

THE SCIENCE OF FATEFUL AFFAIR IN UTTARAKHAND

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ABSTRACT

Uttarakhand is a mountainous state; cragged parcel of land contains around ninety per cent of its mixture countryside(Singh et al., 2015). The state has earned its place among the primary 5 states in reverence of natural hazards. It's associate degree exceptionally fragile landscape that by origin is liable to natural calamities.

INTRODUCTION

Uttarakhand is home to the fragile mountainous region of the Himalayas and has witnessed a series of natural disasters over the last 20 to 30 years. What is alarming is that instead of addressing the causes that led to the disaster or increased its magnitude, the Uttarakhand government is seeking more dilutions to the stringent green laws. Experts as well as activists, had pointed out that the back-to-back dams on upper reaches of Ganga River and its tributaries like Mandakini, Bhagirathi and Alaknanda in Uttarakhand had intensified the magnitude of the disaster. Dams in disaster-prone areas are sometimes considered to amplify floods and earthquakes because of impact on the river's course, water levels and ecosystem and poor management which can further worsen the situation(Dobhal, Gupta, Mehta, & Khandelwal, 2013). The Union Ministry of Water Resources, River Development and Ganga Rejuvenation filed an affidavit in the SC suggesting that certain valleys (in Uttarakhand) must be let untouched and pristine in consideration of the impacts of climate change, loss of biodiversity and for the purpose of the conservation of the origin of the river Ganga. According to the Uttarakhand government's disaster mitigation and management centre, these disasters are seasonal in nature and strike at a certain period of the year with high frequency(Grover & Singh, 2015).

MAJOR CAUSE OF DESTRUCTION

Natural Factors:(Pande, 2010)

1. Unusual Climate Change in the Himalayas.
2. The impact of climate change on Precipitation.
3. Retreating glaciers.
4. High-intensity rainfall.
5. An increase in Glacial Lake Outburst Flood (GLOF) events.

Man-made Factors:(Krasowska, Rolińska, & Mazurkiewicz, 2018)

1. Illegal Human Activities.

2. Setting up Hydroelectric Dams.
3. Illegal Mining.

MEASURES AND PREVENTION:

The technological advances and institutional arrangements for disaster risk management are gradually improving in the Himalayan region (Carreño, Cardona, & Barbat, 2007). In areas where HMD can be expected, it is essential to build the capacity of communities to manage the risks from disaster by themselves. The individual households usually have strategies in place, but the effectiveness of these individual efforts can be enhanced many fold if they are coordinated.

Pre Disaster Mitigation measures

- (i) Locate the hazard prone area:
- (ii) Planning and implement the structural and non-structural measures to minimize the impact of disaster (Nadim, 2013):
- (iii) Physically mark the hazard prone area & Public awareness:
- (iv) Honestly follow /monitor the mitigation rules by government, Project authorities, society & Public:

Post Disaster Mitigation measures

The actual disaster results in substantial damage to the population in terms of loss of life and property. This direct result can be termed the first disaster. The main factors of risk are given by the high velocity and high depth associated with debris, which involve a loss of stability in the water and increase the risk of drowning. Time lag is also crucial as it constrains the potential time of warning and evacuation (Dr. Muhammad Abdul Razzaque, 2010). The local circumstances (e.g., presence of shelters, type of buildings, time of the day, seasonality, and warnings) play a strong role.

CONCLUSIONS

Only local society/community first affects by HMD and we cannot expect that government will be able to intervene everywhere. Government help cannot save us direct & long term impact of HMD. On the basis of above study it is concluded that Intensity & frequency of HMD in Uttarakhand are increasing since year 1997 (Tingsanchali, 2012). Uttarkashi, Rudraprayag and Chamoli districts have faced more prominent disasters. The climate change, geological factors such as unstable slope & poor rock condition and high rate of human population growth are the main factors that increases the intensity & frequency of HMD. We could only minimize the impact of HMD by strongly implementation of Pre-disaster mitigation measures such as planning, public awareness & knowledge about it, structural & non-structural measures honestly follow the environmental and disaster mitigation rules by all of us including project & monitoring authorities (government as well as private developer) with the early warning systems.

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