

Interactive comment on “Hydrologic analysis for river Nyando using SWAT” by A. O. Opere and B. N. Okello

J. Gathenya (Referee)

mgathenya@yahoo.com

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Comments 1. This paper does not seem to fit into the focus of the special issue which reads "Towards theories that link catchment structures and model structures" 2. The title of this paper does not indicate to readers what they are to expect in the paper. It is just plain and general. The authors have investigated the impact of land use change on mean flow and peak flow. Specifically they have looked at the impact of increasing forest cover from 14% to 50% and to 100%. This is perhaps what the title should reflect. 3. The authors have not considered newer published reference materials relevant to the topic and especially to hydrologic modelling in Nyando basin. There are some authors who have even used SWAT model in Nyando and they have not been listed in the references. 4. page 1767 lines 5-10 several typographical mistakes 5. page

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1767 line 11 An R2 of 0.24 is not acceptable and to build scenarios on this foundation would not be acceptable. 6. page 1767 line 22 onwards The introduction should be supported by relevant literature 7. page 1769 line 6-8 Support this statement with literature 8 page 1777 line 23-24 What was the goodness of fit? 9. page 1778 line 24 the scenarios should be described properly 10. The authors do not refer to the tables and figures in the text as is usually done in journal articles and books. There are several mistakes and I do not wish to list everything down. 11. page 1782 Table 1 River Sondu is not part of Nyando basin 12. page 1787 table 6 not clear to readers 13. page 1790 table 9 the scenarios should be labelled. 14. page 1772 line 8-19 Although DEM and land cover data was obtained from ICRAF, the authors should give details of actual sources so that they can understand the limitations. Usually readers will expect to see maps of location, soils, land cover especially in a paper that claims to have used GIS techniques. This paper has no maps at all. Why is the section on page 1769 included? It reads "1.2 Application of GIS in hydrological modeling" 15. The results are too few to excite readers. Only Table 10 gives results that are useful. 16. As a conclusion, I find that the authors have failed to capture previous results of research in Nyando basin. This is unfortunate as this basin is highly researched.

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