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## **Integrated GIS-Remote Sensing based Application of Analytical Hierarchy Process and Socio-demographic Aspect to Landslide Susceptibility Mapping at Rawalakot, Azad Jammu Kashmir, Pakistan.**

The study aimed to produce landslide susceptibility maps based on GIS and Remote Sensing modeling and to conduct field surveys to get the local community's view about the landslides in Rawalakot, Azad Kashmir. Landslide susceptibility index (LSI) maps were prepared utilizing different parameters namely topographic (slope, aspect, elevation, plan curvature, land use/land cover etc.); hydrological (distance from streams, SPI, TWI, precipitation etc.) and geological parameters (lithology, distance from faults, distance from roads etc.) in GIS environment. All the parameter layers were assigned weights with 0.04 threshold consistency ratio (CR) values using an analytical hierarchical process (AHP) and weighted overlay combination (WLC) for the identification of four different landslide susceptibility zones i.e. low, moderate, high and very high. Results showed that these zones covered 3 %, 33%, 45 % and 18% of the total area, respectively. Local community based field survey revealed that standard building codes should be adopted for construction of infrastructure in the area.

**Primary author:** HASSAN, Zahra (NDMA)

**Presenter:** HASSAN, Zahra (NDMA)

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