

LANDSLIDE MONITORING AND EARLY WARNING – SPECIAL REFERENCE TO NE REGION OF INDIA

ABSTRACT : Landslide hazard is a major natural disaster in India. Out of the total landslide occurrences in the country, nearly 20% are found in NE region of India. Conventional method of monitoring landslide is not reliable. A real time monitoring of landslide has been under research stage. Some important technologies under studies are wireless monitoring, GPS system, optical fiber sensing etc. The wireless monitoring of landslide has been undertaken by NEIST, Jorhat. The place selected for this purpose is at Karsingsa in Arunachal Pradesh. It is located in a particular section of NH-52(A) and is identified as potentially dangerous landslide hazard area in the National highway. Geophysical study of the region reveals that, mass sliding due to heavy rainfall during rainy season (June-July) is the main cause of landslide. Basically, grained silty-clayey-sand layer of colluvium nature contributes to the landslide hazard. This process due to flow of land masses may be termed as static liquefaction. To get a proper monitoring method an attempt has been made in that area by using wireless network of sensors. The hardware embedded software for these sensors are used and altogether five different sensors are placed in a network. This system of sensors is then wirelessly connected using RFID technology to a server for monitoring and collection of data for prediction of landslide.
