

Comments:

Manuscript review for hess-2015-12: “Urbanization Dramatically Altered the Water Balances of a Paddy Field Dominated Basin in Southern China” by Hao et al.

The authors analyzed hydrologic responses to urbanization in a paddy dominated basin in southern China. The essence of those similar topics should reside in attribution analyses related to “what’s the most important impact factor and how to quantify its impact”. Similar discussions in general extensively exist in literature already, and most of them rely on detailed observations or modeling approaches. I believe the methodology in attribution used in this study could be substantially improved, which would also enable their results to be more persuasive (see specific comments below). I would suggest a major revision of this manuscript before possible consideration in the publication of HESS.

Specific comments:

- 1) Line 18 of abstract, the expression of “water-dominated to a human-dominated landscape” is not accurate, paddy field is also “human dominated” to some extent, please modify.
- 2) Necessary details of statistic methods and corresponding results (for instance, sen’s slope, DHR) should be provided.
- 3) How reliable is the “Baseflow index program” in your case? The uncertainty will definitely jeopardize your results regarding to the changes of baseflow, please clarify.
- 4) section 3.3, “our results showed that N.....”, please rephrase this paragraph which does not make evident sense to me.
- 5) section 3.3, “the increase in baseflow or low flow...as a result of groundwater management”. Section 4.2, “the large reduction in ET from paddy fields might overwhelmed...”. What do you think is the main factor that leads to the increasing trend of baseflow in your basin? I believe the authors need to elaborate their attribution analyses.
- 6) section 4.1, “a decrease in ET is normally...”. please explain.
- 7) please check the basic usage of scientific terms in hydrology, such as , streamflow / runoff, and their units.
- 8) what’s the temporal coverage of streamflow observation? I suggest tend analyses of all variables (e.g. streamflow, precipitation, ET, PET, baseflow, etc) should be framed within an overlapped time window.

9) please swap the presenting orders of table 1 and table 2.

10) Fig 3 could be dropped off, since it is less relevant to the topic.

11) Words / expression should be revisited for the whole manuscript, to name a few: Line 10, P8, “are control”; Line 4, P16, “practices”, etc.