

Manuscript Number: 2861 NAAS Rating: 4.96

Application of Remote Sensing and GIS in Conventional Weightage Modelling for Landslide Hazard Zonations (LHZ) in Nilgiri District, Tamil Nadu, India

R. Chandrasekaran, P.S. Kumar and Nibedita Nayak¹

Department of Civil Engineering, University College of Engineering, Ariyalur-621 704, India ¹Department of Earth Sciences, Indian Institute of Technology Kanpur, Kanpur-208 016, India E-mai: chandru_gr2003@yahoo.co.in

Abstract: In India, landslide is one of the most significant hazard in mountainous region includes 10 hilly states of Himalayas, North East India, Nilgiri, Eastern Ghats and Western Ghats. In the present study, Landslide Hazard Zonation (LHZ) of Coonoor Ghat section was carried out by adopting conventional weightage modelling with an application of geospatial technology. The LHZ map was executed on the basis of geo-environmental influencing factors such as Geology, Geomorphology, Land use and Land cover, Slope aspect, Lineament buffer, Drainage Buffer, Relative Relief and Soil cover. The final LHZ map was revealed that 66.66 per cent existing landslides were coming under High to Very High Hazard, 24.69 per cent were in Moderate Hazard and 8.65 per cent were in Low Hazard zones.

Keywords: Weightage rating method, Landslide Hazard Zonation, Geoenvironmental factors, Remote sensing and GIS