursement schedule. The Country Office will submit an annual work plan to the UNDP-GEF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually.

Disbursements	GCF Proceeds
1	USD2,285,063
2	USD8,062,855
3	USD6,503,028
4	USD3,599,238
5	USD2,946,978
6	USD2,440,710
7	USD1,215,726
<b>Total</b>	<b>USD27,053,598</b>

Direct Project Services as requested by Government:

services provided to government directly under NIM. The UNDP Country Office will also deliver a pre-determined set of project-specific execution services at the request of the Government. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest). These execution services will be charged to the project budget in accordance with the [UNDP's Harmonized Conceptual Funding Framework and Cost Recovery Methodology](#). The letter of agreement for these direct project costs is included in Annex to this project document.

The government has requested UNDP to undertake the following support services for the activities of the programme/project:

- (a) Identification and/or recruitment of project and programme personnel;
- (b) Identification and facilitation of training activities;
- (c) Procurement of goods and services;

The UNDP and Government of Georgia acknowledge and agree that those services are not mandatory, and will be provided only upon Government request and specified in the Letter of Agreement on support services. If requested, the direct project services would follow UNDP policies on the recovery of direct project costs relating to GCF funded projects. These services (in the amount of US \$0.100 mln under PMC covered by GCF funds) will be specified in the Letter of Agreement. Eligible Direct Project Costs should be calculated on the basis of estimated actual or transaction based costs and should be charged to the direct project costs account codes: "64397- Direct Project Costs – Staff" and "74596-Direct Project Costs – General Operating Expenses (GOE)".

**Budget Revision and Tolerance:** 10% of the total overall projected costs can be reallocated among the budget account categories within the same project output. Any budget reallocation involving a major change in the project's scope, structure, design or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent.

As outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the UNDP-GEF Unit.

Any over expenditure incurred beyond the available GCF grant amount will be absorbed by non-GCF resources (e.g. UNDP TRAC or cash co-financing).

**Refund to GCF:** Unspent GCF resources must be returned to the GCF. Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

**Project Closure:** Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.<sup>28</sup> On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-Global Environmental Finance Executive Coordinator.

**Operational completion:** The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Final Independent Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed.

**Transfer or disposal of assets:** In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file<sup>29</sup>. In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex<sup>[1]</sup>, the Accredited Entity shall inform the GCF, in the final APR, which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

**Financial completion:** The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project is required to be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

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<sup>28</sup> see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>

<sup>29</sup> See [https://popp.undp.org/\\_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP\\_POPP\\_DOCUMENT\\_LIBRARY/Public/PPM\\_Project%20Management\\_Closing.docx&action=default](https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default).

<sup>[1]</sup> 23.04 of the AMA states: " In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA."

## X. TOTAL BUDGET AND WORK PLAN

TOTAL BUDGET AND WORK PLAN			
Atlas Proposal or Award ID:	00094354	Atlas Primary Output Project ID:	00098463
Atlas Proposal or Award Title:	Multi Hazard Early Warning		
Atlas Business Unit	GEO10		
Atlas Primary Output Project Title	Multi Hazard Early Warning		
UNDP-GEF PIMS No.	5846		
Implementing Partner	Ministry of Environmental Protection and Agriculture of Georgia (MoEPA)		

O I D	GCF Output / Atlas Activity	Responsible party (Atlas Impl. Agent)	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note		
1	Expanded climate-induced natural hazard observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and	MoEPA	GCF	71200	International Consultants	74,616.67	106,166.67	43,066.67	-	-	-	-	223,850.00	1A		
				71300	Local Consultants	11,433.33	22,866.67	-	-	-	-	-	-	34,300.00	1B	
				71400	Contractual Services - Individ	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	107,270.00	1C	
				72200	Equipment and Furniture	-	5,222,319.00	-	-	-	-	-	-	-	5,222,319.00	1D
				72100	Contr. Services - Companies / Nat-Serv	150,120.00	392,242.00	162,400.00	-	-	-	-	-	-	704,762.00	1E
				<b>Total Output 1</b>						<b>251,494.29</b>	<b>5,758,918.62</b>	<b>220,790.95</b>	<b>15,324.29</b>	<b>15,324.29</b>	<b>15,324.29</b>	<b>15,324.29</b>
2	Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities	MoEPA	GCF	71200	Int. Consultants	-	174,375.00	295,185.00	317,235.00	297,435.00	102,020.00	40,910.00	1,227,160.00	2A		
				71300	Local Consultants	-	8,246.25	12,836.25	18,836.25	14,366.25	-	6,000.00	60,285.00	2B		
				71400	Contractual Services - Individ	30,648.57	30,648.57	30,648.57	30,648.57	30,648.57	30,648.57	30,648.57	30,648.57	214,540.00	2C	
				71600	Travel	-	20,250.00	27,000.00	27,000.00	27,000.00	27,000.00	27,000.00	6,750.00	135,000.00	2D	
				75700	Training, Workshops and Conference	-	40,000.00	40,000.00	40,000.00	40,000.00	-	-	-	160,000.00	2E	
				72100	Contr. Services - Companies/Nat-Serv	-	394,170.00	854,620.42	973,347.08	977,967.08	730,780.42	335,570.00	4,266,455.00	2F		
<b>Total Output 2</b>						<b>30,648.57</b>	<b>667,689.82</b>	<b>1,260,290.24</b>	<b>1,407,066.90</b>	<b>1,387,416.90</b>	<b>890,448.99</b>	<b>419,878.57</b>	<b>6,063,440.00</b>			
3	Improved community resilience through the implementation of the MHEWS and priority risk reduction measures	MoEPA	GCF	71200	Int. Consultants	118,200.00	12,800.00	31,400.00	31,400.00	22,100.00	12,800.00	27,900.00	256,600.00	3A		
				71300	Local Consultants	5,492.31	10,984.62	10,984.62	10,984.62	10,984.62	10,984.62	10,984.62	71,400.00	3B		
				71400	Contractual Services - Individ	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	15,324.29	107,270.00	3C		
				71600	Travel	13,500.00	13,500.00	18,500.00	18,500.00	13,500.00	13,500.00	9,000.00	100,000.00	3D		
				72100	Cont.I Services - Companies/Nat-Int Serv	1,494,395.91	1,301,333.09	4,663,433.09	1,788,333.09	1,200,023.69	1,200,023.69	398,214.29	12,045,756.82	3E		
				<b>Total Output 3</b>						<b>1,646,912.50</b>	<b>1,353,941.99</b>	<b>4,739,641.99</b>	<b>1,864,541.99</b>	<b>1,261,932.59</b>	<b>1,252,632.59</b>	<b>461,423.19</b>

O I D	GCF Output / Atlas Activity	Respon sible party (Atlas Impl. Agent)	Financi ng Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budg et Note		
4	Project management	MoEPA	GCF	71200	International Consultants	47,115.00	47,115.00	47,115.00	77,115.00	47,115.00	47,115.00	61,410.00	374,100.00	OA		
				71400	Contractual Services - Individ	118,782.9	118,782.9	118,782.9	118,782.9	118,782.9	118,782.9	118,782.9	118,782.9	831,480.00	OB	
				71600	Travel	22,285.71	22,285.71	22,285.71	22,285.71	22,285.71	22,285.71	22,285.71	22,285.71	156,000.00	OC	
				72200	Equipment and Furniture	52,950.00	-	-	-	-	-	-	-	52,950.00	OD	
				72400	Communic & Audio Visual Equip	14,821.43	5,071.43	5,071.43	5,071.43	5,071.43	5,071.43	5,071.43	5,071.43	45,250.00	OE	
				72500	Supplies	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	8,400.00	OF	
				72800	IT Equipment	11,000.00	-	-	-	-	-	-	-	11,000.00	OG	
				73100	Rental & Maintenance - Premises	14,707.14	14,707.14	14,707.14	14,707.14	14,707.14	14,707.14	14,707.14	14,707.14	102,950.00	OH	
				73300	Rental & Maint of Info Tech Eq	428.57	428.57	428.57	428.57	428.57	428.57	428.57	428.57	3,000.00	OI	
				73400	Rental & Maint of Other Equip	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00	84,000.00	OJ	
				74200	Audio Visual & Print Prod Costs	23,125.93	23,125.63	23,125.63	23,125.63	23,125.63	23,125.63	23,125.63	45,625.63	184,379.70	OK	
				74500	Miscellaneous Expenses	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	2,520.00	OL
				74596	Services to Projects - GOE for CO	7,145.00	7,142.50	7,142.50	7,142.50	7,142.50	7,142.50	7,142.50	7,142.50	7,142.50	50,000.00	OM
				64397	Services to projects – CO staff	7,142.86	7,142.86	7,142.86	7,142.86	7,142.86	7,142.86	7,142.86	7,142.86	7,142.86	50,000.00	ON
				75700	Training, Workshops and Conference	4,285.71	4,285.71	4,285.71	4,285.71	4,285.71	4,285.71	4,285.71	4,285.71	4,285.71	30,000.00	OO
				74100	Professional Services - Nat	18,657.14	18,657.14	18,657.14	18,657.14	18,657.14	18,657.14	18,657.14	18,657.14	18,657.14	130,600.00	OP
<b>Total Project management</b>						<b>356,007.36</b>	<b>282,304.56</b>	<b>282,304.56</b>	<b>312,304.56</b>	<b>282,304.56</b>	<b>282,304.56</b>	<b>319,099.56</b>	<b>2,116,629.70</b>			
<b>GRAND TOTAL GCF PROJECT COST</b>						<b>2,285,062.71</b>	<b>8,062,854.98</b>	<b>6,503,027.73</b>	<b>3,599,237.73</b>	<b>2,946,978.33</b>	<b>2,440,710.42</b>	<b>1,215,725.60</b>	<b>27,053,597.52</b>			

Notes to the budget

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
1A	International Consultancy Services	GCF	International Consultant for development of specks, bidding documents, evaluation of bids/offers and supervision of procurement and installation of hydrometric equipment				2	Year	<b>55,800.00</b>
			Consultancy Fee	700.00	60	days		42,000.00	
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	4,600.00	3	trips		13,800.00	
			International Consultant for development of specks, bidding documents, evaluation of bids/offers and supervision of procurement and installation of agrometeorological equipment			2	Year	<b>38,850.00</b>	
			Consultancy Fee	600.00	45	days		27,000.00	
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	3,950.00	3	trips		11,850.00	
			International consultant to assist the government in vulnerability assessment			3	Year	<b>69,800.00</b>	
			Consultancy Fee	700.00	80	days		56,000.00	
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	4,600.00	3	trips		13,800.00	
			International Consultant to assist the government in setting multi-hazard risk information and knowledge portal			3	Year	<b>59,400.00</b>	
			Consultancy Fee	700.00	60	days		42,000.00	
			Travel (DSA for Tbilisi and roundtrip ticket costs)	5,800.00	3	trips		17,400.00	
1B	National Consultancy Services	GCF	National Consultant to assist international consultant in development of specks, bidding documents and supervision of procurement and installation of hydrometric equipment				2	Year	<b>18,000.00</b>
			Consultancy Fee	170.00	70	days		11,900.00	
			Travel (DSA and transportation cost in regions)	152.50	40	days		6,100.00	
			National consultant to assist international consultant in development of specks, bidding documents, supervision of procurement and installation of agrometeorological equipment			2	Year	<b>16,300.00</b>	
			Consultancy Fee	170.00	60	days		10,200.00	
			Travel (DSA and transportation cost in regions)	152.50	40	days		6,100.00	
1C	Contractual Services Individuals	GCF	Team leader/advisor in hydro meteorological monitoring and EWS to support implementation of Output 1 Activities - 1.1.1; 1.2.1; 1.3.1 and 1.4.1; (50%)	7,662.14	7	year		<b>53,635.00</b>	
			Team leader/advisor in agrometeorology to support Output 1 Activity 1.1.1 (50%)	7,662.14	7	year		<b>53,635.00</b>	
1D	Contractual Service Companies	GCF	Letter of Agreement (LOA) with NEA on providing service on procurement, installation and commissioning of hydrometric equipment	5,222,319.00			1	Year	<b>5,222,319.00</b>
			Automatic water level measuring system and its Installation cost	11,495.00	44	units		505,780.00	
			Automatic meteorological station and its installation cost	23,075.00	12	units		276,900.00	
			Automatic meteorological posts and its installation cost	15,225.00	73	units		1,111,425.00	
			Upper air sounding equipment (receiver, hydrogen generator, radiosondes and balloons)	254,250.00	2	units		508,500.00	
			Snow Measurement equipment and installation cost	42,467.00	10	units		424,670.00	
			Mobile discharge meters	40,000.00	4	units		160,000.00	
			Automated inclinometers and Installation costs	20,800.00	20	units		416,000.00	
			Drone with additional corpus	45,000.00	1	units		45,000.00	
			Matrice 600 pro and thermal camera; Visual Computing Appliance (VCA)	33,000.00	1	units		33,000.00	
			Geopositioning equipment/GPS	88,000.00	1	units		88,000.00	
			Super Computer	1,125,000.00	1	units		1,125,000.00	
			Modernization of the telecommunication system	425,700.00	1	units		425,700.00	

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			<i>Insurance Cost</i>	102,344.00	1	service			102,344.00
1E	Contractual Service Companies	GCF	Letter of Agreement (LOA) with NFA on procurement, installation and commissioning of agrometeorological stations:						<b>204,362.00</b>
			automated agrometeorological stations	11,431.13	15	units			171,467.00
			data interpretation meteo data (soil moisture and temperature, wind, air temperature)	2,835.00	6	years			17,010.00
			field climate DSS (decision support system)	2,647.50	6	years			15,885.00
			Contracting Nat Company on providing service on vulnerability studies for 11 river basins; Cost includes: I) consultancy fee: 320 man/daysX125USD=40,000 USD x 3 years = 120,000USD; II) local DSA: 80 man/daysX130USD=10,400USD x 3 years = 31,200 USD; iii) transportation/fuel cost for 30 travels average 600 km each tripX0.1USDfuel cost per trip=1,800 USD x 3 years = 5,400 USD; iv) data collection: 26,250 USD; v) consultations/meetings: 5 meetings/year x 1,000 USD = 5000 USD x 3 years = 15,000 USD; vi) translation: 15USD per pgX550 pg=8,250 USD x 3 years = 24,750 USD; vii) printing and production of reports and maps: 31,800 USD; viii) miscellaneous/contingency: 400 USD	254,800.00	1	Contract	3	Year	<b>254,800.00</b>
Contracting Nat Company on providing service on Development of an information system/central data depository and knowledge portal; Cost include: i) experts fee: 360man/daysX125 USD=45,000 USD x 3 years = 135,000 USD for system design/introduction; II) data collection and processing: 36,800 USD x 3 years = 110,400 USD; iii) miscellaneous/contingency: 200 USD	245,600.00	1	Contract	3	Year	<b>245,600.00</b>			
2A	International Consultancy Services	GCF	International meteorological consultant to assist NEA with meteorological and satellite precipitation estimates				3	Year	<b>59,400.00</b>
			Consultancy Fee	700.00	60	days			42,000.00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	5,800.00	3	trips			17,400.00
			International meteorological consultant to assist NEA with Integration of the new sources of data/types of data into the forecasting platform				3	Year	<b>50,400.00</b>
			Consultancy Fee	750.00	54	days			40,500.00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	3,300.00	3	trips			9,900.00
			Two (2) international experts to assist NEA with hydrological and hydraulic modeling and calibration and running of flood forecasting platform: 2 experts x 90 days x 700 USD				3	Year	<b>175,800.00</b>
			Consultancy Fee	700.00	180	days			126,000.00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	24,900.00	2	person			49,800.00
			International consultant on agrometeorology to assist NEA and MoEPA in drought forecasting				4	Year	<b>27,900.00</b>
			Consultancy Fee	600.00	30	days			18,000.00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	3,300.00	3	trips			9,900.00
			International geology consultant to assist NEA with landslide forecasting				4	Year	<b>20,250.00</b>
			Consultancy Fee	600.00	21	days			12,600.00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	2,550.00	3	trips			7,650.00
International meteorological forecasting expert to assist NEA with avalanche forecasting				5	Year	<b>12,750.00</b>			
Consultancy Fee	600.00	15	days			9,000.00			
Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1,250.00	3	trips			3,750.00			
International meteorological forecasting expert to assist NEA with wind forecasting				5	Year	<b>12,150.00</b>			

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			Consultancy Fee	700.00	12	days			8,400.00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1,250.00	3	trips			3,750.00
			International meteorological forecasting expert to assist NEA with hailstorm forecasting				5	Year	<b>21,250.00</b>
			Consultancy Fee	700.00	25	days			17,500.00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1,250.00	3	trips			3,750.00
			International expert for Last-Mile warning dissemination and communications system				4	Year	<b>26,460.00</b>
			Consultancy Fee	600.00	30	days			18,000.00
			Travel (DSA for Tbilisi and regions, roundtrip ticket costs)	2,820.00	3	trips			8,460.00
			International expert for developing national MHEWS protocol				3	Year	<b>22,500.00</b>
			Consultancy Fee	600.00	30	days			18,000.00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1,500.00	3	trips	2	Year	4,500.00
			International expert to evaluate the system and give recommendations for improvement (mid-term and terminal)						<b>44,100.00</b>
			Consultancy Fee: 2 people x 600 USD x 25 days	600.00	50	days			30,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs): 2350 USD x 3 trips x 2 people	2,350.00	6	trips			14,100.00
			Agrometeorology international expert to build capacities of MoEPA and NEA in developing climate and weather advisories				4	Year	<b>71,400.00</b>
			Consultancy Fee	600.00	90	days			54,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5,800.00	3	trips			17,400.00
			International experts, 1 agriculture economist and 1 agriculture adaptation specialist to build the capacities of MoEPA's staff in agriculture sector adaptation and cost-benefit analysis				4	Year	<b>106,800.00</b>
			Consultancy Fee: 2 people x 600 USD x 60 days	600.00	120	days			72,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs): 2 persons x 5800 x 3 trips	5,800.00	6	trips			34,800.00
			International agrometeorology/climate risk assessment expert to assist MoEPA in developing relevant regulations and methodologies				4	Year	<b>53,400.00</b>
			Consultancy Fee	600.00	60	days			36,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5,800.00	3	trips			17,400.00
			International agrometeorology expert to assist MoEPA and NEA in developing climate information products for agriculture maps				4	Year	<b>53,400.00</b>
			Consultancy Fee	600.00	60	days			36,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5,800.00	3	trips			17,400.00
			International agrometeorology expert to assist MoEPA and NEA in improvement of agrometeorological advisory services				4	Year	<b>53,400.00</b>
			Consultancy Fee	600.00	60	days			36,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5,800.00	3	trips			17,400.00
			International Consultants - 3 multi-hazard risk assessment and planning and 2 technical experts (hydro engineer, agroforestry/watershed restoration expert) to assist NEA in developing MHRMPs for all river basins, including two (2) feasibility studies				5	Year	<b>340,500.00</b>
			Consultancy Fee: 5 consultants x 700 usd x 60 days	700.00	300	person			210,000.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			Travel (DSA for Tbilisi, roundtrip ticket costs): 5220 USD x 5 trips x 5 persons	5,220.00	25	trips			130,500.00
			International DRM/DRR expert to assist the MIA/EMA in developing multi-hazard response and preparedness plans for around 10-11 municipalities				5	Year	75,300.00
			Consultancy Fee	600.00	90	days			54,000.00
			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	7,100.00	3	trips			21,300.00
2B	National Consultancy Services	GCF	National consultant for Last-Mile warning dissemination and communications system (to assist international consultant)				4	Year	7,485.00
			Consultancy Fee	180.00	30	days			5,400.00
			Travel (DSA and transportation cost in regions)	695.00	3	trips			2,085.00
			National consultant on the design of national MHEWS protocol (to assist international consultant) - Consultancy Fee	170.00	90	days	3	Year	15,300.00
			Two (2) local experts to assist with technical evaluation of the MHEWS			2	Year	12,000.00	
			Consultancy Fee: 2 experts x 170 USD x 25 days	170.00	50	days			8,500.00
			Travel (DSA and transportation cost in regions)	1,750.00	2	person			3,500.00
			Local experts - agrometeorology/agriculture; agrometeorology/agriculture/climate adaptation; agrometeorology/agriculture/climate adaptation policy; agrometeorology/agriculture/climate adaptation and agrometeorology/agriculture/climate adaptation to assist the international expert in capacity building - Consultancy Fee: 5 experts x 170 USD x 30 days	170.00	150	person	4	Year	25,500.00
2C	Contractual Services Individuals	GCF	Team leader/advisor in hydro meteorological monitoring and EWS to support implementation of Output 2 Activities from 2.2.1 through 2.2.12 and 2.4.1 and 2.4.2 (50%)	7,662.14	7	year			53,635.00
			Team leader/advisor in agrometeorology to support Output 2 Activities - 2.3.1; 2.3.2; 2.3.4 and 2.3.5; (50%)	7,662.14	7	year			53,635.00
			Team Leader/Advisor in capacity building, policy and planning platforms, to support implementation of Output 2 Activities (2.1.1; 2.1.2 and 2.1.3) (100%)	15,324.29	7	year			107,270.00
2D	Travel	GCF	Letter of Agreement (LoA) with NEA on MHRMPs; Cost includes travel fees for experts of respective institution.	1,500.00	90	trips	6	Year	135,000.00
2E	Training, Workshops and Conference	GCF	Three (3)-day trainings of MoEPA and NEA staff on the use of climate information and climate change adaptation (cost reflects venue services costs, including accommodation and all meals, transportation services)	10,000.00	8	training/workshop			80,000.00
			Three (3)-day trainings of MoEPA and NEA staff on integrating climate risks into agri sector plans, investments and budget frameworks, investment appraisal skills, economic valuation of adaptation options (cost reflects venue services costs, including accommodation and all meals, transportation services)	10,000.00	8	training/workshop			80,000.00
2F	Contractual Service Companies	GCF	Letter of Agreement (LoA) with NEA on providing service on Enhancement of meteorological forecasting and satellite precipitation estimates. Improvements to meteorological forecasting capabilities - Cosmo Model; ECMWF; ECMWF Data, and Improvements to the existing EWS regarding additional remote sensing data sources - GPM; MPE		1	Contract	4	Year	473,600.00
			Cosmo Model	48,000.00	1	service			48,000.00
			ECMWF	42,000.00	1	service			42,000.00
			ECMWF Data	347,600.00	1	service			347,600.00
			GPM	18,000.00	1	service			18,000.00
			MPE	18,000.00	1	service			18,000.00
			Letter of Agreement (LoA) with NEA on providing service to integrate new source data/type into forecasting platform		1	Contract	4	Year	155,600.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			<i>Radar data processing</i>	103,000.00	1	service			103,000.00
			<i>Validation and calibration of the radar data</i>	25,800.00	1	service			25,800.00
			<i>Procedures for the inclusion of the radar data</i>	26,800.00	1	service			26,800.00
			Letter of Agreement (LoA) with NEA on Expanding flood forecasting platform to all river basins.		1	Contract	5	Year	<b>616,200.00</b>
			<i>Hydrological Modelling</i>	308,100.00	1	service			308,100.00
			<i>Hydraulic Modelling</i>	66,000.00	1	service			66,000.00
			<i>Flood Forecasting Platform</i>	242,100.00	1	service			242,100.00
			Letter of Agreement (LoA) with NEA and MoEPA/NFA on Development of drought forecasting system		2	Contract	5	Year	<b>326,100.00</b>
			<i>Design of the drought forecasting system</i>	2,100.00	1	service			2,100.00
			<i>Historical information</i>	18,000.00	1	service			18,000.00
			<i>Soil Moisture Information</i>	81,000.00	1	service			81,000.00
			<i>Precipitation anomalies</i>	9,000.00	1	service			9,000.00
			<i>Snowmelt runoff and discharge</i>	12,000.00	1	service			12,000.00
			<i>Standard Precipitation Index</i>	60,000.00	1	service			60,000.00
			<i>Palmer Drought Severity Index</i>	123,000.00	1	service			123,000.00
			<i>Development of warning criteria</i>	21,000.00	1	service			21,000.00
			Letter of Agreement (LoA) with NEA on Development of landslide forecasting system		1	Contract	5	Year	<b>66,750.00</b>
			<i>Design of the landslide forecasting system</i>	10,000.00	1	service			10,000.00
			<i>Historical information</i>	9,000.00	1	service			9,000.00
			<i>Product development and Validation</i>	27,750.00	1	service			27,750.00
			<i>Development of warning criteria</i>	20,000.00	1	service			20,000.00
			Letter of Agreement (LoA) with NEA on Development of avalanche forecasting		1	Contract	5	Year	<b>62,250.00</b>
			<i>Design forecasting system</i>	16,000.00	1	service			16,000.00
			<i>Historical information</i>	9,000.00	1	service			9,000.00
			<i>Product development and Validation</i>	22,000.00	1	service			22,000.00
			<i>Development of warning criteria</i>	15,250.00	1	service			15,250.00
			Letter of Agreement (LoA) with NEA on Development of wind forecasting system		1	Contract	5	Year	<b>65,850.00</b>
			<i>Design forecasting system</i>	17,000.00	1	service			17,000.00
			<i>Historical information</i>	9,000.00	1	service			9,000.00
			<i>Product development and Validation</i>	23,000.00	1	service			23,000.00
			<i>Development of warning criteria</i>	16,850.00	1	service			16,850.00
			Letter of Agreement (LoA) with NEA on Development of hailstorm forecasting system		1	Contract	5	Year	<b>71,750.00</b>
			<i>Design forecasting system</i>	16,000.00	1	service			16,000.00
			<i>Historical information</i>	9,000.00	1	service			9,000.00
			<i>Product development and Validation</i>	33,750.00	1	service			33,750.00
			<i>Development of warning criteria</i>	13,000.00	1	service			13,000.00
			Letter of agreement (LoA) with NEA for general MHEWS and general forecasting capabilities		1	Contract	5	Year	<b>41,500.00</b>
			<i>Additional hydraulic modelling software</i>	10,000.00	1	service			10,000.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			<i>Additional servers and storage capacity</i>	12,000.00	1	service			12,000.00
			<i>Additional internet capacity (router and internet connection)</i>	2,500.00	1	service			2,500.00
			<i>Additional redundant back up system</i>	17,000.00	1	service			17,000.00
			Letter of Agreement (LoA) with NEA and Contracting Nat Company on design of warning dissemination and communications systems.		2	Contract	4	Year	<b>80,055.00</b>
			<i>"Last-mile" communication models</i>	16,027.50	1	service			16,027.50
			<i>Communication protocols and SOPs</i>	19,027.50	1	service			19,027.50
			<i>Technical implementation of the system</i>	45,000.00	1	service			45,000.00
			Letter of Agreement (LoA) with NEA and Contracting Nat Company on Design of national MHEWS protocol		2	Contract	3	Year	<b>46,200.00</b>
			<i>Design of the National MHEWS Protocol</i>	46,200.00	1	service			46,200.00
			Letter of Agreement (LoA) with MoEPA/NFA/Research and Consultation Center on Development of guidance documents to cover development of regulations, stakeholder consultations, printing and production, lobbying, advocacy. Cost include: i) experts fees: 80 man/daysX125USD=10,000 USD x 4 years = 40,000; ii) consultations: 5 meetings/year x 1000 USD = 5000 USD x 4 years = 20,000 USD; iii) printing and production: 16,000 USD; iv) translation: 15 USD per pageX60pg=900USD x 4 years = 3,600 USD; v) miscellaneous/contingency: 400 USD	80,000.00	1	Contract	4	Year	<b>80,000.00</b>
			Letter of Agreement (LoA) with NEA and MoEPA/NFA/Research and Consultation Center on Development of agrometeorological information products. Cost include: i) experts fees: 150 man/daysX125USD=18,750 USD x 4 years = 75,000 USD; ii) data collection, processing and interpretation: 32,000 USD; iii) translation: 15 USD per pgX150pg=2,250 USD x 4 years - 9,000 USD; iv) consultations/meetings: 5 meetings/years x 1000 USD x 4 years = 20,000 USD; v) printing and production of climate products: 4700 USD x 4 years = 18,800 USD; vi) miscellaneous/ contingency: 400 USD	155,200.00	2	Contract	4	Year	<b>310,400.00</b>
			Letter of Agreement (LoA) with MoEPA/NFA/Research and Consultation Center on Development/enhancement of agrometeorological advisory services. Cost includes: i) experts fees: 200 man/daysX125USD=25,000 USD x 4 years = 100,000 USD; ii) consultations/meeting: 5 meetings/year x 1000 USD x 4 years = 20,000 USD; iii) translation: 15 USD per pg.X50pg.=750 USD x 4 years = 3,000 USD; iv) printing and production: 37,000 USD; v) miscellaneous/contingency: 400 USD	160,400.00	1	Contract	4	Year	<b>160,400.00</b>
			Letter of Agreement (LoA) with NEA on Development of MHRMPs for 11 river basins and Two (2) feasibility studies		1	Contract	6	Year	<b>1,709,800.00</b>
			<i>MHRMPs. Cost per plan includes: i) experts fees: 6 expertsX105 man/days per expertX125 USD daily fee=78,750; ii) translation: 15 USD per pg.X150pg.=2,250 USD; iii) data collection, aggregation, interpretation: 4,900 USD; vi) consultations: 5,000 USD; vii) printing and production of maps and reports: 9,000 USD; viii) contingency: 100 USD</i>	100,000.00	11	units			1,100,000.00
			<i>Feasibility Studies: Cost per FS includes: i) experts fees: 8 expertsX190 man/days per expertX125USD daily fee=190,000 USD; ii) Local DSA: 8 personsX80man/days per personX130 USD per diem=83,200USD; iii) fuel cost: 80 round tripsX600 km per tripX0.1 USD per km fuel cost=4,800 USD; iv) data collection: 8,000 USD; v) consultations: 5,000 USD; vi) translation: 15 USD per pg.X200pg.=3,000 USD; vii) printing and production: 10,800 USD; viii) contingency: 100 USD</i>	304,900.00	2	units			609,800.00
<b>3A</b>	International Consultancy Services	GCF	International consultant to develop ToR/SoW, request for proposal, evaluate proposal, provide on applications/proposals, as well as conduct monitoring of the process CBDRM				3	Year	<b>37,200.00</b>
			Consultancy Fee	700.00	40	days			28,000.00
			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	4,600.00	2	trips			9,200.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			International consultant to design and validate community impact evaluation programme				3	Year	<b>55,800.00</b>
			Consultancy Fee	700.00	60	days			42,000.00
			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	6,900.00	2	trips			13,800.00
			Contracting International consultant to assist EIEC to develop and implement awareness programme, guidance documents and education programs, training modules on DRR/DRM, MHEWS, CBMHRM				1	Year	<b>35,600.00</b>
			Consultancy Fee	600.00	40	days			24,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5,800.00	2	trips			11,600.00
			Contracting International consultant to give a technical to UNDP and MRDI on design and implementation of structural measures (cost for International Consultant are considered under the design costs in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS				6	Year	<b>128,000.00</b>
			Consultancy Fee	700.00	150	days			105,000.00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	4,600.00	5	trips			23,000.00
<b>3B</b>	National Consultancy Services	GCF	National Gender Advisor Expert - Consultancy Fee: 170 USD x 60 days x 7 years	170.00	420	year	7	Year	<b>71,400.00</b>
<b>3C</b>	Contractual Services Individuals	GCF	Team leader/advisor in community-based processes and structural measures to support implementation of Output 3 Activities	15,324.29	7	year			<b>107,270.00</b>
<b>3D</b>	Travel	GCF	Letter of Agreement (LoA) with NEA on CBEWS. Cost includes travel fees for experts of respective institution.	10,000.00	1	Contract	2	Year	<b>10,000.00</b>
			Letter of Agreement (LoA) with EIEC on capacity building; Cost includes travel fees for respective institution staff	1,500.00	60	trips	7	Year	<b>90,000.00</b>
<b>3E</b>	Contractual Services - Companies	GCF	Letter of Agreement (LoA) with NEA on Installation and commissioning of CBEWS equipment at 100 communities. Cost includes and installation costs of CBEWS equipment, as well as service fee. Indicative cost per community: i) experts fees: 1 expertX3man/daysX125 USD daily fee=375 USD; ii) 1 expertX3man/daysX130 DSA=390 USD; iii) fuel: 3 trips average 600 km per tripX0.1 USD fuel cost=180 USD; iv) contingency: 55 USD. Total costs: \$1000 x 100 communities = \$100,000	100,000.00	1	Contract	2	Year	<b>100,000.00</b>
			International firm/consortium to develop specs for equipment, prepare tender dossier, evaluate bids and provide monitoring to installation and commissioning of equipment. Cost includes: i) international experts fees: 2 expertsX20 man/days per expert per tripX500 USD daily fee per expertX4trips= 80,000 USD; ii) travel costs for internationals: 2 expertsX20 man/daysX200 USD DSAX4trips=32,000 USD; iii) local experts fees: 2 expertsX160man/days per expertX125USD daily fee per expert=40,000 USD; iv) round trip tickets for internationals: 800 USD per trip per expertX2 expertsX4 trips=6,400 USD; v) fuel cost for travel to regions: 80 round trips average 600 km per tripX0.1 USD fuel cost per km=4,800 USD; vi) Local DSA: 2 local expertsX80 man/days per personX130USD local DSA=20,800 USD	184,000.00	1	Contract	1	Year	<b>184,000.00</b>
			Procurement of hydrometric equipment		1	Contract			<b>1,540,000.00</b>
			Water level monitoring sensors	15,000.00	100				1,500,000.00
			Staff gauges	200.00	200				40,000.00
			Procurement of communications equipment		1	Contract			<b>1,200,600.00</b>
			GSM/GPRS modem device	300.00	2	units			600.00
			Dedicated website	10,000.00	1	units			10,000.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			<i>Generators</i>	500.00	200	units			100,000.00
			<i>Sirens</i>	200.00	5,000	units			1,000,000.00
			<i>Remote siren system</i>	1.00	35,000	units			35,000.00
			<i>Boards</i>	200.00	200	units			40,000.00
			<i>Miscellaneous</i>	1.00	15,000	service			15,000.00
			Procurement and installation of signaling equipment	200,000.00	1	Contract			<b>200,000.00</b>
			<i>Evacuation routes signaling</i>	1,000.00	200	units			200,000.00
			Nat Company to provide service on Refurbishment/renovation of buildings to serve as evacuation centers		1	Contract			<b>200,000.00</b>
			<i>Evacuation center (fitting)</i>	5,000.00	40	units			200,000.00
			Contracts with Nat Companies to conduct community impact evaluation/survey	22,000.00	3	Contract	3	Year	<b>66,000.00</b>
			International firm/NGO or consortium of international and local firms/NGOs to carry out/facilitate community multihazard risk management process, including community mobilization, empowerment, participatory GIS planning, and implementation of community resilience measures.		1	Contract			<b>1,500,000.00</b>
			<i>Implementation of priority measures outlined in the CBDRM plans: An indicative cost of on the ground activity per community is estimated at 17,500 USD, that includes assistance to local community-based organizations/incentive groups in implementing resilience measures, e.g. watershed restoration, floodplain restoration, etc. More specifically, these costs cover project design, material costs, land works, labor cost, project management, including monitoring and oversight, reporting. Cost per community project is based on previous projects implemented in a number of pilot communities under USAID INRMW and UNDP/GEF small grants projects</i>	17,500.00	60	comm			1,050,000.00
			<i>Implementation of agroforestry measures based on the detailed risk maps and consultations with the communities. Cost per ha includes: cost for site selection and community consultation, cost of study of the watershed, cost of project design, costs for purchase of seeds and/or seedlings, land cultivation, direct sowing, planting, maintenance and protection including fencing, contingency and management/supervision costs. Agroforestry cost per hA is based on prototype Rion Flood project info and international guidelines. (i) Intl. consultants/fees: \$700 x 30 days = 21,000 USD; (ii) design, site selection, local consultants \$3,000 x 15 ha = 45,000 USD; (iii) site preparation US\$ 3,000 x 15 ha = 45,000 USD; (iv) purchase and transportation of seedlings \$5 x 2500 units/seedlings x 15 ha = 187,500 USD; (v) purchase of equipment 4,500 USD; (vi) planting \$2,500 x 15 ha = 37,500 USD; (vii) fencing: \$5,800 x 15 ha = 87,000 USD; (viii) after care: 500 USD x 3 years x 15 ha = 22,500 USD</i>	30,000.00	15	ha			450,000.00
			Letter of Agreement (LoA) with EIEC on Capacity building to communities and municipal practitioner. Cost includes: i) local experts fees: 4 expertsX50 man/days eachX125 USD daily fee=25,000 USD x 7 years = 175,000 USD; ii) community meetings/trainings at municipal level: 2 joint meetings/trainings per regionX500 USD per trainingX10 regions=10,000 USD x 7 years = 70,000 USD; iii) translation: 15 USD per pg.X200 pg.=3,000 USD x 7 years = 21,000 USD; iv) printing and production cost: 32,900 USD; v) contingency: 1,100 USD	300,000.00	1	Contract	7	Year	<b>300,000.00</b>
			Letter of Agreement (LoA) for with EIEC on Community forums, award competitions, government-community dialogues. Cost include: i) 1 annual national-wide community forum: 20,000 USD per forum x 7 years = 140,000 USD; ii) 10 awards, 1 award per region, 1000 USD each award, total: 10,000 USD x 7 years = 70,000 USD; iii) government-community dialogues to be held in regional governors'	244,000.00	1	Contract	7	Year	<b>244,000.00</b>

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
			offices: 10 events in 10 regions X450 USD per event=4,500 USD x 7 years = 31,500 USD; iv) printing and production 1,400 USD; v) contingency: 1,100 USD						
			Letter of Agreement (LoA) with EIEC on Development and introduction of youth education programs at preschool, school and university education levels. Cost include: i) experts fees: 2 expertsX50 man/days X125 USD daily fee=12,500 USD x 7 years = 87,500 USD; ii) local DSAs: 100 man/daysX130USD =13,000 USD x 7 years = 91,000 USD; iii) fuel cost 0.1 USDX600kmX70trips=4,200 USD x 7 years = 29,400 USD; iv) printing and production: 95,000 USD; v) contingency: 600 USD	303,500.00	1	Contract	7	Year	303,500.00
			Letter of Agreement (LoA) with EIEC on National-wide media campaign. Cost includes: i) experts fees: 2 expertsX50man/days eachX125 USD=12,500 USD x 7 years = 87,500 USD; ii) translating and printing of materials: 15,000 USD x 7 years = 105,000 USD; iii) visual materials - video clips, public service announcements (PSAs): 40000 USD x 7 years = 280,000 USD; iv) contingency: 1,000 USD	473,500.00	1	Contract	7	Year	473,500.00
			Contracting local engineering and construction company to design structural measures: Detailed Costing is provided in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS	171,062.82	1	Contract			171,062.82
			Letter of agreement (LoA) with Road Department under MRDI to implement structural measures on three (3) sites - Lagodekhi, Kobuleti and Gautskinari, including SEMP		1	Contract	6	Year	5,563,094.00
			<i>Structural measures Costs. Detailed Costing is provided in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS</i>	5,027,094.00	1	contract			5,027,094.00
			<i>Cost for Implementation of SEMP:</i>						536,000.00
			<i>ESMF Updating and Auditing</i>	10,000.00	1	service			10,000.00
			<i>General ESMF Expenses</i>	20,000.00	1	service			20,000.00
			<i>Aquatic Monitoring (42 sites (three per River), two assessments-year over five years)</i>	86,000.00	1	service			86,000.00
			<i>Water quality monitoring (monitoring to be undertaken over 5 years)</i>	90,000.00	1	service			90,000.00
			<i>Water quality sample Laboratory Analysis (monitoring to be undertaken over 5 years)</i>	60,000.00	1	service			60,000.00
			<i>Sediment Sample Field Testing (monitoring to be undertaken over 5 years)</i>	60,000.00	1	service			60,000.00
			<i>Sediment Sample Laboratory Analysis (monitoring to be undertaken over 5 years)</i>	60,000.00	1	service			60,000.00
			<i>Erosion, Drainage, and Sediment Control (includes silt curtains, etc</i>	90,000.00	1	service			90,000.00
			<i>Stakeholder Engagement Control</i>	40,000.00	1	service			40,000.00
			<i>Grievance Redress Mechanism</i>	20,000.00	1	service			20,000.00
<b>0A</b>	International consultancy services	GCF	Chief Technical Adviser (CTA) to provide technical advice to the project (cost includes travel costs to Georgia and consultancy fee)	44,871.43	7	year			314,100.00
			International Mid-Term and Final Evaluator	30,000.00	2	Contract			60,000.00
<b>0B</b>	Contractual Services - Individuals	GCF	Project coordinator	35,228.57	7	year			246,600.00
			Technical assistant	15,697.50	7	year			109,882.50
			Finance/accounting assistant	15,697.50	7	year			109,882.50
			Admin/procurement assistant	15,697.50	7	year			109,882.50
			Logistics/driver	12,617.14	7	year			88,320.00
			Driver	10,473.21	7	year			73,312.50
			Monitoring and Evaluation Staff	13,371.43	7	year			93,600.00
<b>0C</b>	Travel	GCF	DSA in regions for Project Staff	130.00	1,200	trips			156,000.00
<b>0D</b>	Equipment and Furniture	GCF	Purchase vehicles (2)	20,000.00	2	items			40,000.00
			Purchase of office furniture (desks, shelves, meeting table, chairs, armchairs)	12,950.00	1	service			12,950.00
<b>0E</b>		GCF	Purchase of Audio-Visual Equipment for project office (projectors, copier/printer/fax machine, photo camera, land line, internet hubs, etc.)	9,750.00	1	service			9,750.00

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
	Communic & Audio Visual Equip		Security and ICT services	5,071.43	7	year			35,500.00
0F	Supplies	GCF	Office Supplies	100.00	84	items			8,400.00
0G	IT Equipment	GCF	Purchase of ICT Equipment (desktops, lap-tops for project staff)	11,000.00	1	service			11,000.00
0H	Rental & Maintenance-Premises	GCF	Project Office rent and maintenance costs; utility costs	14,707.14	7	year			102,950.00
0I	Rental & Maint of Info Tech Eq	GCF	Rental of interpreting equipment	428.57	7	year			3,000.00
0J	Rental & Maint of Other Equip	GCF	Fuel Cost for Project vehicles	1,000.00	84	items			84,000.00
OK	Audio Visual & Print Prod Costs	GCF	Cost for ICT equipment maintenance and supplies	70.00	84	items			5,880.00
			Cost for publications and visibility materials	5,000.00	30	items			150,000.00
			Cost for One short documentary and video trailer/clip	22,500.00	1	units			22,500.00
			Translation/Interpreting costs	857.10	7	year			5,999.70
OL	Miscellaneous Expenses	GCF	Contingency costs	360.00	7	year			2,520.00
OM	Services to Projects - GOE for CO	GCF	Direct Project Costs (DPCs) Services to projects - GOE for CO; UNDP support services related to HR, Procurement and Finance services to be provided by the Project through UNDP under GCF finance. The costs are estimated based on the basis of estimated actual or transactional based costs. Respective Letter for Support Services will be signed	50,000.00	1	contract			50,000.00
ON	Services to projects – CO staff	GCF	Direct Project Costs (DPCs) Services to projects – CO staff. UNDP support services for Technical Support to be provided by the Project through UNDP. Respective Letter for Support Services will be signed	25,000.00	2	contract			50,000.00
OO	Training, Workshops and Conference	GCF	Conference facility costs for workshops, conferences organized by the project	4,285.71	7	year			30,000.00
OP	Professional Services - Nat	GCF	Annual project audit cost	18,657.14	7	year			130,600.00
				<b>Total Project Management</b>					
				<b>GRAND TOTAL GCF COST</b>					<b>27,053,598</b>

**Activity level budget**

<b>OID</b>	<b>GCF Output</b>	<b>Responsible party (Atlas Implementing Agent [1])</b>	<b>AID</b>	<b>Source Finance</b>	<b>Atlas Budget Accounting Code</b>	<b>Budget Account Description</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Total (USD)</b>	<b>Budget Note</b>			
1	Expanded climate-induced natural hazard observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks	Ministry of Environment Protection and Agriculture of Georgia (MoEPA)	1,1	GCF	71200	International Consultants	31 550,00	63 100,00	-	-	-	-	-	-	94 650,00	1A			
				GCF	71300	Local Consultants	11 433,33	22 866,67	-	-	-	-	-	-	-	34 300,00	1B		
				GCF	71400	Contractual Services - Individ	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	107 270,00	1C		
				GCF	72100	Contractual Services - Companies	-	204 362,00	-	-	-	-	-	-	-	-	204 362,00	1D	
				GCF	72200	Equipment and Furniture	-	5 222 319,00	-	-	-	-	-	-	-	-	5 222 319,00	1E	
			<b>Sub Total Activity 1.1</b>							<b>58 307,62</b>	<b>5 527 971,95</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>5 662 901,00</b>		
			1,3	GCF	71200	International Consultants	23 266,67	23 266,67	23 266,67	-	-	-	-	-	-	-	69 800,00	1F	
				GCF	72100	Contractual Services - Companies	76 440,00	101 920,00	76 440,00	-	-	-	-	-	-	-	254 800,00	1G	
			<b>Sub Total Activity 1.3</b>							<b>99 706,67</b>	<b>125 186,67</b>	<b>99 706,67</b>					<b>324 600,00</b>		
			1,4	GCF	71200	International Consultants	19 800,00	19 800,00	19 800,00	-	-	-	-	-	-	-	59 400,00	1H	
				GCF	72100	Contractual Services - Companies	73 680,00	85 960,00	85 960,00	-	-	-	-	-	-	-	245 600,00	1I	
			<b>Sub Total Activity 1.4</b>							<b>93 480,00</b>	<b>105 760,00</b>	<b>105 760,00</b>					<b>305 000,00</b>		
			<b>Total GCF Output 1</b>							<b>251 494,29</b>	<b>5 758 918,62</b>	<b>220 790,95</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>6 292 501,00</b>	
			2	Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities	Ministry of Environment Protection and Agriculture of Georgia (MoEPA)	2,1	GCF	71400	Contractual Services - Individ	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	107 270,00	2A
<b>Sub Total Activity 2.1</b>							<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>15 324,29</b>	<b>107 270,00</b>						
2,2	GCF	71200				International Consultants	-	6 615,00	127 425,00	149 475,00	129 675,00	18 860,00	40 910,00	-	-	-	472 960,00	2B	
	GCF	71300				Local Consultants	-	1 871,25	6 461,25	12 461,25	7 991,25	-	6 000,00	-	-	-	34 785,00	2C	
	GCF	71400				Contractual Services - Individ	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	107 270,00	2D	
	GCF	72100				Contractual Services - Companies	-	-	374 960,42	493 687,08	498 307,08	388 820,42	250 080,00	-	-	-	2 005 855,00	2E	
<b>Sub Total Activity 2.2</b>							<b>15 324,29</b>	<b>23 810,54</b>	<b>524 170,95</b>	<b>670 947,62</b>	<b>651 297,62</b>	<b>423 004,70</b>	<b>312 314,29</b>	<b>2 620 870,00</b>					

			2,3	GCF	71200	International Consultants		84 600,00	84 600,00	84 600,00	84 600,00			338 400,00	2F				
				GCF	71300	Local Consultants		6 375,00	6 375,00	6 375,00	6 375,00			25 500,00	2G				
				GCF	72100	Contractual Services - Companies		137 700,00	137 700,00	137 700,00	137 700,00			550 800,00	2H				
				GCF	75700	Training, Workshops and Conference		40 000,00	40 000,00	40 000,00	40 000,00			160 000,00	2I				
			<b>Sub Total Activity 2.3</b>								<b>268 675,00</b>	<b>268 675,00</b>	<b>268 675,00</b>	<b>268 675,00</b>			<b>1 074 700,00</b>		
			2,4	GCF	71200	International Consultants		83 160,00	83 160,00	83 160,00	83 160,00	83 160,00			415 800,00	2J			
				GCF	71600	Travel		20 250,00	27 000,00	27 000,00	27 000,00	27 000,00	6 750,00		135 000,00	2K			
				GCF	72100	Contractual Services - Companies		256 470,00	341 960,00	341 960,00	341 960,00	341 960,00	85 490,00		1 709 800,00	2L			
			<b>Sub Total Activity 2.4</b>								<b>359 880,00</b>	<b>452 120,00</b>	<b>452 120,00</b>	<b>452 120,00</b>	<b>452 120,00</b>	<b>92 240,00</b>	<b>2 260 600,00</b>		
			<b>Total GCF Output 2</b>							<b>30 648,57</b>	<b>667 689,82</b>	<b>1 260 290,24</b>	<b>1 407 066,90</b>	<b>1 387 416,90</b>	<b>890 448,99</b>	<b>419 878,57</b>	<b>6 063 440,00</b>		
			3	Improved community resilience through the implementation of the MHEWS and priority risk reduction measures	Ministry of Environment Protection and Agriculture of Georgia (MoEPA)	3,1	GCF	71200	International Consultants	18 600,00		18 600,00	18 600,00	9 300,00		27 900,00	93 000,00	3A	
							GCF	71300	Local Consultants	5 492,31	10 984,62	10 984,62	10 984,62	10 984,62	10 984,62	10 984,62		71 400,00	3B
							GCF	71400	Contractual Services - Individ	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29	15 324,29		107 270,00	3C
							GCF	71600	Travel			5 000,00	5 000,00					10 000,00	3D
							GCF	72100	Contractual Services - Companies	22 000,00		3 362 100,00	487 000,00	455 000,00	455 000,00	209 500,00		4 990 600,00	3E
<b>Sub Total Activity 3.1</b>							<b>61 416,59</b>	<b>26 308,90</b>	<b>3 412 008,90</b>	<b>536 908,90</b>	<b>490 608,90</b>	<b>481 308,90</b>	<b>263 708,90</b>	<b>5 272 270,00</b>					
3,2	GCF	71200				International Consultants	35 600,00									35 600,00	3F		
	GCF	71600				Travel	13 500,00	13 500,00	13 500,00	13 500,00	13 500,00	13 500,00	9 000,00		90 000,00	3G			
	GCF	72100				Contractual Services - Companies	188 714,29	188 714,29	188 714,29	188 714,29	188 714,29	188 714,29	188 714,29		1 321 000,00	3H			
<b>Sub Total Activity 3.2</b>							<b>237 814,29</b>	<b>202 214,29</b>	<b>202 214,29</b>	<b>202 214,29</b>	<b>202 214,29</b>	<b>202 214,29</b>	<b>197 714,29</b>	<b>1 446 600,00</b>					
3,3	GCF	71200				International Consultants	64 000,00	12 800,00	12 800,00	12 800,00	12 800,00	12 800,00				128 000,00	3I		
	GCF	72100				Contractual Services - Companies	1 283 681,62	1 112 618,80	1 112 618,80	1 112 618,80	556 309,40	556 309,40			5 734 156,82	3J			
<b>Sub Total Activity 3.3</b>							<b>1 347 681,62</b>	<b>1 125 418,80</b>	<b>1 125 418,80</b>	<b>1 125 418,80</b>	<b>569 109,40</b>	<b>569 109,40</b>		<b>5 862 156,82</b>					
<b>Total GCF Output 3</b>							<b>1 646 912,50</b>	<b>1 353 941,99</b>	<b>4 739 641,99</b>	<b>1 864 541,99</b>	<b>1 261 932,59</b>	<b>1 252 632,59</b>	<b>461 423,19</b>	<b>12 581 026,82</b>					

4	Project Management	UNDP	4,1	GCF	71200	International Consultants	47 115,00	47 115,00	47 115,00	47 115,00	47 115,00	47 115,00	61 410,00	-	374 100,00	OA		
				GCF	71400	Contractual Services - Individ	118 782,86	118 782,86	118 782,86	118 782,86	118 782,86	118 782,86	118 782,86	118 782,86	-	831 480,00	OB	
				GCF	71600	Travel	22 285,71	22 285,71	22 285,71	22 285,71	22 285,71	22 285,71	22 285,71	22 285,71	-	156 000,00	OC	
				GCF	72200	Equipment and Furniture	52 950,00	-	-	-	-	-	-	-	-	-	52 950,00	OD
				GCF	72400	Communic & Audio Visual Equip	14 821,43	5 071,43	5 071,43	5 071,43	5 071,43	5 071,43	5 071,43	5 071,43	-	45 250,00	OE	
				GCF	72500	Supplies	1 200,00	1 200,00	1 200,00	1 200,00	1 200,00	1 200,00	1 200,00	1 200,00	-	8 400,00	OF	
				GCF	72800	Information Technology Equipmt	11 000,00	-	-	-	-	-	-	-	-	-	11 000,00	OG
				GCF	73100	Rental & Maintenance- Premises	14 707,14	14 707,14	14 707,14	14 707,14	14 707,14	14 707,14	14 707,14	14 707,14	-	102 950,00	OH	
				GCF	73300	Rental & Maint of Info Tech Eq	428,57	428,57	428,57	428,57	428,57	428,57	428,57	428,57	-	3 000,00	OI	
				GCF	73400	Rental & Maint of Other Equip	12 000,00	12 000,00	12 000,00	12 000,00	12 000,00	12 000,00	12 000,00	12 000,00	-	84 000,00	OJ	
				GCF	74100	Professional Services - Nat	18 657,14	18 657,14	18 657,14	18 657,14	18 657,14	18 657,14	18 657,14	18 657,14	-	130 600,00	OK	
				GCF	74200	Audio Visual & Print Prod Costs	23 125,93	23 125,93	23 125,93	23 125,93	23 125,93	23 125,93	23 125,93	45 625,63	-	184 379,70	OL	
				GCF	74500	Miscellaneous Expenses	360,00	360,00	360,00	360,00	360,00	360,00	360,00	360,00	-	2 520,00	OM	
				GCF	75700	Training, Workshops and Conference	4 285,71	4 285,71	4 285,71	4 285,71	4 285,71	4 285,71	4 285,71	4 285,71	-	30 000,00	ON	
				GCF	74596	Services to Projects - GOE for CO	7 145,00	7 142,50	7 142,50	7 142,50	7 142,50	7 142,50	7 142,50	7 142,50	-	50 000,00	OO	
				GCF	64596	Services to projects - CO staff	7 142,86	7 142,86	7 142,86	7 142,86	7 142,86	7 142,86	7 142,86	7 142,86	-	50 000,00	OP	
<b>Total GCF Project management</b>							<b>356 007,36</b>	<b>282 304,56</b>	<b>282 304,56</b>	<b>312 304,56</b>	<b>282 304,56</b>	<b>282 304,56</b>	<b>319 099,56</b>	-	<b>2 116 629,70</b>			
<b>GRAND TOTAL GCF PROJECT COST</b>							<b>2 285062,71</b>	<b>8 062 854,98</b>	<b>6 503027,73</b>	<b>3 599237,73</b>	<b>2 946 978,33</b>	<b>2 440 710,42</b>	<b>1 215725,60</b>	-	<b>27 053 597,52</b>			

Note	Budget Account Description	Source of Finance	Description of Cost	Unit Cost (USD)	QTY	Unit	Duration	Unit	Total Cost (USD)
1A	International Consultancy Services	GCF	International Consultant for development of specks, bidding documents, evaluation of bids/offers and supervision of procurement and installation of hydrometric equipment				2	Year	<b>55 800,00</b>
			Consultancy Fee	700,00	60	days			42 000,00
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	4 600,00	3	trips			13 800,00
			International Consultant for development of specks, bidding documents, evaluation of bids/offers and supervision of procurement and installation of agrometeorological equipment				2	Year	<b>38 850,00</b>
			Consultancy Fee	600,00	45	days			27 000,00
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	3 950,00	3	trips			11 850,00
1B	National Consultancy Services	GCF	National Consultant to assist international consultant in development of specks, bidding documents and supervision of procurement and installation of hydrometric equipment				2	Year	<b>18 000,00</b>
			Consultancy Fee	170,00	70	days			11 900,00
			Travel (DSA and transportation cost in regions)	152,50	40	days			6 100,00
			National consultant to assist international consultant in development of specks, bidding documents, supervision of procurement and installation of agrometeorological equipment				2	Year	<b>16 300,00</b>
			Consultancy Fee	170,00	60	days			10 200,00
			Travel (DSA and transportation cost in regions)	152,50	40	days			6 100,00
1C	Contractual Services Individuals	GCF	Team leader/advisor in hydro meteorological monitoring and EWS to support implementation of Output 1 Activities - 1.1.1; 1.2.1; 1.3.1 and 1.4.1; (50%)	7 662,14	7	years			<b>53 635,00</b>
			Team leader/advisor in agrometeorology to support Output 1 Activity 1.1.1 (50%)	7 662,14	7	years			<b>53 635,00</b>
1D	Contractual Service Companies	GCF	Letter of Agreement (LOA) with NFA on procurement, installation and commissioning of agrometeorological stations:						<b>204 362,00</b>
			automated agrometeorological stations	11 431,13	15	units			171 467,00
			data interpretation meteo data (soil moisture and temperature, wind, air temperature)	2 835,00	6	years			17 010,00
			field climate DSS (decision support system)	2 647,50	6	years			15 885,00
1E	Contractual Service Companies	GCF	Letter of Agreement (LOA) with NEA on providing service on procurement, installation and commissioning of hydrometric equipment	5 222 319,00			1	Year	<b>5 222 319,00</b>
			Automatic water level measuring system and its Installation cost	11 495,00	44	units			505 780,00

			Automatic meteorological station and its installation cost	23 075,00	12	units			276 900,00
			Automatic meteorological posts and its installation cost	15 225,00	73	units			1 111 425,00
			Upper air sounding equipment (receiver, hydrogen generator, radiosondes and ballons)	254 250,00	2	units			508 500,00
			Snow Measurement equipment and installation cost	42 467,00	10	units			424 670,00
			Mobile discharge meters	40 000,00	4	units			160 000,00
			Automated inclinometers and Installation costs	20 800,00	20	units			416 000,00
			Drone with additional corpus	45 000,00	1	units			45 000,00
			Matrice 600 pro and thermal camera ; Visual Computing Appliance (VCA)	33 000,00	1	units			33 000,00
			Geopositioning equipment/GPS	88 000,00	1	units			88 000,00
			Super Computer	1 125 000,00	1	units			1 125 000,00
			Modernization of the telecommunication system	425 700,00	1	units			425 700,00
			Insurance Cost	102 344,00	1	service			102 344,00
<b>1F</b>	International Consultancy Services	GCF	International consultant to assist the government in vulnerability assessment				3	Year	<b>69 800,00</b>
			Consultancy Fee	700,00	80	days			56 000,00
			Travel (DSA for Tbilisi and regions; roundtrip ticket costs)	4 600,00	3	trips			13 800,00
<b>1G</b>	Contractual Service Companies	GCF	Contracting Nat Company on providing service on vulnerability studies for 11 river basins; Cost includes: I) consultancy fee: 320 man/daysX125USD=40,000 USD x 3 years = 120,000USD; II) local DSA: 80 man/daysX130USD=10,400USD x 3 years = 31,200 USD; iii) transportation/fuel cost for 30 travelsXaverage 600 km each tripX0.1USDfuel cost per trip=1,800 USD x 3 years = 5,400 USD; iv) data collection: 26,250 USD USD; v) consultations/meetings: 5 meetings/year x 1,000 USD = 5000 USD x 3 years = 15,000 USD; vi) translation: 15USD per pgX550 pg=8,250 USD x 3 years = 24,750 USD; vii) printing and production of reports and maps: 31,800 USD; viii) miscellaneous/contingency: 400 USD	254 800,00	1	Contract	3	Year	<b>254 800,00</b>
<b>1H</b>	International Consultancy Services	GCF	International Consultant to assist the government in setting multi-hazard risk information and knowledge portal				3	Year	<b>59 400,00</b>
			Consultancy Fee	700,00	60	days			42 000,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	5 800,00	3	trips			17 400,00

<b>1I</b>	Contractual Service Companies	GCF	Contracting Nat Company on providing service on Development of an information system/central data depository and knowledge portal; Cost include: i) experts fee: 360man/daysX125 USD=45,000 USD x 3 years = 135,000 USD for system design/introduction; II) data collection and processing: 36,800 USD x 3 years = 110,400 USD; iii) miscellaneous/contingency: 200 USD	245 600,00	1	Contract	3	Year	<b>245 600,00</b>
				<b>Total GCF Output 1</b>					<b>6 292 501,00</b>
<b>2A</b>	Contractual Services Individuals	GCF	Team Leader/Advisor in capacity building, policy and planning platforms, to support implementation of Output 2 Activities (2.1.1; 2.1.2 and 2.1.3) (100%)	15 324,29	7	year			<b>107 270,00</b>
<b>2B</b>	International Consultancy Services	GCF	International meteorological consultant to assist NEA with meteorological and satellite precipitation estimates				3	Year	<b>59 400,00</b>
			Consultancy Fee	700,00	60	days			42 000,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	5 800,00	3	trips			17 400,00
			International meteorological consultant to assist NEA with Integration of the new sources of data/types of data into the forecasting platform				3	Year	<b>50 400,00</b>
			Consultancy Fee	750,00	54	days			40 500,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	3 300,00	3	trips			9 900,00
			Two (2) international experts to assist NEA with hydrological and hydraulic modeling and calibration and running of flood forecasting platform: 2 experts x 90 days x 700 USD				3	Year	<b>175 800,00</b>
			Consultancy Fee	700,00	180	days			126 000,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	24 900,00	2	person			49 800,00
			International consultant on agrometeorology to assist NEA and MoEPA in drought forecasting				4	Year	<b>27 900,00</b>
			Consultancy Fee	600,00	30	days			18 000,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	3 300,00	3	trips			9 900,00
			International geology consultant to assist NEA with landslide forecasting				4	Year	<b>20 250,00</b>
			Consultancy Fee	600,00	21	days			12 600,00
			Travel (DSA for Tbilisi and roundtrip ticket costs)	2 550,00	3	trips			7 650,00
International meteorological forecasting expert to assist NEA with avalanche forecasting				5	Year	<b>12 750,00</b>			
Consultancy Fee	600,00	15	days			9 000,00			

			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1 250,00	3	trips			3 750,00
			International meteorological forecasting expert to assist NEA with wind forecasting				5	Year	<b>12 150,00</b>
			Consultancy Fee	700,00	12	days			8 400,00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1 250,00	3	trips			3 750,00
			International meteorological forecasting expert to assist NEA with hailstorm forecasting				5	Year	<b>21 250,00</b>
			Consultancy Fee	700,00	25	days			17 500,00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1 250,00	3	trips			3 750,00
			International expert for Last-Mile warning dissemination and communications system				4	Year	<b>26 460,00</b>
			Consultancy Fee	600,00	30	days			18 000,00
			Travel (DSA for Tbilisi and regions, roundtrip ticket costs)	2 820,00	3	trips			8 460,00
			International expert for developing national MHEWS protocol				3	Year	<b>22 500,00</b>
			Consultancy Fee	600,00	30	days			18 000,00
			Travel (DSA for Tbilisi) ticket cost not included, since expert will be already contracted under this Activity and travel missions will be combined	1 500,00	3	trips	2	Year	4 500,00
			International expert to evaluate the system and give recommendations for improvement (mid-term and terminal)						<b>44 100,00</b>
			Consultancy Fee: 2 people x 600 USD x 25 days	600,00	50	days			30 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs): 2350 USD x 3 trips x 2 people	2 350,00	6	trips			14 100,00
<b>2C</b>	National Consultancy Services	GCF	National consultant for Last-Mile warning dissemination and communications system (to assist international consultant)				4	Year	<b>7 485,00</b>
			Consultancy Fee	180,00	30	days			5 400,00
			Travel (DSA and transportation cost in regions)	695,00	3	trips			2 085,00
			National consultant on the design of national MHEWS protocol (to assist international consultant) - Consultancy Fee	170,00	90	days	3	Year	<b>15 300,00</b>
			Two (2) local experts to assist with technical evaluation of the MHEWS				2	Year	<b>12 000,00</b>

			Consultancy Fee: 2 experts x 170 USD x 25 days	170,00	50	days			8 500,00
			Travel (DSA and transportation cost in regions)	1 750,00	2	person			3 500,00
<b>2D</b>	Contractual Services Individuals	GCF	Team leader/advisor in hydro meteorological monitoring and EWS to support implementation of Output 2 Activities from 2.2.1 through 2.2.12 and 2.4.1 and 2.4.2 (50%)	7 662,14	7	year			<b>53 635,00</b>
			Team leader/advisor in agrometeorology to support Output 2 Activities - 2.3.1; 2.3.2; 2.3.4 and 2.3.5; (50%)	7 662,14	7	year			<b>53 635,00</b>
<b>2E</b>	Contractual Service Companies	GCF	Letter of Agreement (LoA) with NEA on providing service on Enhancement of meteorological forecasting and satellite precipitation estimates. Improvements to meteorological forecasting capabilities - Cosmo Model; ECMWF; ECMWF Data, and Improvements to the existing EWS regarding additional remote sensing data sources - GPM; MPE		1	Contract	4	Year	<b>473 600,00</b>
			<i>Cosmo Model</i>	48 000,00	1	service			48 000,00
			<i>ECMWF</i>	42 000,00	1	service			42 000,00
			<i>ECMWF Data</i>	347 600,00	1	service			347 600,00
			<i>GPM</i>	18 000,00	1	service			18 000,00
			<i>MPE</i>	18 000,00	1	service			18 000,00
			Letter of Agreement (LoA) with NEA on providing service to integrate new source data/type into forecasting platform		1	Contract	4	Year	<b>155 600,00</b>
			<i>Radar data processing</i>	103 000,00	1	service			103 000,00
			<i>Validation and calibration of the radar data</i>	25 800,00	1	service			25 800,00
			<i>Procedures for the inclusion of the radar data</i>	26 800,00	1	service			26 800,00
			Letter of Agreement (LoA) with NEA on Expanding flood forecasting platform to all river basins.		1	Contract	5	Year	<b>616 200,00</b>
			<i>Hydrological Modelling</i>	308 100,00	1	service			308 100,00
			<i>Hydraulic Modelling</i>	66 000,00	1	service			66 000,00
			<i>Flood Forecasting Platform</i>	242 100,00	1	service			242 100,00
			Letter of Agreement (LoA) with NEA and MoEPA/NFA on Development of drought forecasting system		2	Contract	5	Year	<b>326 100,00</b>
			<i>Design of the drought forecasting system</i>	2 100,00	1	service			2 100,00
<i>Historical information</i>	18 000,00	1	service			18 000,00			
<i>Soil Moisture Information</i>	81 000,00	1	service			81 000,00			
<i>Precipitation anomalies</i>	9 000,00	1	service			9 000,00			

		<i>Snowmelt runoff and discharge</i>	12 000,00	1	service			12 000,00
		<i>Standard Precipitation Index</i>	60 000,00	1	service			60 000,00
		<i>Palmer Drought Severity Index</i>	123 000,00	1	service			123 000,00
		<i>Development of warning criteria</i>	21 000,00	1	service			21 000,00
		Letter of Agreement (LoA) with NEA on Development of landslide forecasting system		1	Contract	5	Year	<b>66 750,00</b>
		<i>Design of the landslide forecasting system</i>	10 000,00	1	service			10 000,00
		<i>Historical information</i>	9 000,00	1	service			9 000,00
		<i>Product development and Validation</i>	27 750,00	1	service			27 750,00
		<i>Development of warning criteria</i>	20 000,00	1	service			20 000,00
		Letter of Agreement (LoA) with NEA on Development of avalanche forecasting		1	Contract	5	Year	<b>62 250,00</b>
		<i>Design forecasting system</i>	16 000,00	1	service			16 000,00
		<i>Historical information</i>	9 000,00	1	service			9 000,00
		<i>Product development and Validation</i>	22 000,00	1	service			22 000,00
		<i>Development of warning criteria</i>	15 250,00	1	service			15 250,00
		Letter of Agreement (LoA) with NEA on Development of wind forecasting system		1	Contract	5	Year	<b>65 850,00</b>
		<i>Design forecasting system</i>	17 000,00	1	service			17 000,00
		<i>Historical information</i>	9 000,00	1	service			9 000,00
		<i>Product development and Validation</i>	23 000,00	1	service			23 000,00
		<i>Development of warning criteria</i>	16 850,00	1	service			16 850,00
		Letter of Agreement (LoA) with NEA on Development of hailstorm forecasting system		1	Contract	5	Year	<b>71 750,00</b>
		<i>Design forecasting system</i>	16 000,00	1	service			16 000,00
		<i>Historical information</i>	9 000,00	1	service			9 000,00
		<i>Product development and Validation</i>	33 750,00	1	service			33 750,00
		<i>Development of warning criteria</i>	13 000,00	1	service			13 000,00
		Letter of agreement (LoA) with NEA for general MHEWS and general forecasting capabilities		1	Contract	5	Year	<b>41 500,00</b>
		<i>Additional hydraulic modelling software</i>	10 000,00	1	service			10 000,00
		<i>Additional servers and storage capacity</i>	12 000,00	1	service			12 000,00
		<i>Additional internet capacity (router and internet connection)</i>	2 500,00	1	service			2 500,00
		<i>Additional redundant back up system</i>	17 000,00	1	service			17 000,00

			Letter of Agreement (LoA) with NEA and Contracting Nat Company on design of warning dissemination and communications systems.		2	Contract	4	Year	<b>80 055,00</b>
			<i>"Last-mile" communication models</i>	16 027,50	1	service			16 027,50
			<i>Communication protocols and SOPs</i>	19 027,50	1	service			19 027,50
			<i>Technical implementation of the system</i>	45 000,00	1	service			45 000,00
			Letter of Agreement (LoA) with NEA and Contracting Nat Company on Design of national MHEWS protocol		2	Contract	3	Year	<b>46 200,00</b>
			<i>Design of the National MHEWS Protocol</i>	46 200,00	1	service			46 200,00
<b>2F</b>	International Consultancy Services	GCF	Agrometeorology international expert to build capacities of MoEPA and NEA in developing climate and weather advisories				4	Year	<b>71 400,00</b>
			Consultancy Fee	600,00	90	days			54 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5 800,00	3	trips			17 400,00
			International experts, 1 agriculture economist and 1 agriculture adaptation specialist to build the capacities of MoEPA and MoEPA's staff in agriculture sector adaptation and cost-benefit analysis				4	Year	<b>106 800,00</b>
			Consultancy Fee: 2 people x 600 USD x 60 days	600,00	120	days			72 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs): 2 persons x 5800 x 3 trips	5 800,00	6	trips			34 800,00
			International agrometeorology/climate risk assessment expert to assist MoEPA in developing relevant regulations and methodologies				4	Year	<b>53 400,00</b>
			Consultancy Fee	600,00	60	days			36 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5 800,00	3	trips			17 400,00
			International agrometeorology expert to assist MoEPA and NEA in developing climate information products for agriculture maps				4	Year	<b>53 400,00</b>
			Consultancy Fee	600,00	60	days			36 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5 800,00	3	trips			17 400,00
			International agrometeorology expert to assist MoEPA and NEA in improvement of agrometeorological advisory services				4	Year	<b>53 400,00</b>
			Consultancy Fee	600,00	60	days			36 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5 800,00	3	trips			17 400,00

<b>2G</b>	National Consultancy Services	GCF	Local experts - agrometeorology/agriculture; agrometeorology/agriculture/climate adaptation; agrometeorology/agriculture/climate adaptation policy); agrometeorology/agriculture/climate adaptation and agrometeorology/agriculture/climate adaptation to assist the international expert in capacity building - Consultancy Fee: 5 experts x 170 USD x 30 days	170,00	150	person	4	Year	<b>25 500,00</b>
<b>2H</b>	Contractual Services - Companies	GCF	Letter of Agreement (LoA) with MoEPA/NFA/Research and Consultation Center on Development of guidance documents to cover development of regulations, stakeholder consultations, printing and production, lobbying, advocacy. Cost include: i) experts fees: 80 man/daysX125USD=10,000 USD x 4 years = 40,000; ii) consultations: 5 meetings/year x 1000 USD = 5000 USD x 4 years = 20,000 USD; iii) printing and production: 16,000 USD; iv) translation: 15 USD per pageX60pg=900USD x 4 years = 3,600 USD; v) miscellaneous/contingency: 400 USD	80 000,00	1	Contract	4	Year	<b>80 000,00</b>
			Letter of Agreement (LoA) with NEA and MoEPA/NFA/Research and Consultation Center on Development of agrometeorological information products. Cost include: i) experts fees: 150 man/daysX125USD=18,750 USD x 4 years = 75,000 USD; ii) data collection, processing and interpretation: 32,000 USD; iii) translation: 15 USD per pgX150pg=2,250 USD x 4 years = 9,000 USD; iv) consultations/meetings: 5 meetings/years x 1000 USD x 4 years = 20,000 USD; v) printing and production of climate products: 4700 USD x 4 years = 18,800 USD; vi) miscellaneous/contingency: 400 USD	155 200,00	2	Contract	4	Year	<b>310 400,00</b>
			Letter of Agreement (LoA) with MoEPA/NFA/Research and Consultation Center on Development/enhancement of agrometeorological advisory services. Cost includes: i) experts fees: 200 man/daysX125USD=25,000 USD x 4 years = 100,000 USD; ii) consultations/meeting: 5 meetings/year x 1000 USD x 4 years = 20,000 USD; iii) translation: 15 USD per pg.X50pg.=750 USD x 4 years = 3,000 USD; iv) printing and production: 37,000 USD; v) miscellaneous/contingency: 400 USD	160 400,00	1	Contract	4	Year	<b>160 400,00</b>
<b>2I</b>	Training, Workshops and Conference	GCF	Three (3)-day trainings of MoEPA and NEA staff on the use of climate information and climate change adaptation (cost reflects venue services costs, including accomodation and all meals, transportation services)	10 000,00	8	training/workshop			<b>80 000,00</b>
			Three (3)-day trainings of MoEPA and NEA staff on integrating climate risks into agri sector plans, investments and budget frameworks, investment appraisal skills, economic valuation of adaptation options (cost reflects venue services costs, including accomodation and all meals, transportation services)	10 000,00	8	training/workshop			<b>80 000,00</b>

<b>2J</b>	International Consultancy Services	GCF	International Consultants - 3 multi-hazard risk assessment and planning and 2 technical experts (hydro engineer, agroforestry/watershed restoration expert) to assist NEA in developing MHRMPs for all river basins, including two (2) feasibility studies				5	Year	<b>340 500,00</b>
			Consultancy Fee: 5 consultants x 700 usd x 60 days	700,00	300	person			210 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs): 5220 USD x 5 trips x 5 persons	5 220,00	25	trips			130 500,00
			International DRM/DRR expert to assist the MIA/EMA in developing multi-hazard response and preparedness plans for around 10-11 municipalities				5	Year	<b>75 300,00</b>
			Consultancy Fee	600,00	90	days			54 000,00
			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	7 100,00	3	trips			21 300,00
<b>2K</b>	Travel	GCF	Letter of Agreement (LoA) with NEA on MHRMPs; Cost includes travel fees for experts of respective institution.	1 500,00	90	trips	6	Year	<b>135 000,00</b>
<b>2L</b>	Contractual Services - Companies	GCF	Letter of Agreement (LoA) with NEA on Development of MHRMPs for 11 river basins and Two (2) feasibility studies		1	Contract	6	Year	<b>1 709 800,00</b>
			<i>MHRMPs. Cost per plan includes: i) experts fees: 6 expertsX105 man/days per expertX125 USD daily fee=78,750; ii) translation: 15 USD per pg.X150pg.=2,250 USD; iii) data collection, aggregation, interpretation: 4,900 USD; vi) consultations: 5,000 USD; vii) printing and production of maps and reports: 9,000 USD; viii) contingency: 100 USD</i>	100 000,00	11	units			1 100 000,00
			<i>Feasibility Studies: Cost per FS includes: i) experts fees: 8 expertsX190 man/days per expertX125USD daily fee=190,000 USD; ii) Local DSA: 8 personsX80man/days per personX130 USD per diem=83,200USD; iii) fuel cost: 80 round tripsX600 km per tripX0.1 USD per km fuel cost=4,800 USD; iv) data collection: 8,000 USD; v) consultations: 5,000 USD; vi) translation: 15 USD per pg.X200pg.=3,000 USD; vii) printing and production: 10,800 USD; viii) contingency: 100 USD</i>	304 900,00	2	units			609 800,00
				<b>Total GCF Output 2</b>					<b>6 063 440,00</b>
<b>3A</b>	International Consultancy Services	GCF	International consultant to develop ToR/SoW, request for proposal, evaluate proposal, provide advise on applications/proposals, as well as conduct monitoring of the process CBDRM				3	Year	<b>37 200,00</b>
			Consultancy Fee	700,00	40	days			28 000,00
			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	4 600,00	2	trips			9 200,00
			International consultant to design and validate community impact evaluation programme				3	Year	<b>55 800,00</b>
			Consultancy Fee	700,00	60	days			42 000,00

			Travel (DSA for Tbilisi and Regions, roundtrip ticket costs)	6 900,00	2	trips			13 800,00
<b>3B</b>	National Consultancy Services	GCF	National Gender Advisor Expert - Consultancy Fee: 170 USD x 60 days x 7 years	170,00	420	year	7	Year	<b>71 400,00</b>
<b>3C</b>	Contractual Services Individuals	GCF	Team leader/advisor in community-based processes and structural measures to support implementation of Output 3 Activities	15 324,29	7	year			<b>107 270,00</b>
<b>3D</b>	Travel	GCF	Letter of Agreement (LoA) with NEA on CBEWS. Cost includes travel fees for experts of respective institution.	10 000,00	1	Contract	2	Year	<b>10 000,00</b>
<b>3E</b>	Contractula Services - Companies	GCF	Letter of Agreement (LoA) with NEA on Installation and commissioning of CBEWS equipment at 100 communities. Cost includes comissioning and installation costs of CBEWS equipment, as well as service fee. Indicative cost per community: i) experts fees: 1 expertX3man/daysX125 USD daily fee=375 USD; ii) 1 expertX3man/daysX130 DSA=390 USD; iii) fuel: 3 tripsXaverage 600 km per tripX0.1 USD fuel cost=180 USD; iv) contingency: 55 USD. Total costs: \$1000 x 100 communities = \$100,000	100 000,00	1	Contract	2	Year	<b>100 000,00</b>
			International firm/consortium to develop specs for equipment, prepare tender dossier, evaluate bids and provide monitoring to installation and commissioning of equipment. Cost includes: i) international experts fees: 2 expertsX20 man/days per expert per tripX500 USD daily fee per expertX4trips= 80,000 USD; ii) travel costs for internationals: 2 expertsX20 man/daysX200 USD DSAX4trips=32,000 USD; iii) local experts fees: 2 expertsX160man/days per expertX125USD daily fee per expert=40,000 USD; iv) round trip tickets for internationals: 800 USD per trip per expertX2 expertsX4 trips=6,400 USD; v) fuel cost for travel to regions: 80 round tripsXaverage 600 km per tripX0.1 USD fuel cost per km=4,800 USD; vi) Local DSA: 2 local expertsX80 man/days per personX130USD local DSA=20,800 USD	184 000,00	1	Contract	1	Year	<b>184 000,00</b>
			Procurement of hydrometric equipment		1	Contract			<b>1 540 000,00</b>
			<i>Water level monitoring sensors</i>	15 000,00	100				1 500 000,00
			<i>Staff gauges</i>	200,00	200				40 000,00
			Procurement of communications equipment		1	Contract			<b>1 200 600,00</b>
			<i>GSM/GPRS modem device</i>	300,00	2	units			600,00
			<i>Dedicated website</i>	10 000,00	1	units			10 000,00
			<i>Generators</i>	500,00	200	units			100 000,00

			<i>Sirens</i>	200,00	5 000	units			1 000 000,00
			<i>Remote siren system</i>	1,00	35 000	units			35 000,00
			<i>Boards</i>	200,00	200	units			40 000,00
			<i>Miscellaneous</i>	1,00	15 000	service			15 000,00
			Procurement and installation of signaling equipment	200 000,00	1	Contract			<b>200 000,00</b>
			<i>Evacuation routes signaling</i>	1 000,00	200	units			200 000,00
			Nat Company to provide service on Refurbishment/renovation of buildings to serve as evacuation centers		1	Contract			<b>200 000,00</b>
			<i>Evacuation centre (fitting)</i>	5 000,00	40	units			200 000,00
			Contracts with Nat Companies to conduct community impact evaluation/survey	22 000,00	3	Contract	3	Year	<b>66 000,00</b>
			International firm/NGO or consortium of international and local firms/NGOs to carry out/facilitate community multihazard risk management process, including community mobilization, empowerment, participatory GIS planning, and implementation of community resilience measures.		1	Contract			<b>1 500 000,00</b>
			<i>Implementation of priority measures outlined in the CBDRM plans: An indicative cost of ontheground activity per community is estimated at 17,500 USD, that includes assistance to local community-based organizations/incentive groups in implementing resilience measures, e.g. watershed restoration, floodplain restoration, etc. More specifically, these costs cover project design, material costs, land works, labor cost, project management, including monitoring and oversight, reporting. Cost per community project is based on previous projects implemented in a number of pilot communities under USAID INRMW and UNDP/GEF small grants projects</i>	17 500,00	60	comm			1 050 000,00

			<i>Implementation of agroforestry measures based on the detailed risk maps and consultations with the communities. Cost per ha includes: cost for site selection and community consultation, cost of study of the watershed, cost of project design, costs for purchase of seeds and/or seedlings, lan cultivation, direct sowing, planting, maintenance and protection including fencing, contingency and management/supervision costs. Agroforestry cost per hA is based on prototype Rion Flood project info and international guidelines. (i) Intl. consultants/fees: \$700 x 30 days = 21,000 USD; (ii) design, site selection, local consultants \$3,000 x 15 ha = 45,000 USD; (iii) site preparation US\$ 3,000 x 15 ha = 45,000 USD; (iv) perchase and transportation of seedlings \$5 x 2500 units/seedlings x 15 ha = 187,500 USD; (v) purchase of equipment 4,500 USD; (vi) planting \$2,500 x 15 ha = 37,500 USD; (vi) fencing: \$5,800 x 15 ha = 87,000 USD; (vii) after care: 500 USD x 3 years x 15 ha = 22,500 USD</i>	30 000,00	15	ha			450 000,00
<b>3F</b>	International Consultancy Services	GCF	Contracting International consultant to assist EIEC to develop and implement awareness programme, guidance documents and education programs, training modules on DRR/DRM, MHEWS, CBMHRM				1	Year	<b>35 600,00</b>
			Consultancy Fee	600,00	40	days			24 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	5 800,00	2	trips			11 600,00
<b>3G</b>	Travel	GCF	Letter of Agreement (LoA) with EIEC on capacity building; Cost includes travel fees for respective institution staff	1 500,00	60	trips	7	Year	<b>90 000,00</b>
<b>3H</b>	Contractual Services - Companies	GCF	Letter of Agreement (LoA) with EIEC on Capacity building to communities and municipal practitioner. Cost includes: : i) local experts fees: 4 expertsX50 man/days eachX125 USD daily fee=25,000 USD x 7 years = 175,000 USD; ii) community meetings/trainings at municipal level: 2 joint meetings/trainings per regionX500 USD per trainingX10 regions=10,000 USD x 7 years = 70,000 USD; iii) translation: 15 USD per pg.X200 pg.=3,000 USD x 7 years = 21,000 USD; iv) printing and production cost: 32,900 USD; v) contingency: 1,100 USD	300 000,00	1	Contract	7	Year	<b>300 000,00</b>
			Letter of Agreement (LoA) for with EIEC on Community forums, award competitions, government-community dialogues. Cost include: i) 1 annual national-wide community forum: 20,000 USD per forum x 7 years = 140,000 USD; ii) 10 awards, 1 award per region, 1000 USD each award, total: 10,000 USD x 7 years = 70,000 USD; iii) government-community dialogues to be held in regional governors' offices: 10 events in 10 regions X450 USD per event=4,500 USD x 7 years = 31,500 USD; iv) printing and production 1,400 USD; v) contingency: 1,100 USD	244 000,00	1	Contract	7	Year	<b>244 000,00</b>

			Letter of Agreement (LoA) with EIEC on Development and introduction of youth education programs at preschool, school and university education levels. Cost include: i) experts fees: 2 expertsX50 man/days X125 USD daily fee=12,500 USD x 7 years = 87,500 USD; ii) local DSAs: 100 man/daysX130USD =13,000 USD x 7 years = 91,000 USD; iii) fuel cost 0.1 USDX600kmX70trips=4,200 USD x 7 years = 29,400 USD; iv) printing and production: 95,000 USD; v) contingency: 600 USD	303 500,00	1	Contract	7	Year	<b>303 500,00</b>
			Letter of Agreement (LoA) with EIEC on National-wide media campaign. Cost includes: i) experts fees: 2 expertsX50man/days eachX125 USD=12,500 USD x 7 years = 87,500 USD; ii) translating and printing of materials: 15,000 USD x 7 years = 105,000 USD; iii) visual materials - video clips, public service announcements (PSAs): 40000 USD x 7 years = 280,000 USD; iv) contingency: 1,000 USD	473 500,00	1	Contract	7	Year	<b>473 500,00</b>
<b>3I</b>	International Consultancy Services	GCF	Contracting International consultant to give a technical advise to UNDP and MRDI on design and implementation of structural measures (cost for International Consultant are considered under the design costs in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS				6	Year	<b>128 000,00</b>
			Consultancy Fee	700,00	150	days			105 000,00
			Travel (DSA for Tbilisi, roundtrip ticket costs)	4 600,00	5	trips			23 000,00
<b>3J</b>	Contractual Services - Companies	GCF	Contracting local engineering and construction company to design structural measures: Detailed Costing is provided in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS	171 062,82	1	Contract			<b>171 062,82</b>
			Letter of agreement (LoA) with MRDI to implement structural measures on three (3) sites - Lagodekhi, Kobuleti and Gautskinari, including SEMP		1	Contract	6	Year	<b>5 563 094,00</b>
			Structural measures Costs. Detailed Costing is provided in APPENDIX 1. TENTATIVE COST ESTIMATE FOR RISK REDUCTION STURCURAL MEASURES BY SITES AND MAJOR CIVIL WORKS	5 027 094,00	1	contract			5 027 094,00
			Cost for Implementation of SEMP:						536 000,00
			ESMF Updating and Auditing	10 000,00	1	service			10 000,00
			General ESMF Expenses	20 000,00	1	service			20 000,00
			Aquatic Monitoring (42 sites (three per River), two assessments-year over five years)	86 000,00	1	service			86 000,00
			Water quality monitoring (monitoring to be undertaken over 5 years)	90 000,00	1	service			90 000,00
			Water quality sample Laboratory Analysis (monitoring to be undertaken over 5 years)	60 000,00	1	service			60 000,00

			<i>Sediment Sample Field Testing (monitoring to be undertaken over 5 years)</i>	60 000,00	1	service			60 000,00
			<i>Sediment Sample Laboratory Analysis (monitoring to be undertaken over 5 years)</i>	60 000,00	1	service			60 000,00
			<i>Erosion, Drainage, and Sediment Control (includes silt curtains, etc)</i>	90 000,00	1	service			90 000,00
			<i>Stakeholder Engagement Control</i>	40 000,00	1	service			40 000,00
			<i>Grievance Redress Mechanism</i>	20 000,00	1	service			20 000,00
			<b>Total GCF Output 3</b>						<b>12 581 026,82</b>
<b>0A</b>	International consultancy services	GCF	Chief Technical Adviser (CTA) to provide technical advise to the project (cost includes travel costs to Georgia and consultancy fee)	44 871,43	7	year			<b>314 100,00</b>
			International Mid-Term and Final Evaluator	30 000,00	2	Contract			<b>60 000,00</b>
<b>0B</b>	Contractual Services - Individuals	Gcf	Project coordinator	35 228,57	7	year			<b>246 600,00</b>
			Technical assistant	15 697,50	7	year			<b>109 882,50</b>
			Finance/accounting assistant	15 697,50	7	year			<b>109 882,50</b>
			Admin/procurement assistant	15 697,50	7	year			<b>109 882,50</b>
			Logistics/driver	12 617,14	7	year			<b>88 320,00</b>
			Driver	10 473,21	7	year			<b>73 312,50</b>
			Monitoring and Evaluation Staff	13 371,43	7	year			<b>93 600,00</b>
<b>0C</b>	Travel	GCF	DSA in regions for Project Staff	130,00	1 200	trips			<b>156 000,00</b>
<b>0D</b>	Equipment and Furniture	GCF	Purchase vehicles (2)	20 000,00	2	items			<b>40 000,00</b>
			Purchase of office furniture (desks, shelves, meeting table, chairs, armchairs)	12 950,00	1	service			<b>12 950,00</b>
<b>0E</b>	Communic & Audio Visual Equip	GCF	Purchase of Audio Visual Equipment for project office (projectors, coppier/printer/fax machine, photcamera, land line, internet hubs, etc)	9 750,00	1	service			<b>9 750,00</b>
			Security and ICT services	5 071,43	7	year			<b>35 500,00</b>
<b>0F</b>	Supplies	GCF	Office Supplies	100,00	84	items			<b>8 400,00</b>
<b>0G</b>	IT Equipment	GCF	Purchase of ICT Equipment (desktoppns, lap-tops for project staff)	11 000,00	1	service			<b>11 000,00</b>
<b>0H</b>	Rental & Maintenance-Premises	GCF	Project Office rent and maintenance costs; utility costs	14 707,14	7	year			<b>102 950,00</b>
<b>0I</b>	Rental & Maint of Info Tech Eq	GCF	Rental of interpreting equipment	428,57	7	year			<b>3 000,00</b>

<b>OJ</b>	Rental & Maint of Other Equip	GCF	Fuel Cost for Project vehicles	1 000,00	84	items			<b>84 000,00</b>
<b>OK</b>	Professional Services - Nat	GCF	Annual project audit cost	18 657,14	7	year			<b>130 600,00</b>
<b>OL</b>	Audio Visual & Print Prod Costs	GCF	Cost for ICT equipment maintenance and supplies	70,00	84	items			<b>5 880,00</b>
			Cost for publications and visibility materials	5 000,00	30	items			<b>150 000,00</b>
			Cost for One short documentary and video trailer/clip	22 500,00	1	units			<b>22 500,00</b>
			Translation/Interpreting costs	857,10	7	year			<b>5 999,70</b>
<b>OM</b>	Miscellaneous Expenses	GCF	Contingency costs	360,00	7	year			<b>2 520,00</b>
<b>ON</b>	Training, Workshops and Conference	GCF	Conference facility costs for workshops, conferences organized by the project	4 285,71	7	year			<b>30 000,00</b>
<b>OO</b>	Services to Projects - GOE for CO	GCF	Direct Project Costs (DPCs) Services to projects - GOE for CO; UNDP support services related to HR, Procurement and Finance services to be provided by the Project through UNDP under GCF finance. The costs are estimated based on the basis of estimated actual or transactional based costs. Respective Letter for Support Services will be signed	50 000,00	1	contract			<b>50 000,00</b>
<b>OP</b>	Services to projects – CO staff	GCF	Direct Project Costs (DPCs) Services to projects – CO staff. UNDP support services for Technical Support to be provided by the Project through UNDP. Respective Letter for Support Services will be signed	25 000,00	2	contract			<b>50 000,00</b>
				<b>Total GCF Project Management</b>					<b>2 116 629,70</b>
				<b>GRAND TOTAL GCF COST</b>					<b>27 053 597,52</b>

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## **XI. LEGAL CONTEXT**

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed in 1994. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by the Ministry of Environment Protection and Agriculture (MoEPA) through its Environment and Climate Change Department (“Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

By signing this UNDP GCF project document, the Implementing Partner also agrees to the terms and conditions of the GCF Funded Activity Agreement (FAA) included in Annex and to use the GCF funds for the purposes for which they were provided. UNDP has the right to terminate this project should the Implementing Partner breach the terms of the GCF FFA.

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## **XII. RISK MANAGEMENT**

Consistent with the Article III of the SBAA [*or the Supplemental Provisions to the Project Document*], the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- a) put in place an appropriate security plan and maintain the security plan, considering the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the Implementing Partner'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 the Implementing Partner's obligations under this Project Document.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via [http://www.un.org/sc/committees/1267/aq\\_sanctions\\_list.shtml](http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml).

Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).

The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at [www.undp.org](http://www.undp.org).

In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

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### **XIII. MANDATORY ANNEXES**

The following documents are mandatory annexes and must be included as part of the final project document package. Links can be provided to these documents if they have been posted to the UNDP GEF PIMS and open.undp.org.

Annex A: GCF Funding Activity Agreement and Notice of Effectiveness

Annex B: GCF Board approved GCF Funding Proposal

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties – provided separately after Prodoc signature

Annex D: Letters of co-financing – provided separately

Annex E: Timetable of project implementation – provided separately

Annex F: Procurement plan – provided separately

Annex G: Terms of References for Project Board and Project Team

Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Assessment Report (ESAR)

Annex I: Stakeholder Engagement Plan

Annex J: Gender Analysis and Action Plan

Annex K: UNDP Risk Log

Annex L: LOA with the government in case DPCs are applied

Annex M: Capacity Assessment including HACT micro assessment – provided separately

Annex N: Learning and Knowledge management

Annex O: UNDP Project Quality Assurance Report

**Annex A: GCF Funding Activity Agreement and Notice of Effectiveness**

Provided separately

**Annex B: GCF Board approved GCF Funding Proposal**

Link to the funding proposal package:

[https://www.greenclimate.fund/documents/20182/953917/GCF\\_B.19\\_22\\_Add.10 -  
\\_Funding\\_proposal\\_package\\_for\\_FP068.pdf/fdd2bcbc-7de3-4704-9554-79e839114ab2](https://www.greenclimate.fund/documents/20182/953917/GCF_B.19_22_Add.10_-_Funding_proposal_package_for_FP068.pdf/fdd2bcbc-7de3-4704-9554-79e839114ab2)

**Annex C: Letter of agreement between the Implementing Partner and Responsible Parties**

Provided separately (after Project Document is signed)

**Annex D: Letters of co-financing**

Provided separately

## **Annex E: Timetable of project implementation**

Provided separately

**Annex F: Procurement plan**

Provided separately

## **Annex G: Terms of References for Project Board and Project Team**

### **1/ TERMS OF REFERENCE OF PROJECT BOARD**

#### **Background**

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: **“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”**. The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

The Project Board (PB) composed of Executive, Senior Supplier and Senior User is an ultimate decision-making body for the GCF project. The executive represents the project implementing partner, senior user/beneficiary – entity (ies) directly benefiting from the project and defining and monitoring the quality requirement for the project deliverables/products and senior supplier – entity that commits resources for the project. PB has also project assurance role to ensure the adherence of the project to set out rules and procedures and quality requirements/

#### **Composition**

The Project board is composed of representatives of following entities:

- Representative(s) of the Environment and Climate Change Department, MoEPA – executive
- Representative of the Policy Department, MoEPA – senior user
- Representative (s) of National Environmental Agency (NEA), MoEPA – senior user
- Representative of Environmental Information and Education Centre, MoEPA – senior user
- Representative of National Food Agency, MoEPA – senior user
- Representative of Agriculture Scientific-Research Centre, MoEPA – senior user
- Representative of Emergency Management Service (EMS) – senior user
- Representative Ministry of Internal Affairs/Joint Operational Centre – senior user
- Representative (s) of the Ministry of Regional Development and Infrastructure – senior user
- Representatives of local governments – senior users
- Representatives of Civil Society Organizations (CSOs) – senior users
- UNDP Deputy Resident Representative/Assistant Representative – senior supplier
- Representative (s) of SDC management – senior supplier
- UNDP Environment and Energy Team Leader/ex-officio: Programme Associate – project assurance

#### **Roles and responsibilities**

- Review and approve semi-annual work plan and progress reports, including risk logs
- Review progress of the previous year (APR) as well as annual work plan for the next year and approve/endorse them

- Give strategic guidance to the project and assist the project in overcoming potential difficulties during the project implementation
- Conduct end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
- Address the grievances coming from local stakeholders on social and environmental impacts of the project, based on the Social and Environmental Review Sheet (checklist) prepared by the Project Manager.

### **Rules and Procedures**

The Project Board should meet at least once in every six months and more when necessary. Written invitations together with meeting agenda and other supporting documents in Georgian and English languages should be circulated among PB members at least one week before the meeting by the PB secretariat.

The MoEPA through the representative of the Environment and Climate Change Department will chair the PB meetings. The Project Management Unit (PMU) will serve as a secretariat to the PB.

Decisions should be made at PB meetings through open voting of its members. Minimum quorum for decision-making should be 2/3 of PB members. Opinions of the PSC members may be expressed/comments to deliverables may be provided orally during PB meetings to be recorded by the PB secretariat in the form of Minutes of the PB Meeting (PB MoM) or, in a writing through e-mails addressed to the secretariat. These written comments should also be reflected in the Minutes of the PB Meeting, which should be circulated among PB members in English and Georgian Languages. A signature of the PB MoM from each PB member, attending the meeting is necessary either in a written form or digitally.

The PB is hereby authorised to adopt, at its first meeting any additional Rules of Procedure, regarding the detailed responsibilities and manner of work.

### **Extended PB meetings**

The PB meeting, if deemed necessary, may convene expanded PB meeting with participation of representatives of various relevant authorities, donors/international development agencies, NGOs and private sector representatives not members to PSC and/or field experts to provide experts opinion on topics of project concern.

## **2/ TERMS OF REFERENCE/JOB DESCRIPTION FOR PROJECT CHIEF TECHNICAL ADVISOR (CTA)**

**Position Type:** External Vacancy

**Job Title:** Chief Technical Advisor to the project: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Type of contract:** Individual Contract

**Expected starting date:** ASAP

**Expected duration of assignment:** up to 330 man/days during 7-year period

### **1. BACKGROUND**

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”* (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia's communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory "Last Mile" communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective and efficient implementation of the project, a Chief Technical Advisor (CTA) is being recruited to provide an advice on technical and managerial issues to this GCF project as outlined here below. The CTA will be responsible for providing overall technical backstopping to the Project. He/She will render technical support to the National Project Coordinator/Project Manager, project staff, Project Board and other government counterparts. The CTA will be an experienced expatriate. will be responsible for providing overall technical backstopping to the Project. He/She will render technical support to the National Project Coordinator (NPC)/Project Manager, staff, the Project Board and other government counterparts. The Chief Technical Advisor will be an experienced expatriate. He/She will work under overall guidance of UNDP DRR/Assistance Res Rep and direct supervision from Environment and Energy Team Leader of UNDP CO.

## 2. SCOPE OF THE WORK

With support of Project manager, the CTA for the GCF Project will conduct all necessary advisory activities to smoothly implement the project and will provide guidance on the implementation of the Project activities and on parallel co-financing initiatives. In particular, the CTA will:

- Provide advice on managerial issues to project team, e.g. development of annual work plans, procurement plan, major project revisions, identifying project risks and elaborating relevant management responses
- Provide technical expertise/advise and strategic guidance for all project components/activities, including hydrometric monitoring, MHEWS, capacity development and setting of national institutions, development of community-based early warning systems and implementing risk reduction processes, etc.
- In collaboration with the National Project Coordinatory/Project Manager develop inception, annual progress and terminal report
- Assume quality control of interventions, and support the Project Manager in the coordination of the implementation of planned activities under the project as stipulated in the project document/work plan;
- Support development and implementation of alternative livelihood options and land rehabilitation activities in Gishwati ecosystem;
- Provide technical expertise in undertaking project impact and risk/vulnerability assessment of target communities
- Ensure that technical contracts meet the highest standards - provide input into development of Terms of Reference for sub-contracts, assist with selection process, recommend best approaches, provide technical peer function to sub-contractors; provide training and backstopping where necessary
- Assist the Project Manager and other monitoring team in monitoring of project indicators and targets against Results and Resources Framework (RRF) and adjusting it
- Provide on-demand advise to the UNDP management and Environment and Energy Team Leader, National Project Director and relevant government counterparts on project related issues and in strategic areas of CCA/CRM, MHEWS, etc.
- Contribute to mid-term and terminal evaluation of the project
- Assist the NPC in adjusting the project Results Framework, as required and in line
- with corporate requirements;

- Assist the project in outreach, advocacy, visibility and strategic partnerships
- Assist the project in learning and knowledge management
- Document lessons from project implementation and make recommendations to the Project Board for more effective implementation and coordination of project activities.

### 3. OUTPUTS/EXPECTED DELIVERABLES

The consultant will provide the following reports according to UNDP format

1. Filled in time sheets and Consultants mission reports
2. In cooperation with Project Manager - Inception report: The Individual Consultant will prepare an inception report which details his/her understanding of the consultancy work and how he/she will deliver on the assignment. The report should include the scope of work, workplan and timeframe. Inception report should not be between 10 to 15 pages and is expected one week after the first mission  
Progressive reports after every mission or major activity undertaken by the consultant
3. Terminal compiled report, including lessons learned which incorporates the comments This report should not be between 30-50 pages

### 4. DURATION OF THE CONTRACT

The consultancy is expected to take 330 working days which will be distributed within a period of approximately 7 years. The contract will be renewed on an annual basis, upon satisfactory performance by the CTA and certification by the Environment and Energy Team Leader

### 5. DUTY STATION

The duty station will be Home and Tbilisi Project Office

### 6. REQUIRED EXPERTISE AND QUALIFICATION

#### Education:

- Advanced university degree (***at least M. Sc. or equivalent – minimum qualification criterion***) in the area of Environmental Science, Climatology, Hydrometeorology or other relevant field relevant university degree

#### Experience:

- ***At least 10 years (minimal qualification criterion)*** of professional experience, of which at least 7 are at international level, and 5 are in either fields of Climate Risk Reduction (CRM)/Climate Change Adaptation (CCA), climatology, hydrology, meteorology, EWS
- ***At least 5 years of experience (minimum qualification criterion)*** in project development and implementation
  - Strong skills in monitoring and evaluation
  - Proven experience in providing consultancy services in either of following fields: CCA, CRM, including EWS, hydrometeorology
  - ***Proven experience in drafting technical reports or scientific papers (minimum qualification criterion)***
  - Proven experience in developing terms of references/scope of works for consultancy works on CCA, CRM, including EWS
  - Knowledge and understanding of climate change issues and Early Warning System
  - ***Proven experience of at least 3 years in advising projects in CIS regions (minimum qualification criterion)*** and specifically in Georgia is value added
  - Exposure to multilateral projects

#### Language:

- Excellent written and verbal communication skills in English

#### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard

- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Experience of working and collaborating with governments;
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

#### 7. PAYMENT MODALITIES

The consultant shall be paid the consultancy fee based on actual days worked, upon submission of filled in and signed timesheets and consultant's mission reports and clearance of these documents by the UNDP CO (Environment and Energy Team Leader)

#### 8. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references;
- Brief description of why the individual considers him/herself as the most suitable for the assignment
- 1-2 technical reports/assessments/studies developed by the consultant in English
- Financial Proposal that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs.

Short-list of applicants will be made based on screening (yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

#### 9. EVALUATION CRITERIA

The expert will be evaluated against a combination of technical and financial criteria. Maximum score is 100% out of which technical criteria equals 70% and financial criteria equals 30%. The technical evaluation will include the following:

- Educational Background as requested: 10%
- Professional experience as requested: 15%
- Demonstrated experience in project development and implementation: 15%
- Proven experience in advising projects in CIS regions and specifically in Georgia is crucial: 10%
- Demonstrated experience in project development, implementation and management in CIS: 5%
- Fluency in English: 5%
- Strong inter-personal and communications skills: 10%

Technical score for the candidate will be set based on an interview with him/her.

### **3/ TERMS OF REFERENCE/JOB DESCRIPTION FOR NATIONAL PROJECT COORDINATOR/PROJECT MANAGER**

**Position Type:** External Vacancy

**Job Title:** National Project Coordinator/Project Manager to the project: *"Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia"*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** Project office in Tbilisi

**Type of contract:** Service Contract (SC)

**Expected starting date:** ASAP

**Expected duration of assignment:** full-time, 1 year with a view of annual contract extension

## 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: ***“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*** (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

Overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective and efficient implementation of the project, National Project Coordinator/Project Manager is being recruited to manage the project on a daily basis. He/She will work under the technical guidance of CTA and direct supervision of Environment and Energy Team Leader of UNDP CO.

## 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from Environment and Energy Team Leader, National Project Coordinator/Project Manager will manage the project on a daily basis. More specifically, he/she will:

- With assistance of CTA and finance assistant develop annual work plans
- Track financial expenditures
- Prepare budget and project revisions
- With assistance of CTA and Monitoring and Evaluation Officer will maintain issues and risk log and track progress against indicators and targets of project Results and Resources Framework and adjust it in accordance with corporate requirements and local needs
- Coordinate recruitment of project staff and supervise their work
- With assistance of CTA develop ToRs/SoWs for consultancy assignments, participate in the selection of consultants and supervise their work
- With assistance of CTA and Procurement Assistant develop annual procurement plans, SoWs for procurements, participate in selection of vendors and supervise their work
- With assistance of CTA, Finance Assistant and Procurement Assistant will prepare Letters of Agreements (LoAs) with national counterparts/responsible parties and supervised their execution
- With assistance of project team provide a secretary work to the PB
- Contribute to the development of inception report, annual progress reports and terminal report
- Provide on-demand advise to the UNDP management and Environment and Energy Team Leader, National Project Director and relevant government counterparts on project related issues
- Contribute to mid-term and terminal evaluation of the project in terms of management responses
- Liaise with national and local counterparts and other strategic partners
- Coordinate outreach, advocacy, visibility activities
- Contribute to the staff and stakeholders learning and knowledge management
- Document lessons from project implementation and make recommendations to the Project Board for more effective implementation and coordination of project activities

### 3. DURATION OF THE CONTRACT

The National Coordinator/Project Manager will be hired on a full-time basis during 1-year period. Annual extension of contract is envisaged until the end of the project pending on satisfactory performance by the incumbent and certification of such performance by the Environment and Energy Team Leader,

### 4. REQUIRED EXPERTISE AND QUALIFICATION

#### Education:

- Advanced university degree (***at least M.Sc. or equivalent – minimum qualification criterion***) in the area of Environmental Science, National Resources Management, Water Resources Management, Climatology, Hydrology, Hydrometeorology or other relevant fields

#### Experience:

- ***At least 5 years of (managerial or consultancy) experience (minimum qualification criterion)*** in any of following fields: Climate Risk Reduction (CRM)/Climate Change Adaptation (CCA), climatology, hydrometeorology, EWS
- ***At least 5 years of experience (minimum qualification criterion)*** in project management
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP
- Knowledge and understanding of CCA and CRM context of Georgia

#### Language:

- Excellent written and verbal communication skills in English

#### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

### 5. PAYMENT MODALITIES

The National Project Coordinator/Project Manager shall be paid a fixed salary on a monthly basis

### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

### 7. EVALUATION CRITERIA

The expert will be evaluated against technical criteria. Maximum score is 100%. The technical evaluation will include the following:

- Educational Background as requested: 10%
- Professional experience, as requested: 20%
- Project management experience as requested: 20%

- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 20%
- Knowledge of Georgia's CCA/CRM context and institutional setting: 20%
- Strong interpersonal and communications skills: 5%
- Fluency in English: 5%

Technical score of the candidate will be set based on an interview with him/her.

#### **4/ TERMS OF REFERENCE/JOB DESCRIPTION FOR GENDER ADVISOR**

**Position Type:** External Vacancy

**Job Title:** Gender Advisor to the project: *"Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia"*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Home-based and Project office in Tbilisi*

**Type of contract:** Individual Contract (IC), local

**Expected starting date:** ASAP

**Expected duration of assignment:** up to 420 man/days within 7 years of project implementation, 60 man/days per year. Individual Contract will be concluded for 1-year period, with a view of its renewal, pending on satisfactory performance by incumbent and certification of such performance by the National Project Coordinator/Project Manager

##### 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: *"Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia"* (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity's/implementing partner's role for it.

An overall objective of the project is to reduce exposure of Georgia's communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory "Last Mile" communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure gender mainstreaming into the project outputs and activities, UNDP CO seeks for a local Gender Advisor to ensure implementation of Gender Action Plan and provide gender related advise to the project, UNDP CO and external partners.

##### 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Manager, Gender Advisor will ensure implementation of Gender Action Plan and provide gender related advise to the project, UNDP CO and external partners. More specifically, he/she will

- Review gender action plan and revise if necessary

- Collect gender disaggregated data for project monitoring purposes and track the progress/monitoring implementation of Gender Action Plan
- Provide a project-related gender-related advice to Project Team, UNDP CO and external partners
- Conduct gender-related training of project staff, contractors and if necessary national counterparts
- Contribute thematically in various trainings that envisage gender mainstreaming aspects

### 3. DURATION OF THE CONTRACT

Up to 60 man/days per year, 420 man/days in total. An IC contract will be concluded with an incumbent with 1-year duration. Annual renewal of the contract is envisaged until the end of the project, pending on satisfactory performance of the consultant and certification of this performance by the National Project Coordinator/Project Manager.

### 4. REQUIRED EXPERTISE AND QUALIFICATION

#### Education:

- Advanced university degree (***at least M.Sc. or equivalent – minimum qualification criterion***) in the area of Social Science, Gender Studies or related fields

#### Experience:

- ***At least 5 years of managerial or consultancy experience (minimum qualification criterion)*** in gender mainstreaming/studies
- Demonstrated experience in working with/for international organizations
- Strong knowledge and understanding of gender context of Georgia

#### Language:

- Excellent written and verbal communication skills in English

#### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

### 5. PAYMENT MODALITIES

The consultant will be paid a consultancy fee based on actual days worked, upon submission to and certification by the National Project Coordinator/Project Manager filled in and signed time sheets and consultant's mission report.

### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment
- Financial proposal, indicating daily fee, other consultancy related cost and total cost in USD

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

### 7. EVALUATION CRITERIA

The expert will be evaluated against a combination of technical and financial criteria. Maximum score is 100% out of which technical criteria equals 70% and financial criteria equals 30%. The technical evaluation will include the following:

- Educational Background as requested: 20%
- Professional experience, as requested: 15%
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 15%
- Strong Knowledge and understanding of gender context of Georgia:10%
- Strong interpersonal and communications skills: 5%
- Fluency in English: 5%

Technical score for the candidate will be set based on an interview with him/her.

## **5/ TERMS OF REFERENCE/JOB DESCRIPTION FOR TEAM LEADER/ADVISOR IN HYDROMETEOROLOGICAL MONITORING AND EWS**

**Position Type:** External Vacancy

**Job Title:** Team Leader/Advisor in hydrometeorological monitoring and EWS: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Project office in Tbilisi*

**Type of contract:** Service contract, local

**Expected starting date:** ASAP

**Expected duration of assignment:** Part-time (50%) up to 7 years. Annual contract with a view of annual renewal until the end of the project

### 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”* (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective implementation of the output 1 and 2 of the project related to expansion of hydrometeorological network and establishment of MHEWS the project seeks for a local Team Leader/Advisor.

### 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Manager, Team Leader/Advisor in Hydrometeorological Monitoring and EWS will support implementation of activities 1.1.1, 1.2.1, 1.3.1, 1.4.1., 2.2.1 through 2.2.12, 2.4.1 and 2.4.2 and related to expansion of hydrometeorological network and establishing Multi-hazard EWS within NEA. More specifically, he/she will:

- Assist National Project Coordinator/Project Manager and CTA in developing specs for procurement of hydrometric equipment
- Assist National Project Coordinator/Project Manager and CTA in developing ToRs/SoWs for consultancy assignments related to expansion and proper operations of hydrometric network and developing/strengthening of multi-hazard forecasting/EWS platforms within NEA
- Assist National Project Coordinator/Project Manager in coordinating a work of teams of international and national consultants to be engaged in activities related to expansion and proper operations of hydrometric network and developing/strengthening of multi-hazard forecasting/EWS platforms within NEA
- Liaise with NEA on the issues related to expansion and proper operations of developing/strengthening of multi-hazard forecasting/EWS platforms within NEA
- Assist project team and consultants in conveying trainings/workshops, meetings related to expansion and proper operations of developing/strengthening of multi-hazard forecasting/EWS platforms within NEA
- Provide English-Georgian-English interpreting during vis-à-vis working meetings with relevant national counterparts
- Assist National Project Coordinator/Project Manager and CTA in monitoring indicators and targets related to expansion and proper operations of developing/strengthening of multi-hazard forecasting/EWS platforms within NEA

### 3. DURATION OF THE CONTRACT

Part-time (50%). A SC will be concluded with the incumbent with a duration of 1-year. Annual renewal of the contract is anticipated pending on the satisfactory performance of the work by the Team Leader and certification his/her work by the National Project Coordinator/Project Manager.

### 4. REQUIRED EXPERTISE AND QUALIFICATION

#### Education:

- University degree (***at least Bachelor's degree or equivalent – minimum qualification criterion***) in the area of Natural/Environmental Sciences, Geography, Geology, Hydrology, Meteorology or any other related field

#### Experience:

- ***At least 3 years of managerial or consultancy experience (minimum qualification criterion)*** in hydrology, meteorology, geology or related field
- Demonstrated experience in working with/for international organizations
- Strong knowledge and understanding of institutional setting of hydrometeorological services for Georgia

#### Language:

- Excellent written and verbal communication skills in English

#### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

### 5. PAYMENT MODALITIES

The consultant will be paid a fixed salary on a monthly basis.

### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

## 7. EVALUATION CRITERIA

The expert will be evaluated against technical qualification. Maximum score is 100%. The technical evaluation will include the following:

- Educational Background as requested: 20%
- Professional experience, as requested: 20%
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 20%
- Strong knowledge and understanding of hydrometeorological monitoring and forecasting context: 20%
- Strong interpersonal and communications skills: 10%
- Fluency in English: 10%

Technical score for the candidate will be set based on an interview with him/her.

## 6/ TERMS OF REFERENCE/JOB DESCRIPTION FOR TEAM LEADER/ADVISOR IN AGROMETEOROLOGY

**Position Type:** External Vacancy

**Job Title:** Team Leader/Advisor in Agrometeorology: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Project office in Tbilisi*

**Type of contract:** Service contract, local

**Expected starting date:** ASAP

**Expected duration of assignment:** Part-time (50%) up to 7 years. Annual contract with a view of annual renewal until the end of the project

### 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: ***“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*** (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness

of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective implementation of the activities related to agrometeorology (expansion and proper operations of agrometeorological network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology) of output 1 and 2, the project seeks for a local Team Leader/Advisor in agrometeorology.

## 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Manager, Team Leader/Advisor in Agrometeorology will support implementation of Output 1: Activity 1.1.1; Output 2: Activities: 2.3.1; 2.3.2; 2.3.4 and 2.3.5 expansion and proper operations of agrometeorological network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology within MoEPA. More specifically, he/she will:

- Assist National Project Coordinator/Project Manager and CTA in developing specs for procurement of agrometeorological monitoring equipment
- Assist National Project Coordinator/Project Manager and CTA in developing ToRs/SoWs for consultancy assignments related to expansion and proper operations of agrometeorological monitoring network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology
- Assist National Project Coordinator/Project Manager in coordinating a work of teams of international and national consultants to be engaged in activities related to expansion and proper operations of agrometeorological monitoring network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology
- Liaise with National Food Agency, Agriculture Scientific-Research Centre and other relevant entities working on agrometeorological issues
- Assist project team and consultants in conveying trainings/workshops, meetings related to expansion and proper operations of agrometeorological monitoring network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology
- Provide English-Georgian-English interpreting during vis-à-vis working meetings with relevant national counterparts
- Assist National Project Coordinator/Project Manager and CTA in monitoring indicators and targets related to expansion and proper operations of agrometeorological monitoring network, development of climate/agrometeorology information and advisory products and effective delivery of such products and services to farmers; capacity building in agrometeorology

## 3. DURATION OF THE CONTRACT

Part-time (50%). A SC will be concluded with the incumbent with a duration of 1-year. Annual renewal of the contract is anticipated pending on the satisfactory performance of the work by the Team Leader and certification his/her work by the National Project Coordinator/Project Manager.

## 4. REQUIRED EXPERTISE AND QUALIFICATION

### Education:

- University degree (***at least Bachelor's degree or equivalent – minimum qualification criterion***) in the area of Natural/Environmental Sciences, Geography, Meteorology, Agrometeorology or any other related field

### Experience:

- ***At least 3 years of managerial or consultancy experience (minimum qualification criterion)*** in Geography, Meteorology, Agrometeorology another related field

- Demonstrated experience in working with/for international organizations
- Strong knowledge and understanding of institutional setting and local context concerning agrometeorological services in Georgia

Language:

- Excellent written and verbal communication skills in English

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

#### 5. PAYMENT MODALITIES

The consultant will be paid a fixed salary on a monthly basis.

#### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

#### 7. EVALUATION CRITERIA

The expert will be evaluated against technical qualification criteria. Maximum score is 100%. The technical evaluation will include the following:

- Educational Background as requested: 20%
- Professional experience, as requested: 20%
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 20%
- Strong knowledge and understanding of institutional setting and local context concerning agrometeorological services in Georgia:20%
- Strong interpersonal and communications skills: 10%
- Fluency in English: 10%

Technical score for the candidate will be set based on an interview with him/her.

### **7/ TERMS OF REFERENCE/JOB DESCRIPTION FOR TEAM LEADER/ADVISOR CAPACITY BUILDING, POLICY AND PLANNING PLATFORMS**

**Position Type:** External Vacancy

**Job Title:** **Team Leader/Advisor Capacity Building, Policy and Planning platforms:** *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Project office in Tbilisi*

**Type of contract:** Service contract, local

**Expected starting date:** ASAP

**Expected duration of assignment:** Part-time (50%) up to 7 years. Annual contract with a view of annual renewal until the end of the project

## 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: **“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”** (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective implementation of the activities related to capacity building, policy and planning platforms for Climate Change Adaptation (CCA)/Climate Risk Management (CRM), Multi-Hazard Early Warning System (MHEWS) under the Output 2 – Activities: 2.1.1., 2.1.2 and 2.1.3 the project seeks for local Team Leader/Advisor.

## 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Manager, Team Leader/Advisor in Capacity Building, Policy and Planning Platforms will support implementation of Output 2 – Activities: 2.1.1., 2.1.2 and 2.1.3 related to capacity building, policy and planning platforms for CCA/CRM, MHEWS, etc. More specifically, he/she will:

- Assist National Project Coordinator/Project Manager and CTA in developing ToRs/SoWs for consultancy assignments related to capacity building, policy and planning platforms for CCA/CRM, MHEWS, etc.
- Assist National Project Coordinator/Project Manager in coordinating a work of teams of international and national consultants to be engaged in activities related capacity building, policy and planning platforms for CCA/CRM, MHEWS, etc.
- Liaise with relevant national counterparts
- Assist project team and consultants in conveying trainings/workshops, meetings related to capacity building, policy and planning platforms for CCA/CRM, MHEWS, etc.
- Provide English-Georgian-English interpreting during vis-à-vis working meetings with relevant national counterparts
- Assist National Project Coordinator/Project Manager and CTA in monitoring indicators and targets related to capacity building, policy and planning platforms for CCA/CRM, MHEWS, etc.

## 3. DURATION OF THE CONTRACT

Part-time (50%). A SC will be concluded with the incumbent with a duration of 1-year. Annual renewal of the contract is anticipated pending on the satisfactory performance of the work by the Team Leader and certification his/her work by the National Project Coordinator/Project Manager.

#### 4. REQUIRED EXPERTISE AND QUALIFICATION

##### Education:

- University degree (***at least Bachelor's degree or equivalent – minimum qualification criterion***) in the area of Natural/Environmental Sciences, Geography, Geophysics, Geology, Hydrology, Meteorology, Agrometeorology or any other related field

##### Experience:

- ***At least 3 years of managerial or consultancy experience (minimum qualification criterion)*** in CCA/CRM, Geography, Geophysics, Geology, Hydrology, Meteorology, Agrometeorology or any other related field
- Experience in capacity development of national institutions responsible for CCA/CRM, EWS, etc.
- Demonstrated experience in working with/for international organizations and in particular, UNDP
- Strong knowledge and understanding of institutional setting and local context concerning CCA/CRM, EWS

##### Language:

- Excellent written and verbal communication skills in English

##### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

#### 5. PAYMENT MODALITIES

The consultant will be paid a fixed salary on a monthly basis.

#### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

#### 7. EVALUATION CRITERIA

The expert will be evaluated against qualification criteria. Maximum score is 100%. The technical evaluation will include the following:

- Educational Background as requested: 10%
- Professional experience as requested: 20%
- Demonstrated experience in capacity building of relevant national institutions: 20%
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 20%
- Strong knowledge and understanding of institutional setting and local context concerning CCA/CRM, EWS: 20%
- Strong interpersonal and communications skills: 5%
- Fluency in English: 5%

Technical score for the candidate will be set based on an interview with him/her.

## **8/ TERMS OF REFERENCE/JOB DESCRIPTION FOR TEAM LEADER/ADVISOR IN COMMUNITY-BASED PROCESSES AND STRUCTURAL MEASURES**

**Position Type:** External Vacancy

**Job Title:** Team Leader/Advisor in Community-based Processes and Structural Measures: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Project office in Tbilisi*

**Type of contract:** Service contract, local

**Expected starting date:** ASAP

**Expected duration of assignment:** Part-time (50%) up to 7 years. Annual contract with a view of annual renewal until the end of the project

### **1. BACKGROUND**

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”* (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To ensure effective implementation of the activities related to creating Community-Based Early Warning Systems (CBEWS) Community-based Climate Risk Management Processes and carrying out climate risk reduction structural measures under Output 3 (Activity: 3.1 and 3.3) the project seeks for local Team Leader/Advisor.

### **2. SCOPE OF THE WORK**

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Manager, Team Leader/Advisor in Community-based Processes and Structural Measures will support implementation of Output 3, Activity: 3.1 and 3.3 related to establishment of CBEWS, implementation and CBCRM process in selected most vulnerable communities and carrying out of climate risk reduction structural measures in 13 locations of Georgia, including Environmental and Social Management Plan (ESMP). More specifically, he/she will:

- Assist National Project Coordinator/Project Manager and CTA in developing specs for procurement of necessary measuring, communications and signaling equipment for CBEWSs
- Assist National Project Coordinator/Project Manager and CTA in developing ToRs/SoWs for consultancy assignments related to establishment of CBEWS, implementation and CBCRM process in selected most vulnerable communities and carrying out of climate risk reduction structural measures in 13 locations of Georgia
- Assist National Project Coordinator/Project Manager in coordinating a work of teams of international and national consultants to be engaged in activities related to related to establishment of CBEWS,

implementation and CBCRM process in selected most vulnerable communities and carrying out of climate risk reduction structural measures in 13 locations of Georgia

- Liaise with MoEPA, Ministry of Regional Development and Infrastructure and other relevant government institutions at central level and relevant local governments and community representative in pilot areas
- Assist project team and consultants in conveying trainings/workshops, meetings related to related to establishment of CBEWS, implementation and CBCRM process in selected most vulnerable communities and carrying out of climate risk reduction structural measures in 13 locations of Georgia
- Provide English-Georgian-English interpreting during vis-à-vis working meetings with relevant national counterparts
- Assist National Project Coordinator/Project Manager and CTA in monitoring indicators and targets related to related to establishment of CBEWS, implementation and CBCRM process in selected most vulnerable communities and carrying out of climate risk reduction structural measures in 13 locations of Georgia
- Act as an Environmental and social safeguard/compliance office within the project team

### 3. DURATION OF THE CONTRACT

Part-time (50%). A SC will be concluded with the incumbent with a duration of 1-year. Annual renewal of the contract is anticipated pending on the satisfactory performance of the work by the Team Leader and certification his/her work by the National Project Coordinator/Project Manager.

### 4. REQUIRED EXPERTISE AND QUALIFICATION

#### Education:

- University degree (***at least Bachelor's degree or equivalent – minimum qualification criterion***) in the area of Natural/Environmental Sciences, Geography, Civic Engineering or another related field

#### Experience:

- ***At least 3 years of managerial or consultancy experience (minimum qualification criterion)*** in natural resources management, climate change adaptation, design and/or supervision of implementation of small-scale community projects
- Demonstrated experience in working with communities/grass roots organizations
- Demonstrated experience in working with/for international organizations and in particular, with/for UNDP
- Strong knowledge and understanding of rural communities and their development challenges

#### Language:

- Excellent written and verbal communication skills in English

#### Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standard
- Ability to establish and maintain good working relations with colleagues in multi-cultural environment
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants

### 5. PAYMENT MODALITIES

The consultant will be paid a fixed salary on a monthly basis.

### 6. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

#### 7. EVALUATION CRITERIA

The expert will be evaluated against technical qualification criteria. Maximum score is 100%. The technical evaluation will include the following:

- Educational Background as requested: 10%
- Professional experience, as requested: 20%
- Demonstrated experience in working with rural communities/grass roots organizations: 20%
- Demonstrated experience in working with/for International Development Organizations and in particular UNDP, 20%
- Strong knowledge and understanding of rural communities and their development challenge: 20%
- Strong interpersonal and communications skills: 5%
- Fluency in English: 5%

Technical score for the candidate will be set based on an interview with him/her.

### 9/ TERMS OF REFERENCE/JOB DESCRIPTION FOR JUNIOR MONITORING AND EVALUATION (M&E) OFFICER

**Position Type:** External Vacancy

**Job Title:** Junior Monitoring and Evaluation (M&E) Officer: *“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*

**Category:** Environment and Energy

**Application Deadline:** TBD

**Duty station:** *Project office in Tbilisi*

**Type of contract:** Service contract, local

**Expected starting date:** ASAP

**Expected duration of assignment:** Full-time (100%) up to 7 years. Annual contract with a view of annual renewal until the end of the project

#### 1. BACKGROUND

In April 2018, GCF board secretariat approved a 7-year (August 2018- July 2025) project for Georgia entitled: ***“Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”*** (hereafter GCF project). The project will be implemented under National Implementation Modality (NIM) with the Ministry of Environmental Protection and Agriculture (MoEPA playing) an executing entity’s/implementing partner’s role for it.

An overall objective of the project is to reduce exposure of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The GCF project will provide critical climate risk information that would enable the Government of Georgia to implement a number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. The project will thus catalyse a paradigm shift in the national climate risk management, climate-proofed disaster risk reduction and early warning approaches. The project innovation and transformative change will also include (a) participatory “Last Mile” communication solutions tailored to the needs of local communities, including CBEWSs; (b) increasing implementation capacities for carrying out cost-effective risk reduction and community resilience measures through such innovative approaches as watershed/floodplain restoration, agroforestry, etc., and combination of structural and non-structural protection measures aimed at reducing exposure and increasing effectiveness of the early warning; (c) combining best available science and local knowledge for vulnerability assessment, hazard and risk mapping, disaster modelling and forecasting; (d) (e) carrying out a comprehensive community, municipal and national-wide awareness raising, education and capacity development activities on multi-hazard risk reduction, including preparedness, response and EWSs.

To track regular progress of the project and ensure effective monitoring and evaluation of project activities, the project seeks for a Junior M&E Officer.

## 2. SCOPE OF THE WORK

Under the technical guidance of CTA and direct supervision from National Project Coordinator/Project Manager Junior M&E Officer will assist the CTA and National Project Coordinator/Project Manager in monitoring and ensuring high quality and timely inputs, and for ensuring that the project maintains its strategic vision and that its activities result in the achievement of its intended outputs in a cost effective and timely manner. He will assist the CTA and National Project Coordinator/Project Manager in designing and implementing the M&E activities of the Project, preparing Quarterly/Annual reports on project progress and will monitor the project activities on a regular basis, developing and maintaining the MIS of the Project and will be responsible for the collection & analysis of different data in relation to the project activities.

The Junior M&E Officer works in close collaboration with project team, CO programme and operations clusters, Government officials, private sector, non-government and civil society organizations.

### Duties and Responsibilities

- Develop and strengthen monitoring, inspection and evaluation procedures
- Monitor all project activities, expenditures and progress towards achieving the project outputs
- Recommend further improvement in the Results and Resources Framework
- In collaboration with CTA, National Project Coordinator/Project Manager, Gender Advisor and Team Leaders/Advisors for various project components develop monitoring and impact indicator for the project success
- Monitor and evaluate overall progress on achievement of results
- Monitor the sustainability of the project's results
- Provide feedback to the CTA Project Manager on project strategies and activities
- Suggest strategies to the Project Management for improving the efficiency and effectiveness of the project by identifying bottlenecks in completing project activities and developing plans to minimize or eliminate such bottlenecks
- Report on a regular basis on all project activities to National Project Coordinator/Project Manager
- Conduct capacity assessment on existing monitoring and evaluation system
- Develop indicators and a monitoring strategy for the project
- Provide inputs, information and statistics for quarterly, annual and other reports to Project Management Team and UNDP
- Participate in annual project reviews and planning workshops and assist the CTA and Project Manager in preparing relevant reports
- Support monitoring and evaluation of the effects and impact of the project
- Assist in coordinating across the available components of the Project to ensure effective implementation of M&E
- Assist the project personnel with M&E tools and in supporting them in their use.
- Perform other duties as required

## 3. MEASURABLE OUTPUTS AND PERFORMANCE INDICATORS

- Collect baseline data
- Prepare of regular monitoring reports
- Assist CTA and National Project Coordinator/Project Manager in preparing annual reports
- Organize and conduct training on M&E for project and government staff, if necessary
- Assist CTA and National Project Coordinator/Project Manager in preparation of reports on the findings and lessons learned from project innovations
- Provide input and update information related to project outcome in UNDP and GOB website
- Prepare Issues Log and Risk Log for the project
- Develop M&E system for the Project
- Prepare and maintain data base
- Assist National Project Coordinator/Project Manager in commissioning project evaluations, including impact evaluations

#### 4. DURATION OF THE CONTRACT

The Junior M&E Officer will be hired by UNDP CO through local Service Contract with a duration of 1-year. Annual renewal of the contract is envisaged until the end of the project, pending on the satisfactory performance of the work by the incumbent and certification by National Project Coordinator/Project Manager

#### 5. COMPETENCIES

##### Corporate Competencies

- Demonstrates integrity by modelling the UN's values and ethical standards
- Promotes the vision, mission, and strategic goals of UNDP
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability

##### Functional Competencies

- Organizes and accurately completes multiple tasks by establishing priorities while taking into consideration special assignments, frequent interruptions, deadlines, available resources and multiple reporting relationships
- Plans, coordinates and organizes workload while remaining aware of changing Priorities and competing deadlines
- Establishes, builds and maintains effective working relationships with staff and clients to facilitate the provision of support

##### Knowledge Management and Learning

- In-depth knowledge on M&E and development issues
- Solid knowledge of monitoring and the application of methodology: Good understanding of capacity assessment methodologies; excellent ability to identify significant capacity building opportunities;
- Excellent communication skills (written and oral): Sensitivity to and responsiveness to all partners, Respectful and helpful relations with donors and project staff
- Ability to lead implementation of new systems (business side), and affect staff behavioral/ attitudinal change

##### Self-Management

- Focuses on result for the client
- Consistently approaches work with energy and a positive, constructive attitude
- Demonstrates strong oral and written communication skills
- Remains calm, in control and good humored even under pressure
- Demonstrates openness to change and ability to manage complexities
- Responds positively to critical feedback and differing points of view
- Solicits feedback from staff about the impact of his/her own behavior

#### 6. REQUIRED EXPERTISE AND QUALIFICATION

##### Education:

University Degree (***bachelor's – minimum qualification requirement***) in Sociology, Development Studies, Statistics or related field.

##### Experience:

- ***2 years of experience (minimum qualification requirement)*** in the design and implementation of M&E in development projects
- Experience in designing tools and strategies for data collection, analysis and production of reports
- Demonstrated experience in working with/for international organizations and in particular, UNDP
- Proven ICT skills, especially in using database software
- Expertise in analyzing data using statistical software
- Strong training & facilitation skills

##### Language Requirements:

Fluency in written and spoken Bangla and English.

## 7. PAYMENT MODALITIES

The consultant will be paid a fixed salary on a monthly basis.

## 8. APPLICATION PROCEDURES

Qualified and interested candidates are hereby requested to apply. The application should contain the following:

- Personal CV or P11, indicating education background/professional qualifications, all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references
- Brief description of why the individual considers him/herself as the most suitable for the assignment

Short-list of applicants will be made based on screening (applying simple yes/no principle) of application package and minimum qualification criteria. Only short-listed candidates will be invited to an individual interview.

## 9. EVALUATION CRITERIA

The expert will be evaluated against technical qualification criteria. Maximum score is 100%. The technical evaluation will include the following:

- Educational background as requested: 20%
- Professional experience, as requested: 20%
- Demonstrated experience in working with/for international organizations and in particular, UNDP
- Proven ICT skills, especially in using database software: 20%
- Expertise in analyzing data using statistical software: 20%
- Strong training & facilitation skills: 10%
- Strong interpersonal and communications skills: 5%
- Fluency in English: 5%

Technical score for the candidate will be set based on an interview with him/her.

**Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Assessment Report (ESAR)**

**UNDP Social and Environmental and Safeguards Screening Procedure**

**Project Information**

<b>Project Information</b>	
1. Project Title	Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia
2. Project Number	00094354
3. Location (Global/Region/Country)	Georgia

**Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability**

**QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?**

***Briefly describe in the space below how the Project mainstreams the human-rights based approach***

The project will ensure social equity and equality. Entire project serves to reduce the vulnerability of Georgian population and increase resilience of people, institutions, systems to climate-induced disasters. Particular focus is made on increasing resilience of 100 most vulnerable communities to climate-induced natural hazards and risks. All components and activities and in particular, components and activities directly affecting/targeting rural communities will be implemented with active engagement of all stakeholders, including disadvantaged persons in line with Stakeholder Engagement Plan Annexed to the Project Document

***Briefly describe in the space below how the Project is likely to improve gender equality and women’s empowerment***

Gender mainstreaming will be a key aspect of the GCF project and in particular, CBCRM process. In engaging with the communities, the project will pay particular attention to inclusion of vulnerable groups and particularly, women to ensure that gender issues are considered. As outlined in the Gender Assessment and Gender Action Plan (Annex J), there are considerable differences in vulnerability to disasters between the genders in Georgia, in line with traditional gender roles. Men are 25% more likely than women to be employed, self-employed or engaged in contract work. In general, male-headed households have higher incomes than female-headed households and overall there is a considerable difference in the income of male-headed households, which emphasizes the increased vulnerability of female-headed households. Pregnant and nursing mothers are particularly vulnerable because of their increased need for food and water and their decreased mobility. As the primary caretakers of their homes, women attend to the needs of children, elderly and the disabled. This increases their workload and reduces their mobility in cases where quick evacuations are required or where they live a long distance to water supply facilities. For effective climate and disaster risk management, the project will ensure that women are primary stakeholders and will therefore need to be involved in decisions on the types of solutions that are implemented in particular, during planning and implementation of non-structural community resilience measures as part of CBCRM process. Gender mainstreaming actions (e.g. ensuring representative women participation in project boards/advisory panels, two-tier GRM, consultations, meetings, networking events, etc.), capacity building (trainings, re-trainings, ToTs, etc.), awareness campaigns and tools (e.g. gender-sensitive vulnerability assessment and mapping) will be applied at various institutional levels (central government agencies, local government, community level), in particular, through the Activities 2.1, 2.2, 2.3, 2.4, 3.1, 3.2 and 3.3. Gender differentiated indicators will be used to monitor the projects performance in achieving the right gender balance. Gender Advisor will be hired throughout the project to ensure implementation of Gender Action Plan, including its monitoring and to provide proper advice to the project and broader stakeholder on gender issues. Please refer to the Gender Analysis and Action Plan (Annex J) for the description of gender mainstreaming actions to be supported through the project.

***Briefly describe in the space below how the Project mainstreams environmental sustainability***

The project will increase the resilience of vulnerable people, properties, infrastructure and economic sectors. Further the project will enhance the resilience of forest ecosystems, including protected areas and land resources as well as will protect streams and lakes from siltation and thus, aquatic fauna from increased turbidity. The project is addressing climate risks by introducing CRM and CCA measures. Specific environmental benefits include improved eco system functions through better spatial planning and the introduction of agro-forestry which will improve the natural functions of the floodplains and watersheds within which they are implemented. Other environmental benefits include reduction in soil erosion and land degradation through the zoning of activities away from high risk areas as well as improved management. Improved agricultural practices that the project will catalyse, will also provide environmental enhancements. In the long-run the project will bring about significant environmental benefits by increasing the country’s resilience to climate-induced natural disasters and thus, enabling its population to better protect national assets, including environmental assets (land, forest and land resources).

For social and environmental risks associated with implementation of structural risk reduction measures in 13 locations of Georgia, ESAR was developed together with ESMP, based on which the project is expected to have spatially and temporally restricted moderate negative environmental and social impacts, including sediment movement, silting of water courses, temporary damage to local landscape, injuries during transportation of crew and materials as well as during construction activities, etc. Management Plans have been developed to avoid, and where not possible, to mitigate negative environmental and social impacts, including the development and implementation of an Erosion, Drainage and Sediment Control Plan (EDSCP). Concerning positive impacts, during construction phase temporary jobs for locals can be created as a short-term positive impact. However, the long-term sustainable positive social and environmental impacts of the project and in particular, flood defence structures will be avoided losses in human lives, assets, agricultural lands and ecosystems. In total, 1.7 million people will benefit from the initiative, of which 52% are women.

Negative environmental impacts associated with operations phase are solely related to proper O/M of the structures. The lifetime of the structures is about 20 years and during this time span such measures, as cleaning canals from vegetation/weeds and sediments or conducting minor repairs may become necessary annually or within reasonable intervals. In case these structures are damaged/scoured/dilapidated as a result of improper aftercare, then damming the canals and flooding downstream areas can happen. Thus, it is necessary to follow O/M plan, developed during project feasibility phase. Importantly, the technical solutions for structural risk reduction interventions have been tested through a prototype EWS and flood risk management project in Rioni basin and there is evidence of positive impact on local environment over the medium to long term, thereby offsetting the short-term environmental impacts.

The non-structural community resilience measures, including agroforestry and floodplain/watershed restoration will have limited environmental and social impact. The project will carefully assess and select plant species during project design phase in terms of their conservation and economic values that are of local provenance and have high survival rate, etc. Moreover, during reforestation/afforestation activities, small scale sediment movement may happen and measures have to be taken to control erosion through the development and implementation of an EDSCP, including installing silt curtains to restrict sediment movement during implementation of structural and non-structural community resilience measures. Overall, community resilience measures will create temporary jobs for local community members, including women that can be considered as a short-term positive social impact. Moreover, if high economic value crops/plant species are selected, they may bring additional revenues for local and improve their livelihoods.

Thus, the non-structural interventions combined with expansion of existing hydrometeorological network are unlikely to have medium risk impacts. The project will ensure that all the equipment purchased meets international environmental, safety and technical standards. Efforts will be also made to minimize environmental footprint of project activities, by introducing internal paper-reduction, re-use, water and energy conservation/saving policies.

## Part B. Identifying and Managing Social and Environmental Risks

<p><b>QUESTION 2: What are the Potential Social and Environmental Risks?</b></p> <p><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i></p>	<p><b>QUESTION 3: What is the level of significance of the potential social and environmental risks?</b></p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i></p>	<p><b>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</b></p>
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Risk Description	Impact and Probability (1-5)	Significance (Low, moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design.
Risk 1: Sediment movement during riverbank works	I = 3 P = 3	Moderate		There is the likelihood for sediment movement during the construction of hard infrastructure. To ensure that the sediment is not mobilised that will result in environmental impacts, it will be necessary to prepare an Erosion, Drainage and Sediment Control Plan (EDSCP) and install silt curtains to restrict sediment movement from the site. Further, any earthworks should be undertaken during the dry season and compacted

<b>Risk Description</b>	<b>Impact and Probability (1-5)</b>	<b>Significance (Low, moderate, High)</b>	<b>Comments</b>	<b>Description of assessment and management measures as reflected in the Project design.</b>
				sufficiently to reduce sediment movement. The EDSCP should contain aspects including but not limited to the installation of sediment curtains to reduce sediment movement and the quick placement of footing material. These impacts will be spatially and temporally restricted to works periods.
Risk 2: Sediment movement during ecosystem revegetation works	I = 2 P = 2	<b>Low</b>		There is the potential for sediment movement during planting and reforestation. To ensure that the sediment is not mobilised through either wind or more specifically water movement, it will be necessary to prepare an EDSCP and install silt curtains to restrict sediment movement and the covering of sediment where practicable.
Risk 3: Contamination of existing water sources	I = 2 P = 2	<b>Moderate</b>		To ensure contaminants do not enter waterways and groundwater systems, a water quality monitoring plan will be developed to ensure chemicals are not released. This will involve testing sediment prior to movement and planning so that the works are not undertaken during rain events. Where rainfall is anticipated, appropriate material should be placed under the sediment prior to excavation to ensure there is no seepage into groundwater systems. The water quality monitoring for the sources will be designed to identify potential impacts so that management measures can be proactively rather than reactively enacted upon.
Risk 4: Sediment movement during installation of hydrometric equipment and equipment for CBEWs	I = 2 P = 2	<b>Low</b>		When undertaking the installation of weather stations, the ESAR and EDSCP will be followed to ensure runoff does not flow into riverine systems
Risk 5: Construction noise	I = 2 P = 2	<b>Low</b>		The construction contractor should consider any sensitive receptors including communities. Noise will be limited to excavators removing sediment from the water course. It is likely that more noise will be generated through the use of excavators and trucks moving sediment. Where necessary, noise shields should be constructed to reduce the potential for noise to reach these communities if an impact occurs. The noise will have very limited temporal scales.

<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design.</i>
Risk 6. Locating infrastructure that is socially detrimental	I = 2 P = 2	<b>Low</b>		Stakeholder consultation will be undertaken prior to the selection of infrastructure sites to ensure no impacts. No interventions will be undertaken on private land.
Risk 7. Impact of agroforestry activities on local pasturelands	I = 2 P = 2	<b>Low</b>		Stakeholder consultation will be undertaken prior to the selection of agroforestry sites to ensure no conflicts. Economic benefits from protecting housing, infrastructure and agricultural land are expected to be higher than opportunity costs related to planting on grazing land. Planting of economically feasible tree species (fruits, nuts) are part of the bioengineering measures.
Risk 8. Physical and Economic Displacement related to intervention construction	I = 2 P = 2	<b>Low</b>		It may be necessary to utilise areas of land adjacent to where the structural interventions will be undertaken so as to access water courses (e.g. Khodasheniskhevi and Milari, etc.). The land is currently under agricultural production. Where access is required, the land will be returned in the same condition as it was prior to any access. Access to this land will only be undertaken through voluntary agreements with landholders. Where a voluntary agreement cannot be established, the land will not be used.
Risk 9. Impacts on indigenous peoples and/or ethnic groups and/or internally displaced peoples	I = 2 P = 2	<b>Low</b>		Prior to undertaking any intervention, additional stakeholder engagement will be conducted to ensure that any indigenous peoples and/or ethnic groups and/or internally displaced peoples are fully consulted to ensure the project will not impact on them and/or their cultures/traditions. If any people are found to be located within the area, the project will comply with the UNDP Social and Environment Standard and the project will develop a social inclusion plan.
Risk 10. Hydrometeorological and/or flood defence infrastructure are destroyed due to various natural hazards	I=4 P=3	<b>Medium</b>		The project will develop and implement emergency management/contingency plan in line with UNDP CO's crisis management requirements. During the design and constructing of relevant infrastructure disaster risks will be taken into consideration or in other words, climate proofing will be carried out. These activities will reduce the level of impact and probability that the infrastructure will be destroyed to minimum level

<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design.</i>
<b>QUESTION 4: What is the overall Project risk categorization?</b>				
Select one (see <a href="#">SESP</a> for guidance)			<b>Comments</b>	
	<i>Low Risk</i>	<input type="checkbox"/>		
	<i>Moderate Risk</i>	X	There will be no long term environmental and social impacts associated with the project. Any environmental impacts will be spatially and temporally restricted during construction/rehabilitation of flood defense structures, community level resilience measures, including agroforestry	
	<i>High Risk</i>	<input type="checkbox"/>		
<b>QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?</b>				
Check all that apply			<b>Comments</b>	
	<i>Principle 1: Human Rights</i>	<input type="checkbox"/>	Not Applicable	
	<i>Principle 2: Gender Equality and Women's Empowerment</i>	X	The participation of women and youth in project activities/interventions is a focus of the project. This is to ensure that they are also empowered to make decisions and also benefit as a result of project interventions.	
	<i>1. Biodiversity Conservation and Natural Resource Management</i>	X	The project will have an overall benefit on natural resources and ecosystems in the future given they will be better protected from climate-induced natural hazards	
	<i>2. Climate Change Mitigation and Adaptation</i>	X	The project is designed to reduce vulnerability and increase resilience of Georgian population, institutions and systems to climate-induced natural hazards and risks	
	<i>3. Community Health, Safety and Working Conditions</i>	<input type="checkbox"/>	Not Applicable	
	<i>4. Cultural Heritage</i>	<input type="checkbox"/>	Not Applicable	
	<i>5. Displacement and Resettlement</i>	<input type="checkbox"/>	Not Applicable	
	<i>6. Indigenous Peoples</i>	<input type="checkbox"/>	Not Applicable	
	<i>7. Pollution Prevention and Resource Efficiency</i>	<input type="checkbox"/>	Not Applicable	

Final Sign off:

QA Assessor	Ms. Nino Antadze, EE portfolio, UNDP	Signature
QA Approver	Ms. Louisa Vinton, UNDP Resident Representative	Signature
PAC Chair	Ms. Tuya Altangerel, Deputy Resident Representative	Signature

## H2. Environmental and Social Assessment Report

Link: [http://www.ge.undp.org/content/georgia/en/home/library/environment\\_energy/environment-and-social-assessment-report/](http://www.ge.undp.org/content/georgia/en/home/library/environment_energy/environment-and-social-assessment-report/)

## Annex I: Stakeholder Engagement Plan

During the preparatory phase of the project: **Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia** consultations were conducted with all relevant national authorities, local governments, where priority structural measures will be implemented and donors working in climate adaptation and DRR areas, on project architecture, budget, stakeholders' on-going activities and their potential roles in the project. The MoENRP as GCF DNA was coordinating the process. Since the merger of the MoENRP and MoA in January 2017, consultations on the project have been conducted with the new Ministry of Environment protection and Agriculture (MoEPA), the EE/IP of the project. More specifically, larger group and vis-a-vis meetings were organized and e-mail communications established with representatives of following stakeholders:

1. Ministry of Environment Protection and Agriculture
  - a. *Minister*
2. Ministry of Environment and Natural Resources Protection:
  - a. *First Deputy Minister/NDA*
  - b. *Head of the Integrated Management Department*
  - c. *Heads and representatives of Climate Change and Water Resources Management Divisions of the Integrated Management Department*
  - d. *Head and representatives of International Relations and Policy Department*
  - e. *Head of the National Environmental Agency and representative of hydromet and geology departments*
  - f. *Head and representatives of the Environmental Information and Education Centre (EIEC)*
3. Crisis Management Centre (CMA), State Security and Crisis Management Council (SSCMC)
  - a. *Director of the CMA*
  - b. *Senior Advisor to the Director of the CMA*
4. Ministry of Internal Affairs of Georgia:
  - a. *Deputy Minister*
  - b. *Head of the NATO Integration Division, International Relations Department;*
  - c. *Head of Bilateral and Multilateral Cooperation Unit, International Relations Department;*
  - d. *Representatives of Emergency Management Department EMA*
5. Ministry of Agriculture:
  - a. *Deputy Minister*
  - b. *Deputy Heads and Representatives of National Food Agency (NFA)*
  - c. *Deputy Head of Agriculture Scientific-Research Centre*
  - d. *Deputy Head of the Agricultural Cooperatives Development Agency (ACDA)*
  - e. *Representatives of Amelioration and Land Management Department*
  - f. *Head of the International Relations Department*
  - g. *Head of the Policy Analysis Department*
  - h. *Representative of the Regional Coordination Department*
  - i. *Head of the Public Relations Department*
6. Ministry of Energy:
  - a. *Head of the Energy Department*
  - b. *Head of the Division for Energy Efficiency and Alternative Sources*
7. Ministry of Regional Development and Infrastructure:
  - a. *First Deputy Minister*
  - b. *Acting Head of the Division for Relations with Infrastructure Development Partners, Department for Infrastructure Policy and Relations with Development Partners*
  - c. *Deputy Head and representatives of Road Department*
  - d. *Head of the Department for Relations with Regions and Local Self-governing Agencies*
8. Tbilisi City Hall:
  - a. *Vice-Mayor of Tbilisi*
  - b. *Head of Department of International Relations*
  - c. *Representative of the Department of Environment and Green Spaces/landscaping*
9. Georgian Co-investment Fund:
  - a. *Chief Executive Officer*

- b. *Managing Director (Finance, Risk and Investor Relations)*
  - c. *Operational Risk Manager, Risk Analysis Department*
  - d. *Managing Director (FMCG and Logistics)*
  - e. *Senior Associate (Energy & Infrastructure)*
10. MAGTICOM:
    - a. *Chief Information Officer*
    - b. *Director for Institutional Marketing Department*
  11. Municipal governments of 10 target municipalities where structural measures have to be implemented
  12. UNDP Country Office Management
    - a. Resident Representative;
    - b. Deputy Resident Representative;
    - c. Head of Programme Unit / Assistant Resident Representative;
    - d. Operations Manager
  13. Manager of AF/UNDP Rioni Flood Risk Management Project
  14. FAO Project Manager
  15. SDC representatives – Director, Head of Programme, DRR Officer
  16. Representatives of European Union Water Initiative Plus for the Eastern Partnership (EUWI+)

In addition to national-wide consultation on project architecture, budget, management arrangement and stakeholders' roles in the project, consultations on the potential environmental and social impact and communities' general attitudes towards planned structural measures were held with local government target community representatives from 7 through 12 December, 2017. Overall attitude of target communities towards planned projects was very positive and employment opportunity was underlined as one of the major positive impacts of projects.

Below is given the detailed table 1 of stakeholder consultation, held during project preparatory phase with indication of names, titles, institutions and contacts of stakeholders consulted, date/venue of communications, means of communications and issues discussed/results achieved. Tables 2 and 3 contain a list of stakeholders consulted on environmental and social impacts of planned structural measures.

**Table 1. Stakeholder consultations on project architecture and co-funding commitments**

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
1.	Levan Davitashvili	Minister of Environment Protection and Agriculture	MoEPA		29 January 2018	Vis-à-vis meeting with UNDP Management (UNDP RR/UN RC in Georgia)	Meeting at MoEPA was aimed at discussing implication of the merging of the two ministries (MoENRP and MoA) on the GCF proposal and future cooperation on the project with MoEPA. The Minister confirmed that MoEPA will be the project Implementing Partner/Executing Entity. The Minister emphasized importance of this project for Georgia. He reconfirmed validity of all commitments to the project made earlier by MoENRP and MoA. MoEPA takes over all the financial and O&M commitments to the projects outlined in the official letters from MoENRP and MoA.
2.	Teimuraz Murghulia	Former First Deputy Minister of Environment and GCF DNA, current Deputy Minister of Education and Science	MoENRP	<a href="mailto:teimuraz.murgulia@mes.gov.ge">teimuraz.murgulia@mes.gov.ge</a>	12 October, 2016, MoENRP	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- status of the GCF project development discussed;</li> <li>- focus of the proposal and main project components discussed;</li> <li>- scope of the risk reduction component (structural flood protection measures) discussed;</li> <li>- NDA's support for the finalization of the project package including facilitation of consultations with the national institutional stakeholders secured.</li> </ul>
					4 November, 2016, MoENRP	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- status of the GCF project development reviewed;</li> <li>- outcomes from the UNDP regional advisor's mission and stakeholder consultations discussed;</li> <li>- initial outcomes of the CBA analysis for structural measures and related investment priorities discussed and agreed upon;</li> <li>- continued NDA support to the project reconfirmed.</li> </ul>
3.	Tamar Bagratia	Head of the Agency	NEA, MoNERP	E-mail: <a href="mailto:t.bagratia@nea.gov.ge">t.bagratia@nea.gov.ge</a> Tel: +995 591 100 090	- 13 October, 2016, NEA	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- NEA's equipment needs for the observation network and EWS discussed and reconfirmed;</li> <li>- provision of NEA's justification on radars, drones and agrometeorological monitoring equipment by 24 October agreed upon</li> </ul>
4.	Tengiz Gogotishvili		MDF	e-mail: <a href="mailto:tgogotishvili@mdf.org.ge">tgogotishvili@mdf.org.ge</a>	13 October, 2016, MDF	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- opportunities for cooperation with the Fund discussed and following potential areas of cooperation identified: <ul style="list-style-type: none"> <li>i) MDF could be incorporating risk management and risk assessment requirements for its projects based on the GCF project's risk assessments/zoning thus promoting risk-informed investment culture with the client municipalities.</li> <li>ii) MDF could include risk-informed investment planning module in their capacity building and training programme for municipalities. MDF consultants could be engaged for the finalization of the GCF feasibility study (component on structural protection measures with municipalities: SEMP, O&amp;M plan).</li> <li>iii) MDF could be potentially considered as a responsible partner or operator for the structural risk reduction measures work in the GCF project.</li> </ul> </li> </ul>
5.	Natia Natsvlshvili	ARR	UNDP CO	<a href="mailto:Natia.natsvlshvili@undp.org">Natia.natsvlshvili@undp.org</a>		Group meeting	<ul style="list-style-type: none"> <li>- GCF project development process and requirements discussed;</li> </ul>

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
6.	Nino Antadze	Energy and Environment Team Leader	UNDP CO	Nino.antadze@undp.org	14 October, 201, UNDP CO		<ul style="list-style-type: none"> <li>- remaining gaps in the feasibility study and related human and financial requirement to finalize the study discussed;</li> <li>- potential sources of funding for the project development discussed and needed level of efforts discussed and agreed upon;</li> <li>- Next steps discussed.</li> </ul>
7.	Ivane Tsiklauri	Project Manager	UNDP/AF Rioni Flood	Project Ivane.tsiklauri@undp.org			
8.	Maia Ochigava	Head of the Water Resources Management Service	MoENRP	caucasusgreen.area@yahoo.com	2 November, 2016, MoENRP	Group meetings	<ul style="list-style-type: none"> <li>- project components discussed;</li> <li>- on-going initiatives of the MoENRP and other government entities discussed, including EUWI+ EU support for implementation of flood directive, etc.</li> <li>- areas of cooperation identified to be as follows: flood management and, DRR capacity development, including development of legal-regulatory basis;</li> <li>- next steps for project preparation discussed.</li> </ul>
9.	Marina Makarova	Deputy Head of the Water Resources Management Service		Marina.makarova@moe.gov.ge			
10.	Beso Datishvili	Head of the DRR Service		<a href="mailto:bdatishvili@gmail.com">bdatishvili@gmail.com</a>			
11.	Tea levidze	Head of the International Relations Division of the Department for International Relations and Policy		E-mail: t.levidze@moe.gov.ge Tel: +995 599 505 311			
12.	Gizo Chelidze	Head of the Policy Division of the Department of International Relations and Policy		Tel: +995 322 727223			
13.	Maia Tskvaradze	Head of the XXXX Division of the Climate Change Service	<a href="mailto:m.tskvaradze@moe.gov.ge">m.tskvaradze@moe.gov.ge</a> ; tel: <a href="tel:591276777">591276777</a>	2 November, 2016, MoENRP	Group meetings	<ul style="list-style-type: none"> <li>- Phone calls and e-mails exchanged on meetings with various stakeholders and co-funding letters</li> </ul>	
				November, 2016-May, 2017	Phone conversations , e-mail		

Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved	
					communications		
14.	Ana Tarkashvili	Chief Specialist of Environmental Innovation Projects Service	LEPL Environmental Information and Education Center Ministry of Environment and Natural Resources Protection of Georgia (EIEC)	E-mail: <a href="mailto:anatakashvili@gmail.com">anatakashvili@gmail.com</a> ; Tel: <a href="tel:+995599999549">+995 599 99 95 49</a>	2 November, 2016, MoENRP	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- The issue of EIEC's engagement in the project as a responsible party for awareness raising education activities discussed;</li> <li>- EIEC's current capacities and ongoing activities were discussed;</li> <li>- potential co-funding commitments by EIEC were discussed.</li> </ul>
15.	Ia Papiashvili	Director	EIEC	<a href="mailto:iapapiashvili@gmail.com">iapapiashvili@gmail.com</a> / <a href="mailto:ia.Papiashvili@eiec.gov.ge">ia.Papiashvili@eiec.gov.ge</a> ; tel: (+995 32) 2 11 20 23	2 November, 2016, EIEC	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- The issue of EIEC's engagement in the project as a responsible party for awareness raising education activities discussed;</li> <li>- EIEC's current capacities and ongoing activities were discussed;</li> <li>- potential co-funding commitments by EIEC were discussed;</li> <li>- follow-up actions discussed and 11 February, 2016 set as a deadline for submission by EIEC of the outline for public awareness activities as well as background information on the Centre of the project</li> </ul>
16.	Shota Gvinianidze	Managing Director	MACTICOM, mobile operator	<a href="mailto:shota.gvinianidze@magticom.ge">shota.gvinianidze@magticom.ge</a>	3 November, 2016, MAGTICOM office	group meeting	<ul style="list-style-type: none"> <li>- MAGTI's business and capacities to provide services for MHEWS discussed;</li> <li>- potential services to be provided discussed and agreed upon to be as follows: (a) sim cards for automated monitoring stations/transmission of data to NEA; (b) sms warnings to population – disaster warnings and/or climate/agromet. advisories (will need to work on geographic filters, technically possible)</li> <li>- Possible tariffs and CSR component of the services discussed;</li> <li>- Letter of interest/support from MAGTI's side discussed.</li> </ul>
17.	Nikoloz Davitashvili	Director of Institutional Market Department		<a href="mailto:Nikoloz.davitashvili@magticom.ge">Nikoloz.davitashvili@magticom.ge</a> ; tel: +995 595 15 13 13			
18.	David Sharikadze	Head of the Energy Department, Ministry of Energy	Ministry of Energy	<a href="mailto:d.sharikadze@energy.gov.ge">d.sharikadze@energy.gov.ge</a> ; tel: (+995 32) 235-78-23	3 November, 2016, Ministry of Energy	Group meeting	The discussion focused on how the GCF project outputs (risk maps, risk assessments, better hydro-meteorological and geological monitoring data) could be of use for the energy infrastructure investments, including hydro power projects. Benefits of the climate/disaster risk information and MHEWS are well understood by the Ministry counterparts; the Ministry fully supports the project; will share plans for HPP construction to identify potential synergies.
19.	Margalita Arabidze	Head of the Division for Energy Efficiency and Alternative Sources		<a href="mailto:m.arabidze@energy.gov.ge">m.arabidze@energy.gov.ge</a> ; tel: (+995 32) 235-78-27			
20.	Lasha Abashidze	Vice Mayor	Tbilisi City Hall	Email: <a href="mailto:l.abashidze@tbilisi.gov.ge">l.abashidze@tbilisi.gov.ge</a>	3 November,	Group meeting	

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
21.	Ana Ardolean	Head of the International Relations Department	Tbilisi City Hall	<a href="mailto:a.ardelean@tbilisi.gov.ge">a.ardelean@tbilisi.gov.ge</a> ; tel: Tel: <a href="tel:+9953223786">+995 322 37 86</a> <a href="tel:+995595160101">14</a> Cell: <a href="tel:+995595160101">+995 595 16 01 01</a>	2016, Tbilisi City Hall		<ul style="list-style-type: none"> <li>- on-going activities of the Tbilisi City Hall discussed including 100 Cities Resilience Project, under which the resilience plan for the city of Tbilisi would be developed specialists;</li> <li>- cooperation and synergy opportunity for the GCF project (output 2 on municipal risk management planning) were discussed to be as follows: a) expanded hydrometeorological monitoring, forecasting and modeling for smaller river basins located in Tbilisi; b) Development of SOPs, communications protocols for DRM, c) Development of multi-hazard response plan; d) Development of feasibility studies for some of the priority structural measures included under Tbilisi PDNA;</li> <li>- Provision of support/co-funding letter from the Tbilisi City Hall discussed and agreed upon.</li> </ul>
					25 November, 2016, Tbilisi City Hall	Vis-à-vis meeting	<ul style="list-style-type: none"> <li>- details of project activities/sub-activities related to the city of Tbilisi discussed;</li> <li>- agreement reached to include following activities in the project: i) purchase of monitoring equipment for smaller rivers under the NEA's management; ii) conduct multihazard assessments and mapping for smaller watershed of Tbilisi; iii) develop hydraulic and hydrological models for smaller rivers of Tbilisi; iv) Institutionalization of resilience efforts within the Mayor's office/support to setting resilience unit after the resilience plan is developed (end of 2017) by supporting the Mayor's office with development of optimum institutional model/organogram for resilience unit, developing its charter/scope of work, standard operational procedures, job descriptions for resilience unit staff, recruitment of relevant staff and their training in resilience planning, early warning, communications and response; Development of communications protocols and plan of the unit and improvement coordination with other stakeholders; v) development of multihazard response plan for Tbilisi municipality; vi) development of feasibility, outline and detailed design studies of structural and/or non-structural measures, e.g. check-dams, reforestation/afforestation of river banks/slopes terraces, floodplain restoration within smaller watersheds of Kura in Tbilisi;</li> <li>- Potential sources of co-funding and issuance of the support/co-funding letter from the Mayor's Office discussed and, submission of request letter on co-funding from MoENRP agreed upon</li> </ul>
					13-16 February, 2017	e-mail correspondence	<ul style="list-style-type: none"> <li>- e-mails exchanged on submission of support/co-funding letter from Tbilisi City Hall;</li> <li>- Draft co-funding letter shared with UNDP and discussed</li> </ul>
					9-10 March, 2017		
7-8 April, 2017							

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
22.	Gocha Tsopurashvili	Deputy Minister	Ministry of Agriculture		3 November, 2016, MoA	Group meetings	<ul style="list-style-type: none"> <li>- GCF project concept, including its objectives, outputs and activities presented and discussed;</li> <li>- current activities of MoA in agrometeorology and climate smart agriculture discussed;</li> <li>- areas of potential cooperation and MoA's role in the project discussed and preliminary agreed upon to be as follows: i) expansion of existing agrometeorological network operated by NFA; ii) capacity building and training for the Ministry of Agriculture, including specific training on the use of climate information and climate change</li> </ul>
23.	Lasha Zivivadze	Deputy Head of the Policy Analysis Department		<a href="mailto:lasha.zivivadze@moa.gov.ge">lasha.zivivadze@moa.gov.ge</a> ; tel: <a href="tel:577080012">577 08 0012</a>			
24.	Nodar Khatiashvili	Deputy Director of the Agriculture Scientific-Research Centre		<a href="mailto:Nodar.khatiashvili@csrca.gov.ge">Nodar.khatiashvili@csrca.gov.ge</a> ; <a href="mailto:n.inogate@yahoo.com">n.inogate@yahoo.com</a> ; tel: +995 599 58 38 89			
25.	Konstantine Khuntsaidze	Deputy Head of the ACDA		<a href="mailto:Kote.khuntsaidze@acda.gov.ge">Kote.khuntsaidze@acda.gov.ge</a> ; tel: +995 577 15 09 01			<ul style="list-style-type: none"> <li>- Project details discussed;</li> <li>- MoA's current activities discussed;</li> <li>- MoA's potential role in the project discussed to be as follows: i) expansion of the agrometeorological networks based on existing prototype; ii) capacity building of MoA in forecasts and warnings; iii) development of new climate information products for the agricultural sector (agro-climate maps, calendars, advisories, etc.) and delivery of these products to the farmers; iv) development of guidance documents, methodologies and technical regulations for the agricultural sector on climate risk assessment and management, use of climate information, etc.;</li> <li>- Potential co-funding sources and submission of co-funding/commitment letter by MoA discussed following follow-up measures agreed upon: i) The Ministry will prepare and submit their proposals for the GCF project activities with costing as well as additional background information on the current institutional system and capacities of the agrometeorological monitoring and information services; on-going and planned pilot and investment projects relevant to the agrometeorological monitoring and climate change adaptation in the agricultural sector; indicative co-financing for the proposed project activities. ii) Information will be prepared by 11 November. Follow up letter will be drafted by UNDP and officially sent by the MoENRP.</li> </ul>
26.	Khatia Tsilosani	Head of the International Relations Department		<a href="mailto:khatia.tsilosani@moa.gov.ge">khatia.tsilosani@moa.gov.ge</a> ; tel: (+995 32) 237-80-05 (ext: 1077)			
27.	Nana Chinchilikashvili	Head of the Public Relations Department		<a href="mailto:nana.chinchilikashvili@moa.gov.ge">nana.chinchilikashvili@moa.gov.ge</a> ;			
28.	Beka Dzagamia	Project Manager	FAO, Georgian office	<a href="mailto:Beka.Dzagamia@fao.org">Beka.Dzagamia@fao.org</a> ; tel: +995 599519197; Office: (+995 32) 2227705/2359440	3 November, 2016, MoA	Vis-à-vis meeting	<p>FAO project details discussed. The project is installing 10 automated agrometeorological stations with soil sensors and pest monitoring in Kakheti (approx. costs EUR 8,000/per station, coverage 3-5 sq/km). The stations will be owned by the National Food Agency (NFA). These stations will be installed by the end of the year. The Agency already has 14 agromet stations (without soil sensors). FAO project will also provide 2 agromet. stations without soil sensors to NEA. The project team strongly recommended to set up the agromet monitoring network at NFA based on their competencies and capacities to analyze and communicate agrometeorological information. NFA and NEA use different types of equipment, data is not compatible. Earlier the project conducted a study on the existing and recommended coverage of the agrometeorological monitoring network and will make it available to UNDP. The overall needs have been assessed at 300 stations nation-wide but these needs could be prioritized. The project will set an EWS for pests/diseases. SMS messaging has been piloted. The current</p>

Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved		
						project phase will be completed in the end of 2017 but there are preliminary prospects for continuation.		
29.	Mamuka Chikhladze	Operational Risk Manager, Risk Analysis Department	Georgian Co-investment Fund (GCF)	<a href="mailto:mchikhladze@gcfund.ge">mchikhladze@gcfund.ge</a> ; tel: +995 577 555667	3 November, 2016, GGC	Group meeting	The discussion focused on how the GCF project outputs (risk maps, assessments, profiles, better hydro-meteorological and agrometeorological monitoring data) could be of use for the Fund's investments. The Fund's portfolio includes projects in hydropower, agriculture (green houses, farms), tourism and hospitality sectors; will share the pipeline with us. The minimum project value is \$5 mln, but prefer working with larger investments. For the on-going Oni HPP project under development the Co-Investment Fund contractors have been purchasing hydrological data from NEA that was obtained with the new monitoring stations supplied by the Rioni project. For the other regions of Georgia, the observation data is not available/have big gaps. Thus, in general the Fund is fully supporting to the new project and is eager to release a letter of support with no financial commitment. The Fund's current investment framework covers 5-year horizon, projects are under development/implementation, GCF project risk monitoring and modeling will not be ready in time to inform the investment project, but will be useful for the future projects.	
30.	Temo Jorbenadze	Managing Director (FMCG & Logistics)						<a href="mailto:tjorbenadze@gcfund.ge">tjorbenadze@gcfund.ge</a> ; +995 591 471515
31.	George Bachiashvili	CEO						<a href="mailto:gbachiashvili@gcfund.ge">gbachiashvili@gcfund.ge</a>
32.	Tea Jokhadze	Managing Director (Finance, Risk and Investor Relations)						<a href="mailto:tjokhadze@gcfund.ge">tjokhadze@gcfund.ge</a>
33.	Giorgi Ghibradze	Director National Crisis Management Centre	CMC, SSCMC	<a href="mailto:gghibradze@sscmc.gov.ge">gghibradze@sscmc.gov.ge</a> ; tel + 995 577 11 33 31	4 November, 2016, CMC/SSCM C	Group meeting	<ul style="list-style-type: none"> <li>- CMC/SSCMC mandate and ongoing projects/activities discussed;</li> <li>- GCF objectives, outputs and activities discussed;</li> <li>- SSCMC's potential role in the project discussed and preliminary agreed upon to be as follows: 1) participation in socio-economic vulnerability, damage and loss assessment and holding a disaster database;</li> <li>- follow-up steps discussed and agreed upon the SSCMC reps. to send the DRR action plan to UNDP within one week</li> </ul>	
34.	Levan Gelashvili	Senior Advisor, CMC						<a href="mailto:lgelashvili@sscmc.gov.ge">lgelashvili@sscmc.gov.ge</a> ; tel: +995 577 41 50 05
35.	Nugzar Gasviani	First Deputy Charman of the Road Department of Georgia	MRDI	<a href="mailto:ngasviani@yahoo.com">ngasviani@yahoo.com</a> ; +995 32 1 37 05 08	4 November, 2016, MRDI	Group meeting	<ul style="list-style-type: none"> <li>- GCF project discussed;</li> <li>- areas of cooperation discussed and preliminary agreed upon: to be as follows: i) guidance and capacity building to municipalities on risk management plans and tools; efficient municipal management (training and capacity building), implementation of structural measures; participation in developing municipal-level response plans.</li> </ul>	
36.	Giorgi Tsakadze	Head of the Department of the Local Self-governance development and Regional Policy						<a href="mailto:g.tsakadze@mrdi.gov.ge">g.tsakadze@mrdi.gov.ge</a> ; +995 577 50 15 20

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
37.	Shalva Khutsishvili	Deputy Minister/Parliamentary Secretary	MIA	<a href="mailto:shalvakhutsishvili@mia.gov.ge">shalvakhutsishvili@mia.gov.ge</a> ; tel: +995 577 29 72 29/office: +995 032 2 41 19 20	4 November, 2016, MIA	Group meeting	<ul style="list-style-type: none"> <li>- Project details discussed;</li> <li>- MIAs latest development on creation of 24/7 Joint Operations Centre (JOP) discussed;</li> <li>- MIA/JOC's role in the project discussed and preliminary agreed upon to be as follows: JOC is well positioned to obtain and process information from NEA, and communicate warning appropriately to the recipients (government agencies, municipalities, public). In this context, MoENRP/NEA could be responsible for obtaining, analysis and supplying information on climate-induced hazards and risks, and the Mol through the Joint Operational Centre will be responsible for communicating and delivery of the warnings. The information and communication system and protocols, SOPs for decision making and communication need to be designed. An interagency working group needs to be established engaging all relevant government agencies. MHEWS for climate induced hazards will need to be integrated into a broader national EWS. Data compatibility needs to be addressed. (GCF Output 2). Mol field staff (policemen, border officers, etc.) could be equipped to contribute to the EWS (reporting on disasters, verification of information from sensor network, etc.). More details on the potential cooperation and synergies will be discussed with the responsible Mol staff member Sophia Beridze upon her availability after 14 November.</li> </ul>
38.	Zurab Chichua	Head of Bilateral and Multilateral Cooperation Unit International Relations Department		<a href="mailto:z.chichua@mia.gov.ge">z.chichua@mia.gov.ge</a> ; tel: <a href="tel:+995322418776">+995 32 2 41 87 76</a> Cell: <a href="tel:+995577526362">+995 577 52 63 62</a>	4 November, 2016- April/May 2017	Phone conversations and e-mail communications	Phone conversations held and a number of e-mails exchanged on MIA's concrete roles in the project, potential sources of co-financing and issuance of the co-funding letter by MIA
					16 December, 2016	Group meeting with representatives of International Relations Department	<ul style="list-style-type: none"> <li>- Project activities and sub-activities related to the last-mile warning and communications, response capacities and multihazard information systems discussed;</li> <li>- MIA's current projects and EWS concept being elaborated by the MIA with participation of various stakeholders discussed;</li> <li>- MIA's role and potential co-funding from the MIA discussed.</li> </ul>
39.	Ramaz Chitanava	Head of the Hydrometeorology Department	NEA, MoENRP	E-mail: <a href="mailto:ramazchitanava@gmail.com">ramazchitanava@gmail.com</a> ; Tel: +995 591 404 070 18	i) 4 November, 2016	i) Group meeting	- 4 <sup>th</sup> of November, 2016 group meeting: justification on radars and drones were presented and discussed; coordination with the MoA and JOC of the MIA discussed; additional equipment needs discussed and agreed upon; cost estimates for the equipment presented and discussed
40.	George Kordzakhia	Deputy Head of the Hydrometeorology Department		<a href="mailto:giakordzakhia@gmail.com">giakordzakhia@gmail.com</a> ; +995 599 14 56 56	ii) 15 February, 2017	ii) Group meeting	- 15 <sup>th</sup> of February 2017 group meeting: NEA's co-funding issues discusses, agrometeorology monitoring and forecasting issues discussed;
						iii) Group meeting	

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
41.	Irakli Megreladze	Head of Hydrometeorological Department (NHMS)		E-mail: <a href="mailto:iramegreldze@gmail.com">iramegreldze@gmail.com</a> ; Mob: <a href="tel:+995591404099">+995591404099</a> Office: <a href="tel:+995322439537">+995322439537</a>	iii) 23 February 2017 iv) November, 2016-April, 2017	iv_ E-mail communications	<ul style="list-style-type: none"> <li>– 23th of February 2017 group meeting: NEAs' co-funding issues discussed, radar issues discussed and agreed upon to remove large radars from the list of equipment to be purchased through GCF funding, location of agrometeorological network agreed upon to be with the NFA with a condition that the data would be shared with NEA</li> <li>– E-mail communications: request on inclusion of additional equipment in GCF proposal received, discussed and agreed upon; co-funding issues and draft letter discussed and agreed upon</li> </ul>
42.	Michael Sutter	International Services Development, Head of Asia, Africa and Americas EUWI+ Project Manager	Austrian Environmental Agency - UBA	E-mail: <a href="mailto:michael.sutter@umweltbundesamt.at">michael.sutter@umweltbundesamt.at</a> Tel: +43 1 31304 5477	December 1, 2016, Tiflis Palace Hotel, Conference Hall	Kick-off workshop of the EUWI+ project	<ul style="list-style-type: none"> <li>- GCF project presented;</li> <li>- cooperation areas between two projects discussed.</li> </ul>
43.	Timothy Turner	EUWI+ Project Technical Coordinator	Thesis Consulting	E-mail: <a href="mailto:trturner@btinternet.com">trturner@btinternet.com</a> Tel.: +38 044 360 8775			
44.	Peep Mardiste	Environmental Affairs Officer	UN Economic Commission for Europe, Environmental Division	<a href="mailto:peep.mardiste@unece.org">peep.mardiste@unece.org</a> Tel: +41 22 917 3448			
45.	Tatiana Efimova	Programme Manager for EECCA	OECD	E-mail: <a href="mailto:tatiana.efimova@oecd.org">tatiana.efimova@oecd.org</a> Tel: +331 45 24 1434			
46.	Philipp Hobenblum	Laboratory equipment procurement	Austrian Environmental Agency - UBA	E-mail: <a href="mailto:philipp.hobenblum@umweltbundesamt.at">philipp.hobenblum@umweltbundesamt.at</a>			
47.	Andreas Scheidleder	Groundwater expert	Austrian Environmental Agency - UBA	E-mail: <a href="mailto:andreas.scheidleder@umweltbundesamt.at">andreas.scheidleder@umweltbundesamt.at</a>			

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
48.	Pierre Henry de Villeneuve	River Basin Management and Planning	International Office of Water - OIEau	E-mail: p.henry-de-villeneuve@oieau.fr			
49.	Yunona Videnina	Public Participation	International Office of Water - OIEau	E-mail: <a href="mailto:yunona.videnina@gmail.com">yunona.videnina@gmail.com</a>			
50.	Zurab Jincharadze	EUWI+ Project Deputy Technical Coordinator	Zoi Environment	E-mail: zurab.jincharadze@gmail.com Tel: +995 593 080 011			
51.	Sophio Beridze	Head of the NATO Integration Division, International Relations Department	MIA	<a href="mailto:sophiko_beridze@mia.gov.ge">sophiko_beridze@mia.gov.ge</a> ; tel: +995 577 224599	16 December, 2016, MIA	Group meeting	<ul style="list-style-type: none"> <li>- Project activities and sub-activities related to the last-mile warning and communications, response capacities and multihazard information systems discussed;</li> <li>- MIA's current projects and EWS concept being elaborated by the MIA with participation of various stakeholders discussed;</li> <li>- MIA's role and potential co-funding from the MIA discussed;</li> <li>- Agreement reached that the MoENRP would send a request letter on cofunding to the MIA.</li> </ul>
52.	Ana Tchanturia	International Relations Department		a.tchanturia@mia.gov.ge			
53.	Tariel Beridze	Deputy Head of Hydro-Meteorological Department	NEA	<a href="mailto:tarielberidze@yahoo.com">tarielberidze@yahoo.com</a>	26 December, 2016, NEA	Group meeting	<ul style="list-style-type: none"> <li>- Conceptual designs prepared by UNDP CO engineering consultant discussed and adjusted/corrected as per NEA representative's comments in particular, for Kobuleti and Kodasheniskhevi projects;</li> <li>- Priorities among projects agreed upon to be as follows: Kobuleti and Kodasheniskhevi projects are of higher priority due to risks and potential impacts;</li> <li>- Agreement reached to resend an updated bill of quantity and O/M costs,</li> </ul>
54.	Dmitri Ukeba	Engineering Consultant	UNDP CO	<a href="mailto:dimitri@btconsult.ge">dimitri@btconsult.ge</a>			
55.	Ivane Tsiklauri	Project Manager	UNDP/AF Rioni Flood Project	<a href="mailto:ivane.tsiklauri@undp.org">ivane.tsiklauri@undp.org</a>			
56.	Giorgi Iakobashvili	Deputy Head	NFA	Tel: +995 599568569	10 January, 2017, NFA	Group meeting	<ul style="list-style-type: none"> <li>- details of the project agromet-related activities discussed, including the number of stations, hosting organization, data to be generated, geographic locations, etc. and preliminary agreement reached to focus on either Shida Kartli or Kvemo Kartli, drought, frosts and other natural hazards and, to purchase around 15 stations to be hosted by NFA</li> <li>- contents of the co-funding/commitment letter from the MoA discussed</li> </ul>
57.	Zurab Lipartia	Deputy Head		Tel: + 995(32) 291 91 68			
58.	Demna Khelaia	Deputy Head		Tel: + 995(32) 291 91 68			
59.	Nikoloz Meskhi	Head of the Phytosanitary Department		<a href="mailto:Nikoloz.meskhi@nfa.gov.ge">Nikoloz.meskhi@nfa.gov.ge</a> ; tel: +995 577080708			

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
					30 January, MoA	Group meeting	<ul style="list-style-type: none"> <li>- Agrometeorology monitoring, forecasting an early warning activity discussed;</li> <li>- Cofunding of the project MoA's side discussed;</li> <li>- Agreement reached to send a letter of request on project co-financing from the MoENRP</li> </ul>
60.	Ekaterine Zviadadze	Head of the Policy Analysis Department	MoA	Office number: (+995 32) 2378045 (ext.:1086) E-mail: <a href="mailto:ekaterine.zviadadze@moa.gov.ge">ekaterine.zviadadze@moa.gov.ge</a>	30 January, 2017	Group meeting	
61.	Marika Gelashvili	Regional Coordination Department		Tel: +995 577080016			
62.	Valerian Mchedlize	Head of the Amelioration and Land Management Department Ministry of Agriculture of Georgia		Office number: (+995 32) 2378019 (ext.:1115) E-mail: <a href="mailto:v.mchedlize@moa.gov.ge">v.mchedlize@moa.gov.ge</a>			
63.	Ioseb Dzmanashvili	Director of corporate sales	NOBLEX Ltd.	Tel: +995 32 2473003, 05 Fax: +995 32 2473015 Mobile: <a href="tel:+995599240600">+995 599 240600</a> E-mail: <a href="mailto:ioseb.dzmanashvili@noblex.ge">ioseb.dzmanashvili@noblex.ge</a>	10-18 January, 2017	Phone conversation; E-mail communications	<ul style="list-style-type: none"> <li>- Specifications of agrometeorological equipment discussed, since NOBLEX conducted procurement of 10 automated agromet stations for NFA/MoA;</li> <li>- Costs of agromet stations discussed;</li> <li>- Costs and specs of agromet stations shared with UNDP CO and MoA</li> </ul>
64.	Alexandre Ediberidze	Director	NOBLEX Ltd.	Tel: +995 32 2473003, 05 Fax: +995 32 2473015 Mobile: <a href="tel:+995599550505">+995 599 550505</a> E-mail: <a href="mailto:alexander.ediberidze@noblex.ge">alexander.ediberidze@noblex.ge</a>			
65.	Gizo Chelidze	Head of the Integrated Management Department	MoENNR	<a href="mailto:g.chelidze@moe.gov.ge">g.chelidze@moe.gov.ge</a>	15 February, 2017	Group meeting	<ul style="list-style-type: none"> <li>- Strategy for soliciting co-funding letters from various responsible parties discussed and agreed upon the MoENRP to take a lead over soliciting such letters;</li> </ul>

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
66.	Nino Tkhilava	Head of the International Relations and Policy Department		<a href="mailto:Nino.tkhilava@moe.gov.ge">Nino.tkhilava@moe.gov.ge</a>			- Co-funding amounts and types of co-funding from MoENRP's side discussed and agreed upon to try to mobilize around US\$ 29-30 million from MoENRP; s side for project co-financing.
67.	Grigol Lazriev	Head of the Climate Change Division		<a href="mailto:g.lazrievi@moe.gov.ge">g.lazrievi@moe.gov.ge</a>			
68.	Tamar Tsivtsivadze	Head of Program in Georgia	SDC	Phone +995 322 25 36 82 / 83 Fax +995 322 25 36 84 International Cooperation <a href="mailto:tbilisi@eda.admin.ch">tbilisi@eda.admin.ch</a>	23 February, 2017	Group meeting, email communications	SDC is launching its new assistance programme in Georgia for 2017-2020. In the framework of the new strategy/programme SDC plans to support the work on hazard mapping (methodology and implementation) and other related regulatory work. These activities have been planned under the new GCF proposal. SDC will consider co-financing of the relevant activities proposed for the GCF project. SDC will also consider UNDP as an implementing partner for their project. UNDP will share with SDC the draft feasibility study and an outline of corresponding activities addressing hazard/risk mapping and regulatory framework. It is important that some preliminary decisions are taken by the end of March.
69.	David Chichinadze	DRR Officer		Phone +995 322 25 36 82 / 83 Fax +995 322 25 36 84 International Cooperation <a href="mailto:tbilisi@eda.admin.ch">tbilisi@eda.admin.ch</a>			
70.	Olivier Burki	Regional Director, South Caucasus	SDC	Tel: +995 32 225 3682 Email: <a href="mailto:Olivier.burki@eda.admin.ch">Olivier.burki@eda.admin.ch</a>	4 April, 2017	Vis-a vis meeting	Follow up meeting to discuss the possibility of partnering with SDC, as noted above; detailed discussion on the content of the GCF proposal; overall agreement on partnership though, SDC will make final decision, including on partnership with UNDP once its strategy is approved by mid-Summer;
71.	Irakli Matkava	First Deputy Minister	MRDI	Email: <a href="mailto:i.matkava@mrdi.gov.ge">i.matkava@mrdi.gov.ge</a> Tel: +995 32 22510709 Mob: +995 591 744774	19 April, 2017	Group meeting	<ul style="list-style-type: none"> <li>- 14 Structural measures discussed and MRDI's portion of co-funding preliminary agreed upon to be in the range of 50-70% of total costs;</li> <li>- Agreement reached to provide co-funding letter by the end of the next week and before its submission the draft would be shared with UNDP for crosschecking;</li> <li>- Agreement reached that that MRDI would facilitate obtaining of co-financing letters from municipalities (good news indeed) confirming O&amp;M costs after flood protection measures are in place.</li> </ul>
72.	Mamuka Shalikashvili	Acting Head of Division for Relations with Infrastructure Development Partners		Tel.: +995 32 2 510 731 Mob.: +995 577 477 572 E-mail: <a href="mailto:m.shalikashvili@mrdi.gov.ge">m.shalikashvili@mrdi.gov.ge</a>			

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
73.	Archil Nizharadze	Head of Operational Department	EMA Emergency Management Agency	Email: <a href="mailto:cepgeorgia@mia.gov.ge">cepgeorgia@mia.gov.ge</a>	1 May, 2017	Group meeting	The meeting MIA, NEA, MoENRP and UNDP representatives; EMA required clarification on the content of the Proposal that relates to EMA's mandate; the issue of cofounding was discussed; clarification provided and EMA confirmed its readiness to partner with the project and also provide co-financing for the related component of the project and provide MIA with required input for the co-financing letter
74.	Mamuka Tavadze	Deputy Head of Samtredia Municipality	Samtredia Municipality	<a href="mailto:m_tavadze@mail.ru">m_tavadze@mail.ru</a>	8 September, 2016	Group meeting	Meeting at Samtredia municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Samtredia municipality. After site visit 5 high flood risk sites were selected. Maintenance of future flood defense structures as well discussed and verbal confirmation received about readiness of the municipality on implementation maintenance of structures.
75.	Varaz Gabedava	Head of Municipality	Khobi Municipality	<a href="mailto:varazgabedava@gmail.com">varazgabedava@gmail.com</a>	8 September, 2016	Group meeting	Meeting at Khobi municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Khobi municipality. Three high flood risk sites on Rioni river visited and both selected for the long list. Local authorities assured on future maintenance of flood defense structures.
76.	Zurab Pataraiia	Deputy Head of Municipality	Senaki Municipality	<a href="mailto:Zurab_pataraiia@mail.ru">Zurab_pataraiia@mail.ru</a>	9 September, 2016	Group meeting	Meeting at Senaki municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Senaki municipality. Three high flood risk sites were visited and selected. Maintenance of future flood defense structures was discussed and confirmation received from local authorities on their maintenance.
77.	Vakhtang Gabelia	Deputy Head of Municipality	Abasha Municipality	<a href="mailto:gamgeobaabasha@yahoo.com">gamgeobaabasha@yahoo.com</a>	9 September, 2016	Group meeting	Meeting at Abasha municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Abasha municipality. Four high flood risk sites were selected. Maintenance of the future flood defense structures discussed and agreed that the municipality will reflect it in its future budget.
78.	Sulkhan Evgenidze	Head of Municipality	Kobuleti	<a href="mailto:gamgeoba@kobuleti.org.ge">gamgeoba@kobuleti.org.ge</a>	9 September, 2016	Group meeting	Meeting at Kobuleti municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Kobuleti. After site visit one high flood risk site was selected. Future maintenance of the structure discussed and agreed that further consultation is needed with Georgian Amelioration on this issue.
79.	Tariel Maisuradze	Head of economic development unit	Gori	<a href="mailto:tariel.maisuradze72@gmail.com">tariel.maisuradze72@gmail.com</a>	10 September, 2016	Group meeting	Meeting at Gori municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Gori. Two high flood risk sites were selected. Maintenance of future flood defense structures discussed and agreed that the municipality will provide such letter confirming acceptance of future maintenance of the structures.
80.	Karlo Jamburia	Head of Municipality	Lagodekhi Municipality	<a href="mailto:lag_gamgeoba@yahoo.com">lag_gamgeoba@yahoo.com</a>	12 September, 2016	Group meeting	Meeting at Lagodekhi municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Lagodekhi municipality. Two high flood risk sites were selected. Maintenance of future flood defense structures discussed and agreed that the municipality will take such responsibility.

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
81.	David Potskverishvili	Deputy Head of Municipality	Akhmeta Municipality	<a href="mailto:d.focxverishvili@gmail.com">d.focxverishvili@gmail.com</a>	12 September, 2016	Group meeting	Meeting at Akhmeta municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Akhmetaa municipality. One high flood risk site was selected. Maintenance of future flood defense structures discussed and confirmation received about readiness of the municipality on implementation future maintenance of the structure.
82.	Alexandre Sachishvili	Deputy Head	Telavi City Hall	<a href="mailto:aka-sachishvili@mail.ru">aka-sachishvili@mail.ru</a>	13 September, 2016	Group meeting	Meeting at Telavi city hall. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Telavi. Two high flood risk sites were selected. Maintenance of future flood defense structures discussed and agreed that the city hall will take such responsibility.
83.	Berdo Asanishvili	Deputy Head of Municipality	Sighnaghi Municipality	<a href="mailto:signagi_gamgeoba@yahoo.com">signagi_gamgeoba@yahoo.com</a>	13 September, 2016	Group meeting	Meeting at Sighnaghi municipality. Aim of the meeting was to introduce local authorities about prospective project and select high flood risk sites in Sighnaghi municipality. Four high flood risk sites were selected. Maintenance of future flood defense structures discussed and confirmation received about readiness of the municipality on implementation maintenance of the structures.

**Table 2. List of Stakeholders consulted within the framework of environmental and social impact assessment in Western Georgia**

#	Name	Settlement, organization	Contact details (Phone)
<b>Samtredia</b>			
1	Rostom Tavadze	vil. Ilori, depuri gamebeli	599 71 17 11
2	Giorgi Bochorishvili	vil. Ilori, head of department	571 07 05 79
3	David Shanidze	vil. Ilori, local resident	598 10 38 54
4	Mamuka Chkhaidze	vil. Ilori, local resident	579 11 73 13
5	Otar Margiani	vil. Ilori, local resident	599 26 47 89
<b>Kobuleti, Achkva project</b>			
5	Zaza Kaikatsishvili	Head of infrastructure service, Kobuleti administration	599 85 85 48
6	David Zoidze	Member – infrastructure service, Kobuleti administration	
7	Lashs Chincharadze	Kobuleti, local resident	599 80 25 08
8	Amiran Verdzadze	Kobuleti, local resident	593 36 28 73
9	David Zakareishvili	Kobuleti, local resident	555 94 99 00
10	Makhvala Shanidze	Kobuleti, local resident	
11	Nino Motskhobili	Kobuleti, local resident	555 22 13 57
12	Lasha Kakaladze	Kobuleti, local resident	579 22 25 42
13	Nana Nutsubidze	Kobuleti, local resident	592 12 28 70
<b>Abasha municipality, Gagma Kodori project</b>			
14	Nestor Dzidziguri	vil. Pirveli Maisi, local resident	599 85 57 39
15	David Dzidziguri	vil. Pirelli Maisi, local resident	593 22 98 27
16	Aleko Komakhidze	vil. Pirelli Maisi, local resident	
17	David Komakhidze	vil. Pirelli Maisi, local resident	593 37 64 88
18	Giorgi Dzidzigrkva	vil. Pirelli Maisi, local resident	593 19 10 12
19	Bakar Shelia	vil. Gaghma Kodori, deputy	577 60 33 83
20	Genadi Kvantaliani	vil. Gaghma Kodori, local resident	551 24 23 43
21	Giorgi Khomeriki	vil. Gaghma Kodori, local resident	598 43 30 02
<b>Samtredia municipality, Vazisubani project</b>			
22	Aleko Botsvadze	vil. Tolebi, representative of administration	599 34 52 42
23	Nana Dzeladze	vil. Tolebi, local resident	
24	Dato Shanidze	vil. Tolebi, local resident	599 46 10 31
25	Tina Siradze	vil. Vazisubani	
26	Mutraz Siradze	vil. Vazisubani	557 75 49 47
27	Rostom Tavadze	vil. Vazisubani, deputy gamebeli	599 71 17 11
28	Giorgi Bochorishvili	vil. Vazisubani, head of infrastructure service	571 07 05 79
<b>Khobi municipality, Patara Poti, Patara Poti and Sagvichio projects</b>			
29	Darejan Bachilava	Patara Poti, representative of local administration (rtsmunebuli)	599 04 40 65
30	Mtvarisa Bartia	Patara Poti, representative of gamebeli	599 87 04 65
31	Goderdze Khurtsilava	Patara Poti, local resident	
32	David Ugrekhelidze	Patara Poti, local resident	
33	Nino Basilaia	Patara Poti, local resident	599 19 69 22
34	Vitali Gvichia	vil. Sagvichio, administration representative	577 95 94 88
35	Dato Gvichia	vil. Sagvichio, local resident	574 11 27 97
36	Marine Kiladze	vil. Sagvichio, local resident	599 87 04 67
37	Giorgi Megrelishvili	vil. Sagvichio, local resident	

#	Name	Settlement, organization	Contact details (Phone)
38	Tariel Shamanadze	vil. Sagvichio, local resident	
39	Murman Shanidze	vil. Sagvichio, local resident	
<b>Senaki municipality, Chaladidi project</b>			
40	Natia (Vardo) Chikobava	vil. Zemo Chaladidi	59820 15 94
41	Irakli Rusia	vil. Zemo Chaladidi, gamgebeli representative	599 18 81 81
42	Malkhaz Abramia	vil. Zemo Chaladidi, local resident	589 53 41 67
43	Badri Khurua	vil. Zemo Chaladidi, local resident (Siriachkoni)	551 09 92 68

**Table 3. List of Stakeholders consulted within the framework of environmental and social impact assessment in Eastern Georgia**

#	Name	Settlement, organization	Contact details (Phone)
<b>Signhaghi municipality, Milari project</b>			
1	Zakaria Alkhanishvili	vil. Anaga, gamgebeli	577 93 67 61
2	Irma Ghviniasvili	vil. Dzveli Anaga, local resident	599 85 56 38
3	Zakaria Gogilashvili	Milari, farmer	599 55 62 59
4	Mikheil Gogolashvili	vil. Anaga, farmer	595 53 71 21
<b>Lagodekhi municipality, Lagodekhistskali Project</b>			
5	Karlo Jamburia	Lagodekhi, gamgebeli	591 41 00 41
6	Sandro Shavlakadze	Lagodekhi, infrastructure service	555 18 65 98
7	Givi Maisuradze	Lagodekhi resident	551 12 86 12
8	Valeri Maisuradze	Lagodekhi resident	597 70 33 86
9	Valeri Iashvili	Lagodekhi resident	555 10 71 47
10	Irma Adamashvili	Lagodekhi resident	598 30 29 85
11	Susana Natroshvili	Lagodekhi resident	7 671 32 02
12	Ramas Zikharulidze	Tbilisi	598 68 88 99
<b>Akhmeta municipality, Alaverdi/Khodasheniskshevi project</b>			
13	Mikheil Meskhi	Alaverdi resident	599 51 37 33
14	David Nareklisvili	Alaverdi resident	558 14 55 67
<b>Gori municipality, Gori project</b>			
15	Nina Gigauri	resident, Tsmindatskali district resident, Gori	598 76 54 01
16	Inga Lelashvili	resident, Tsmindatskali district resident, Gori	595 91 09 14
17	Iago Tsiklauri	Gori, head of infrastructure service	599 85 84 24
18	Zurab Jalaghonia	Gori, head of architecture service	599 85 18 33

## **Annex J: Gender Analysis and Action Plan**

### **Introduction**

1. This Gender Analysis and Action Plan has been prepared for the submission to the Green Climate Fund with the proposal “Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”. This assessment aims to provide an overview of the gender situation in Georgia, identify gender issues that may be relevant to the project, and to examine potential gender mainstreaming opportunities. Individual needs and contexts in a disaster situation are examined through the lenses of vulnerability, visibility and voice. The analysis follows social vulnerability approach and further defines whose voice is seen as the default one, and whose is the most visible perspective. The assessment was based on available data from Statistical Department of Georgia, studies conducted by the Government of Georgia, international organizations, and NGOs.
2. The GCF project supports the commitment of the Georgian Government (GoG) to avoid losses of lives and to reduce economic and infrastructure losses caused by climate-induced hydro meteorological disasters. The project will achieve this by nation-wide scaling-up of the Multi-Hazard Early Warning System (MHEWS), setting up capacities for improved use of climate information at all level of decision making, and improving adaptive capacities of the most vulnerable communities. The existing barriers include an incomplete risk knowledge and insufficient capacities to generate, analyze, deliver and utilize climate risk information for decision making and resilient development. The project will improve resilience of up to 1.7 Million people (40% of the population) including in the most vulnerable communities in mountainous rural areas as well as densely populated urban areas. The project will scale-up successful prototypes tested under the UNDP flood risk management project in Georgia’s Rioni River Basin.
3. While it is noted that the Gender Analysis and Action Plan should specifically identify and analyze the most critical issues relevant to the project and whether the needs and priorities of an equal number of women/girls/men/boys are being assessed, this Gender Analysis and Action Plan has been prepared without in-depth on-ground consultation and is based on available published and grey literature. Further a full institutional gender analysis has not been undertaken. During project implementation, stakeholder consultation will be undertaken to assess the components in relation to gender, age and other important matters. There may be a need for the Gender Analysis and Action Plan to be modified depending on stakeholder consultation prior to and during the implementation of the project.

### **Climate-driven natural disasters in Georgia**

4. There are four main climate-induced hazards experienced in Georgia, all of which have been observed to be intensifying and increasing in frequency over time. They are floods (due to heavy rainfall and snowmelt), hydrologically-induced geological hazards (including landslides, mudflow, debris flows), droughts and severe winds and hailstorms. Coupled with significant levels of exposure and vulnerability, these events have a substantial negative impact on the national economy and people. More than 80% of the victims, economic damage caused by disasters, and eco-migrants come from highland areas resulting in abandonment of villages. The most recent devastating flooding and landslide disaster occurred in June of 2015 affecting Georgia’s capital Tbilisi (population over 1 million) and had significant socio-economic consequences for the Georgia’s capital: 19 people killed, 3 people missing, 67 families displaced, and around 700 people directly affected overall. The economic impact was equally high: USD 24.3 million in physical damage and USD 4.37 million in financial losses mainly within the housing, transportation, water management sectors.
5. Georgia’s Third National Communication to the UNFCCC (TNC) provides an evidence of the increasing impact of climate change on the frequency and severity of hydrological and meteorological disasters. In the recent past, the drought cycle of Georgia has changed from 15-20 years to 6 years; in 2007-2009 the frequency of strong

winds increased to 6-12 times per year compared to 1 to 4 times per year in the previous decade; there was double the total number of recorded floods during the period 1992-2013 compared to 1960-1991; there was 4 times the total number of recorded landslides during the period 1992-2013 compared to 1960-1991. The TNC also forecasts future warming and changes in seasonality and intensity of rainfall across the country that will result in further increased flood and rainfall-induced landslide risks, frequency and severity of winds and hail storms, and droughts. The TNC long term climate change scenarios indicate more extremes as prolonged rainfall events, concentrated in a short period of time with the potential to generate more runoff during these short periods, thereby increasing the potential for flash flooding (due to high peak river flows), mudflows and landslides.

### Existing Gender Inequality in Georgia

6. Gender equality is defined as the “stage of human social development at which rights, responsibilities and opportunities of individuals will not be determined by the fact of being male or female” (Lopez-Claros & Zahidi, 2005.p.1). According to the UNDP Gender Inequality Index, measuring inequalities in reproductive health, empowerment and economic status, in 2014 Georgia ranked as 77 among 188 countries (UNDP, 2015). Slightly worse is the position of the country according to the other composite, Gender Gap Index developed by World Economic Forum (WEF, 2015) and measuring gender gaps in regard to economic participation and opportunities, educational attainment, health and survival, and political empowerment. It ranks Georgia as 82 out of 145 countries. On the political empowerment sub index Georgia is ranked at 120. Women’s representation in legislative bodies is small. Comprising 52.3 percent of population, in 2014 women constituted only 11.4 percent of the members of the parliament. Similar is women’s representation in local councils. Women constitute only 11.8 percent in local representative bodies. Several attempts of initiative groups outside and inside the Parliament to introduce quota system for securing the membership in Parliament for women did not succeed, despite successful record of quota system in more than 130 countries around the globe. Twenty-one local councils have a position of an adviser on gender issues, although the position is not backed by the salary and instead in fact is an additional duty of one of a council employees. It can be stated that there is a gender balance among judges, 51 percent of them are women with the Chairperson of Supreme Court being female.
7. Much similar is situation in executive power: 16 percent of ministers and 15 percent of deputy ministers is women. Only three ministries have designated persons to deal with gender equality, in other ministries this task is usually assigned to a staff member as additional duty. In ministries, as can be seen from Table 1 men outnumber women. Women comprise 18.2 percent of all the staff of existing 16 Ministries and 3 offices of state Ministers’. Their distribution clearly demonstrates gender stereotypes of male and female professions, as women’s share among the staff is high in the Ministry of Education and Science (72.3 percent), Ministry of Labour, Health and Social Affairs (69.2 percent) and Ministry of Culture and Monument Protection (62.3 percent) and extremely low in the Ministry of Internal Affairs (14.3 percent), Ministry of Corrections (34.4 percent) and Ministry of Agriculture (35.5 percent). Comparable to average ratio is the ratio of women holding managerial positions in ministries, which accounts to 19.0 percent.

**Table 1. Gender composition of Ministries**

No	Executive Body	Number of Employees	Share of women employees %	Number of managerial Position	Share of women on managerial positions %
1	Office of State Minister for Diaspora Issues	35	51.4	6	16.7
2	Office of State Minister for Reconciliation and Civic Equality	36	58.5	7	71.4

No	Executive Body	Number of Employees	Share of women employees %	Number of managerial Position	Share of women on managerial positions %
3	Office of State Minister for European and Euro-Atlantic Integration	55	52.7	10	100
4	Ministry of Corrections	3,796	34.4	532	7.9
5	Ministry of Energy	84	51.2	20	30.0
6	Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees	255	49.0	49	28.6
7	Ministry of Culture and Monument Protection	191	62.3	42	57.1
8	Ministry of Environment and Natural Resources Protection	157	56.7	41	53.7
9	Ministry of Labour, Health and Social Affairs	315	69.2	39	51.3
10	Ministry of Internal Affairs	46,878	14.3	889	5.6
11	Ministry of Finance	308	57.5	50	17 34.0
12	Ministry of Sport and Youth Affairs	107	39.2	28	28.6
13	Ministry of Agriculture	380	35.5	121	33 27.3
14	Ministry of Foreign Affairs	276	60.5	85	43.5
15	Ministry of Regional Development and infrastructure	135	44.4	36	25.0
16	Ministry of Justice	169	58.0	56	35.7
17	Ministry of Defense	428	47.0	109	35.8
18	Ministry of Economy and Sustainable Development	205	52.7	60	48.3
19	Ministry of Education and Science	307	72.3	54	70.4
	Total	54,117	18.2	2,234	19.0%

**Source: Calculations based on “Women’s rights and Gender Equality”. Ombudsmen’s Office, 2015**

8. The picture of total gender composition in the staff as well as in managerial positions is skewed by disproportional size of the two male dominated ministries, of Internal Affairs and Corrections. When these ministries are excluded from the count, women constitute more than half (54.4 percent) of the staff and less than half (40.8 percent) are in managerial positions in remaining 17 entities.
9. Corresponding to official statistics is the perception of Georgia’s population on overall gender equality existing in the country. Less than one fourth of the population (25 percent of men and 21 percent of women) thinks that there is gender equality in Georgia (NDI, 2014). World Value Survey (WVS) which was carried out in Georgia in 1996, 2009 and 2014 demonstrates some progress. Disagreement to two statements concerning gender equality asked in all the three waves “On the whole men make better political leaders than women do” and “University is more important for a boy than for a girl” clearly demonstrates a linear increase over time and hence increase of the share of those, who adhere to gender equality. Difference in subscription to equality is not confined only to historical time. Inspection of the data of 2014 WVS shows two more trends, equality is more common among women than men and among the young generation.

10. Gender stereotypes, lack of awareness of the existence of opportunities due to the upbringing in a patriarchal manner, institutional barriers, access to information, “time-poverty”, economic weakness, limited mobility, all of these can restrict the choices women make and result in inequality of opportunities that women face (Elson,1991; Sumbadze, 2008). This explains why women often are devoid of opportunities to make informed choices, escape their underprivileged condition and engage fully in public life, have a say in family.
11. Engagement of women in public life is small, and is smaller in rural than urban setting. Women rarely participate in consultations in regions held by the Ministry of Regional Development and Infrastructure in regard to planning regional development programs. That can be assumed to be the reason for so to say “male agenda” of the program, resulting in scarcity of funds allocated to pertinent for women issues such as kindergartens or supply of potable water (Ombudsmen’s office, 2015).
12. Marriage rests on assumed duties and responsibilities of the partners, which are in a great extent defined by cultural norms. Division of roles in Georgian families is consistent with the world-wide allocation of primary functions of breadwinner and decision maker to men, and family caretaker to women (Narayan, 2000), corresponding to distinction between instrumental roles related to survival assigned to men, and expressive roles related to maintenance of morale, assigned to women (Parsons, 1965).
13. Women’s decision-making power is restricted in private realm. It seems still to be backed by the norm. Only half of the population (62 percent women and 37 percent men) thinks that husband and wife should together make decisions in the family, while 48 percent (36 percent of women and 62 percent of men) considers that decision-making power should rest with men (UNWOMEN, 2013).
14. Women lack power in decisions on a number of important family issues. Women and men report having equal power on decisions over shopping for everyday needs, spending leisure and on decisions over children’s upbringing, but men’s power considerably exceeds women on decision about employment arrangements, often restricting women’s participation in work force. This does not allow women to gain power, as economic independence often determines her power in the family (Gender and Generation Survey, 2010).
15. Next to decision-making power, time poverty is one more problem that women face. Women work much more at home than men. Overall involvement of men in household duties in Georgia is rather low. Only 23.7 percent of chores are done by men only, compared to 46.3 percent performed solely by women (Gender and Generation Survey, 2010). Comparison of the number of females and males engaged in performing household tasks can serve as a demonstration of women’s work overload. Making repairs and paying bills are the only tasks where men outnumber women.

**Table 2. Ranking of the engagement of women in household tasks**

No	Task	Women %	Men %
1	Cleaning house No 1081	96	4
2	Washing No 1081	95	4
3	Cooking No 1081	93	5
4	Caring for children No 1009	87	4
5	Helping child with lessons No 1009	81	5
6	Caring for a sick family member No 1081	77	5
7	Taking child to school/kindergarten No 1009	66	9
8	Taking out garbage No 1081	52	19
9	Shopping No 1081	32	24

No	Task	Women %	Men %
10	Paying bills, No 1081	19	44
11	Making repairs in the house No 1081	7	67

16. Women are not only more than men busy in doing household tasks, but according to the survey results they are engaged in agriculture more days a year (344.2) than men do (263.9) (UNWOMEN, 2016).
17. Early marriage is one more manifestation of gender inequality, as it much more frequently occurs among girls than boys. In 2015 611 marriages were registered of persons aged 16-18, 95 percent of minors being girls. In 2015 among the parents of new-borns 1372 were under-aged mothers and 42 fathers. Early marriage very often is the reason of leaving school, resulting in the poor education outcomes for married women, negatively reflecting on their human capital. In 2015 408 pupils aged 13-17 left schools because of marriage.
18. Gender based violence is an extreme manifestation of gender inequality. Registration of cases in fact began since the adoption of law on Elimination of Domestic Violence, Support and Protection to its Victims in 2006. Country is witnessing increase of incidents. Statistics are alarming. In 2014 the Emergency and Operative Response Center registered 9,260 and in 2015 15,910 notifications related to domestic violence. 350 cases in 2014 and 728 cases in 2015 were initiated under the Criminal Code. 902 restrictive and 87 protective orders were issued in 2014 and 2,726 and 173 correspondingly in 2015. 28 cases of femicide or attempted femicide were registered in 2015. (Ombudsmen’s office, 2015; UNWOMEN, 2015). In 2015 93 percent of offenders were men, among them 61 percent aged over 45, while 87 percent of victims were women, among them 56 percent aged 25-44.
19. Georgia fares better in human capital than in empowerment, but gender gap is considerable. Life expectancy of females’ is 77.2, while males’ is 68.6. Georgia has a good record in regard to education. Girls constitute 47 percent of basic level and 49 percent of high school graduates. Girls outperform boys in National Exams in almost all subjects, including STEM (Sumbadze, 2015). Share of girls and boys is similar among VET graduates, but girls’ share is bigger among University students (54 percent).
20. It can be concluded that despite some progress, achievement of gender equality remains a serious challenge for the country.

#### **Legal and Administrative Framework Protecting Women and Promoting Gender Equality Legislation**

21. Legal framework warrants gender equality. Equal rights of men and women in Georgia are spelled out in the constitution and in the laws. In keeping with the country’s endeavour towards European integration and sharing of universal values, since 1994, Georgia has been a signatory of major international conventions and treaties based on human-rights approach to gender equality:
  - The Convention on the Elimination of All Forms of Discrimination against Women” (CEDAW) (1994)
  - Five-year action plan for the advancement and empowerment of women (Beijing Platform of Action) (1995)
  - Millennium Development Goals with two goals MDG3 and MDG specifically focused on gender equality (2000)
  - Council of Europe Convention on Preventing and Combating Violence Against Women (Istanbul Convention) (2014)

- Sustainable Development Goals (SDG) agenda with Goal 5, focused on achieving Gender Equality (2015), with gender equality as a cross-cutting principle in the achievement of all goals.
22. Georgia regularly presents official and shadow country reports to CEDAW committee.
23. A number of national laws has been adopted by the Parliament of Georgia focused on achieving gender equality in the country:
- The Law on Combating Trafficking (2006)
  - The Law on the Elimination of Domestic Violence, Protection and Assistance to the Victims of Domestic Violence (2006)
  - The Law on Gender Equality (2010)
  - The law on Elimination of all forms of Discrimination (2014)
24. Implementation of the laws are supported by corresponding Action Plans. Several amendments to laws were adopted in 2015 and 2016 that were aimed at gender equality. Amendment No 4087 to “Local Self-governance Code” demands gender balance in community meetings and Civic Council membership. Community meetings are required to have equal number of women and men. Among members of Civic Council there should be no less than one-third of persons of one sex. Restrictions to early marriages was initiated by Ombudsmen’s office. Amendment allows marriage registration of persons aged 16-18 only by the permission of the court.

#### **Gender Issues in Addressing Vulnerability to Climate and Disaster Risks in Georgia**

25. The project aims at reducing vulnerability of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. For achieving its objectives and targeting the GCF assistance the project employs social vulnerability approach. The various elements of this approach are discussed below in the context of gender equality and gender mainstreaming.
26. Natural disasters in most cases are sudden, unpredicted, uncontrolled and acute, rarely lasting more than few days. Impacts of a disaster is determined both by the character and severity of the event itself, as well as by individual’s assets, material and other parameters constituting vulnerability. Severity of impact of natural hazards are often measured by the degree to which functioning of individuals, groups or organizations is disrupted. The disruption can be caused by death of family member or friends, displacement, injury, separation from family and community, damage to vegetation and infrastructure, epidemics of communicable diseases, loss of land, house, crops, livestock, productive assets, and other property, loss of employment and trade, damage to infrastructure.
27. Vulnerability is defined as “the conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards” (UN internal strategy for disaster reduction). The vulnerability is determined by the material and social assets that individuals and communities possess. The effect of possessing resources to a different degree is evident at all phases of disaster cycle, i.e. protection, response, impact and recovery.
28. The vulnerability of households also depends on their composition. Gender and age of household members, number of dependents and persons with disabilities, economic status, human, social and political capital - all have an effect on protection from, response to and impact or recovery from natural disasters. Households can be nuclear, or three or four generational, men headed or women headed, consisting of only a woman or a man. In all phases of disaster cycle it is important to consider composition of households and the ratio of dependents,

these being children, seniors and persons with disabilities (PWD). Concept of vulnerability is closely linked with resilience - “the capacity of a system to maintain its basic functions and structures in time of shocks and perturbations” (Birdman, 2006,15)

29. Social vulnerability approach to disasters emphasizes the roles of social, economic and political relations, it describes social distribution of risks: as “some groups in society are more prone than others to damage, loss, and suffering in the context of differing hazards” (Blake, et al 1994,9). In dealing with disasters next to their physical impact the social conditions that underlie different outcomes should be taken into consideration. Households rather than individuals should be taken as a unit for intervention strategies.
30. Gender intersects with other characteristics such as poverty, disability, age, seniority and ethnic minority – which rarely act alone – to exacerbate inequality and vulnerability.

**Gender:**

31. Women are more vulnerable to natural hazards than men. Their vulnerability is especially high in women-headed and one-member households consisting of women. By January 2015 population of Georgia consisted of 3,729 500 persons, among them 47.7 percent men and 52.3 percent women. Different is the gender composition of population across the age groups. Women’s share is higher among those of productive age, and elder generation. Women constitute 47.4 percent (of total 649.100) of 0-14 years old, 51.5 percent (of total 2,651 300) of persons of productive age, i.e. 15-64 olds, and 62.2 percent (of total 519.100) of elderly, i.e. aged 65+. One third of households (33.2 percent) are headed by women, and twice that number, 66.8 percent are headed by men. The portion of women headed households is bigger in urban (36.6 percent) than rural locations (29.8 percent). (GEOSTAT).
32. Material resources: Poverty is more widely spread among women. Due to their bigger share, women constitute 64.2 percent of beneficiaries of age determined pension package. But they also outnumber men among 421,387 of state subsistence allowance beneficiaries (55.1 percent). More men (67 percent) than women (51.0 percent) are employed, moreover women earn much less, on average monthly 618 GEL, than men, who earn 980 GEL. That’s why women are more dependent on natural resources for subsistence than men. Compared to men, women own less property and productive assets. Especially vulnerable are women headed households (WB, 2016).
33. Human capital: Human capital comprises of labour power, health and nutrition status, skills and knowledge of an individual. On all these constituent parts, women fare poorer than men. Although women’s life expectancy in Georgia exceeds men’s, 77.2 years to 68.6 years in 2014, women have in general more health related problems than men. Due to higher longevity, as 62.2 percent among those over 65 are women, they more than men are expected to have problems associated with functioning. Women’s health is also under higher risk than men’s due to being victims of domestic violence. In 2014, 742 women and 87 men were registered as victims of domestic violence and 690 men and 60 women as perpetrators. Men’s health is threatened by different type of violence, as they are victims of crime more often than women.
34. Social capital: Social capital comprises of social trust, norms and networks, that can be drawn for solving problems. Social trust is rather low in the country. According to 2014 World Value Survey, only 9.8 percent of population (10.1 percent men and 7.7 percent women) believed that others can be trusted (WVS, 2014). Social support is estimated as high, but disasters increase the need for social support at the same time decreasing its availability due to the increase of demand. Low is participation of population in solving pertinent problems and the membership in voluntary organizations, with the only exception of church (CRRC, 2015 CB dataset)

35. **Political capital:** Political capital is defined as an ability to influence policy and processes of government. Women in the country are very poorly represented at all levels and spheres of consultations and decision-making. That means that 53.2 percent of populations' voice is hardly heard.

**Poverty:**

36. Georgia has been recently upgraded by the WB to an upper middle-income status, ranking 76th on the Human Development Index (UNDP, 2015). However, despite observed economic growth, a substantial part of the population is still living in poverty. According to the recent World Bank study (WB, 2016) 32 percent of population is estimated to be below the poverty line, i.e. spending 2.5 or less USD a day and only 7 percent of population is considered as being middle class, consuming 10USD or more a day. Households headed by women, big size families and families with children under 15 are particularly vulnerable to poverty. There are also regional disparities in poverty rates. Besides an individual poverty the poverty of community exacerbates the situation.

**Table 3. Poverty Headcount by Regions (2.5USD a day)**

No	Region	Percent
1	Shida Kartli	51.9
2	Mtsketa-Mtianeti	49.3
3	Guria	45.3
4	Kvemo Kartli	42.4
5	Samegrelo & Zemo Svaneti	36.8
6	Kakheti	35.3
7	Racha-Lechkhumi & Kvemo Svaneti	34.6
8	Imereti	34.6
9	Ajara	31.9
10	Tbilisi	18.6
11	Samtskhe-Javakheti	17.6

Source: WB, 2016

37. Rural poverty is bigger than urban. 18.8 percent of rural and 14.3 percent of urban dwellers are qualified as persistent poor (WB, 2016). Some groups of the population are particularly disadvantaged regarding access to basic services and social inclusion. For example, as a result of the wars in the 1990s in South Ossetia and Abkhazia and the 2008 Georgian-Russian conflict, Georgia currently counts 258,595 IDPs out of a total population of 3.72 million. The inadequate housing conditions and high levels of unemployment<sup>30</sup> comprise the most pressing issues for IPDs. Additionally, in Georgia children are at a higher risk of poverty than any other age group. Households with children are poorer than those without children, they comprise 78 percent of Households living in extreme poverty, the higher the number of children in the household, the greater the poverty risk<sup>31</sup>. All these factors contribute directly to reduced adaptation and coping capacities of the vulnerable groups.

<sup>30</sup>Economic and Social Vulnerability in Georgia, UNDP 2012

<sup>31</sup>UNICEF, Reducing child poverty 2012

38. Poor may not lose more material property in amount, but the loss is significantly more proportionally to their assets. Poorer live in sub-standard houses, that are more prone to the effects of disaster. Poverty, exacerbated by effects of disaster pushes population abroad. As migration possibilities to Russia, where men were occupied mostly in construction works became limited, while demand for domestic labour increased in EU countries, more and more women become economic migrants.

**Age, seniority and disability:**

39. Among the country’s population 649,100 persons are aged under 15 and 519,100 over 65. That means that 1168,200 persons or 31.3 percent is dependent by age. Among elderly high is the ratio of those with functioning disabilities, such as moving, hearing, seeing, cognitive functioning and. self-care.

**Table 4. Age distribution of population**

Age Group	Women	Men	Total
0-14			
Number	307 700	341 400	649 100
Percent	47.4	52.6	100
15-64			
Number	1,320 700	1,240 600	2,561 300
Percent	51.6	48.4	100
65+			
Number	322 600	196 500	519 100
Percent	62.2	37.8	100
Total			
Number	1,951 000		
Percent			

**Table 5. Share of age groups in total population**

Age Group	Total
0-14	
Number	649 100
Percent	17.40
15-64	
Number	2,561 300
Percent	68.68
65+	
Number	519 100
Percent	13.92
Total	
Number	3, 729 500
Percent	100

**Source: calculated based on 2014 Census data**

40. Isolated living arrangement, diminished social networks, lower access to information (e.g. use of internet, mobile applications), limited physical and cognitive capabilities restrict access and adequate perception of warnings by elderly. As a result, they often do not respond to warning. They are also reluctant to be separated from normal/accustomed surroundings and fear the unknown. Sensory impairments, mobility problems, reduced thermoregulatory capacity in the elderly make them more susceptible to the effects of extremely hot or cold temperatures. The ability to survive injury also decreases with age. These factors explain higher death rate among elderly due to disasters. At the disaster warning, there is a high chance that children be separated from parents, being at school or kinder-garden.

41. By October 2015, 123,607 (3.3 percent of total population) was registered as having disability status. The distribution of PWDs differ across regions, the biggest share is concentrated in Racha-Lechkhumi and Kvemo Svaneti, Imereti and Ajara regions.

**Table 6. Ranking of PWDs by their proportion to population by regions**

No	Region	% of population	Number of PWDs
1	Racha-Lechkhumi and kvemo Svaneti	4.8	1,539
2	Imereti	4.3	24,008
3	Ajara	4.3	14,412
4	Guria	4.0	4,543
5	Shida Kartli	3.9	10,263
6	Samegrelo-Zemo Svaneti	3.8	12,737
7	Kakheti	3.3	10,684
8	Samtskhe-Javakheti	2.9	4,728
9	Mtskheta-Mtianeti	2.9	2,752
10	Tbilisi	2.5	28,1905
11	Kvemo Kartli	2.3	9,746
	Total	3.3	123,607

**Source: Agency for Social Services**

42. People with disabilities are less likely to be employed and have University education and hence are more prone to poverty. Despite deterioration of functioning many seniors do not have a disability status, but are highly vulnerable to impacts of disasters. Most widely spread limitation among the population is poor eyesight, 0.25 percent cannot see at all. Bigger proportion of women compared to men suffer from all the measured limitations except walking. This can partially be explained by the fact that women are nearly twice the percentage of men among over 65-year-olds.

**Table 7. Proportion of women and men with different types of functional limitations**

Type of functional limitation	Total % No 3,713 804	Women % No 1,940 940	Men % No 1, 772 864
Seeing	16.60	19.08	13.87
Hearing	7.52	8.38	6.57
Walking	7.08	5.27	5.66
Remembering	3.79	4.18	3.36
Caring for self	3.73	4.05	3.37
Communicating	2.85	2.93	2.77

**Source: Calculated based on Census 2014 data**

#### **Ethnicity:**

43. Georgia's population is multi-ethnic, with Georgians comprising 83 percent. Two biggest ethnic minority groups are Azeris (7 percent) and Armenians (6 percent). Other ethnicities, such as Russians, Abkhazs, Ossetians, Greeks, Yezidis, etc together comprise 4 percent. Azeri population is concentrated in Kvemo Kartli and Armenian population in Samtskhe-Javakheti regions. Ethnicity is closely linked with faith, overwhelming majority of Georgians belong to Georgian Orthodox Church, Armenians to Armenian Apostolic Church, while Azeris are mostly Muslims.

44. Representatives of ethnic minorities, especially those living in isolated communities, do not master state language, much lower than understanding of verbal information is understanding of written materials. In planning response, it should be taken into an account that women of Muslim faith, especially of Azeri ethnicity are reluctant to leave their houses unaccompanied by male family member. Evacuation procedures need to consider these factors. Minorities are poorly represented in national and local legislative and executive bodies, so their involvement in planning, preparation of and recovering from disaster processes is rather limited.

**Gender issues related to different phases of disaster management cycle**

45. The impact of the all above mentioned vulnerabilities is revealed at all phases of disaster management cycle, i.e. at prevention and protection, response, impact and coping. The purpose of the gender mainstreaming throughout various phases of disaster management is to empower women and see them as capable agents of change, who can manage crisis, deal with its aftermath, and take on leadership roles in the family and community. Women play important economic and community roles that help in reconstruction and resilience building. Women often take on leadership roles in family and community in the face of death or disability.

**Summary of gender differences in vulnerability and adapting to disasters**

<p>Disparities that increase risks for women in disasters</p> <ul style="list-style-type: none"> <li>• Higher levels of poverty</li> <li>• Extensive responsibilities of caring for others</li> <li>• Domestic violence</li> <li>• Traditional women’s occupations</li> </ul>	<p>Disparities that increase risks for men in disasters</p> <ul style="list-style-type: none"> <li>• Occupational segregation</li> <li>• Internalized norms of masculinity</li> <li>• Roles in the family and in the home</li> </ul>
<p>Gender experiences that can increase capacities for managing disaster situations: Women</p> <ul style="list-style-type: none"> <li>• Social networking</li> <li>• Caring abilities</li> <li>• Extensive knowledge of communities</li> <li>• Management of natural and environmental resources</li> <li>• High levels of risk awareness</li> </ul>	<p>Gender experiences that can increase capacities for managing disaster situations by: men</p> <ul style="list-style-type: none"> <li>• Professional and work contacts</li> <li>• Technical abilities</li> <li>• Limited childcare responsibilities</li> </ul>

46. Prevention and protection: Early warning system works as a potent protection mechanism against natural hazards. But as receivers of warnings are humans, for warranting the desired response a number of human related factors should be considered. Information on hazard risk can be delivered in time, but still the problem of understanding information, believing it and acting according to provided recommendations and hence saving life, health and property remains problematic. That ‘s for the messages on multi-hazard risk information are to be tailored to the needs and capabilities of vulnerable groups, targeting women, children, senior citizens and persons with disabilities (PWDs). Education level, knowledge of language in which warning is communicated, problems of hearing and seeing constitute serious barriers for adequately grasping the threat.

47. Women and men differ in regard of appraisal of trustworthiness of information sources, men believe more in official and media announcements, while women rely more on personal information obtained from kin and neighbours. Effective targeting requires utilization of both sources.

48. Men are more risk tolerant than women, hence less prone to take self-protective actions. Men often label evacuation calls as panic and do not react. Besides, acting according to stereotypical gender roles men may decide not to evacuate to safeguard property. On the other hand, women are readier to respond to risk, but

lack of social power deters them to mobilize family to respond, they also may be slow to react according to instructions until securing family members.

49. Children and people with low education level may encounter problems of understanding messages when they are worded in impersonal, official manner. Elderly citizens with the problems of hearing or seeing and living alone can be left out of reach in case of delivery of hazard risk messages only by printed or electronic media.
50. Response to disasters: Effectiveness of response in a great deal depends on a well-planned emergency behaviour, preparedness and social cohesion of community. Therefore, outlined below features should be reflected in emergency planning. Timely evacuation is a challenging issue for small children, seniors and persons with disabilities, especially with problems of moving and of persons with poor health. People dependent on health services for survival (dialyses, cancer treatment) are faced with life threatening circumstances in disaster.
51. Women's, children's and elderly's vulnerability is greater due to the mobility constraints. Both car ownership and having driver's licence is less frequent among women than men. In Georgia among car owners only 13 percent are women, among driver's license holder's 29 percent.
52. Impact of disasters and coping: Psychological reaction to natural disaster can be: withdrawal, stunning, apathy, disbelief, but also increase in community bond and social cohesion. Experience of natural hazards may result in stress, anxiety, depression and other mood disturbances. Effect usually is not long lasting, only 25 percent of victims suffer psychological effects some months after disaster (Thomas, et al., 2013). Coping strategies of disaster affected population could be leaving area, over-exploiting resources in order to survive (e.g. cutting down trees for wood), liquidation of assets (e.g. livestock), reducing food intake.
53. As women, more than men depend on natural resources for livelihood, disaster has a more severe effect on women. At the same time women play key roles in the sustainable use and management of natural resources. As among senior women considerably outnumber men, they are more likely to experience physical limitations that matter so much in emergencies. The burden of domestic work and care-giving to children, as well as to ill and disabled family members mainly falls on women, so caring in aftermaths of disasters becomes more challenging for women. As men can decide to migrate due to property or employment loss, family burden increases for women. But also, more and more women decide to migrate for providing for the family, as the demand for domestic labour increases in EU countries. The migration of family member also effects senior citizens as they have to look after grandchildren.
54. Lesser political and professional representation, low involvement in consulting process of key stakeholders make women more vulnerable as their perceptions and needs are not reflected in planning of recovery process. Gender stereotypes negatively reflect on men. Men often are overwhelmed with emotions after disaster, but are constrained to express them, which has health related consequences and often stimulates substance abuse, domestic violence, gambling, and engagement in risky behaviours.

## **Recommendations**

55. The analysis above shows that in order to set up effective national and community based early warning systems, climate-informed planning and improved resilience, gender consideration need to be integrated into the project implementation. The existing gender inequality factors (e.g. limited engagement of women in planning and decision making) and traditional distribution of gender roles in families and communities call for tailoring and targeting of the project solutions to outreach beneficiaries of both genders equally. Based on the analysis of the gender aspects of vulnerability to climate-induced natural disasters a number of recommendations for the proposed GCF project have been elaborated. These recommendations and the following Gender Action Plan are aimed at ensuring that the GCF project:

- narrows gender inequality;
- addresses the needs and constraints of women, girls, men, and boys;
- avoid any risks of adverse gender impacts;
- ensure women’s participation, promotes their leadership qualities; and
- ensure women are included as planners, co-implementers and agents of change.

56. As a result of the project implementation more lives, property and productive assets will be secured from the impacts of climate induced disasters. Beneficiary of this outcome will be all the population, but gender gap will decrease as women’s benefits will be bigger as for the livelihood women more than men depend on natural resources. They also are poorer than men and hence proportionally loose more.

57. The recommendations and the Gender Action Plan as summarized below have been designed to ensure that both men and women have full and equitable access to the Project’s resources and benefits, with specific actions and responsibilities aimed at ensuring the full participation of women in Project activities.

58. At Project inception, additional gender analysis will be undertaken to ensure that the baseline data set is sex- and age-disaggregated and adequate for assessment of the gender impacts of the Project. At this time, the Gender Action Plan will be presented to the Project Implementation Team, including Government staff and consultants. In particular, the Project team leaders will ensure that all specialists are briefed on their responsibilities in relation to the Gender Action Plan upon mobilization. Progress reports will provide periodic updates on the effect of the Project on women, and regular UNDP review missions and the midterm review mission will review and monitor the gender impacts.

#### Carry out gender sensitive vulnerability assessment

- Subjecting 2014 Census data to additional analyses, providing sex- and age- disaggregated data on social vulnerability across regions, assessing employment, education, health problems connecting with adequate functioning, disability, physical abilities (to swim, climb and run), ownership of house and productive assets and farming opportunities, ratio of dependent persons in households, household composition-single member male and female, women headed households, livelihoods, unpaid care and domestic work responsibilities.
- Mapping households receiving state subsistence allowance assistance by analysing social assistance database across regions.
- Carrying out group discussions and in-depth interviews with key stakeholders, ensuring an equal representation of women, persons over 65, disabled or family members of disabled, community leaders and government officials for mapping hazards and risks, collection of existing community coping strategies, identifying local businesses and institutions able to contribute to DRM activities. To identify priority needs, responses to, separate coping mechanisms of women and men, elderly, disabled and poor.

#### Ensure collection of sex- and age-disaggregated data for project indicators

- Gender disaggregated reporting will be further introduced beyond the project level at the national level through the multi-hazard disaster risk information and knowledge system to be designed by the project (activity 1.4. of the project)

#### Enhance gender considerations in disaster preparedness activities

- Disaster preparedness and response plans should be based on gender analysis and include gender considerations
- Men and women of different age groups, as well as those from vulnerable communities, should be involved in planning and implementation. Community consultancy groups with at least 30 percent representation of women should be established.
- Ensure that information on hazards, their character, probability of occurrence, threats to life, possible impact on livelihood, houses, crops and livestock and on protecting measures is reaching both women and men through appropriately tailored channels.
- Increase preparedness of educational institutions. Provide information to teachers, pupils and students, academic and other staff on different types of disasters and on effective immediate response to them. Create emergency plans for kinder-gardens, schools, vocational institutions and Universities. Ensure they are practicing periodically. Provide the staff with first aid training.

#### Warrant universal access to disaster warnings

- Tailor warning to the gender-differentiated needs and capabilities of specific population groups, such as children, senior citizens, the sick and persons with disabilities.
- Set up community based early warning systems and make sure that they are tailored to effectively serve both women and men.
- Use multiple methods for targeting messages for reaching broadest group of people, including TV, radio, Internet, sirens, flashing lights, registration-based alert systems sending messages to cell phones with information clearly stated orally and graphically.
- Include pregnant women and the elderly and disabled in emergency planning.

#### Mainstream gender considerations and engagement of women in resilience building activities

- Target 30 percent representation of women in capacity building and training activities supported by the project.
- Make sure that women have equal access to livelihood generating activities facilitated by the project.
- Disseminate information and stimulate involvement of population of the hazard prone regions in insurance schemes, among them insurance of crops.
- Disseminate information on risk zones with recommendations for construction of dwellings, agricultural activities and livestock husbandry.
- Support creation of employment opportunities for women and poor; ensure that women are part of employment-guarantee schemes planned in the framework of the community-based disaster risk management activities; provide social care services to redistribute burden of unpaid care work that falls on women. Provision of social care infrastructure can also generate jobs for women and men as part of disaster recovery.
- Strengthen social capital through creating community groups for planning for, safeguarding from and mitigating adverse effects of natural disasters with at least 30 percent women participations.
- Make sure that all representatives of ethnic minorities have the equal access to project benefits.

Conduct gender mainstreaming trainings and build capacity of national stakeholders targeted by project and responsible for various disaster risk reduction functions

- In 2016 UNDP Istanbul Regional Hub (IRH) developed and piloted a three-module training manual on Gender mainstreaming in disaster preparedness and response. The tool is designed for UNDP staff and government officers working in disaster preparedness and disaster response in the Europe and CIS region. In 2017 the tool was piloted with the DRR project practitioners in the Western Balkans countries. A series of training and capacity building workshop on gender mainstreaming will be conducted in the course of the GCF project based on the UNDP training manual targeting various stakeholders and practitioners (government, NGOs, community leaders, youth groups, women's groups, farmers' groups) at the national and local levels.

In some regions of Georgia to be targeted by the project there are compact settlements of ethnic minorities, e.g. Armenian and Azeri communities in Kvemo Kartli and Samtskhe-Javakheti, who do not master Georgian language. Therefore, the project will ensure equal participation of such groups in trainings and capacity building activities. Moreover, it will produce training/knowledge/ public information materials in languages of large ethnic groups and will distribute them among target beneficiaries. In addition, the project will ensure English-Russian-Georgian interpreting during the trainings, where representatives of ethnic minorities will participate.

Engage women in decision-making

- Ensure at least 30 percent representation of women and their active participation in project stakeholder consultations, local and national decision-making bodies set up and/or facilitated by the project, including project TAWGs.
- Secure participation of the Gender Advisor in all project TAWGs.

Requirements to the project staff

- Gender-responsive social vulnerability approach can be realized only by the gender and social vulnerability sensitive staff of the project. Therefore, project staff should be composed of women by at least 30 percent, evenly represented at all levels of decision-making. Staff members should have a record of participation in trainings on gender mainstreaming and on social vulnerability approach.

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## Gender Action Plan

Project Outputs and activities	Gender mainstreaming actions	Indicators and targets	Timeline	Responsibilities
	<b>Output 1. Expanded hydro-meteorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks</b>			
Activity 1.1: Rehabilitation of the hydrometric network	If installation of the new observation equipment at the vicinity of local settlements requires community consultations, make sure that women are adequately represented in the consultations, including women of ethnic minorities and other vulnerable groups	Community members (both men and women) raise no concerns neither complains due to installation of observation equipment. Verified through the independent evaluations.	Year 2 and 3	NEA  Project Management Unit (PMU)
Activity 1.2: Floodplain zoning integrating hazard and risk maps for all basins in Georgia and for key climate-induced hazards	Stakeholder consultations for the design and communication of the risk zones engage both men and women, including ethnic minorities and other vulnerable groups	Ratio of women in stakeholder consultations on floodplain zoning  At least 30% participants of consultations are women	Year 2,3 and 4	NEA, PMU
Activity 1.3: Introduction and implementation of methods and tools for the systematic gender-sensitive socio-economic vulnerability assessment for decision making for prioritisation of resilience investments.	Gender disaggregated indicators introduced in the socio-economic vulnerability assessment  Gender-sensitive socio-economic vulnerability assessment carried out	Baseline, progress and final report on social and gender vulnerability	Year 2 and 3	NEA, PMU
Activity 1.4: A centralized multi-hazard disaster risk information and knowledge system	Ensure that the data collection and information systems support gender-disaggregated data for decision-making	Data is sex and age-disaggregated	Years 2 and 3	NEA, MIA, SCMC, PMU
	<b>Output 2: Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities</b>			
Activity 2.1: Institutional and legal frameworks and institutional capacity building for the MHEWS and for the enhanced use of climate information:	A series of training workshops on gender mainstreaming for DRR practitioners and policy makers (based on the UNDP training manual on gender mainstreaming in disaster preparedness and response)	Gender considerations are reflected in policy documents and technical guidance (review by gender advisor)  Decision makers and practitioners are trained on gender mainstreaming in DRR based on UNDP training manual	Year 1-7 (continuously)	MoEPA, PMU

Project Outputs and activities	Gender mainstreaming actions	Indicators and targets	Timeline	Responsibilities
<ul style="list-style-type: none"> <li>- Policy, regulatory framework and technical guidance for MHEWS;</li> <li>- Institutional strengthening, coordination, communication and enhanced use of climate information;</li> <li>- Training and capacity building of relevant stakeholders at all levels</li> </ul>	<p>Review of the new policies and guidance documents by the gender advisor to identify gender gaps and mainstreaming opportunities</p>	<p>(number of women and men disaggregated)</p> <p>Number of women in planning teams and consultation groups (at least 30%)</p>		
<p>Activity 2.2: Development and implementation of the MHEWS covering all Georgia</p>	<p>Tailor warnings and multi-hazard risk information to the needs and capabilities of vulnerable groups, targeting women, children, senior citizens, persons with disabilities and ethnic minorities</p> <p>Use multiple methods for targeting messages to outreach all vulnerable groups, including TV, radio, Internet, sirens, flashing lights, registration-based alert systems sending messages to cell phones with information clearly stated orally and graphically. Use multiple languages and signals/tools for warning messages to reach ethnic minority groups and disabled persons</p>	<p>Warnings are tailored to the needs of vulnerable groups</p> <p>Information on hazards delivered through multiple methods. Information is clear and not complex. Information is issued in understandable for the population languages.</p>	<p>Year 3,4,5, 6</p>	<p>NEA, PMU</p>
<p>Activity 2.3: Enhancing access and the use of weather and climate information and agrometeorological information services by farmers and agricultural enterprises</p>	<p>Conduct gender analysis of the client sectors/groups</p> <p>Include gender mainstreaming in the training and capacity building courses addressing agricultural sector stakeholders and consultation centres, including farmers representing ethnic minorities</p> <p>Make sure that men and women, including those from vulnerable groups (e.g. ethnic minorities, IDPs, etc.) have equal access to new climate information products and agrometeorological advisory services</p>	<p>Design of weather/climate advisories integrate needs of men and women and tailored delivery and communication methods are utilized</p>	<p>Year 3-7</p>	<p>MoEPA, NFA, PMU</p>

Project Outputs and activities	Gender mainstreaming actions	Indicators and targets	Timeline	Responsibilities
Activity 2.4: Climate-informed planning platforms: - multi hazard basin risk management plans - Municipal-level climate-induced multi-hazard response and preparedness plans	Mainstream gender considerations in the planning process  Secure adequate representation of women within the planning teams and consultation groups, including women representing vulnerable groups (e.g. elderly, bread-makers, ethnic minorities, disabled persons, IDPs)	Gender considerations are reflected in planning (review by gender advisor)  Number of women in planning teams and consultation groups (at least 30%)	Year 1-7	MoEPA, PMU
<b>Output 3: Improved adaptive capacities and resilience of vulnerable communities through the implementation of community-based EWS and DRM</b>				
Activity 3.1: Implementation of community-based early warning schemes and other CBDRM practices	Involve vulnerable groups in planning and realization of CBEWS and CBDRM through creating community consultancy groups with at least 30% representation of women,  Ensure that women and vulnerable group members (elderly, bread-maker women, people living under poverty line, ethnic minorities, IDPs, etc.) can equally benefit from livelihoods and employment opportunities facilitated by the project. e.g. engage women in local employment guarantee schemes, including women representing disadvantaged groups (elderly, bread-makers, ethnic minorities, IDPs, etc.)	Community consultation groups with at least 30% representation of women  Ratio of women employed in CBDRM employment guarantee schemes	Year 2-7	PMU
Activity 3.2: Public awareness and capacity building programme at all levels to effectively deliver climate risk information and training to communities and local first-responders	Increase preparedness of educational institutions. Provide information to teachers, pupils and students and staff, on different disasters and effective immediate response to them. Create emergency plans and ensure practicing its implementation periodically. Provide the staff with first aid training. Ensure equal access of all vulnerable groups to the benefits of education and capacity building activities, including ethnic minorities  Achieve 30 percent representation of women in training courses, including women representing vulnerable groups (elderly, bread-makers, ethnic minorities, IDPs, etc.)	Emergency plans for educational institutions, Staff informed on nature and effects of hazards. Record of emergency drills practiced. Number of staffs with the knowledge of first aid.  Women comprise 30% of trainees  Information tailored to the needs of men, women, boys and girls	Year 2-7	EIEC  PMU

Project Outputs and activities	Gender mainstreaming actions	Indicators and targets	Timeline	Responsibilities
	Tailor information and awareness campaigns for the needs of men, women, boys and girls, vulnerable groups (elderly, bread-maker women, ethnic minorities, IDPs, disabled persons, etc.)			
Activity 3.3: Implementation of risk reduction intervention measures	Make sure that women and vulnerable groups are adequately represented in the stakeholder consultations,  Ensure that women have equal access to grievance reporting mechanism.	Ratio of women in stakeholder consultations	Year 1-7	Road Department/MRDI  PMU
<b>Effective project management</b>				
Staffing	Ensure that staff of the project composed of at least 30% of women	30% percent of women in the staff	Year 1-7	UNDP, NIM Partner, PMU
Capacity building and training	Training of staff members of the project on gender mainstreaming and social vulnerability approach	Staff members completed training in gender mainstreaming and social vulnerability approach	Year 1	UNDP, NIM Partner, PMU
Stakeholder consultations and participatory decision making	Make sure that women are adequately represented in the project TAWGs. Secure participation of the project Gender Advisor in all TAWGs.	Gender Advisor is a member of all TAWGs. Gender mainstreamed in the TAWGs discussions. Balanced representation of women and men in TAWGs.	Years 1-7	UNDP, NIM Partner, PMU

#### Gender Assessment and Action Plan Budget

Type of Supply	Category	US\$	Activity	Description of procurement	First year % of disbursement
Individual Consultant	IC	103,400	1.3.	International consultant to assist stakeholders in gender sensitive socio-economic vulnerability analysis.	0%
Goods and works	Training, workshops and conferences	5,000	2.1.	Training of SSCMC and other relevant agencies on gender sensitive socio-economic vulnerability analysis, with 1-or two sessions fully dedicated to gender aspects of the analysis.	0%

Type of Supply	Category	US\$	Activity	Description of procurement	First year % of disbursement
Goods and works	Training, workshops and conferences	5,000	2.1.3	1 training of national decision-makers on multi-hazard early warning systems and CRM, with special sessions to be dedicated to gender mainstreaming in climate and disaster risk management and EWS.	0%
International consultant	International consultants	25,800	2.1.3	International consultant to conduct training of key decision-makers on multi-hazard early warning systems and CRM, with special sessions to be dedicated to gender mainstreaming in climate and disaster risk management and EWS	0%
Services	Contractual services companies - Nat.	66,000	3.1.2	Gender sensitive community impact evaluation programme	33.33%
Individual contract	IC	41,600	3.2.1	Contract with international consultant to assist EIEC develop and implement gender sensitive awareness programme, guidance documents and education programs as well as training modules on gender sensitive CRM/DRR, MHEWS, CBMHRM, etc.	100%
Services	Contractual services companies - Nat.	850,000	3.2	Subcontracts under the Letter of Agreement with EIEC: mainstreaming of gender considerations into capacity building and public awareness activities, including gender sensitive community awareness, youth education programmes at preschool, school and universities; nation-wide gender sensitive media campaign, including video footages, booklets, video clips TV and radio programmes, Facebook campaigns, etc.	14.30%
Individual Consultant	IC	95200	3.1.2	Gender advisor	7.70%
Goods and works	Trainings, workshops, conferences	42,000	4.1.1	Annual workshops/reviews, with one or two complete sessions to be dedicated to gender integration into project as well as to the progress towards implementation of a gender action plan. 1 specific event out of all, will be a staff and contractors/partners training in gender mainstreaming in project implementation	14.30%
Goods and works	Audio-visual and printing and production costs	25,000	3.1	One documentary on the project, its successes, lessons learned with a specific focus on gender issues	0%
Goods and works	Audio-visual and printing and production costs	10,000	3.1	2 publications, one brochure/case study on gender sensitive community based MHEWS and MHRMP and another on the gender dimension of the project	0%
<b>TOTAL</b>					1,269,000

### International agreements relevant to gender and climate change

Year	International Agreement	Environmental Relevance	Gender Relevance
1948	UN Universal Declaration of Human Rights (UNDHR)	No specific mention of environment but acknowledges fundamental human rights that are linked to and dependent upon a healthy environment	Establishes core human rights but with a limited gender perspective
1979	Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)	Calls for governments to ensure that women participate at all levels of decision-making concerned with environmental sustainability, and that women's interests and perspectives are adequately reflected in all policies and approaches adopted	The first international treaty to recognize women's human rights
1992	Agenda 21 and the Rio Declaration on the Environment and Development	This provided the first international precedent for including the gender perspective in promoting sustainable development. It adopted a gender perspective in all development and environment policies and programmes, leading to the promotion of women's effective participation in the proper use of natural resources;	
1992	UN Convention on Biological Diversity (UNCBD)	The first global agreement focused on conservation and sustainable use of biodiversity	Explicitly addresses women's participation and „recognises the vital role that women play in conservation and sustainable use of biological diversity, emphasizing the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation'
1992	UN Framework Convention on Climate Change (UNFCCC)	Acknowledges human interference with the climate and aims to stabilise concentration of GHGs in the atmosphere	Absence of any mention of gender
1994	UN Convention to Combat Desertification (UNCCD)	The only legally binding international agreement dealing with land degradation	Promotes the equal participation of men and women and recognises „the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries, and the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought'
1995	Beijing Declaration and Platform for Action	This makes the link between gender, the environment and sustainable development. Chapter K draws attention to women's poverty and the need for women to participate in decision-making about the environment at all levels, as well as the integration of gender in all sustainable development policies and programmes.	

<b>Year</b>	<b>International Agreement</b>	<b>Environmental Relevance</b>	<b>Gender Relevance</b>
2000	Millennium Declaration and MDGs	Includes goal on environmental sustainability (but with no linkage to gender)	Promotes gender equality but without making linkages with environment
2005	Kyoto Framework for Action	The first internationally accepted framework on disaster risk reduction (DRR), setting out objectives and priorities for policies at national level over the next decade.	Recognises that a gender perspective should be integrated into all DRR policies, plans and decision-making processes, including those associated with existing climate variability and future climate change.
2007	UN Declaration on the Rights of Indigenous Peoples (UN DECRIPI)	Acknowledges rights to forests and community lands.	Establishes rights of minorities but with limited gender perspective.

(Adopted and Drawn from Raczek et. al. 2010)

**Annex K: UNDP Risk Log**

<b>Project Title: Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia</b>	<b>Award ID:00094354</b>	<b>Date: 30 June 2018</b>
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#	Description	Type	Impact and Probability	Countermeasures/ Mngt response	Owner	Submitted/ updated by	Last updated	Status
1	Political situation becomes instable due to local upheavals or regional conflicts	Political	Probability P=1 Impact I=5	The project will develop and implement emergency management/contingency plan in line with UNDP CO's crisis management requirements. This may reduce the level of impact of the risk to medium to low level	Project management UNDP CO Implemen-ting partner - MoEPA	UNDP CO	30 June 2018	On-going
2	Hydrometeorological and/or flood defence infrastructure are destroyed due to various natural hazards	Environ-mental	Probability P=2 Impact I=5	The project will develop and implement emergency management/ contingency plan in line with UNDP CO's crisis management requirements. During the design and constructing of relevant infrastructure disaster risks will be taken into consideration or in other words, climate proofing will be carried out. These activities will reduce the level of impact and probability that the infrastructure will be destroyed to minimum level	Project management Implemen-ting partner – MoEPA Responsible parties – NEA and MRDI	UNDP CO	30 June 2018	On-going
3	Climate adaptation and EWS/DRR do not stay a government priority and therefore, the latter's political, financial and technical support to these areas and particularly, to the project is reduced	Political	Probability P=1 Impact I=5	The project will have constant consultations with high-level government representatives and will carry out lobbying and advocacy campaigns in support of CC adaptation, EWS and DRR. This will reduce the impact of the risk to the minimum level	Project management Implemen-ting partner	UNDP CO	30 June 2018	On-going
4	Absorption and operational capacities of project responsible parties and particularly, NEA stay inadequate to properly run and maintain MHEWS	Opera-tional	Probability P=3 Impact I=5	The project will pay high attention to the capacity building of all relevant agencies through carrying out training of trainers, on-the-job and field trainings of the staff of relevant agencies, introducing/strengthening internship mechanisms within responsible parties and particularly NEA, developing technical guidelines, methodologies and sustainable operations and maintenance plans for established national-wide MHEWS. Altogether will reduce probability and impact of the risk to minimum level	Project management Responsible parties – NEA, MRDI, etc.	UNDP CO	30 June 2018	On-going

#	Description	Type	Impact and Probability	Countermeasures/ Mngt response	Owner	Submitted/ updated by	Last updated	Status
5.	Due to poor financial performance of the government and particularly, ministries and agencies engaged in the project as responsible parties, significant budget and staff cuts occur in these state organizations	Organizational/financial	Probability P=3 Impact I=5	The project will assist the government authorities to develop and implement sustainable long-term financial plan for running MHEWS, including the plan for engaging private sector in the area as well as accessing international donor financing.	Project Management Implementing Partner – MoEPA Responsible parties, e.g. NEA, MRDI, etc.	UNDP CO	20 June 2018	On-going
6.	Local communities are not interested to be engaged in CBEWS and CBMHRM processes	Other	Probability P=3 Impact I=3	The project will conduct aggressive awareness campaign at grassroots' level on the climate-induced natural hazards, vulnerabilities and risks and benefits for reducing these risks. It will also make significant efforts to mobilize and empower local communities in CBEWS and CBMHRM. This will reduce the impact and probability of the risk to the minimum	Project management	UNDP CO	30 June 2018	On-going
7.	No finances are available for proper operation and maintenance of CBEWS	Financial	Probability P=3 Impact I=3	The project will use volunteer warden's schemes for operating local early warning system as well as will make efforts to integrate them into national-wide system and management and institutional structures (kept by NEA and MIA). Moreover, the project will seek for minimum level financing for O/M of the system within local authorities, NEA and EMA. These measures will reduce the level of impact to the minimum	Project management	UNDP CO	30 June 2018	On-going
8.	Multi-hazard plans are not implemented	Operational	Probability P=3 Impact I=3	The project will engage all level stakeholders, including line Ministries, international aid organizations, development banks and private sector in discussion and endorsement of the plans. Moreover, it will facilitate official adoption of the plans by the government and will advocate and lobby to include priority measures of the plans in state and municipal budgets. These measures will reduce the level of risk to the minimum	Project Management Implementing Partner – MoEPA	UNDP CO	30 June 2018	On-going

#	Description	Type	Impact and Probability	Countermeasures/ Mngt response	Owner	Submitted/ updated by	Last updated	Status
9.	Sediment movement during riverbank works	Environ-mental	Probability P=3 Impact I=2	There is the likelihood for sediment movement during the construction of hard infrastructure. To ensure that the sediment is not mobilised that will result in environmental impacts, it will be necessary to prepare an Erosion, Drainage and Sediment Control Plan (EDSCP) and install silt curtains to restrict sediment movement from the site. Further, any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. The EDSCP should contain aspects including but not limited to the installation of sediment curtains to reduce sediment movement and the quick placement of footing material. These impacts will be spatially and temporally restricted to works periods	Project team – Project Manager and Environmental Compliance and Safeguards Office Responsible party – MRDI Contractor	UNDP CO	30 June 2018	On-going
10	Sediment movement during ecosystem revegetation works	Environ-mental	Probability P=2 Impact I=2	There is the potential for sediment movement during planting and reforestation. To ensure that the sediment is not mobilised through either wind or more specifically water movement, it will be necessary to prepare an EDSCP and install silt curtains to restrict sediment movement and the covering of sediment where practicable	Project team – Project Manager and Environmental Compliance and Safeguards Officer Contractor(s)	UNDP CO	30 June 2018	Ongoing
11	Contamination of existing water sources	Environ-mental	Probability P=3 Impact I=2	To ensure contaminants do not enter waterways and groundwater systems, a water quality monitoring plan will be developed to ensure chemicals are not released. This will involve testing sediment prior to movement and planning so that the works are not undertaken during rain events. Where rainfall is anticipated, appropriate material should be placed under the sediment prior to excavation to ensure there is no seepage into groundwater systems. The water quality monitoring for the sources will be designed to identify potential impacts so that management measures can be	– Project Manager and Environmental Compliance and Safeguards Officer Contractor(s)	UNDP CO	30 June 2018	Ongoing

#	Description	Type	Impact and Probability	Countermeasures/ Mngt response	Owner	Submitted/ updated by	Last updated	Status
				proactively rather than reactively enacted upon				
12	Construction noise	Environ-mental	Probability P=1 Impact I=1	The construction contractor should consider any sensitive receptors including communities. Noise will be limited to excavators removing sediment from the water course. It is likely that more noise will be generated through the use of excavators and trucks moving sediment. Where necessary, noise shields should be constructed to reduce the potential for noise to reach these communities if an impact occurs. The noise will have very limited temporal scales	– Project Manager and Environmental Compliance and Safeguards Officer Contractor(s)	UNDP CO	30 June 2018	Ongoing
13	Sediment movement during the installation of hydro-meteorological observation equipment for the MHEWS	Environ-mental	Probability P=1 Impact I=1	When undertaking the installation of weather stations, the ESAR and EDSCP will be followed to ensure runoff does not flow into riverine systems	– Project Manager and Environmental Compliance and Safeguards Officer Responsible party - NEA	UNDP CO	30 June 2018	Ongoing
14	Locating infrastructure that is socially detrimental	Other - social	Probability P=1 Impact I=1	Stakeholder consultation will be undertaken prior to the selection of infrastructure sites to ensure no impacts. No interventions will be undertaken on private land	– Project Manager and Environmental Compliance and Safeguards Officer Responsible parties – NEA, MRDI Contractor(s)	UNDP CO	30 June 2018	Ongoing
15	Agroforestry activities on local pasturelands	Environ-mental	Probability P=1 Impact I=1	Stakeholder consultation will be undertaken prior to the selection of agroforestry sites to ensure no conflicts. Economic benefits from protecting housing, infrastructure and agricultural land are expected to be higher than opportunity costs related to planting on grazing land. Planting of economically feasible tree species (fruits, nuts) are part of the bioengineering measures	Manager and Environmental Compliance and Safeguards Officer Contractor(s)	UNDP CO	30 June 2018	Ongoing

#	Description	Type	Impact and Probability	Countermeasures/ Mngt response	Owner	Submitted/ updated by	Last updated	Status
16	Physical and Economic Displacement related to intervention construction	Other - social	Probability P=1 Impact I=1	It may be necessary to utilise areas of land adjacent to where the structural interventions will be undertaken so as to access water courses (e.g. Khodasheniskhevi and Milari, etc.). The land is currently under agricultural production. Where access is required, the land will be returned in the same condition as it was prior to any access. Access to this land will only be undertaken through voluntary agreements with landholders. Where a voluntary agreement cannot be established, the land will not be used	Project Manager and Environmental Compliance and Safeguards Officer Responsible party– MRDI Contractor(s)	UNDP CO	30 June 2018	Ongoing
17	Impacts on indigenous peoples and/or ethnic groups and/or internally displaced peoples	Other - social	Probability P=1 Impact I=1	Prior to undertaking any intervention, additional stakeholder engagement will be conducted to ensure that any indigenous peoples and/or ethnic groups and/or internally displaced peoples are fully consulted to ensure the project will not impact on them and/or their cultures/traditions. If any people are found to be located within the area, the project will comply with the UNDP Social and Environment Standard and the project will develop a social inclusion plan.	Project Manager and Environmental Compliance and Safeguards Officer Responsible party– MRDI Contractor(s)	UNDP CO	30 June 2018	Ongoing

## Annex L: Letter of Agreement with the Government

### STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES

Dear Mr. Davitashvili,

1. Reference is made to consultations between officials of the Government of Georgia (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:
  - (a) Identification and/or recruitment of project and programme personnel;
  - (b) Identification and facilitation of training activities;
  - (c) Procurement of goods and services;
4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.
5. The relevant provisions of the UNDP Standard Basic Assistance Agreement with the Government of Georgia (the “SBAA”), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.
6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.
8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.
9. Any modification of the present arrangements shall be affected by mutual written agreement of the parties hereto.
10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

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Signed on behalf of UNDP  
Louisa Vinton  
Resident Representative

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For the Government  
Levan Davitashvili  
Minister  
Ministry of Environment Protection and Agriculture of Georgia (MEPA)

Attachment

**DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES**

1. Reference is made to consultations between the Ministry of Environment Protection and Agriculture, the institution designated by the Government of Georgia and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project “Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia” (Atlas Project ID/Award ID number: 00094354; Atlas Output ID number: 00098463), (“the Project”).

2. In accordance with the provisions of the letter of agreement signed on 4 December 2018 and the project document, the UNDP country office shall provide support services for the Project as described below.

3. Support services to be provided:

Support services (Insert description)	Schedule for the provision of the support services	Amount and method of reimbursement of UNDP (where appropriate)	Estimated Chargeable Amount
1. Payments, disbursements and other financial transactions	2018-2022 Throughout implementation period, when applicable	As per UNDP Universal Price List: Payment process: \$38.49 Vendor profiles: \$20.66	\$ 26,000
2. Recruitment of staff, project personnel and consultants	2018-2022 Throughout implementation period, when applicable	As per UNDP Universal Price List: Consultants: \$234.26 Local personnel: \$ 599.81	\$ 26,000
3. Procurement of services and goods, including disposal	2018-2022 Throughout implementation period, when applicable	As per UNDP Universal Price List: CAP needed: \$540.84 CAP not needed: \$217.35	\$ 26,000
4. Organization of training activities, conferences and workshops, including fellowships	2018-2022 Throughout implementation period, when applicable	As per UNDP Universal Price List: CAP needed: \$540.84 CAP not needed: \$217.35	\$ 14,000
5. Travel authorization, visa requests, ticketing, and travel arrangements	2018-2022 Throughout implementation period, when applicable	As per UNDP Universal Price List: Travel costs (DSA, tickets): \$16.51 Travel authorizations: \$26.42 Travel Claim F10: \$23.12	\$ 8,000
			Up to USD 100,000 from GCF grant

4. Description of functions and responsibilities of the parties involved:

UNDP will provide support services to the Ministry as described in the paragraph 3 above in accordance with UNDP rules and procedures; it retains ultimate accountability for the effective implementation of the project;

The UNDP will provide support to the National Project Director (appointed by MEPA) in order to maximize the programme’s impact as well as the quality of its products. UNDP will be responsible for administering resources in accordance with the specific objectives defined in the Project Document, and in keeping with the key principles of transparency, competitiveness, efficiency and economy. The financial management and accountability for the resources allocated, as well as other activities related to the execution of programme activities will be undertaken under the direct supervision of the UNDP Country Office.

The Ministry through its National Project Director (NPD) designated from its staff or through duly authorized person, will approve annual work plans, authorize direct payment requests and submit them to UNDP country office in a timely manner;

The Ministry through its NPD or other duly authorized person will monitor and assure that the project funds are spent in accordance with Annual Work Plan (AWP) by authorizing and signing direct payment requests and Combined Delivery Reports (CDRs).

**Annex M: Capacity Assessment including HACT micro assessment**

Provided separately

## Annex N: Learning and Knowledge Management

The knowledge management (KM) of the project will have the following key aims:

1. To ensure access to data and information generated by the project as well as long-term access to data on which stakeholders' essential institutional functions rely and/or data and information that can be used for evidence for policy and practice advice (**connecting people to information and knowledge**)
2. Connect key stakeholder groups, practitioners and experts to ensure that key learning and experience is shared within and across sectors (**connecting people to people**)
3. Ensure staff in the stakeholder institutions know about effective and relevant KM techniques so that knowledge is shared, captured and retained by the institutions and shared within and across the sector (**institutional KM improvement**)
4. By developing and promoting KM as a tool for continuous and sustainable improvement and ensuring that KM tools generated by the project will be systematically used and maintained within the stakeholder institutions (Developing and embedding KM tools and practices).

At the community level the project will seek public participation and community support in the design and implementation of the impact-based MHEWS and all other aspects of the project. A key project sub-activity under hazard and risk mapping (Activity 1.2) is the introduction of methods and tools for systematically collecting damages and losses data at all levels central, municipality and community level to include 'crowd sourcing and public participatory' approaches to reporting damages and impacts of flooding. In addition, these socio-economic survey methods will be conducted alongside the awareness raising and capacity building of communities (activity 3.2) which will enable full participation of communities in the design and implementation phases of all project activities.

### Connecting people to information and knowledge

New work should always build on the foundation of previous knowledge. New knowledge gained on the project will be captured and stored appropriately for others to access and learn from. The following series of tools and techniques will be employed to enable people to find information and knowledge more effectively throughout the project.

Tools and techniques	Description	Purpose	Actions
Case Study	Narrative Recording of the Project's progress and outcomes.	Share experiences with others, seeking comments/consultation, advocacy	At least 20 case studies will be generated per year of the project
Rapid Evidence review	A systematic review of research and other evidence producing overview of the knowledge base in a particular area	An evidence baselines to enable project activities to build on what has gone before	Project feasibility studies will form the project baseline which will be updated throughout the project as it progresses.
Knowledge Banks (web databases)	Repositories of stored knowledge (research/evidence/best practice), captured through various tools and techniques, and shared via websites and toolkits	Mass collection of accumulated knowledge in a specific area readily available to stakeholder	The project will develop a knowledge and data management website for all project, stakeholder and beneficiary staff

### Case Studies

Cased studies will be written on all key aspects of the project and could be generated from technical reports but made appropriate for a number of different audiences. Hence technically detailed studies will be summarized and made appropriate for beneficiaries, the media and other types of audiences for the purpose of sharing experience, for soliciting comment/feedback and for advocacy purposes. Cased studies will have a clear structure that brings out key qualitative and quantitative information from the project and will be published with a broad audience in mind. The project will aim to have at least 20 case studies per year of the project.

To facilitate the generation of case studies in a systematic and consistent manner, project and programme teams will be asked to capture and record their learning and best practice in photos, videos and reports, so that others can benefit. A structured case study format will be used to make information accessible to the reader. Case studies will be published on the UNDP website as well as the project portal to be developed (see Knowledge banks below).

### **Evidence Review**

A rapid evidence reviews (RER) is a way of reviewing research and evidence on a particular issue. It looks at what has been done in a particular area and records the main outcomes. Evidence reviews can be run in several ways. Some are more exhaustive in their execution and ambitious in their scope. A fully-developed review will scan available literature as comprehensively as possible, using electronic databases and comprehensive sourcing. The RER provides a quicker but still useful way of gathering and consolidating knowledge. It is a useful building block from which to start work on a new topic but should not be considered a definitive review, but rather suitable as a starting point for more in-depth review, or cursory information required to start a more in-depth review. Any new piece of work is likely to draw on what has already been done by others in the sector. An RER ensures that you take account of this work before starting a project. This avoids duplication of effort and gives a foundation on which to build.

The project feasibility studies and all supporting material gathered during project development will form the project baseline which will be updated throughout the project as it progresses thus ensuring that the evidence baseline for all project activities is always up-to-date.

### **Knowledge banks**

Knowledge Banks are online services and resources which hold information, learning and support and also act as a project data manage and repository database. They are typically used to showcase the work of the project and provide signposts to documents, articles and toolkits.

#### *Project Data Management and GIS*

River Basin scale hazard and risk management is inevitably a multidisciplinary undertaking which will use and generate large numbers of spatial and non-spatial datasets. Under Output 1.4 the national multi-hazard information system will be developed and will consist of a national e-Library, databases (including the GIS database previously noted), information systems and knowledge portal (web knowledge portal to increase awareness, provide interactive hazard maps, with integration with social media and possible mobile application to increase community engagement and allow two-way flow of information. It will be an integral part of the NSDI currently being developed for Georgia and provide the information access and sharing platform for geospatial information on hazards. This will contribute to a more effective regulation of the agriculture, environment protection, transportation, logistics and disaster management.

The system will represent a major shift in how government departments currently work and will need to be supported by the introduction of appropriate data sharing protocols and importantly by extensive training and capacity building to ensure sustainability

The data repository will provide a structured environment to enforce data integrity and support data auditing, versioning and data quality. Audit trails, as well as structured and categorized schemas, will make data collation, manipulation and analysis more manageable.

The establishment of a structured GIS data repository is envisaged to provide the following advantages:

- Provides a 'single source of truth' to provide consistency and transparency in the use of datasets used by everyone working on the project.
- Enables a data security model to be implemented to constrain user permissions to appropriate levels.
- Reduced duplication and redundancy of data.
- Provides a mechanism to enforce data quality and consistency in accordance with standards.
- Provides a structured environment to support the effective discovery of data through web-based portal services.
- Enables datasets to be performance tuned for use in GIS desktop and web systems.
- Provides a comprehensive trusted source of data to permit the effective investigation of spatial relationships between different datasets, which will add a further dimension to the analysis.

The spatial data repository will include and enforce metadata. It enhances the value of data, providing business critical information regarding the data's currency and quality, which can aid in identifying gaps in data, in addition to providing a useful mechanism to support discovery services.

This data repository will perform a crucial role in efficiently managing data and metadata during the project and represents a significant project deliverable. The scale, comprehensiveness and structure of the database will be dictated by the quality and

quantity of the data identified in the early stages of the project. It will however also need to be cognizant of future datasets and processes that will be included, and therefore will be scalable with consideration included at the design phase.

This knowledge management system, based on initiatives such as the EU’s INSPIRE directive brought into EU legislation in 2007 and which provides a clear framework on the establishment of the SDI and its constituting services.

In addition, the data management system developed to provide a single point of ‘truth’ with respect to datasets to be used and generated by the project, it will also provide a portal for document management and will provide access for project staff and stakeholders to all relevant documents.

### 5.3 Connecting People to People

The following series of tools and techniques describe how knowledge management will enable people to connect to people more effectively.

Tools and techniques	Description	Purpose	Actions
Community of Practice (CoP/Knowledge network/professional network)	A group people who share a common interest working together over an extended period to explore ways of working in a specific area of knowledge	Learning from Shared experiences, publishing best practice/position papers	The project will set up a number of technical working groups, interagency working groups as well as regional working groups to enable CoP people to interact and share experiences
Peer Assist	Gaining input and insight from outside experts to reuse and reapply existing knowledge and experience	First-hand knowledge transfer, access the institutional knowledge base	The project will engage a range of local and international experts who will provide technical assistance to the project. For long-term peer assist, the project will help establish relationships between institutions and local as well as international universities and research centers
Knowledge café	A group of people having an open, creative conversation in an informal environment on a topic of mutual interest	Informal learning through dialogue.	This will be achieved through the meetings of the technical working groups and through bi-lateral meetings between individual stakeholder organizations
Knowledge marketplace	Allows matching of a knowledge requirement with someone with expertise	Starts connection of people to people, people to document and documents to people	This will be provided by project experts who will be identifiable by their area of expertise and will provide support the project and stakeholders. In the long-term, a ‘directory’ of experts can be developed to fill this need.

#### Community of Practice (CoP)

A CoP provides an environment (virtual and or face-to-face) that connects people and encourages the development and sharing of new ideas and strategies. This environment supports faster problem solving, cuts down on duplication of effort, and provides potentially unlimited access to expertise. Technology now allows people to network, share and develop practice entirely online. Virtual communities overcome the challenges of geographical boundaries. They encourage the flow of knowledge across local government and enable sustainable self-improvement.

The project will set up a number of technical working groups, interagency working groups as well as regional working groups to enable CoP people to interact and share experiences. In addition to face-to-face meetings, the project web portal will be configured to enable online cross-organizational working and sharing of ideas.

The project inter-agency working group will help to outline and examine the current policy framework relating to hazard management and which could best elaborate current practice and deficiencies with respect to MHEWS and the inclusion of climate change considerations. Given the fragmented nature of the current elements of HRM, MHEWS, DRR and CCA, the establishment of a working group, which will be comprised of representatives from all relevant institutions, is an essential first step to ensure inclusion and consultation from the beginning and throughout the process. This will enable an active participatory approach (experts from relevant line-ministries and water agencies) on development of the MHEWS and related policies and legislation and will ensure buy-in. It is envisaged that a number of technical working groups will be required, based on technical area as well as geographical relevance.

### Peer Assist

The project will engage a range of local and international experts who will provide technical assistance throughout the project. For long-term peer assist, the project will help establish relationships between institutions and local as well as international universities and research centers.

Technical capacity in all aspects of CRM, DRR, CCA and EWS has been identified as one of the main barriers to the development and implementation of a MHEWS in Georgia. The project will ensure that the necessary technical assistance is provided to address this and that the long-term capacity development is assured through formal learning, and also through increased access to experts e.g. through the establishment of relationships between institutions and local as well as international universities and research centers.

### Knowledge café

The knowledge café approach will be used when developing workshops for the technical and inter-agency working groups as follows:

#### Preparation for a knowledge café

- appoint a facilitator – someone who can encourage participation.
- identify the topic for discussion (e.g. to discuss/consult on a project preliminary output).
- provide an informal/relaxed setting.

#### During a knowledge café

- The facilitator should introduce the knowledge café concept, any codes of conduct, and finally pose the question.
- Participants should arrange themselves into groups to discuss the question.
- Each participant in turn shares their knowledge and experience without interruption, giving everyone an opportunity to talk. Alternatively, a ‘talking-stick’ can ensure only the person holding the stick can speak, thus avoiding the discussion becoming dominated by one or a few speakers.
- After each participant has shared, the group continues the discussion together.
- The groups should eventually reconvene to exchange ideas and findings – these could be captured electronically or on paper.

### Knowledge Marketplace

Knowledge marketplace identifies what people know and what they need to know on a particular subject, then connects them appropriately. The knowledge marketplace can be facilitated online, via email or face-to-face.

It can be used in many situations, and is particularly useful when delegating roles and responsibilities within a new project team. Success depends on the willingness of participants to both contribute and benefit in equal measure from exchanging knowledge. It is highly dependent on the degree of trust between individuals. Given the size of the project and national remit, it will be important to develop and use the knowledge market place approach to ensure that the right expertise and knowledge is not missed by any part of the project team stakeholder or beneficiaries. By placing the knowledge marketplace online (and open to beneficiaries as well) it would also identify local experts that would otherwise go unnoticed.

### Institutional KM improvement

Summarizing lessons learnt and experiences and sharing them with others can help build and retain knowledge. The following series of tools and techniques describe how knowledge management can enable improvement through impact assessments, evaluations and people management.

Tools and techniques	Description	Purpose	Actions
Gone well/not gone well	Quick debrief at the end of an event/activity concentrating on good points and items for improvement	Tactic knowledge capture and feedback about effectiveness of the event	All significant project events/activities will be subject to a debrief to capture good/bad points and lessons learned
After Action review (AAR) formative evaluation	Quick discussion at the end of key stages of an activity reflecting on the current position and future actions	Tactic knowledge capture of lessons learnt e.g. noted minutes of project meetings	All significant project events/activities will include formal minutes which will be made available on project portal

## Annex O: UNDP Project Quality Assurance Report

Atlas Project Award ID:	00094354	Output ID/Project ID number: 00098463	Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia	Appraisal/Design
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PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL				
OVERALL PROJECT				
EXEMPLARY (5) ●●●●● X	HIGHLY SATISFACTORY (4) ●●●●○	SATISFACTORY (3) ●●●○○	NEEDS IMPROVEMENT (2) ●●○○○	INADEQUATE (1) ●○○○○
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The SES criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.
DECISION				
<ul style="list-style-type: none"> <li>APPROVE – the project is of sufficient quality to continue as planned. Any management actions must be addressed in a timely manner.</li> <li>APPROVE WITH QUALIFICATIONS – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner.</li> <li>DISAPPROVE – the project has significant issues that should prevent the project from being approved as drafted.</li> </ul>				
RATING CRITERIA				
STRATEGIC				
<p><b>1.</b> Does the project’s Theory of Change specify how it will contribute to higher level change? (Select the option from 1-3 that best reflects the project):</p> <ul style="list-style-type: none"> <li><u>3</u>: The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme/CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project’s strategy is the best approach at this point in time. X</li> <li><u>2</u>: The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project strategy is the best approach at this point in time, but is backed by limited evidence.</li> <li><u>1</u>: The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make an explicit link to the programme/CPD’s theory of change.</li> </ul> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	3		3	
	<b>Evidence</b>			
	GCF Funding proposal; draft project document			
<p><b>2.</b> Is the project aligned with the thematic focus of the UNDP Strategic Plan? (select the option from 1-3 that best reflects the project):</p> <ul style="list-style-type: none"> <li><u>3</u>: The project responds to one of the three areas of development work<sup>32</sup> as specified in the Strategic Plan; it addresses at least one of the proposed new and emerging areas<sup>33</sup>; an issues-based analysis has been incorporated into the project design; and the project’s RRF includes all the relevant SP output indicators. <i>(all must be true to select this option)</i> X</li> <li><u>2</u>: The project responds to one of the three areas of development work<sup>1</sup> as specified in the Strategic Plan. The project’s RRF includes at least one SP output indicator, if relevant. <i>(both must be true to select this option)</i></li> <li><u>1</u>: While the project may respond to one of the three areas of development work<sup>1</sup> as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan.</li> </ul>	3		3	
	<b>Evidence</b>			
	Cover page for draft Project document specifies applicable Key Result Area (Strategic Plan)			
RRF				

<sup>32</sup> 1. Sustainable development pathways; 2. Inclusive and effective democratic governance; 3. Resilience building

<sup>33</sup> sustainable production technologies, access to modern energy services and energy efficiency, natural resources management, extractive industries, urbanization, citizen security, social protection, and risk management for resilience

RELEVANT		
<p><b>3.</b> Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (select the option from 1-3 that best reflects this project) :X</p> <ul style="list-style-type: none"> <li>• <b>3:</b> The target groups/geographic areas are appropriately specified, prioritizing the excluded and/or marginalized. Beneficiaries will be identified through a rigorous process based on evidence (if applicable.) The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) (<i>all must be true to select this option</i>)</li> <li>• <b>2:</b> The target groups/geographic areas are appropriately specified, prioritizing the excluded and/or marginalized. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. (<i>both must be true to select this option</i>)</li> <li>• <b>1:</b> The target groups/geographic areas are not specified, or do not prioritize excluded and/or marginalized populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/geographic areas throughout the project.</li> </ul> <p>*Note: Management Action must be taken for a score of 1</p>	3	
	3	
	<p>Select (all) targeted groups: (drop-down)</p> <p><b>Evidence</b></p> <p>Draft project document Stakeholder consultation report attached to GCF funding proposal Stakeholder Engagement Plan Gender Action Plan ESAP</p>	
<p><b>4.</b> Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (select the option from 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <li>• <b>3:</b> Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and monitoring have been explicitly used, with appropriate referencing, to develop the project’s theory of change and justify the approach used by the project over alternatives <b>X</b></li> <li>• <b>2:</b> The project design mentions knowledge and lessons learned backed by evidence/sources, which inform the project’s theory of change but have not been used/are not sufficient to justify the approach selected over alternatives.</li> <li>• <b>1:</b> There is only scant or no mention of knowledge and lessons learned informing the project design. Any references that are made are not backed by evidence.</li> </ul> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	3	
	3	
	<p><b>Evidence</b></p> <p>Draft Project document Feasibility study attached to GCF funding proposal</p>	
<p><b>5.</b> Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (select the option from 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <li>• <b>3:</b> A <u>participatory</u> gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (<i>all must be true to select this option</i>) <b>X</b></li> <li>• <b>2:</b> A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. Gender concerns are integrated in the development challenge and strategy sections of the project document. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (<i>all must be true to select this option</i>)</li> <li>• <b>1:</b> The project design may or may not mention information and/or data on the differential impact of the project’s development situation on gender relations, women and men, but the constraints have not been clearly identified and interventions have not been considered.</li> </ul> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	3	
	3	
	<p><b>Evidence</b></p> <p>Draft Project document Gender Analysis report and Action plan</p>	

<p>6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <li>• <u>3</u>: An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level change complementing the project's intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. (<i>all must be true to select this option</i>) <b>X</b></li> <li>• <u>2</u>: Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labor between UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified.</li> <li>• <u>1</u>: No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance.</li> </ul> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	<p>3</p>	<p>3</p> <p><b>Evidence</b></p> <p>Draft prodoc reflects intention of UNDP to explore partnerships with existing programmes and leverage its convening power to develop strategic partnerships to enhance delivery of expected programme results</p>
SOCIAL & ENVIRONMENTAL STANDARDS		
<p>7. Does the project seek to further the realization of human rights using a human rights-based approach? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <li>• <u>3</u>: Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. (<i>all must be true to select this option</i>) <b>X</b></li> <li>• <u>2</u>: Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget.</li> <li>• <u>1</u>: No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered.</li> </ul> <p>*Note: Management action or strong management justification must be given for a score of 1</p>	<p>3</p>	<p>3</p> <p><b>Evidence</b></p> <p>Draft Prodoc integrates Human Rights Based Approach in ESAR and associated ESMP as well as in Gender Action Plan</p>
<p>8. Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <li>• <u>3</u>: Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant, and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. (<i>all must be true to select this option</i>). <b>X</b></li> <li>• <u>2</u>: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget.</li> <li>• <u>1</u>: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered.</li> </ul>	<p>3</p>	<p>3</p> <p><b>Evidence</b></p> <p>Draft Project Document ESAR and associated ESMP</p>

*Note: Management action or strong management justification must be given for a score of 1		
9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]	Yes	No
	SESP done	
<b>MANAGEMENT &amp; MONITORING</b>		
10. Does the project have a strong results framework? (select from options 1-3 that best reflects this project): <ul style="list-style-type: none"> <li>• <u>3</u>: The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. <i>(all must be true to select this option) X</i></li> <li>• <u>2</u>: The project's selection of outputs and activities are at an appropriate level, but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. <i>(all must be true to select this option)</i></li> <li>• <u>1</u>: The results framework does not meet all of the conditions specified in selection "2" above. This includes: the project's selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project's theory of change; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators.</li> </ul> *Note: Management Action or strong management justification must be given for a score of 1	3	
	3	
	<b>Evidence</b>  Draft Project Document and RRF	
11. Is there a comprehensive and costed M&E plan in place with specified data collection sources and methods to support evidence-based management, monitoring and evaluation of the project?	Yes (3)	
12. Is the project's governance mechanism clearly defined in the project document, including planned composition of the project board? (select from options 1-3 that best reflects this project): <ul style="list-style-type: none"> <li>• <u>3</u>: The project's governance mechanism is fully defined in the project composition. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. <i>(all must be true to select this option) X</i></li> <li>• <u>2</u>: The project's governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. <i>(all must be true to select this option)</i></li> <li>• <u>1</u>: The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided.</li> </ul> *Note: Management Action or strong management justification must be given for a score of 1	3	
	3	
	<b>Evidence</b>  Draft Project document	
13. Have the project risks been identified with clear plans stated to manage and mitigate each risk? (select from options 1-3 that best reflects this project):	3	
3		

<ul style="list-style-type: none"> <li>• <u>3</u>: Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. <i>(both must be true to select this option) X</i></li> <li>• <u>2</u>: Project risks related to the achievement of results identified in the initial project risk log with mitigation measures identified for each risk.</li> <li>• <u>1</u>: Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document.</li> </ul> <p>*Note: Management Action must be taken for a score of 1</p>	<b>Evidence</b>  Draft project document includes a Risk log ESAP and ESMP include environmental and social risks and associated mitigation measures for structural measures to be implemented in 13 locations	
<b>EFFICIENT</b>		
<b>14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners.</b>	Yes (3)	
<b>15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)</b>	Yes (3)	
<b>16. Is the budget justified and supported with valid estimates?</b> <ul style="list-style-type: none"> <li>• <u>3</u>: The project’s budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget <b>X</b></li> <li>• <u>2</u>: The project’s budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates.</li> <li>• <u>1</u>: The project’s budget is not specified at the activity level, and/or may not be captured in a multi-year budget.</li> </ul>	3	3
	<b>Evidence</b> Draft Project document	
<b>17. Is the Country Office fully recovering the costs involved with project implementation?</b> <ul style="list-style-type: none"> <li>• <u>3</u>: The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.)<b>X</b></li> <li>• <u>2</u>: The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant.</li> <li>• <u>1</u>: The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross-subsidizing the project.</li> </ul> <p>*Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.</p>	3	3
	<b>Evidence</b>  Project document includes provisions for Cost recovery	
<b>EFFECTIVE</b>		
<b>18. Is the chosen implementation modality most appropriate? (select from options 1-3 that best reflects this project):</b> <ul style="list-style-type: none"> <li>• <u>3</u>: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. <i>(both must be true to select this option) X</i></li> <li>• <u>2</u>: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments.</li> </ul>	3	3
	<b>Evidence</b>  Macro and micro HACT micro assessments Project document	

<ul style="list-style-type: none"> <li>• <u>1</u>: The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered.</li> </ul> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>		
<p><b>19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination?</b></p> <ul style="list-style-type: none"> <li>• <u>3</u>: Credible evidence that all targeted groups, prioritizing marginalized and excluded populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views, rights and any constraints have been analyzed and incorporated into the root cause analysis of the theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions <b>X</b></li> <li>• <u>2</u>: Some evidence that key targeted groups, prioritizing marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analyzed and incorporated into the root cause analysis of the theory of change and the selection of project interventions.</li> <li>• <u>1</u>: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project.</li> </ul>	3	
	3	
	<p><b>Evidence</b></p> <p>Draft project document Stakeholder Engagement Plan Stakeholder Consultation Report attached to GCF funding proposal ESAR</p>	
<p><b>20. Does the project conduct regular monitoring activities, have explicit plans for evaluation, and include other lesson learning (e.g. through After-Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?</b></p>	Yes (3)	
<p><b>21. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.</b></p> <p>*Note: Management Action or strong management justification must be given for a score of “no”</p>	Yes (3)	
	<p><b>Evidence</b></p> <p>Draft project document Gender Analysis Report and Action Plan</p>	
<p><b>22. Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted resources? (select from options 1-3 that best reflects this project):</b></p> <ul style="list-style-type: none"> <li>• <u>3</u>: The project has a realistic work plan &amp; budget covering the duration of the project <i>at the activity</i> level to ensure outputs are delivered on time and within the allotted resources</li> <li>• <u>2</u>: The project has a work plan &amp; budget covering the duration of the project at the output level.</li> <li>• <u>1</u>: The project does not yet have a work plan &amp; budget covering the duration of the project.</li> </ul>	3	
	3	
	<p><b>Evidence</b></p> <p>Draft Project document</p>	
<b>SUSTAINABILITY &amp; NATIONAL OWNERSHIP</b>		
<p><b>23. Have national partners led, or proactively engaged in, the design of the project? (select from options 1-3 that best reflects this project):</b></p> <ul style="list-style-type: none"> <li>• <u>3</u>: National partners have full ownership of the project and led the process of the development of the project jointly with UNDP.</li> <li>• <u>2</u>: The project has been developed by UNDP in close consultation with national partners.</li> <li>• <u>1</u>: The project has been developed by UNDP with limited or no engagement with national partners.</li> </ul>	3	
	3	
	<p><b>Evidence</b></p> <p>Draft Project document Stakeholder consultation report attached to GCF funding proposal</p>	
<p><b>24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):</b></p> <ul style="list-style-type: none"> <li>• <u>3</u>: The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly <b>X</b></li> <li>• <u>2.5</u>: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of</li> </ul>	3	2
	<p><b>Evidence</b></p> <p>Project document Feasibility study attached to GCF funding proposal HACT</p>	

<p>national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities.</p> <ul style="list-style-type: none"> <li>• <u>2:</u> A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment.</li> <li>• <u>1.5:</u> There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned.</li> <li>• <u>1:</u> Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions.</li> </ul>		
<p><b>25. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible?</b></p>	<p>Yes (3)</p>	
<p><b>26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilization strategy)?</b></p>	<p>Yes (3)</p>	