

Interactive comment on “Streamflow allocation in arid watersheds: a case study in Northwestern China” by C. He et al.

Anonymous Referee #2

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Dear Authors,

The Paper discusses how sustainable and participatory water allocation should be managed in arid watersheds and gives an example (case study) for the Heihe watershed in Northwestern China. No doubt, there is a great need for integrated water management that considers ecosystem services and functions (ESS / ESF), too.

The main problem of the paper is that it is neither a review paper about IWRM in different parts of the world (as it seemed to be by reading the introduction) nor it is an elaborated case study. The paper should either deepen the IWRM review (another title has to be chosen then) or it must analyze the case study more scientifically. If the authors decide to focus on the case study, than it must be stated very clearly that the

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allocation framework is just in a preparatory phase and cannot be transferred to other regions yet.

The hydrological model description and analysis have some weak points, e.g.:

1. No description of the flood routing component of DLBRM.
2. No analysis why the upper zone evaporation (UZE) is app. zero. The soil map indicates other values for the UZE, at minimum for the non-sandy parts of the catchment.
3. How was the groundwater - surface water interaction modeled?
4. Table 3 is insufficient. Which gauge was considered? Better: Show the hydrographs of the calibration and validation periods.
5. An uncertainty analysis is completely missing. How can the model serve the decision makers?

The topic is still very interesting and emerging. There are many other scientific projects which are dealing with sustainable water management in arid regions, also in China. I would suggest revising the paper towards a review paper about IWRM in arid regions (including considering ESS / ESF).

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 8941, 2012.

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