

V PROJECT RESULTS AND RESOURCES FRAMEWORK

<p>Objective: To improve resilience of highly exposed regions of Georgia to hydro-meteorological threats that are increasing in frequency and intensity as a result of climate change.</p> <p>Indicator: number of people protected from the flood and flash flood risks in the Rioni river basin;</p>				
Outcomes and indicators	Baseline	Targets and Milestones	Source of Verification	Outputs and indicators
<p>Outcome 1: Floodplain development policies in place to minimise exposure of highly vulnerable people of Rioni river basin to climate change induced flood risks.</p>	<p>Fragmentation and gaps in national regulations for long-term flood/flash floods under climate change</p> <p>Lack of appropriate hazard maps on which to base floodplain policy</p> <p>Low capacity among national and regional staff to undertake hazard mapping and risk assessment to support development of floodplain policy</p>	<p>Floodplain land use and development policy which addresses fragmentation and gaps in place by project completion</p> <p>Local-level flood insurance scheme to steer development away from high risk areas in place by project closure</p> <p>Accurate hazard and risk maps on which to base development policy</p>	<p>Official Edition „Sakanonmdeblo Matsne“</p> <p>Project annual reports; Mid-term evaluation, final report; training test results;</p> <p>Project annual reports; Mid-term evaluation, final report; training test results;</p>	<p>Output 1.1. Hazard and inundation maps produced for whole basin</p> <p>Indicator 1.1.1: Studies conducted to develop to model and map the hydrometeorological hazards of the whole Rioni basin</p> <p>Output 1.2. Enhanced land-use regulations introduced (land-use planning, including zoning and development controls, e.g. expansion, economic development categories etc.) to ensure comprehensive floodplain management and spatial planning</p>

Indicator 1.1: Floodplain development policies in place, which minimise Climate change vulnerability implemented by close of the project

at least 42NEA staff and 60 municipality staff (at least 50% women) trained in modern hazard mapping and risk assessment techniques

staff training record and certification

Indicator 1.2.1. A comprehensive and robust land use and floodplain development policy framework for Rioni basin.

Output 1.3. New building codes reviewed and streamlined for the housing rehabilitation schemes to flood proof new buildings (e.g. material standards, traditional house raising etc);

Indicator 1.3.1. New building codes including building flood resilience measures

Output 1.4. Targeted training of national and local authorities responsible for climate risk management in advanced methods of forward looking climate risk management planning and flood prevention measures;

Indicator 1.4.1. at least 42NEA staff and 60 municipality staff trained in modern hazard mapping and risk assessment techniques

Output 1.5. Community-based flood insurance scheme designed and implemented covering highly exposed villages under 6 municipalities.

Indicator 1.5.1. At least 1 pilot community-based flood insurance scheme in place

<p>Outcome 2: Direct investments and local actions in highly exposed and vulnerable communities improve flood management practice on 8,400km² and build resilience of 200,000 people</p>	<p>Investment in flood intervention measures limited and annual, falls short of what is required</p>	<p>Implementation of adaptation measures that are a mix of traditional engineering and bioengineering solutions</p>	<p>Project annual reports; Mid-term evaluation, final report; training test results;</p>	<p>Output 2.1. Direct measures of long term flood prevention and risk mitigation designed with participation of local governments and population in 6 municipalities (Lentekhi, Oni, Ambrolauri, Tskaltubo, Samtredia, Tsageri);</p>
<p>Indicator 2.1: Number of community based adaptation solutions implemented at the local level upon project closure.</p>	<p>Traditional engineering measures employed which do not take account of climate change and fail in subsequent hazard events. Climate resilience not built into current approach to direct flood intervention measures.</p>	<p>Set up and implement employee guarantee scheme (targeting 200 employees in each municipality, at least 50% women)</p>	<p>Indicator 2.1.1. Feasibility outline and detailed design studies undertaken to ensure the best climate resilient intervention measures are adopted which will include bioengineering solutions as well as traditional hard engineering options.</p>	<p>Indicator 2.1.2. 15 schemes implemented in the 6 municipalities</p>
<p>Indicator 2.2: % of population with improved water management practices resilient to climate change impacts in the targeted regions.</p>	<p>Current approaches do not involve local communities in the implementation of measures and do not address the recurring problem of loss of agricultural property to flood damage</p>		<p>Output 2.2. Community-based adaptation measures, such as bank terracing, vegetative buffers, bundles and tree revetments implemented through the municipal employment guarantee scheme;</p>	<p>Indicator 2.2.1. Municipal employment-guarantee scheme employing local people in the implementation of the adaptation schemes being implemented. Long-term involvement of local population in the maintenance of flood protection infrastructure</p>

<p>Output 2.3. Flood plain seasonal productive systems (e.g. short season annual cropping, cattle rearing plots or seasonal pastures, agro-forestry) benefit 200,000 people and improve resilience to flood threat;</p>	<p>Indicator 2.3.1. Agro-forestry, cattle rearing plots and seasonal cropping measures adopted in all 6 municipalities established</p>	<p>Output 2.4. Lessons learned and best practices documented and disseminated to raise awareness of effective climate risk management options for further up-scaling;</p>	<p>Indicator 2.4.1. Municipal records of employees guarantee scheme and number of people employed per year</p>	<p>Output 3.1. Long term historical observation data digitised and used in policy formulation and risk management practices;</p>
<p>Outcome 3: Institutional Capacity developed for early warning and timely alert communication to vulnerable communities of the Rioni river basin</p>	<p>Monitoring network in the Rioni basin was reduced from 22 to 4 meteorological stations since the early 1990s. The 4 remaining meteorological stations covering all of Rioni basin is inadequate for effective early warning.</p>	<p>Implementation of adaptation measures that are a mix of traditional engineering and bioengineering solutions</p>	<p>Project annual reports; Mid-term evaluation, final report; Community Surveys;</p>	<p>Indicator 3.1.1. Database of historical observation data for Rioni digitised</p>
<p>Indicator 3.1. Flood forecasting and early warning systems introduced to benefit over 200,000 people at risk in the Rioni basin from flood, flash flood and landslide risk in the basin.</p>	<p>There is currently limited capability among national NEA staff for undertaking flood risk assessment and forecasting and limited experience of EW systems implementation and operation</p>	<p>Set up and implement employee guarantee scheme (targeting 200 employees in each municipality, at least 50% women)</p>	<p>Social programme budget statements</p>	<p>Indicator 3.1.1. Database of historical observation data for Rioni digitised</p>

<p>Indicator Establishment/rehabilitation of monitoring stations to increase spatial coverage</p>	<p>3.2.</p>	<p>Various out-of-date and inadequate hazard maps are used for emergency planning and response by different agencies</p>	<p>Purchase and install 5 Met stations, 20 Met posts, and 10 Hydrological posts</p>	<p>Output 3.2. Multi hazard risk assessment for the Rioni river basin (floods, flash floods, associated mudflows and landslides, linked with climatic alterations under alternative scenarios);</p>
<p>Indicator Number of associations with improved institutional capacity to deliver water services to target communities.</p>	<p>3.2.1.</p>	<p>Emergency plans currently available at MIA but propriety of the information is unknown</p>	<p>At least 10 NEA staff with gender balanced composition trained in risk assessment and forecasting and EWS</p>	<p>Indicator 3.2.1. Rioni flood forecasting model developed, which will couple outputs from downscaled meso-scale meteorological systems to HEC-HMS hydrological models. Linked forecasting met-hydrological-hydraulic model.</p>
<p>Indicator 3.2: % of targeted population with more to early warning in the face of climate change</p>	<p>3.3.</p>	<p>Currently limited warnings to communities</p>	<p>Provision of access to up-to-date, definitive hazards and forecast information via single GIS-based data management and dissemination system</p>	<p>Output 3.3. Series of targeted training delivered for the NEA staff and partner organisations in the advanced methods of risk assessment and forecasting;</p>
<p>Indicator 3.3. Number of national and local staff with flood forecasting, early warning and flood risk assessment capabilities</p>	<p>3.3.1.</p>	<p>Development of emergency plans</p>	<p>90% of people in Rioni basin to have access to early warning messages/signals by completion of project</p>	<p>Indicator 3.3.1. At least 10 NEA staff trained in risk assessment and forecasting and EWS. Municipality emergency staff trained in emergency response. Strengthened capacity of national and local staff in monitoring, flood forecasting, early warning and emergency response</p>
<p>Output 3.4. Essential equipment to increase monitoring and forecasting capabilities in the target basin procured and installed;</p>				

Indicator 3.4.1. Purchase and install 5 Met stations, 20 Met posts, and 10 Hydrological posts. Observation network of all hydrological and meteorological variables to provide an appropriate level of spatial resolution of these variables for early warning

Output 3.5. Systems established at the national and sub-national level led by the NEA for long and short term flood forecasting of hydrological risks; including dissemination and communication of forecasts.

Indicator 3.5.1. A fully integrated flood early warning system (Deltares-FEWS) which links forecasting models to telemetered data as input and forecasting reporting and warning systems as output.

Indicator 3.5.2. An early warning communication network using different communication links such as telephone trees, SMS and e-mail networks

Indicator 3.5.3. GIS-based website for dissemination of hazard maps and associated information, such as hydrometeorological telemetric and Deltares-FEWS data to central and local government stakeholders.

Indicator 3.5.4. A public-facing website presenting key layers of information, with the potential to disseminate early warning information to the public.

Indicator 3.5.5. Early warning awareness and training workshops for community, NGOs, government and media representatives.

I. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, 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.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- 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 this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the 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/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document".

ANNEXES

Annex 1: Map of flood and flash flooding risks in Georgia

Annex 2: Priority sub-catchments for floods and flash flood hazards in Georgia; Marked project area in the Rioni River basin (upper, mid and low reaches)

Annex 3: Catastrophic Flash-Flood Risk Map

Annex 4: UNDP Environmental Finance – Specialized Technical Services

Annex 5: list of prioritized locations in the 6 target municipalities

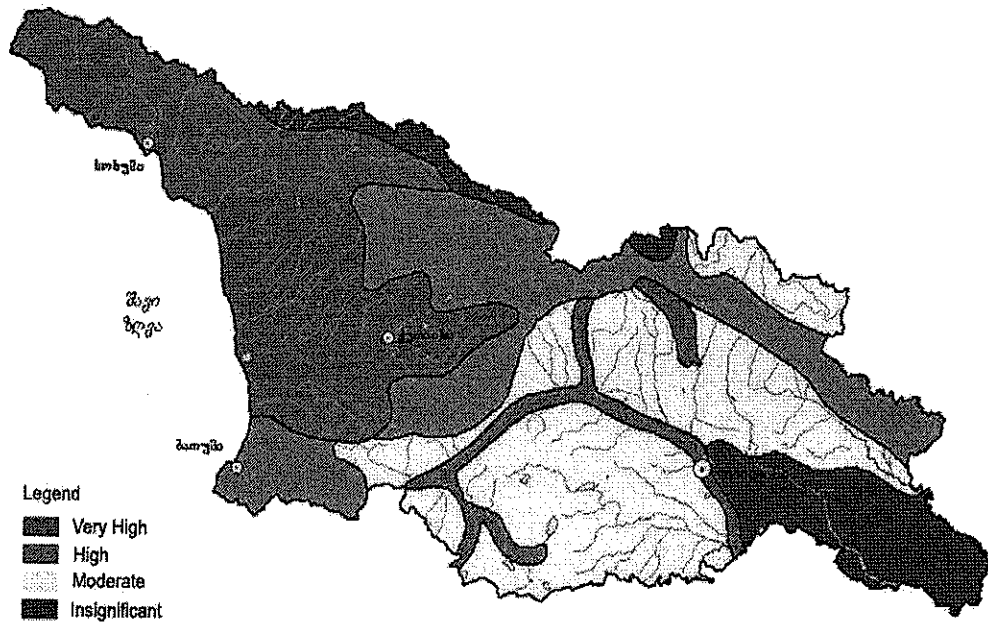
Annex 6: Relevant aid-funded projects

Annex 7: Stakeholder list

Annex 8: Detailed breakdown of the budget for the project

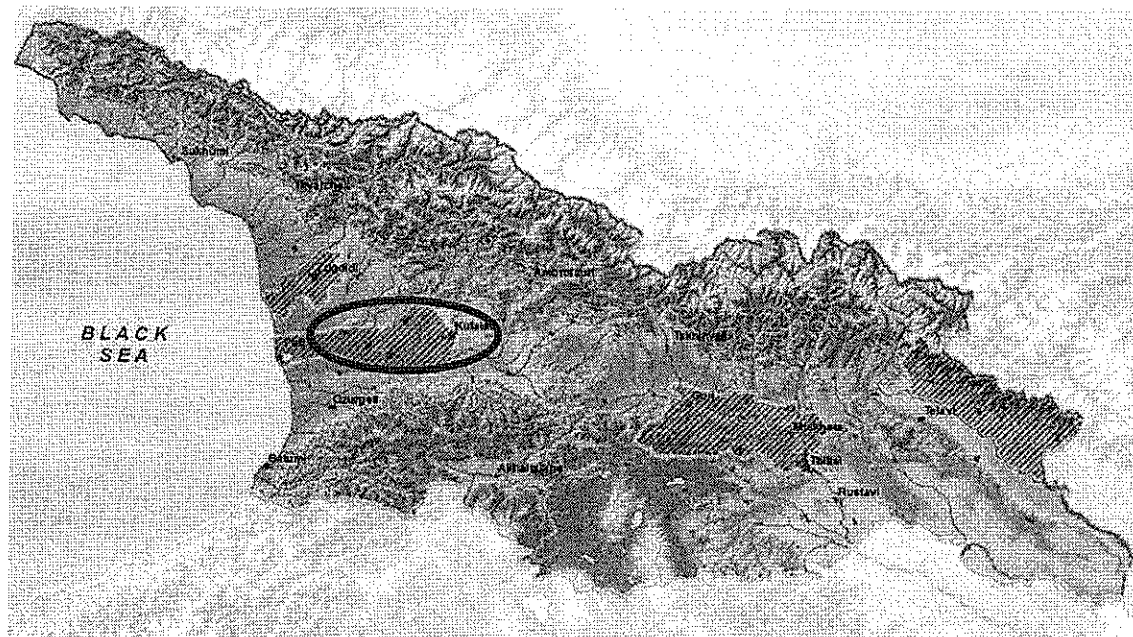
Annex 9: Risk Log

Zoning of Georgia per Flash Flood Risks on Rivers



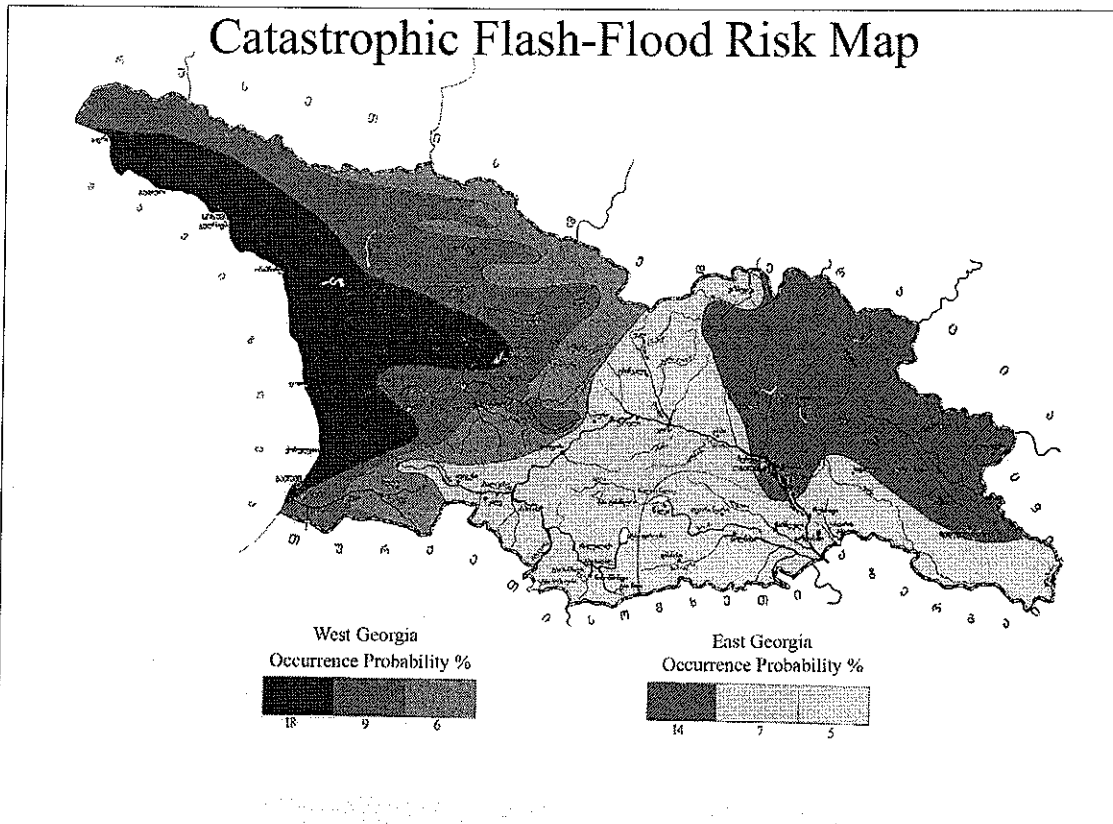
¹⁸ All maps are prepared by NEA

Annex 2: Priority sub-catchments for floods and flash flood hazards in Georgia; Marked project area in the Rioni River basin (upper, mid and low reaches)



Annex 3: Catastrophic Flash-Flood Risk Map

Indicates high hazard occurrence probabilities in the Western Georgia



Annex 4: UNDP Environmental Finance – Specialized Technical Services

The implementing entity fee will be utilized by UNDP to cover its indirect costs in the provision of general management support and specialized technical support services. The table below provides an indicative breakdown of the estimated costs of providing these services. If the national entity carrying out the project requests additional Implementation Support Services (ISS), an additional fee will apply in accordance with UNDP fee policy regarding ISS and would be charged directly to the project budget.

Category	Indicative Services[1] Provided by UNDP	Estimated Cost of Providing Services[2]
Identification, Sourcing and Screening of Ideas	<p>Provide information on substantive issues in adaptation associated with the purpose of the Adaptation Fund (AF).</p> <p>Engage in upstream policy dialogue related to a potential application to the AF.</p> <p>Verify soundness and potential eligibility of identified idea for AF.</p>	20,825
Feasibility Assessment / Due Diligence Review	<p>Provide up-front guidance on converting general idea into a feasible project/programme.</p> <p>Source technical expertise in line with the scope of the project/programme.</p> <p>Verify technical reports and project conceptualization.</p> <p>Provide detailed screening against technical, financial, social and risk criteria and provide statement of likely eligibility against AF requirements.</p> <p>Determination of execution modality and local capacity assessment of the national executing entity.</p> <p>Assist in identifying technical partners.</p> <p>Validate partner technical abilities.</p> <p>Obtain clearances from AF.</p>	62,475
Development & Preparation	<p>Provide technical support, backstopping and troubleshooting to convert the idea into a technically feasible and operationally viable project/programme.</p> <p>Source technical expertise in line with the scope of the project/programme needs.</p> <p>Verify technical reports and project conceptualization.</p> <p>Verify technical soundness, quality of preparation, and match with AF expectations.</p> <p>Negotiate and obtain clearances by AF.</p> <p>Respond to information requests, arrange revisions etc.</p>	83,300

Implementation	<p>Technical support in preparing TORs and verifying expertise for technical positions.</p> <p>Provide technical and operational guidance project teams.</p> <p>Verification of technical validity / match with AF expectations of inception report.</p> <p>Provide technical information as needed to facilitate implementation of the project activities.</p> <p>Provide advisory services as required.</p> <p>Provide technical support, participation as necessary during project activities.</p> <p>Provide troubleshooting support if needed.</p> <p>Provide support and oversight missions as necessary.</p> <p>Provide technical monitoring, progress monitoring, validation and quality assurance throughout.</p> <p>Allocate and monitor Annual Spending Limits based on agreed work plans.</p> <p>Receipt, allocation and reporting to the AFB of financial resources.</p> <p>Oversight and monitoring of AF funds.</p> <p>Return unspent funds to AF.</p>	187,425
Evaluation and Reporting	<p>Provide technical support in preparing TOR and verify expertise for technical positions involving evaluation and reporting.</p> <p>Participate in briefing / debriefing.</p> <p>Verify technical validity / match with AF expectations of all evaluation and other reports</p> <p>Undertake technical analysis, validate results, compile lessons.</p> <p>Disseminate technical findings</p>	62,475
Total		416,500

[1] This is an indicative list only. Actual services provided may vary and may include additional services not listed here. The level and volume of services provided varies according to need.

[2] The breakdown of estimated costs is indicative only.

[2] This is the total fee for UNDP services provided as Implementing Entity. If the Implementing Partner (the national entity carrying out the project) requests additional Implementation Support Services (ISS), an additional fee will apply in accordance with UNDP fee policy regarding ISS. Whilst the total fee will be US\$229,500, the breakdown provided is an estimate only.

Service standards:

1. initial response to communication within 2 working days
2. full response to communication (with the exception of a response requiring travel) within 10 working days

Annex 5: list of prioritized locations in the 6 target municipalities

Priority within the Municipality	Municipality	Address of the object	Description of damage	What is under threat	Works needs to be carried out	Cost (GEL)
1	Abrolauri city	Territory adjacent to the Vazha-Pshavela st.	Rioni is eroding river bank	Pillar of the bridge and living building (block)	Costal fortification with boulders	150,000
2	Ambrolauri	Village Bugeuli, R. Rioni	River erodes central highway	Central highway	Costal fortification with boulders	150,000
1	Oni	Oni, Lebanidze bank	0	Population and the street	Construction of gabion	180,000
2	Oni	Oni, Vakhtang VI St.	0	population	Construction of gabion	24,000
3	Oni	Village Shardometi		Road, population	Construction of gabion	476,000
1	Lentekhi	Village Rtskhemeluri	Bank fortification gabion damaged	community	Construction of gabion	1,000,000
2	Lentekhi	Village Mami	Village is eroded by r. Tskhenistskali	Community, church, graveyard	Stone embankment	180,000
3	Lentekhi	V. Babili	Village is eroded by r. Tskhenistskali	highway ; community	Stone embankment	210,000
1	Samtredia	V. Sajavakho	River bed is changed to the left side and flooded state and private plots	Population and school	Fortification of left bank of the river	672,000
1	Tskaltubo	V. Geguti on the R. Rioni	River bank is damaged	Railway rail, population of the village, agricultural grounds	Bank fortification works	400,000

2	Tskaltubo	V. Zarati on the R. Rioni	River bank is damaged	population of the village, agricultural grounds	Bank fortification works	550,000
1	Tsageri	town Tsageri, Sanapiro St.	Rehabilitation of protection wall on the right bank of the river	Population of the town	Rehabilitation several segments of protecting concrete wall	500,000
2	Tsageri	Town Tsageri Territory adjacent to landfill and brick factory territory	Right bank of the river	grounds	Construction of protection railing (dam?)	108,000
3	Tsageri	Village Lasuriashi	Protecting wall on the left bank of the river	Road to the school and agricultural grounds	Need in wire netting gabion	72,000
4	Tsageri	Village Tchalistavi	Right bank of the river	Community agricultural grounds	Need in wire netting gabion	108,000
Total (GEL)						4,780,000
Total (USD)						2,868,000

Annex 6: Relevant aid-funded projects

Organisation	Project Title/Partners/Stakeholders	Project Objectives/Coverage/beneficiaries/Schedule	Project Outputs	Relevance to current project	Recommended Action
USAID	<p><u>Title:</u> Integrated Natural Resources Management in Watersheds of Georgia (INRMW)</p> <p><u>Partners:</u> Global Water for Sustainability – GLOWS / The Florida International University (FIU) (Contractor – CENN)</p> <p><u>Stakeholders:</u> Local communities, national and local government</p>	<p><u>Principal Objective:</u> The primary goal of the INRMW Programme is to improve the current and future lives of people in Georgia by utilizing and managing natural resources more sustainably, including water, soil, vegetation, and the ecosystems that encompass them.</p> <p><u>Specific objectives:</u> introduce innovative approaches and practical models of participatory integrated natural resources management in targeted watersheds, by facilitating reforms to and harmonization of national policies, and by increasing the capacity of national and regional institutions to replicate these approaches and models throughout the country.</p> <p><u>Geographical Coverage:</u> Alazani, Ioni and Rioni river basins</p> <p><u>Implementation schedule:</u> Sept 2010 to Sept 2014</p>	<ul style="list-style-type: none"> - Empower local communities and authorities in the process of natural resources management by promoting local governance mechanisms that enable rural people to advocate for change that betters their lives. - Achieve tangible results in behavior change of women and men that visibly illustrate the linkages between ecosystem services and human benefits. Facilitate behavior change at the community level and across the entire spatial hierarchy - local to national - of government authorities. - Reduce threats to natural resource sustainability in targeted watersheds; improve water quality and productivity, ecosystem protection, and energy efficiency, and reduce vulnerability to climate change and natural disasters. - Increase capacity for integrated and adaptive natural resources management at community, municipal, regional, and national levels by developing knowledge, skills, and improved management tools within key institutions. - Catalyze more widespread implementation of integrated natural resource management by 	<p>Highly relevant in geographical coverage and scope.</p>	<ul style="list-style-type: none"> - Seek close coordination/collaboration with USAID

<p>USAID/Caucasus Mission</p>	<p>Title: Climate Change Adaptation and Disaster Mitigation (CCADM)</p> <p>Partners: Contractor - CENN</p>	<p><u>Principal Objectives:</u> The overall goal of the project is to develop flexible and resilient societies and economies in rural areas of Georgia capable of coping with the impacts of current climate variability and future climate change.</p> <p><u>Specific objective:</u> of the Project is to reduce the susceptibility of local communities in the pilot rural areas of Georgia Samtskhe-Javakheti, Adjara and Kakheti regions) to negative climate impacts through post-conflict environmental rehabilitation, natural disaster risk reduction (DRR) and climate change adaptation (CCA).</p> <p><u>Geographical Coverage:</u> Georgia</p> <p><u>Implementation schedule:</u> Oct 2009 to Oct 2012</p>	<p>raising public awareness and supporting the development of more enabling policy and institutional frameworks.</p>	<p>Relevant for DRR and CCA components</p>	<p>- Transfer lessons learned</p>
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World Bank	<p>Title: Europe and Central Asia Climate Change Risk Mitigation Measures project</p> <p>Partners: Government of Canada (CIDA)</p> <p>Funding - Administration - The World Bank (IDA)</p> <p>Grant amount - USD 142482</p> <p>Stakeholders: Hydromet Service of Georgia under the National Environmental Agency</p>	<p><u>Principal Objective</u> - introduce a simple and cheap community-operable system of early warning on the expected floods</p> <p><u>Beneficiaries:</u> - rural communities of upstream Rioni river basin (in Racha)</p>	<p>- A small network of community-operated monitoring instruments installed and provides flood risk warnings within the pilot region of Racha, upstream Rioni basin;</p> <p>- Staff of Hydromet service trained in installation of the community-operable monitoring networks for flood warning and in interpretation of data incoming from such networks.</p>	<p>Highly relevant due to geographical coverage and outcomes. Network of monitoring stations should be incorporated into EWS monitoring network to be developed as part of this project if possible</p>	<p>- Transfer lessons learned</p> <p>- Build on lesson learned</p> <p>- Incorporate monitoring stations into EWS</p>
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<p>Swiss Agency for Cooperation and Development (SDC)</p>	<p>Title: DRR Project / Reducing Disaster Risks in Tsageri and Lentekhi Municipalities</p> <p>Stakeholders: Ministry of Regional Development and Infrastructure; - National Environment Agency; - Emergency Management Department; - Governor's Office of Racha Lechkhumi and Kvemo Svaneti Region; - Caucasus Environmental NGO Network - Municipalities of Tsageri and Lentekhi - Communities of Tsageri and Lentekhi;</p>	<p>Principal Objectives: The overall goal of the project is to save lives and reduce economic losses due to natural disasters by supporting the prevention and preparedness efforts on the local level by the introduction of community awareness building, structural policy dialogue with local stakeholders, establishment of a simple and local Disaster Management Strategy, fire fighters/rescuers training and simple engineering prevention measures.</p> <p>Specific Objectives: The project aimed to be as complete as possible introducing disaster risk identification, community awareness building and policy dialogue with local stakeholders as prevention measures, engineering and bio-engineering measures for mitigation of the risks, and fire fighters training and provision of equipment as preparedness measures.</p> <p>Geographical coverage: Racha - Lechkhumi, Lower Svaneti region: Tsageri and Lentekhi Municipalities.</p> <p>Beneficiaries: Local population; Local Government; Municipal fire fighters</p> <p>Implementation Schedule: 2009-2010</p>	<ul style="list-style-type: none"> - The risks of natural hazards in Tsageri and Lentekhi Municipalities are identified and the understanding of disaster risks of the local communities and local authorities has been increased - A simple local Disaster Management Strategy is established. Awareness regarding DRR among local communities and authorities is raised. - Disaster prevention works to protect local communities and rural infrastructures from natural disasters are implemented - The rescue capacities in Lentekhi and Tsageri Municipalities are strengthened - A participatory risk identification was carried out, the hazards, the vulnerabilities and the capacities are identified and a risk map is created - An awareness campaign was organized, trainings for capacity building are completed and policy dialogue – including the establishment of a Disaster Management Strategy – has taken place - Engineering and bio-engineering prevention measures are in place in highly hazard-prone areas - The fire fighters and rescuers of Tsageri 	<p>Highly relevant due to geographic coverage and objectives. Lessons learned will be important for all components of this project.</p>	<ul style="list-style-type: none"> - Transfer lessons learned - Build on lessons learned
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OXFAM	<p><u>Title:</u> Participatory multi-hazard disaster risk reduction in Armenia, Azerbaijan and Georgia- Adjara Autonomous Republic, Shuakhevi, and Keda, 22 communities,</p> <p><u>Stakeholders:</u> The project is implemented through implementing partner BSEA, with joint collaboration of ESMD, Environmental Centre of Monitoring and Prognosis, The Directorate for Environment and Natural Resources of Adjara, Ministry of Education of Adjara, community members, local Municipalities.</p>	<p><u>Principal Objective:</u> To increase resilience and reduce vulnerability of local communities and national institutions by supporting strategies that enable them to prepare for, mitigate and respond to natural disasters, in the South Caucasus Region.</p> <p><u>Specific Objective:</u> Supporting 22 communities to develop their resilience through an institutionalized community based model, promoted within district and national DRR strategic development in Adjara Autonomous Republic, Georgia.</p> <p><u>Geographical coverage:</u> Adjara Autonomous Republic, Georgia.</p> <p><u>Beneficiaries:</u> Local vulnerable population, CBO representatives, Members of Municipality Emergency Groups, local Government representatives, schoolteachers, school pupils, ESMD members, mobilised community members.</p> <p><u>Implementation schedule:</u> 1st March 2010-July 31 2011</p>	<ul style="list-style-type: none"> - Local communities have established a culture of safety and resilience through raising awareness, knowledge, and skills in DRR initiatives - District plans establish coordination mechanisms with communities and strengthen community based disaster risk reduction initiatives - Strengthened disaster risk reduction strategies through increased dialogue, coordination, and information exchange between regional, national and local stakeholders 	<p>The target area is outside of the study area of this project, but lessons learned could be useful.</p>	<ul style="list-style-type: none"> - Transfer general lessons learned to this project.
Danish Red Cross	<p><u>Title:</u> <i>Regional Programme for Building Safer Local Communities in South Caucasus</i>, implemented by GRCS.</p> <p><u>Partners:</u> The project is jointly implemented with community members/volunteers, Red Cross Branch staff / volunteers & HQ staff and</p>	<p><u>Principal Objective:</u> To increase resilience and reduce vulnerability of local communities and institutions through support to strategies that enable them to better prepare for, mitigate and respond to natural disasters.</p> <p><u>Specific Objective:</u> Targeted local communities and institutions are better able to prepare for, mitigate and respond to natural disasters affecting the most vulnerable.</p>	<ul style="list-style-type: none"> - Target communities have completed Hazard Vulnerability and Capacity Assessment (HVCA). - Target communities have developed their preparedness and response plans (CPRP) based on sex and age-disaggregated data and gender analysis. - Volunteer Community Disaster Preparedness and Response Teams are established (20 members each both women and men) as a first 	<p>Relevant due to geographical coverage and outcomes.</p>	<ul style="list-style-type: none"> - Transfer lessons learned

<p>EC Delegation to Georgia</p>	<p>local / regional / national authorities.</p> <p><u>Stakeholders:</u> Lessons learned and best practices are shared with local, regional, national and global stakeholder involved in DM/DRR platforms and forums.</p>	<p><u>Geographical coverage:</u> Racha-Lechkhumi region: Ambrolauri, Oni, Tsageri and Lentekhi districts.</p> <p><u>Beneficiaries:</u> a) Inhabitants of rural communities of the mountain regions, b) School teachers and schoolchildren aged from 7 to 17 years, c) Decision-makers, stakeholders and community leaders, d) Community volunteers and e) Red Cross HQ & Branch staff and volunteers</p> <p><u>Implementation schedule:</u> April 15th 2010 – July 15th 2011</p>	<p>line response of communities linked to regional DM structure/mechanism.</p> <ul style="list-style-type: none"> - Relevant local stakeholders are trained / briefed in DRR, HIFA and climate change. - Age, gender and country tailored awareness raising materials on DRR, climate change and earthquake non-structural mitigation are developed, compiling existing local and international materials in close cooperation with relevant stakeholders. - Teachers are trained and equipped with relevant teaching and educational materials to educate pupils on DRR, climate change and earthquake non-structural mitigation. - Representatives of mass-media are briefed on DRR, climate change and earthquake non-structural mitigation to support awareness raising among community members. - The municipal development strategies are elaborated together with DRR expertise in at least two out of three target municipalities. - At least four development projects are implemented in target communities with DRR as an integral component. 	<p>Relevant due to scope</p>	<ul style="list-style-type: none"> - Transfer lessons learned
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Civil Society Programme (MATRA)	<p>for mitigating natural disasters and reducing poverty in Georgia</p> <p>Partners: Contractor CENN</p>	<p>society and promoting good governance and policy dialogue for sustainable natural resources management at the local and national levels.</p> <p><u>Specific objectives:</u></p> <ol style="list-style-type: none"> 1. Strengthening local capacity to empower affected communities and local authorities to prevent and reduce the natural disasters risks and promote sustainable rural development in the targeted regions of Georgia 2. Developing issue based coalition and partnerships to stimulate structural dialogue between the local communities, local authorities and central government concerned with the natural disaster risk reduction (DRR) and management 3. Prioritising the natural disaster risk reduction (DRR) and management in the State agenda as key factors for eradication of poverty and lobbying for allocation of funds to competent central (Ministry of Environment Protection, Ministry of Agriculture) and local authorities to address natural disasters <p><u>Geographical coverage:</u> Georgia</p> <p>Implementation Schedule: Feb 2009 – Feb 2011</p>	<p>- Guidelines for risk assessment and incorporation of hazard and risk information into spatial planning and</p> <p>- EIA/SEA are developed, communicated and thoroughly explained to stakeholders and tested</p>	<p>Highly relevant due to scope. GIS and EW framework can be adopted as part of this project or built upon as</p>	<p>- Transfer lessons learned</p> <p>- Build on lessons learned</p>
Civil Society Programme (MATRA)	<p>Title: Institutional Building for Natural Disaster Risk Reduction (DRR) in Georgia</p> <p>Partners: Contractor -</p>	<p><u>Principal Objectives:</u> The Project objective is institutional capacity building in disaster risk reduction (DRR) via introduction of modern spatial approaches and technologies and risk communication strategy in spatial planning in Georgia</p>			

CENN	<p><u>Geographical coverage:</u> Georgia</p> <p><u>Implementation Schedule:</u> May 2009 to Nov 2011</p> <p><u>Beneficiaries:</u> NEA staff</p>	<ul style="list-style-type: none"> - 2. The guidelines are endorsed by the Parliamentary Committee on Environment and approved by the Ministry of Environment Protection and Natural Resources - 3. Capacity of staff of the National Environmental Agency of the MoEP is raised in modern technologies and approaches for DRR - 4. New system for DRR data management and analysis is designed and national web-based risk atlas is developed and are in use in the National Environmental Agency - 5. Modern technologies and approaches for DRR are tested and specific case studies (information packages) are developed and published to address different types of geo-hazards - 6. Risk communication strategy involving local stakeholders is elaborated and a framework of early warning system for DRR is developed and introduced 	necessary
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Annex 7: Stakeholder list

Organisation	Name	Role
Central Government		
Ministry of Environment Protection (MoEP)	George Zedginidze	Deputy Minister, Designated Authority for the AF
MoEP	Nino Tkhilava	Head of the Department of Environmental Policy and International Relations
MoEP	Catherine Nakashidze	Head of the Department of Integrated Environmental Management
MoEP	Natalia Arkania	Deputy Head of the Department of Integrated Environmental Management
MoEP	Olga Shashkina	Chief Specialist of the Department of Environmental Policy and International Relations
MoEP	Grigol Lazriev	Head of Hydrometeorology and Climate Change Division (H&CC)/ Dept. of Integrated Environmental Management
MoEP	Medea Inashvili	Chief Specialist of the Division of H&CC/ Dept. of Integrated Environmental Management
MoEP	Marina Shvangiradze	Project Manager, 'Second National Communication'
MoEP – NEA	Shalva Javakhadze	Head of NEA
MoEP – NEA	Ramaz Chitanava	Head of the Department of Hydrometeorology of NEA
MoEP – NEA	Emil Tsereteli	Head of the Department of Geological Risk Management of NEA
MoEP – NEA	O. Gogrichiani	Chief specialist of the Department of Geological Risk Management of NEA
MoEP – NEA	Gia Kordzakhia	Advisor of the Head of NEA
MoEP – NEA	Technical Staff	Various
Ministry of Regional Development and Infrastructure (MRDI)	Djambul Bakuradze	Deputy Minister
MRDI	Mamuka Vatsadze	Deputy Minister
MRDI	Giorgi Dididze	Chief Specialist, Focal Point for Disaster Risk Management in the MRDI
Ministry of Internal Affairs (MIA)	Irakli Kadagidze	Head of the Emergency Management Department
Ministry of Agriculture (MoA)	Vakhtang Gogaladze	Head of Agriculture Development Department
Local Government		
Branch of NEA	Amiran Qvachakhidze	Head of Kolkheti hydrometeorological Observatory of the Department of Hydrometeorology of NEA
Tsageri Municipality	Dimitri Asatiani	Head of Tsageri Municipality
Lentekhi Municipality	Roman Mukbaniani	Head of Lentekhi Municipality
Oni Municipality	Valerian Gavasheli	Head of Oni Municipality
Ambrolauri Municipality	Levan Jmukhadze	Head of Ambrolauri Municipality
Tskaltubo Municipality	Otar Tsitaishvili	Head of Tskaltubo Municipality
Samtredia Municipality	Koba Kandelaki	Head of Samtredia i Municipality

NGOs		
Caucasus Environment NGO Network (CENN)	Nana Janashia	Executive Director
CENN	Kakha Bakhtadze	Programme Officer
UNICEF	Nino Gvetadze	Project Officer
Regional Environmental Centre (REC) Caucasus	Sophiko Akhobadze	Executive Director
Georgian Red Cross	Kakha Mamuladze	DM Coordinator
Swiss Agency for Development and Cooperation	David Tchitchinadze	Project Officer
USAID	Mariam Ubilava	Project Management Specialist - Office of Energy and Environment
USAID	Mariam Shotadze	Project Manager

documented and disseminated to raise awareness of effective climate risk management options for further up-scaling

Outcome	Activity	Sub-Total Output	Sub-Total Outcome	Sub-Total Output	Sub-Total Outcome	Sub-Total Output	Sub-Total Outcome
OUTCOME 3: Early warning system in place to improve preparedness and adaptive capacity	Printing & Publication	20,000	0	20,000	0	20,000	0
	Sub-Total Output 2.4	30,000	0	30,000	0	30,000	0
	Sub-Total Outcome 2	2,900,000	0	573,999	1,146,007	1,178,000	1,178,000
MoEP	IT equipment	20,000	20,000	20,000	20,000	20,000	20,000
	National Experts	95,000	95,000	95,000	95,000	95,000	95,000
	Sub-Total Output 3.1	115,000	115,000	115,000	115,000	115,000	115,000
	sub-contracts	10,000	10,000	10,000	10,000	10,000	10,000
	National Experts	50,000	50,000	50,000	50,000	50,000	50,000
	Printing and publication	10,000	10,000	10,000	10,000	10,000	10,000
	Sub-Total Output 3.2	70,000	70,000	70,000	70,000	70,000	70,000
	Sub-contracts	15,000	15,000	15,000	15,000	15,000	15,000
	Travel	5,000	5,000	5,000	5,000	5,000	5,000
	National Experts	20,000	20,000	20,000	20,000	20,000	20,000
MoEP	Sub-Total Output 3.3	40,000	40,000	40,000	40,000	40,000	40,000
	Equipment for meteo stations	225,000	112,500	112,500	112,500	112,500	112,500
	Installation of meteo posts	170,000	85,000	85,000	85,000	85,000	85,000
	Installation of hydro posts	70,000	35,000	35,000	35,000	35,000	35,000
	IT equipment	10,000	5,000	5,000	5,000	5,000	5,000
	Arrangement for regime net	100,000	50,000	50,000	50,000	50,000	50,000
	Sub-Total Output 3.4	575,000	287,500	287,500	287,500	287,500	287,500
	Travel	10,000	5,000	5,000	5,000	5,000	5,000
	sub-contracts	150,000	75,000	75,000	75,000	75,000	75,000
	National Experts	20,000	10,000	10,000	10,000	10,000	10,000
MoEP	Printing and publication	16,000	8,000	8,000	8,000	8,000	8,000
	Misc	4,000	2,000	2,000	2,000	2,000	2,000
	Sub-Total Output 3.5	200,000	100,000	100,000	100,000	100,000	100,000
	Sub-Total Outcome 3	1,000,000	402,500	397,500	100,000	100,000	100,000
	Monitoring & Evaluation Costs (incl. Travel)	58,000	14,500	14,500	14,500	14,500	14,500
	Contractual Services (Project Management & Administration)	240,000	60,000	60,000	60,000	60,000	60,000
	Supplies	32,000	8,000	8,000	8,000	8,000	8,000
	Sub-Total Project Management	330,000	82,500	82,500	82,500	82,500	82,500
	Contractual Services (Project Management & Administration)	120,000	40,000	40,000	40,000	40,000	40,000
	UNDP (TRAC)						
Project/Programme Execution	Adaptation Fund						
	UNDP (TRAC)						
Project Management	Adaptation Fund						
	UNDP (TRAC)						

	Equipment and Furniture	23,000	15,000	2,000	2,000	4,000
	Miscellaneous	17,000	5,000	3,000	3,000	6,000
	Sub Total Project Management (UNDP TRAC)	160,000	60,000	25,000	25,000	50,000
	Sub Total Project/Programme Execution	330,000	82,500	82,500	82,500	82,500
1. TOTAL Project Implementation Costs		4,900,000	940,000	1,207,674	1,391,826	1,360,500
2. MIE fee for services detailed in ANNEX V (8.5%)		416,500	104,125	104,125	104,125	104,125
3. Total funding from AF (1+2)		5,316,500	1,044,125	1,311,799	1,495,951	1,464,625
4. TOTAL Project Implementation Costs (from UNDP TRAC)		160,000	60,000	25,000	25,000	50,000
5. TOTAL funding allocated for the project (3+4)		5,476,500	1,104,125	1,336,799	1,520,951	1,514,625
6. GRAND TOTAL FUNDING FOR THE NET PROJECT ACTIVITY (5.2)		5,060,000	1,000,000	1,232,674	1,416,826	1,410,500

Budget Notes:

1. Travel associated with conducted site surveys
2. Costs of survey sub-contractors
3. Purchase of field survey equipment
4. International Expert (3 staff months) to provide expertise and technical assistance in inundation modeling and mapping
5. National experts to provide expertise and technical assistance in inundation modeling and mapping
6. Costs of printing and publications associated with producing hazard inundation maps
7. Miscellaneous costs associated with implementation of the activity
8. Costs associated with undertaking stakeholder consultations, including holding workshops
9. National experts to provide expertise and technical assistance in developing land-use management policy
10. Costs of sub-contracts associated with developing land-use management policy
11. Costs of printing and publications associated with the development of land-use management policy
12. Costs associated with undertaking stakeholder consultations, including holding workshops
13. National experts to provide expertise and technical assistance in developing new building codes
14. Costs of sub-contracts associated with developing new building codes
15. Costs of printing and publications associated with the development of new building codes
16. Cost of undertaking targeted training for national and local authority staff in climate change risk management planning and prevention measures
17. National experts to provide expertise and technical assistance in the provision of targeted training
18. Cost of sub-contracts associated with provision of targeted training
19. Costs associated with undertaking stakeholder consultations on community-based flood insurance scheme, including holding workshops

20. National experts to provide expertise and technical assistance development of community-based flood insurance scheme
21. Costs of sub-contracts associated with developing a community-based flood insurance scheme
22. Costs of printing and publications associated with the development of community-based flood insurance scheme
23. Miscellaneous costs associated with implementation of the activity
24. Travel associated with the design of direct flood prevention measures e.g. site visits to assess feasibility of designs
25. International Expert (3.5 staff months) to provide expertise and technical assistance in the design of direct flood mitigation measures
26. National experts to provide expertise and technical assistance in the design of direct flood mitigation measures
27. Costs of sub-contracts to undertake the implementation and building of the direct flood mitigation measures
28. Costs of printing and publications associated with the design and implementation of the direct flood prevention mitigation measures
29. Miscellaneous costs associated with the implementation of the activity
30. Travel associated with the design and implementation of the community-based adaptation measures
31. International Expert (3.5 staff months) to provide expertise and technical assistance in the design of community-based adaptation measures
32. National experts to provide expertise and technical assistance in the design of community-based adaptation measures
33. Costs of sub-contracts to undertake the design and implementation of community-based adaptation measures
34. Costs of printing and publications associated with the development of a community-based adaptation measures (e.g. printing of information leaflets for raising community awareness)
35. Miscellaneous costs associated with the implementation of the activity
36. Travel associated with the design implementation of floodplain seasonal productive systems
37. International Expert (3.5 staff months) to provide expertise and technical assistance in the design of floodplain seasonal productive systems
38. National experts to provide expertise and technical assistance in the design of floodplain seasonal productive systems
39. Costs of sub-contracts to undertake the design and implementation of community-based adaptation measures
40. Costs of printing and publications associated with the development of floodplain seasonal adaptive systems (e.g. printing of information leaflets for raising community awareness)
41. Miscellaneous costs associated with the implementation of the activity
42. National experts to develop and implement a programme for disseminating lessons learned
43. Costs of printing and publications associated with the disseminating lessons learned (e.g. printing of information leaflets for raising community awareness)
44. Purchase of IT equipment (low capability computers - 20, high capability computers - 10, including 1 high capability server)
45. National experts to provide expertise and technical assistance in the establishment of the hydrometric database at NEA
46. Costs of sub-contracts to provide technical assistance in multi-hazard risk assessment
47. National experts to provide technical assistance in multi-hazard risk assessment
48. Costs of printing and publications associated with the activity
49. Costs of sub-contracts to provide technical assistance in the targeted training of NEA staff and partner organization staff in advanced risk assessment of

- forecasting
50. Travel associated with provision of target training
 47. National experts to provide technical assistance in the targeted training of NEA and partner organization staff in advanced risk assessment and forecasting
 52. Purchase of Met stations (5 x \$45k)
 53. Purchase and installation of meteorological posts (20 x \$8.5k)
 54. Purchase and installation of hydrological posts (10 x \$7k)
 55. Purchase (24 core) computer to hasten the forecast model process - 1
8 core - 1
4 core - 4
 56. Arrangement of the regime net (bore-hole, checkpoints etc) on 3 researched landslide area - 3 years & Purchase of boring machine and other equipment
 57. Travel associated with the establishment of the FFEWS
 58. Costs of sub-contracts to provide technical assistance in the establishment of the FFEWS
 59. National experts to provide technical assistance in the establishment of the FFEWS
 60. Costs of printing and publications associated with the activity
 61. Miscellaneous costs associated with the implementation of the activity
 62. Consultancy fee and travel costs for international expert for conducting monitoring and evaluation of the project progress
 63. Contracts of project management and support staff
 64. Cost of office supplies and disposables
 65. As a Multilateral Implementing Entity of the AF, UNDP earns a fee upon approval of each project. The fee is to be used to cover specific costs incurred by UNDP. For the Country Office, these services are related to supporting project development and providing oversight once the project is running.

Annex 9: Project Risk Log

Key risks underlying the project have been analyzed and qualitatively assessed in connection with the context of the target sites for the project. Potential risks include:

No	Risk	Classification	Possible Measures for Addressing the Risk
1	Unforeseen delays in undertaking essential surveys due to weather/access issues etc.	High	Surveys to be scheduled to maximise favourable weather conditions. Early reconnaissance visits to remote areas will determine potential access difficulties. Issues/Risks will be raised to the PEB and adequate mitigation measures will be discussed/approved by PEB and implemented.
2	Adverse climatic conditions may also pose risks to workforce health and safety, or damage adaptation measures being implemented	High	The project will draw up an engineering and safety plan to reduce immediate risks of hazard occurrence during works. Health and safety precautions for the workforce will be established in the inception phase, drawing on lessons from other high altitude projects. Contingency and evacuation plans will be prepared.. All sub-contracted firms will need to have H&S insurance for its employees.
3	Resistance of certain government institutions to introduce floodplain development policy that sets number of land use limiting regulations and floodplain zoning rules.	Medium	Bottom-up approach to the policy development with active engagement of local population and authorities will enable the project to follow the principles of subsidiarity and participation underlined in the Regional Development Strategy and help local authorities make decentralised climate compatible development decisions. Engagement of the Regional Development and Infrastructure Ministry will help the flood plain policy to emerge in full consistency with the development priorities that will be supported to embark on climate resilient pathway.
4	Lack of incentives for particular local communities to cooperate in activities that do not yield immediate financial value, but aim at longer-term resilience, may reduce stakeholder engagement and comprehensive participation.	Medium	The project incorporates activities that yield immediate benefits for communities in terms of awareness, preparedness, skill development and income generation (employee guarantee scheme). This will be emphasized during all meetings and consultations with community representatives during the inception phase

5	Due to staff turnover at the target Ministries the trained staff may leave for the other job opportunities undermining installed technical capacity	Low	Special training conditions and / or training for trainers will be arranged to keep the trained staff at the target Ministries. Staff retention and succession plans will be developed
6	Delays in recruitment of qualified project staff may affect the timeframe of different project activities.	Low	A pro-active coordination mechanism will be established by UNDP during the project inception phase. TORs for project staff will be prepared immediately after project endorsement by the AF Board
7	Changes in the government structures and functions of the Min of EP.	Low Low	Inception workshop will be used to confirm institutional mechanism for project implementation. Inception report will be used to reflect any changes or amendments as required, Closely monitor situation and keep regularly updated on any developments in this regards; call immediately PEB meeting.

2. Over the course of the project, a UNDP risk log will be regularly updated in intervals of no less than every six months in which critical risks to the project have been identified. At the time of project formulation, strong political commitment from national as well as municipal authorities is evident which will limit a number of risks from materializing. Consistent involvement of a diverse set of partners, including local municipalities, community organizations and NGOs will further reduce these risks.