© UNDP Pakistan

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

Due to rising temperatures, glaciers in Pakistan's northern mountain ranges (the Hindu Kush, Himalayas and Karakorum) are melting rapidly and a total of 3,044 glacial lakes have developed in Gilgit-Baltistan (GB) and Khyber Pakhtunkhwa (KP). Of these, 33 glacial lakes have been assessed to be prone to hazardous glacial lake outburst flooding (GLOF). GLOF are sudden events which can release millions of cubic metres of water and debris, leading to the loss of lives, property and livelihoods amongst remote and impoverished mountain communities. Over 7.1 million people in GB and KP are vulnerable; in these areas, 26.7 percent and 22 percent of the population, respectively, are below the poverty line.

QUICK FACTS

Duration: 2018 - 2022

Implementing partners: Ministry of Climate Change, KP and GB Planning and Development departments, Pakistan Meteorological Department

Funding partner: Green Climate Fund, UNDP, Government of GB

Location: Khyber Pakhtunkhwa, Gilgit-Baltistan

Annual budget (2019): US$ 6,849,757

Contact: Muhammad Ibrahim Khan, National Project Manager, Environment and Climate Change Unit, UNDP at ibrahim.khan@undp.org

GREEN CLIMATE FUND

For more information: **www.pk.undp.org**
United Nations Development Programme
4th Floor, Serena Business Complex
Khayaban-e-Suharwardy, G-5/1, Islamabad, Pakistan

Tel: +92 51 835 5600
Fax: +92 51 265 5014

August 2019

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. GLOF-I helped vulnerable communities prepare for and mitigate GLOF risks through early warning systems, enhanced infrastructure and community-based disaster risk management.

Objectives

GLOF-II builds on the measures piloted by GLOF-I and aims to 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 related to GLOF, and improve community preparedness and disaster response. The project will also support the development of sustainable options for livelihoods in project areas, with a particular focus on the participation of women in ensuring food security and livelihoods.

Expected results

GLOF-II will scale up GLOF-I from its original two districts (one each in KP and GB) to cover 10 districts, benefiting 29 million people or 15 percent of the population of Pakistan. Expected results by the end of the project are:

- At least two policies reviewed and/or revised to address or incorporate GLOF risk reduction.
- In target communities, 95 percent of households able to receive and respond to early warnings and take the appropriate action.
- At least 250 small-scale engineering structures established to reduce the effects of GLOF events on livelihoods, such as tree plantation, controlled drainage and mini dams.
- Fifty weather monitoring stations to collect meteorological data in catchment areas; 408 river discharge sensors to collect river flood data. This data will inform hydrological modelling and help develop village hazard watch groups.
- To improve food security and reduce flood risks due to deforestation and inefficient water use, 65,000 women will be trained in home gardening, 240 water-efficient farming technologies will be installed and 35,000 hectares of land will be reforested.

What's next?

To achieve its planned results, GLOF-II will:

- Strengthen and expand institutional and coordination arrangements for implementing adaptation action plans and climate change initiatives in GB and KP at the provincial and local levels.
- Scale up early warning systems and disaster response measures in communities, as well as surveillance and analysis by meteorological and disaster management authorities.
- Establish multi-channel communication systems to ensure that flood warnings reach vulnerable communities, establish village hazard watch groups, and work with local support organizations to operate and maintain early warning systems.
- Strengthen and expand community-based disaster risk management (CBDRM) committees and emergency response cells through equipment and training, and support small-scale infrastructure and slope stabilization.
- Institutionalize a community-based revolving fund through a one-time endowment, which will ensure that 24 CBDRM committees have access to US$ 50,000 each to support adaptation and recovery.
- Assist farmers to install micro-irrigation systems on a self-help basis and build women's food security through inputs and training for fruit and vegetable gardening at home.
- Establish reforestation and water harvesting schemes, and establish farmer-operated tree nurseries.