# AN OVERVIEW OF THE GEOENVIRONMENTAL STATUS OF THE BADIYARGAD CATCHMENT, GARHWAL HIMALAYA, UTTARAKHAND, INDIA

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### ABSTRACT

The Badiyaragad is a fifth order stream that flows from N to S up to Badiyar, taking a turn towards east up to Sayari and then again flowing towards south joining Alaknanda on the opposite of Khankra. The catchment in the middle is drained by the river and numerous tributaries join it laterally. The tributary channels have deposited large alluvial fans. The river has deposited alluvial terraces, which are very distinct towards the lower reaches and form three to four levels. The upper slopes and high altitudinal areas are covered with periglacial and glacial deposits. The terrace, fan and hill slopes have provided an ideal geoenvironment for human activities including agriculture, horticulture, dense settlements and other civil establishments. The Badiyargad catchment is various natural hazards cloudbursts, landslide and floods due to its peculiar geomorphic condition, high relief of peripheral ridges and impact of monsoon winds. The studies carried out so far indicate that the losses causes by these phenomena both in terms of life and property are mainly due to unwise human interaction with the geoenvironmental of the area. The paper gives an overview of the geoenvironmental status of Badiyargad catchment and suggests the necessity of undertaking further detailed studies including resources mapping for balanced development of the area.

**KEY WORDS-**Geoenvironment, geomorphology, natural hazard, climate.

#### REFERENCES

- Bharatarya, S.K. and Valdiya, K.S. 1989. Landslide and erosion in the catchemt of The Gaula River, Kumaun Lesser Himalaya India. Mounatin Research and Development, U.S.A. 9(4): 405-419.
- Bartarya, S.K. 1988. Geohydrological Studies of Gaula Catchment, Ph.D. Thesis, Kumaun University, PP 1-170.
- Datt- 1991. Land Systems, Land Use and Natural Hazard in the Lower Bino Basin (Lesser Himalaya) India. Mountain Research and Development 11 (3).
- Haigh, M.J, J.S. and Bisht, H.S.1990. Hydrological Impact of Deforestation in the Central Himalaya International association of Hydrological Sciences Publication. In Hydrological of Mountain Areas, pp. 419-433.
- Jaganath and Chauniyal, D.D. 2000. An Evidence weighted approach for Landslide Hazard Zonation from Geo-Environment Characterization: A Case Study of Kekani A Case Study of Kekani Aera. Current Science, 79 (2) 25.

- Kumar, G. and Agarwal, N.C., 1975: Geology of Srinagar Nandprayag area (Alaknanda valley). Kumaon Himalaya, U.P. Him. Geol., 5, 29-60.
- Rawat, J.S. and Rawat, M.S. 1994. Accelerated Erosion and Denudation in the nana Kosi Watershed Central Himalaya. India Part I Sediment Load. Mountain Research and Development, Vol. 14, No. 1, pp 25-38.
- Rawat,G.S.,2001. Geological control on the Distribution and Discharge of springs in Khandagad catchment, Garhwal Himalaya, Uttaranchal, Hydrology, Journal, 24(1), 55-66.
- Subramaniam, V. and Dalavi, R.A.1987. Some Aspects of Stream Erosion in the Himalaya. Geological Society of India, Bull. 29: 205-220
- Valdiya, K.S., 1987: Environmental Geology Indian Context. Tata McGraw Hill Publ., New Delhi.