



Seasonal forecasts of groundwater levels in Lanyang Plain in Taiwan

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Groundwater plays a critical and important role in world's freshwater resources and it is also an important part of Taiwan's water supply for domestic, agricultural and industrial use. Prolonged dry climatic conditions can induce groundwater drought and may have huge impact on water resources. Therefore, this study utilizes seasonal rainfall forecasts from the Model for Prediction Across Scales (MPAS) to simulate groundwater levels in Lanyang Plain in Taiwan up to three months into future. The MPAS is setup with 120 km uniform grid and the physics schemes including WSM6 micorphysics scheme, Kain-Fritsch cumulus scheme, RRTMG radiation scheme, and YSU planetary boundary layer scheme are used to provide the rainfall forecasts. Results of this study can provide a reference for water resources management to ensure the sustainability of groundwater resources in Lanyang Plain.