Hydrol. Earth Syst. Sci. Discuss.,
doi:10.5194/hess-2017-64-RC1, 2017

Hydrology and Earth System Sciences
Discussions

Interactive comment on "Stream flow simulation and verification in ungauged zones by coupling hydrological and hydrodynamic models: a case study of the Poyang Lake ungauged zone" *by* Ling Zhang et al.

Anonymous Referee #1

Received and published: 8 April 2017

General comment The manuscript tried to link SWAT with Delft3D to estimate the streamflows in ungagged zones with a case study of the Poyang Lake basin. The topic and the methods sounds interesting but the poor writing make it hard to be understood well. I also think the study might be a reference for other areas. However, the manuscript was not well written and also there are some issues that need to be addressed carefully before it can be considered for publication.

Specific comments 1. The abstract was not well written. (1) 'To estimate streamflow without observation, the authors extend existing techniques . . .', but it is not clear what

is the existing one and what is extended one? A simple 'coupling hydrological model with a hydrodynamic model' is not far clear. (2) L13-15: It is hard to understand. What is land covered area? (3) L15-17: I still did not get what the original and adjusted scenarios are. (4) it is not that convincing to say R2 with higher values and bias with lower values, it would be better to use numbers or a range (e.g., 0.7∼0.8). 2. L29-33: it does not read well, the connection seems not logical. 3. L66-67: What does 'Usually, there are stream flow observation at the lower boundary of the ungauged zone.' Mean? 4. L72-75: Dargahi and Setegn combined a hydrological model (SWAT) with a 3D hydrodynamic model (GEMSS) .... Bellos and Tsakiris . . .. However, . . . there is no clear and specific method of coupling hydrological and hydrodynamic models in space and time.' It is really hard for readers to get what problems or drawbacks others have, and what the novelty of the authors' method is. 5. L101-103: 'We established . . . model was established to . . .' Grammar issue. 6. L103-106: It is strange the end of Introduction was repeating the abstract. 7. L121-124: It reads awkward, and it seems SWAT doesn't need temperature? Were all the data downloaded from Jiangxi hydro info website? 8. Methodology section is too short and lack details. 9. SWAT and Delft3D are the two major approaches of the study; however, there was no description of the two models. 10. L146-147: to simulated ? 11. The results and discussion seems just result description and no discussion was provided. 12. There are many grammar issues here and there, and I believe they need a professional editing service before resubmission.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2017-64, 2017.