Geological and geomorphological features of slope failures caused by heavy rainfall in Seisan area, Kagawa, Japan

Ken-ichi Nishiyama[1]; Hajime Hirota[1]

[1] Tokushima Univ.

Many slope failures and debris flows triggered by heavy rainfall associated with Typhoon 0415, 0421, 0423 occurred in Seisan area, Kagawa, Japan. Many slope failures occurred at mountain slopes consists of Cretaceous sedimentary rocks (Izumi Group).

Field evidence suggests that rainwater penetrated into permeable weathered sandstone layer superposed on poor permeable mudstone layer. Many slope failures occurred at weathered sandstone layer because of low strength and a rise in the ground-water level. The occurrences of slope failures of alteration of sandstone and mudstone were controlled by weathered profile of mountain slope.