

# **Geological mapping with special emphasis on landslides hazard analysis from Gharri Dopatta to Hatian Area, Azad Kashmir, Pakistan**

Syed Naveed-ul-Hassan Bukhari<sup>1</sup>; Nawaz Ikram<sup>2</sup> and Syed Ahsan Hussain Gardezi<sup>2</sup>

<sup>1</sup>*Department of Civil Defense, Azad Jammu and Kashmir*

<sup>2</sup>*Department of Geology, University of Peshawar*

[nawazikram@hotmail.com](mailto:nawazikram@hotmail.com)

## **Abstract**

The Study was carried out to prepare a geological map of the area in detail, and to understand landslide problems in the area. The Saran landslide was studied in detail due to its large size, proximity to road, public and government infrastructure and presence of Muzaffarabad Fault in the landslide area. Other than Muzaffarabad Fault, heavy rain fall, steep slopes and alternative beds of sandstone, shale and clay as well as a road widening project, all contribute to landslides in the area. Rock Falls and Rock slides are common in the area as well.

Samples were collected from the Saran landslide to evaluate the engineering properties of soil. In the laboratory different Soil tests were conducted, including evaluation of natural moisture content, Sieve analysis, Plastic and Liquid limit test, Compaction test and Specific gravity test. According to prevailing conditions of soil, different suggestions were made to improve the land sliding conditions in Project area.