



LANDSLIDE SUCEPTIBILITY ANALYSIS OF KOTHAMANGALAM-MUNNAR HIGHWAY USING GEOINFOEMATICS

Subin K. Jose*, Mahesh Jayakumar**, Vijod M*

*Geology and Environmental Science, Christ College, Irinjalakuda.

**Kerala University of Fisheries and Ocean studies (KUFOS), Kochi.

ABSTRACT

Landslides occur in a large variety of forms depending on the type and speed of movements, the material involved and the triggering mechanism. The research area comprises an area of 77 km road stretch Kothamangalam-Munnar highway (NH49) of Kerala and it was situated at in two districts Idukki and Ernakulam. The present study tries to identify different landslide prone areas in Kothamangalam-Munnar highway (NH49) of Kerala by using Remote Sensing and GIS. In the present study raster based weightage method was carried out for the preparation of landslide susceptibility zonation map. For the study data utilized include survey of India Topographic maps, Indian Remote Sensing Satellite data and Rainfall data from the Indian Meteorological Department. In this study a set of 6 instability factors corresponding to the causative factors for the instability were prepared using remote sensing information and topographic sheets. Different thematic layers such as slope, aspect, elevation, drainage density, landuse and rainfall were created for the preparation of landslide susceptibility zonation map. The accuracy of landslide prediction map was verified by field investigation using GPS.

Key words: *Landslide, Geographic Information System, Remote Sensing, Disaster, Prediction*

INTRODUCTION

Natural disasters such as landslides, earthquakes, flood, drought, cyclone, volcanic eruptions, environmental degradation etc are of global phenomenon. Most of the countries are experiencing either one or more disasters at regular interval. International Decade for Natural Disaster