

Geomorphic Changes in Agricultural Areas of the Kenyan Tropical Highlands

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In the Kenyan Central Highlands, higher altitude areas, more than about 2,000 m a.s.l, in the Aberdare (Nyandarua) Mountains and around Mt. Kenya, are situated under the tropical highland climate, where it is relatively cool and the mean annual amounts of rainfall attain more than 1,000 mm. Prominent areas in terms of agricultural productivity were consequently formed in the tropical highlands, whereas considerably active geomorphic changes currently appear, namely, landslide including multiple slump and large-scaled gully erosion occurring on the valley-side to crest slopes on which cultivated sites stand. As we already reported, rapid and accidental mass movements in these areas, mainly landslides, occasionally accompanied with the loss of house and life, have periodicity in several hundreds of years order from the observation and radiocarbon dating of slope deposits.

Our objectives of this study are 1) to summarize the rate of geomorphic change in each landform unit and/or geomorphic process mainly in the tropical highlands, 2) to show the size of micro landforms resulted from the relationships between slope processes (geomorphic processes) and rate of geomorphic changes, and the ease with which the landforms disappear due to cultivation, and 3) to consider how the land environmental condition of cultivated sites should be evaluated by means of micro landforms.

Keywords: Cultivated Site, Land Condition, Rate of Geomorphic Change, Geomorphic Process, Tropical Highlands, Kenya