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Active Tectonics Associated with Main Central Thrust of Munsiari Area, Eastern Kumaun Himalaya

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Abstract

The paper records evidences of active tectonics associated with the Main Central Thrust (MCT) of Munsiari area, Eastern Kumaun Himalaya. The MCT is an important geotectonic element along which the Central Crystalline Zone (CCZ) of the Greater Himalaya is thrusted over the younger sedimentary belt of Lesser Himalaya during Tertiary orogenic movements. Our study of the MCT zone reveals that a variety of neotectonic signatures are developed in both the upthrust (crystalline) and sub-thrust (sedimentary) units, such as landslides, rock fall, shattering of rocks of the hill faces, vertical cliffs, sudden turn of rivers, terraces, triangular facets and development of zones of crushing of rocks. It has further been observed that the neotetonic features are more commonly developed in the vicinity of MCT within a tract of about 5 km across the trace of MCT, about 3 km in the sedimentary belt and 2 km in the CCZ. Beyond this tract, neotectonic features are noticed only sporadically. This suggest that the MCT is active even today and the mountain building activity is continuous. Results of the present study imply that the area is environmentally fragile and the developmental activities of the area especially in the form of civic construction and engineering projects should be carried out only after taking the above results into account.

Keywords: Active tectonics, Main Central Thrust, Munsiari area, Kumaun Himalaya