

**MODELING AND MAPPING OF RISK ASSESSMENT
FROM DANGEROUS GORASHI LAKE USING
GEOINFORMATICS**

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ABSTRACT

Peoples on mountains are living with disasters such as landslides, avalanches, rainfall flash floods, earthquakes, snow fall flash floods and glacial lake out flood events. With the phenomenon of climate change, the frequency of such disaster events increases. Pakistan is most affected due to climate change because of alarming situation of glaciers depletion in Hindu Kush, Karakorum and Himalayan (HKH) region. The HKH region is the hot spot for climate effects. Pakistan is a country which not contributes much release of greenhouse gasses that are the major cause of global warming and climate changes as compare to developed countries. The climatic condition dramatically affects the land and economy in this part of world due to heavy intensity of flood and cloud burst rainfall events which cause of flash floods and landslides. The Gorashi lake which is formed due to a landslide event is highly dangerous because there are about eight glacial lakes in its catchments. If any of these lakes breaks, water volume of Gorashi lake will be increased causing a landslide. The water flow from Gorashi lake causes heavy floods with landslide material. This type of event can be disastrous for downstream villages such as Ghandoos, Kharmang and Gambat Brok.

Using Geo-Informatics tools (GIS and Remote Sensing), the damaged area, crops losses and Economic losses are calculated and post disaster damages can be assessed. Safe locations for affectees are also be suggested thus minimizing the losses.

Key words: Geographic Information System, Remote Sensing, Hindu Kush, Karakorum and Himalayan), Disasters, Glacial Lake out Floods.