

SURFACE RUNOFF, SOIL LOSS AND LAND USE STUDIES IN TWO MICRO-CATCHMENTS OF THE WESTERN HIMALAYA, INDIA

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Surface runoff and sediment transportation were studied in relation to land use in two micro-catchments located in the Ganges river system in the Garhwal Himalaya. The microcatchment, with 50% of its area under forests and only 12% under wasteland, was characterised by low runoff (2.4% of the annual rainwater input) and low sediment loss ($1.7\text{t ha}^{-1}\text{ yr}^{-1}$). The other micro-catchment, with only 10% of its area under forest and 53% under wasteland, had high runoff (36.5%) and high sediment loss ($10.8\text{t ha}^{-1}\text{ yr}^{-1}$). This preliminary study has demonstrated the important role of vegetative cover in water-soil retention in the fragile Himalayan watersheds, and calls for the revegetation of wastelands, particularly with multipurpose tree species, to ensure socioeconomic acceptability and people's participation in the HKH region.