

## ***Interactive comment on “Climate change and its impacts on river discharge in two climate regions in China” by H. Xu and Y. Luo***

### **Anonymous Referee #1**

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The paper would be published if authors improve the quality by thinking following two comments:

1, Uncertainty assessment is of utmost importance for climate impact studies. Current paper assesses the uncertainty caused by climatic scenarios, but has not given enough consideration on the uncertainty resulted from parameterization process of hydrological model. In section 2.2.1, it was pointed out Nash-Sutcliffe efficiency of SWAT model are only reached 0.44 and 0.57; 0.64 and 0.67 for two river basins for simulation of monthly runoff. Therefore, it was needed to take uncertainty from model performance into account.

2, With the deepening of our understanding on climate change and its possible triggers,

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emission scenarios have been updated several times, such as IS92, SRES, RCPS and SSPS. Current paper projects the possible changes of hydrological regime in two river basins based on SRES A1B for three time periods(2020s, 2050s and 2080s). My suggestion to authors is to update their research results by referring IPCC AR5 report.

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