Debris flow involving landslide dam: a case of Mochiyamadani, Miyagawa area, Mie Prefecture in 2011

Hidehisa Nagata

Fu Sui Do co. ltd.

Miyagawa area in Mie Prefecture was suffered by heavy rain of the Typhoon Talas in 2011, followed by 2004 rain. Many landslides were induced by both the rains. Pre-existed slow landslides reactivated, while incipient rapid deep seated landslides occurred isolated or at adjacent slope of pre-existed landslides.

In Mochiyamadani, tributary of Miyagawa River, enlargement of 2004 landslide and debris/rock slide at a neighboring slope were occurred at the uppermost course in 2011. The moving mass flowed down as a debris flow, eroded landslide dam which was formed by 2004 rockslide at the middle course, increased its volume, and reached the confluence of Miyagawa River. The debris flow destroyed a check dam and a bridge in the lower course, and flushed a house at the opposite bank of Miyagawa River. Miyagawa River was temporary dammed and raised up river water level.

Keywords: 2011 heavy rain, debris flow, landslide dam, Miyagawa River