

紀伊山地における2011年台風12号による深層崩壊の発生場 Occurrence site of deep-seated landslides induced by typhoon 1112 in the Kii Mountains

平石 成美^{1*}, 千木良 雅弘²

HIRAISHI, Narumi^{1*}, CHIGIRA, Masahiro²

¹ 公益財団法人深田地質研究所, ² 京都大学防災研究所

¹Fukada Geological Institute, ²DPRI, Kyoto University

Distribution of convex slope breaks and fluvial knickpoints which are regarded as "erosion front" and deep-seated landslides induced by typhoon 1112 have been investigated to reveal how landslides develop in the context of long-term slope development. We analyzed mountain topography by using 10-m mesh DEM, topographic maps and aerial photographs in the central Kii Mountains, southwest Japan. We found that convex slope break is widely distributed about 200m above the present riverbed in study area, and it divides the area into lower dissected area and upper palaeosurface. Dissected area is divided into lower and upper parts by at least one slope break. These slope breaks were formed by active incision, and the incision dissected palaeosurface and propagated main stream to tributaries and downstream to upstream. Deep-seated landslides tend to occur in slopes with these slope breaks, because undercut slopes are unstable and partly suffered gravitational deformation. Topographic analysis by erosion front has the potential to identify the landslide-susceptible region roughly but widely.

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