PREFACE

According to Cruden (1991), landslides are defined as the movement of rock, earth, or debris down a slope and are one of the common and hazardous natural disasters occurring in hilly areas. This paper aims at examining different types of landslides including rock falls, debris flows, and slides and both natural causes like rainfall and earthquakes and man caused impacts including deforestation and overgrazing. The geographical emphasis is on the highly vulnerable areas of the Indian Himalayas and the western ghats especially given their propensity for frequent and intense rainfall on inclined slopes which are fertile grounds for landslides.

India with its large area is significantly vulnerable owing to variability of terrain and climate; the country has about 12%. Landslide hazard: 6% of its land area is susceptible to those calamities. The study focuses on North East and North West Himalayas and explains the extent of the major effect on densely populated regions and infrastructure. Himachal Pradesh, Jammu & Kashmir, and Uttrakhand are the most vulnerable states in this regard where landslides are frequent and often of high intensity endangering the life, property, and communication.

This research utilizes the Analytical Hierarchy Process (AHP) and Multi Criteria Decision Analysis (MCDA) to generate the Landslide Susceptibility Zonation (LSZ) map for Tehri Garhwal and Rudraprayag districts. This study seeks to determine the patterns of landslides occurrences and their causes, which will go a long way in informing proper initiatives towards fighting this perennial disaster.

Keywords:

Landslides (1), Himalayas (2), AHP (3), Hilly areas (4), Calamities (5)