Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., editor comment EC1
https://doi.org/10.5194/hess-2022-116-EC1, 2022

Comment on hess-2022-116

Carla Ferreira (Editor)

Editor comment on "An improved model of shade-affected stream temperature in Soil & Water Assessment Tool" by Efrain Noa-Yarasca et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2022-116-EC1, 2022

Dear Prof. Efrain Noa-Yarasca,

Thank you very much for submitting your manuscript to this SI in HESS. Increasing temperature of water resources has relevant environmental impacts, and thus investigating the impact of different strategies to increase shadow and reduce temperature is of great relevance for the scientific community and stakeholders. The manuscript is well written and structured, but some clarifications must be performed before considering your manuscript for publication.

Please, consider the relevant comments provided by the 2 reviewers and the following ones for preparing the improved version of your manuscript:

Section 1.1.: please, include this section in the main section.

Section 2.1: please include more information about the hydrological network, the agriculture (e.g. irrigation and main crops), water uses, describe the current condition of the riparian vegetation, etc., so that the reader has a better overview of what is being considered in the model.

The methodology section must better explain how the models were calibrated (e.g. including information on data used) and how the performance of the models was assessed. The methodology used for calculating the costs of restoration and benefit-cost ration for all the scenarios should be also included in this section.

Minor comments:

L25-29: add references

L126-128: add references

L129: “temperatures remain degraded” – what do you mean?

L125-128: I suggest to present this information after describing the land use (end of this section)

L134: Please, correct numbering of the sub-section

L143: please, add information about the resolution of the DEM

L178: delete “In”

Fig. 1: scale bar is missing