Reconstructed natural runoff helps quantifying the relationship between upstream water use and downstream water scarcity in China's river basins:

Review: Thank you for incorporating the changes I had recommended during the first round of revision. I would like to thank and congratulate the authors for considerably improving the manuscript. I think the paper is now almost ready to be published in HESS after last minor corrections. In addition, it would be great if the authors can further improve the manuscript (writing).

Line 1: 'This is particular important for downstream areas where local-generated'… Please correct this sentence.

Page 3, Line 5 – 9: The paragraph is not clear. It would be good if the authors can clearly explain the aspects of water scarcity.

Page 3: It is difficult to compile historical data on long-term water use and the related water scarcity in China due to lack of data 10 accessibility or no long-term data available. The sentence is not clear. Please rewrite.

Objective iii. What are the main drivers contributing China's water scarcity… There is a missing preposition.

Page 4: 'population count data' – I think population data is the correct term. Change the heading to 'Population data'.

Page 7: 'zscore is calculated as'… The method is missing here? Please provide the method. In addition, the section 2.2.5 needs more explanation for a better understanding.

Page 7: "The model captures well the fluctuations of observed discharge in both time and space during the simulation period of 1971-2010 in humid and semi-humid catchments, with small gaps between the observed and natural discharge (Fig. 2). Increasing gaps between the observed and natural discharge, however, are observed in semi-arid and arid basins, especially the Hai, Hei, Shiyang and Tarim River Basins. These gaps are regarded as water use from anthropologic activities"

The above paragraph says the gap between modeled and observed flow is considered as water used for anthropogenic activities. But in the figure 2, some of the river basins experience a higher observed flow than modeled flow. Please give an explanation. How the authors can compare it with the real water usage from those (or all) watersheds? The models (statistical/hydrological) always try to overestimate the results. How the authors would incorporate this over estimation in the study?

Figure 4: Please provide the unit and explanation on the 'Y' axis. It would be easy to interpret.

Page 8: Please split the sentence "For most basins, 1980s is a critical period with rocketing WTA, for instance, 40% increase for Yangtze River Basin, 56% increase for Xi River Basin, 64% increase for Songhua River Basin, 52% increase for Yellow River Basin, 31% increase in Hai River Basin, 67% increase in Shiyang River Basin and 50% increase in national ranges".

Page 9: “Quantifying upstream-downstream water nexus”. In the introduction section the authors did not provide any explanation on “water nexus”. Please provide some explanation for this term.

Page 10, Line 8: ‘The other basins have plenty available water but the excessive water use makes the Tarim River Basin, the downstream of Hei River Basin and the upstream of Songhua River Basin experiencing WTA stresses’. What are the probable sectorial water usage in that area? Pleas provide some explanations with references. In addition, please provide some real water usage examples for all the basins considered.

‘Rocketed – is it possible to change the word with increased or some suitable word.