

Seasonal effect on hydrological models parameters and performance

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Abstract

The study will assess the seasonal effect of hydrological models on performance and parameters for streamflow simulation. TPHM, GR4J, CAT, and TANK-SM hydrological models will be applied for simulating streamflow in ten small and large watersheds located in South Korea. The readily available hydrometeorological data will be applied as an input to the four hydrological models and the potential evapotranspiration will be computed using the Penman-Monteith equation. The SCE-UA algorithm implemented in PEST will be used to calibrate the models considering similar objective functions beside the calibration will be renewed to capture the seasonal effects on the model performance and parameters. The seasonal effects on the model performance and parameters will be presented after assessing the four hydrologic models results. The conventional approach and season-based results will be evaluated for each model in the tested watersheds and a conclusion will be made based on the finding of the results.

Keywords: Hydrological Models, Seasonal Effect, Performance, Parameter

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