

Application of Hydro-debris2D into sediment yield prediction from mountain watershed

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Hydro-debris2D model has been developed and improved for predicting occurrence of debris flow throughout hydrological regime changes. The model contains three components: (1) Shallow-water based surface flow modules, in order to calculate mountain zone torrential flow regimes, (2) rapid subsurface/interflow in weathered rock, and (3) debris flow and sediment-transport components. The model has been applied into Izu Oshima Island's debris flow event in 2013 and to Hiroshima's debris flow disaster in 2014. The model was applied into Shirakawa-basin which contains catchment of Aso Volcano. Landslides occur in more frequent manner compared with actual occurrence when projected observed precipitation. This is due to the application of over-estimated value which had been extracted from Hiroshima debris flow disaster.

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