

Comment on hess-2021-545

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Referee comment on "A review of the applicability of the motivations and abilities (MOTA) framework for assessing the implementation success of water resources management plans and policies" by John Conallin et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-545-RC2>, 2021

The article beautifully synthesizes the science behind the MOTA framework and its application. The authors also critically review the MOTA framework by bringing more insights and opportunities for further development which would widen the applicability of the framework. The authors also propose three "add-in(s)" for MOTA which would broaden its applicability which is a valuable contribution to the theory as well as to its applicability and flexibility. However, I do have some comments –

□□ sections 3 to on-ward found to be mostly based on the literature up to 2019. The recently published literature might have more insights that are potentially missed in this article.

□□ The proposed add-in(s) for stage 5 seems to be part of the MOTA components rather than to be standalone components as illustrated in Figure 5, for example:

o The "characteristics of the actor" add-in is indeed interesting. But how it will be quantified is not clear. Rather than placing it as a standalone component of Motivation, it can be linked with the ability components. For example, the innovativeness characteristics can be included in the technical ability; the environmental belief can be included in the social ability.

o The "Characteristics of innovation" is interesting. Isn't it already in the Perceived opportunity/threat? For example, if the trigger is an innovation of technology and the action is adoption or rejection of the technology, the MOTA component "perceived O&T" includes advantages of using the technology which might be compatibility, complexity, trialability etc.

o another proposed add-in is "social norms" which is a part of the institutional ability.

- More explanation on Figure 5 would help the reader. Especially how these add-on(s) can be operationalized and applied could be discussed.
- It seems the proposed add-in(s) as illustrated in the Figure 5 are specific to adoption of innovative technology but such explanations are not provided. It is therefore needed to clarify whether these add-in(s) are generalized or specific to the research problem/context of the author.
- Further clarification on whether these add-in(s) are for I-MOTA or for A-MOTA would be helpful. Because due the change of actors (from adopting actor to implementing actor) the notion of those add-ins might need to be changed. For example, the Characteristics of Innovations as described in Figure 5 are more relevant to an Implementing Actor (an organization or Agency) rather than an Adopting Actor (Society).

Please also note the supplement to this comment:

<https://hess.copernicus.org/preprints/hess-2021-545/hess-2021-545-RC2-supplement.pdf>