Geophysical Research Abstracts, Vol. 7, 04897, 2005
SRef-ID: 1607-7962/gra/EGU05-A-04897

ABOUT RELATIONSHIP BETWEEN OLD AND NEW LANDSLIDES IN UZBEKISTAN

R.Niyazov (1), B.Nurtaev (2)

(1) Institute Hydroingeo, Uzbekistan, (2) Institute of geology and geophysics, Uzbekistan

In Uzbekistan 17 % of mountain territory was exposed to landslide risk, where is living 10% of country population. Landslides are responsible for 85% of social and 10% of economical losses from natural disasters. In the mountain regions of Uzbekistan for the last 150 years occurred 6 large earthquakes with magnitude up to 7.5. As a result many landslides of different dimensions and volumes were formed. They were formed not only in earthquakes epicentral zone, but at large distances also, especially in watered loess soils, which are very vulnerable to low frequency and long duration motions. Old landslides circuses are changing the shape of slopes, widening water accumulation area and concentrating precipitations. Groundwater outflow path often may be overlapped, increasing hydraulic gradient. As a result ravine erosion processes increased and slopes became more unstable, initiating formation of modern landslides.

The role of previous autumn-winter precipitation and sequence of their impact to activization of landslides at the spring period is reflected. On the base of comparison of landslide displacement date with the time of intensive snow thawing and intensive rains some threshold levels were defined. It is recommended to use these values for the warning of landslide hazard. Amount of precipitation: 1 month – 240 mm, 10 days – 150 - 170mm, 2-3 days – 90-110 mm, 1 day – more than 35 mm.