The title (العنوان):

Watershed based hydrological evolution under climate change effect: An example from North Western Algeria

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Abstract:

Study Region

Three major river basins the Cheliff, Tafna and Macta in North-West Algeria.

Study focus

The purpose of this work is not to test the different climate models but rather to study the sensitivity of hydrological parameters to future climate change. This is achieved using the GR2M hydrological model and climate scenario data from the CNRM-CM5 model.

New hydrological insights

In terms of observed trends, the monthly flows decreased significantly between 1970 and 1999, mainly due to the decrease in precipitation combined with the increase in the potential evapotranspiration (PET), caused by rising temperatures. According to the RCPs8.5 and 4.5 scenarios projections, the decrease in Winter discharges will continue in the future. For the Spring, RCP8.5 forecasts a moderate increase, while RCP4.5 shows a downward trend.

Key words: Algeria ; Climate change ; CNRM-CM5 ; PET ; Flow ; GR2M

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