

## Effect of Climate Change on Runoff in the Upper Mun River Basin, Thailand

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**Abstract :** The climate change is a main parameter which affects the element of hydrological cycle especially runoff. Then, the purpose of this study is to determine the impact of the climate change on surface runoff using land use map on 2008 and daily weather data during January 1, 1979 to September 30, 2010 for SWAT model. SWAT continuously simulate time model and operates on a daily time step at basin scale. The results present that the effect of temperature change cannot be clearly presented on the change of runoff while the rainfall, relative humidity and evaporation are the parameters for the considering of runoff change. If there are the increasing of rainfall and relative humidity, there is also the increasing of runoff. On the other hand, if there is the increasing of evaporation, there is the decreasing of runoff.

**Keywords :** climate, runoff, SWAT, upper Mun River basin

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