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HDS29-03 Room:415 Time:April 28 11:30-11:45

Geologic causes of Akatani rockslide induced by heavy rain with typhoon Talas (1112)

NAGATA, Hidehisa[1*] ; YOKOYAMA, Shunji[2] ; INOKUCHI, Takashi[3] ; KATO, Hironori[4] ; KIMURA, Katsumi[5]

[1]Fu Sui Do co. ltd., [2]Kochi Univ., [3]NIED, [4]Aratani Civil Eng. Consultants, [5]AIST

Heavy rain by the Typhoon Talas in 2011 triggered many landslides at Kii Peninsula. The Akatani rockslide in Gojo City, Nara Prefecture is one of the largest landslides, which has dimensions of 500 m wide, 1100 m long, about 80-100 m deep, and 10 million cubic meters in volume. Geologic causes of the rockslide were investigated.

Geology of the Akatani rockslide is composed of mudstone and sandstone of the Miyama Complex of the Shimanto Belt. Not only bedding plane, but also fault planes and joint planes formed in various stages are weak planes related to the rockslide. The average attitude of the bedding planes tends to dip steeply northward while varying. However, there are low-angle dip slip faults nearly parallel or daylight to the slope surface. These are considered to be out-of-sequence thrusts, because they obliquely intersect bedding plane and some of them subdivided the Miyama Complex into several tectonic units. The rupture surface is not smooth curved but rough. This was the combined fragile planes including faults subparallel to the slope. It is similar to the other landslides in the Shimanto Belt that simple slide along bedding planes did not occur.