

## Response to the comment hessd-11-C1778-2014

Title: A coupled modeling framework of the co-evolution of humans and water: case study of Tarim River Basin, western China

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Comment: This research develops a socio-hydrology coupled model and applies it to the Tarim River Basin located in western China. Definitely, the presented research represents a relevant contribution to hydrology and is suitable for publishing in HESS. The following are my comments. The abstract can be improved such that it is more concise and directly to the main points. Some of the model details are not necessarily placed in abstract. In the introduction, the authors detailed basic information about the Tarim River Basin. However, different types of information are mixed together. Some of them should be placed in Section 2.1. It would be much better if the authors focus on the critical features of the Tarim River Basin because of which the current research is needed.

*Response: Thanks for the comment. One of the main objectives is to develop a coupled modeling framework of co-evolution of the socio-hydrological system. So the abstract try to explain the coupling and feedback processes of the variables. In the revised manuscript the abstract is improved to make it concise. In the introduction Section, the general information and history of the Tarim River Basin is presented and the reason why the Tarim River is selected as the study area is explained. So the annual precipitation and annual pan evaporation are necessary information to understand the feature of the river. The presentation of the information is improved.*