

Interactive comment on “A Water-Energy-Food Nexus Approach for Conducting Trade-off Analysis: Morocco’s Phosphate Industry in the Khouribga Region” by Sang-Hyun Lee et al.

Sang-Hyun Lee et al.

sanghyunsnu@gmail.com

Received and published: 10 August 2020

Dear Editor and Reviewers

Thank you for considering the manuscript for publication in the Hydrology and Earth System Sciences (HESS) and in-depth review of the manuscript. In this study, we developed the WEF-P tool which is a decision support system for linking phosphate industry to agriculture in terms of water-energy nexus perspective. In particular, we adapted the supply chain analysis to quantify the water and energy footprints and assessed the impacts of water allocation between industry and agriculture through dynamic production of phosphate using the WEF-P Tool.

C1

The main comments from reviewers were related to 1) lack of literature reviews, 2) strength of this tool in comparison to others, and 3) economic and environmental impacts assessment. Therefore, in the revised manuscript, we revised the introduction with more literature reviews and reorganized the structure of our manuscript in order to improve its readability and highlight the novelty of the present work. In particular, we have detailed explanation about methodology of the tool, data survey, scenarios, and footprints modeling. In addition, we compared this WEF-P Tool with WEF Nexus 2.0, and added the limitation of economic and environmental impacts assessment through the WEF-P Tool.

Main revisions - Revising introduction with more literature reviews - Reconstructing and revising the materials and methods section - Adding limitations of economic and environmental impacts assessment

In the revision notes, you will find a point-by-point reply to specific comments.

We appreciate again your thoughtful comments and look forward to hearing your reply.

Kind regards, on behalf of all co-authors,

Please also note the supplement to this comment:

<https://hess.copernicus.org/preprints/hess-2020-197/hess-2020-197-AC1-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-197>, 2020.

C2