Name: Arunima Chanda

Supervisor: Prof. Mary Tahir

Department: Geography

Faculty: Natural Sciences

Title: "Impact of Natural Disasters on Socio-economic Condition of Population in Sikkim"

Key Words: Disasters, hazard, susceptibility, vulnerability, risk assessment, landslide,

earthquake, glacial lake outflow flood, coping capacity.

Abstract

Disasters are an in-evident part of nature and human life, which is not solely led by the

overexploitation of resources but are accelerated by it but it, can be overcome by the

increasing coping capacity of the people. For any sustainable developmental activity, balance

between development and environment is pertinent, else ecological degradation would

exceed the former, and to understand this balance one has to have empathetic and scientific

outlook to work towards disaster mitigation to bring about development and then only the

developmental projects undertaken in an area would be eco-friendly and pro-environment.

This thesis comprises of five chapters and the first deals with introduction, conceptual and

analytical framework, objectives, hypothesis, research methodology and literature review and

the second analyses the general causes for Sikkim's vulnerability to disasters wherein it was

found that weak geology, climate change, extreme rainfall, rising population, increasing

vehicular and industrial pollution together with construction of HEPs, which led to

infrastructural improvements, are destabilising the state's geology and geomorphology along

with increasing proneness to disasters.

The third chapter deals with landslide risk analysis wherein an attempt has been made to analyse the temporal changes in the number of landslides and its increase (2005 – 2017), landslide hazard zonation, vulnerability zonation and risk zonation (that is the socioeconomic impact of landslide hazard on people of Sikkim).

The fourth chapter deals with earthquake risk analysis. An attempt has been made to analyse the earthquake hazard zonation, vulnerability zonation and risk zonation and the fifth deals with GLOF hazard and its temporal changes (1990 - 2017), identification of vulnerable villages, causes of increasing GLOF and its impending impact on the people of Sikkim.