

## Assessment of the impacts of abandoned cultivated land on material flux in hilly and mountainous watersheds

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Agricultural land-use has been reduced by mainly urbanization and devastation in Japan. The objective of this study is to evaluate the impact of the decline of agricultural land-use on flood risk and material flux in hilly and mountainous watersheds using Soil Water Assessment Tool. The results indicated that increase of flood risk due to abandonment of agricultural land-use. Furthermore, the abandonment of rice paddy field on steep slope areas may have larger impacts on sediment discharges than cultivated field. Therefore, it is suggested that prevention of expansion of abandonment of rice paddy field is an important factor in the decrease of yields of sediment and nutrients.

Keywords: material transport, hilly and mountainous watersheds, SWAT model