

PREFACE

In the current study, a part of the Indian state of Uttarakhand (Uttarkashi and tehri garhwal) was taken as study region, a Glacial Lake Outburst Flood (GLOF) hazard assessment using remote sensing and GIS techniques. The study includes time series LANDSAT satellite data at a scale of 1:50,000 to map glacier lakes from 1990 to 2020. The manual digitization of lakes was done using NDVI, MNDWI, and NDSI as well as visual interpretation. Over the course of 30 years, there are changes in land use and land cover. A predictive model was developed with the help of elevation and groundwater level it shows with current change rate in snow and water how the study area will experience GLOF.

Keywords

Glacial lakes, Glacial Lake Outburst flood (GLOF), Remote Sensing, NDSI