

Sensitivity analysis of parameters in SWAT Model for estimation of water discharge and sediment yield in the Ota river watershed

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Watershed management is one of effort to protect and maintain water resources. A basic framework of watershed management can be affected by watershed characteristics. Watershed characteristics can be looked as a landscape, as a hydrological system, and as an ecosystem. As hydrological systems, a watershed has some functions as a recharge area, a store area, and a discharge area. The Ota River is the major river which flows through Hiroshima Prefecture and empties into the Seto Inland Sea which a large delta has formed at the river mouth. The Ota River water discharge is important to know for a better water-land management based on a watershed.

A water discharge analysis of the Ota River basin could be knowing by SWAT model. SWAT (Soil and Water Assessment Tool) is a model that can help to predict hydrological condition based on physical properties. SWAT Model has been implemented for watershed hydrology research widely. (Wellen et al.,2015). The research objective is to estimate the Ota River water discharge and sediment yield using SWAT Model and SWAT-CUP.

Keywords: SWAT Model, Water discharge, sediment yield, Ota river watershed, Sensitivity analysis

