

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

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SCG010-P09

Room:Convention Hall

Time:May 25 10:30-13:00

The 3D analyses of the huge landslide mass movements triggered by the Iwate-Miyagi Nairiku Earthquake in the upper reach

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The Iwate-Miyagi Nairiku Earthquake in 2008 had triggered the huge landslides in the upper reach of Aratosawa reservoir. The huge mass movements had occurred on the adjacent slopes of the upper reach of the reservoir. The initiation of the huge mass was directly the strong ground motion of the main shock. The following liquefaction had occurred in the valley bottom of the slopes, and valley bottom sediments run out from valley. Several parts or masses had triggered to move to down slope after the rush-in of the lateral flow from the valleys. The cross sectional explanations of the landslide mass movements were reported by The Japan Landslide Society(2009). The behaviors of huge landslide masses were too complicate to discuss in two dimensions with single cross section. Then 3D analyses were tried to clarify the movements of the huge landslide masses using DEMs.

Keywords: Iwate-Miyagi Nairiku Earthquake, Aratosawa Reservoir, landslide, 3D analyses