ENVIRONMENT AND CLIMATE CHANGE

United Nations Development Programme

PROJECT BRIEF

Scaling-up of Glacial Lake Outburst Flood (GLOF) Risk Reduction in Northern Pakistan (GLOF II PROJECT PAKISTAN)

Project context

Due to rising temperatures, glaciers in Pakistan's northern mountain ranges (Hindu Kush Himalayas and Karakorum) are melting rapidly. Over 3,000 glacial lakes have developed in Gilgit-Baltistan and Khyber Pakhtunkhwa regions, of which 33 glacial lakes have been assessed as prone to glacial lake outburst flooding (GLOF) – which are sudden outburst events releasing millions of cubic metres of water from glacial lakes, leading to destruction downstream, loss of lives, property and livelihoods. An estimated 7.1 million people in GB and KP are vulnerable. The Scaling-up of GLOF risk reduction in Northern Pakistan (GLOF-II) project is a continuation of the four-year 'Reducing Risks and Vulnerabilities from GLOF in Northern Pakistan' (GLOF-I) project, which helped vulnerable communities in two districts to prepare for and mitigate GLOF risks through early warning systems,

QUICK FACTS

Duration: 2017 – 2024

Implementing partners: Ministry of Climate Change

Funding partner: Green Climate Fund, UNDP, Government of Gilgit-Baltistan (GB)

Implementation areas: Khyber Pakhtunkhwa (KP), Gilgit-Baltistan (GB)

Total budget: US$ 36,900,000 (GCF); US$ 500,000 (GoGB)

AWP 2021 budget: US$ 14,865,513.

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GLOF II PAKISTAN
SCALING-UP OF GLACIAL LAKE OUTBURST FLOOD RISK REDUCTION IN NORTHERN PAKISTAN

GREEN CLIMATE FUND

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enhanced infrastructure and community-based disaster risk management.

Objectives

The project builds on activities implemented during the pilot phase and aims to further empower communities to identify and manage risks associated with GLOFs and related impacts of climate change, strengthen public services to lower the risk of disasters, and improve community preparedness and disaster response capacities. The project will also support the development of sustainable options for livelihoods in project areas, with a special focus on participation of women in ensuring food security and livelihoods.

Key Activities

- Provincial line and planning departments have technical capacities to mainstream climate change into development plans
- Sub-national institutions coordinate effectively to implement adaptation action plans and climate change initiatives
- Expanded weather surveillance and discharge measuring networks
- Early warnings are effective in protecting communities from climate-induced risks.
- Vulnerable communities have adequate long-term measures in place to address GLOF-related risks
- Improved financial capacity to adapt to GLOFs and other climate change-induced risks

Key Stakeholders

The project aims to build institutional capacities of government institutions at federal and provincial levels including Pakistan MET department and provincial line departments such as Disaster Management Authorities, Forest departments, Agriculture Department, Planning and Development Department, Pakistan Metrological Department, Environmental Protection Agencies, and Rural Support Programs, and environmental protection agencies. Furthermore, project interventions will target population groups in GB and KP. Communities most vulnerable to the impacts of climate change will be engaged. The maximum participation of women will be ensured in all project activities.

Expected results

The project will expand earlier interventions to 18 districts, directly benefiting communities in 24 valleys in Pakistan. Expected results by the end of the project are:

- At least four policies adopted by government to address or incorporate GLOF risk reduction.
- In target communities, 100 percent of households (696,342 total beneficiaries; 348,171 men and 348,171 women) will be able to receive and respond to early warnings and take appropriate action.
- At least 250 small-scale engineering structures will be established to reduce the effects of GLOF events on livelihoods, such as tree plantation, controlled drainage and mini dams.
- 50 weather monitoring stations to collect meteorological data in catchment areas; 408 river discharge sensors to collect river flow data to inform hydrological modelling and help develop village hazard watch groups.
- To reduce flood risks due to deforestation and inefficient water use, 240 water-efficient farming technologies (irrigation schemes) and 700 ha area will be brought back to productive use and protection through bioengineering measures.

Main Achievements

Upon receipt of funds from GCF in Apr 2018, the project became operational in July 2018. The project is currently under full implementation. Below is a summary of progress to date:

- Project Inception Workshop conducted in July 2018, involving over 100 representatives from national and local Governments to discuss and agree on project implementation strategy and management arrangements, intended project outputs and results, baselines, indicators and targets.
- Stakeholder needs assessments at national and provincial levels has been completed.
- Technical assessments like Knowledge, Aptitude and Practices (KAP) Studies has been done for district level
- Assessment of potential socio-economic impact of GLOFs, and development of socio-economic profiles completed for 05 valleys.
- Feasibility studies for design, and layout for installation of 24 EWS/AWS have been completed; whereas for repair and rehabilitation of irrigation systems; construction of small-scale infrastructure is ongoing.
- GIS Mapping of potential hazard locations (GLOF lakes) and selection of project sites/ interventions has been done for 07 valleys of GB and 05 valleys of KP.

Scaling-up of Glacial Lake Outburst Flood (GLOF) risk reduction in Northern Pakistan

- Work on updating of glacier inventory of Pakistan in ongoing and will be completed in 2021.
- Baseline Assessment study to review and update baselines, indicators and targets in projects results framework reflecting current scenario on the ground, has been completed.
- Sensitization, consensus building, mobilization and awareness raising of stakeholders, communities and the general public on GLOF and climate change risks conducted with Government officials in KP and GB.;
  - To strengthen community awareness of GLOF risks and project interventions, 128 community mobilization sessions, CBDRMCs trainings and awareness sessions have been held so far.
  - 45 stakeholder workshops and consultation meetings were held to sensitize stakeholders (35 in KP and 10 in GB) regarding the project objectives and to align project activities with ongoing government interventions.
  - 58 community mobilization conducted in 05 valleys of KP and 14 valleys of GB valleys for enhanced understanding of GLOF risks and project interventions carried out.
  - Mock drills conducted in 10 valleys of GB and 03 valleys of KP for DRM.
- 1 documentation of indigenous best practices (Glacier Grafting) for GLOF risk reduction and climate change adaptation was carried out in GB in 2020.
- Emergency response and preparedness equipment handed over to provincial and district emergency response authorities in KP and GB.
- Community Based Disaster Risk Management Committees (CBDRMCs) in 21 valleys rehabilitated and Community Hazard Watch Groups strengthened through provision of equipment and training sessions have been initiated in both KP and GB.
- Functional Review of CC Cell in Progress at sub-national level for institutions to coordinate effectively to implement CCA action plan and CCA initiatives.
- Project website (www.glof2.pk) launched in Aug 2020 and baseline video documentary was launched in Dec 2020.
- Under advocacy and awareness, TEDx salon event organized virtually in 2021.
- A 4-day media campaign launched on international mountain day in 2020, and international day for disaster resilience, celebrated at national and local levels.
- World Environment Day celebrated in 2021: 01 Cycling event organized with MoCC and MoFA;Support provided for Signing ceremony of Performance Bonds, 04 Video Messages developed for SAPM, RR, NPD, ARR, 03 Radio shows done in provinces, Talks conducted on WED at KIU-GB).
- GLOF-II Project Social Media Channels launched (Twitter: https://twitter.com/Glof2Pakistan, YouTube: https://www.youtube.com/channel/UCfYuS4TQfSVm69mL4lVzdsw;Instagram: https://www.instagram.com/glof2pakistan/; Facebook: https://www.facebook.com/GLOF2Pakistan)
- 02 Documentaries launched (Ice Stupa- An indigenous best practice, Shisper Glacier Surge)
- A number of publications 01 story on UNDP Exposure- Ice Stupas, 01 article in Express Tribune- Shisper Glacier Surge, 01 article in Dawn News- Irrigation Channels in KP, 01 Story in Development Advocate)
- Environmental and Social Management Framework finalized – to ensure compliance with applicable safeguards polices of UNDP, GCF and the Government of Pakistan.
- Support provided to sports festivals (Ice hockey championship at Altit Sports festival, Hindukush Snow Sports Festival) for increased outreach.
- Gender Strategy and Action Plan was reviewed and completed in 2020;
- Procurement action for early warning system (AWSs, discharge gauges and sensors, etc.) for 24 target valleys initiated and will be completed in 2021.
- Interim Evaluation of the project has been completed in early Oct 2020. The evaluation assessed the progress achieved to date and provides direction to make necessary changes in project design to ensure intended outputs are delivered.
- 16 training of over 150 officials from District Disaster Management Authorities, and other relevant stakeholders on roles and responsibilities, and implementation of EW strategies at district and local level have been completed and training manual being devised by DRM experts.
- Rehabilitation, reconstruction and restoration of 13 irrigation channels have been completed in KP.
- To date 75,000 plants covering a total area of 69.71 hectares in 08 valleys of GB for slope stabilization has been completed.

- 04 stakeholder exposure visits conducted for SAPM, NPD, RR UNDP and NPM for monitoring of project activities.

What's next?

In 2021, the following outcomes are expected which include;

- Hazard, Vulnerability Risk Assessments (HVRA) of 03 targeted valleys in KP & 09 targeted valleys in GB in line with criteria for HVRA.
- Knowledge, Aptitude and Practice (KAP) Study of 24 targeted valleys in KP & GB.
- GIS Mapping of Hazard community (Contractual services-companies for GIS mapping of potential hazard locations (GLOF lakes) and selection of project sites/ interventions.
- Preparation and Review of Integrated National and Provincial Climate Change Adaptation Plan (CCAAP).
- Establishment of Integrated GIS based MIS (Digital Platform) at National and Provincial Level.
- Community mobilization sessions in 24 valleys of KP & GB for enhanced understanding of GLOF risks and project interventions.
- Establishing SOP and conduct mock-drills in 24 targeted valleys of KP & GB by engaging Stakeholders and communities.
- Development of Inter-agency multi-level SOPs/Plans for GLOF/Disaster risk reduction (PMD, NDMA/PDMA/DDMA) i.e. Contingency Planning and Disaster Risk Reduction Planning.
- Construction, repair, and reconstruction of small-scale infrastructure to reduce medium- and long-term risks of floods (gabion walls, check dams, spillways).
- Construction of slope stabilization activities through bioengineering structures.
- Construction, repair and reconstruction of irrigation systems.
- Construction/reconstruction of Rehabilitation Centres (CBRMC) at the 24 targeted valleys to better respond to GLOFs and CC-induced risks/Disasters.
- IEC material is being developed for outreach and advocacy.
- Animated videos, short documentaries, web-series are underway to highlight the project interventions.
- GLOF-II website revamping to update all project updates on a regular basis.
- Stakeholders' exposure visits to target valleys.
- Journalist training for improved reporting on climate change and disasters.
- Preparations for celebrations of relevant days (Panel discussion, Photography/videography competition, etc)

Where we work

- Gilgit-Baltistan
- Khyber Pakhtunkhwa