

Review #1

Thanks to the authors for the revisions, which address most of my previous points. I think some final small changes would be useful as suggested below:

Thank you very much for the feedback on the remaining unresolved points. Below we provide a point-by-point response together with the implemented changes in the revised manuscript as well as explanations.

The newly-added points about spatial resolution could usefully be included in some form briefly in the discussion as well, as they're important for understanding current setup and potential.

We added a short paragraph in the discussion on the current spatial resolution of the model to explain the concept of aggregated social-ecological systems in which we have one representative farmer per grid cell. We also noted that this system can be changed or extended depending on the research question

Figure 2 has improved but I'm still not convinced it's as useful as it could be. Having (incomplete) lists of the parameters and settings makes me wonder what the terms that are there mean exactly and what is missing – the conceptual and programmed links between the components aren't obvious from this (except that they exist). Can you add a little more description/detail on what exactly the interactions are here?

We revised the caption of Figure 2 to provide a clearer description of the structural hierarchy, modelling interfaces, and coupling logic within the framework. In particular, we clarified that the entities are hierarchically linked, while interactions and processes are defined within the respective coupled model implementation. We also added explanations on the meaning of the extensible attributes and entities represented by the three dots, as well as the annual exchange of coupled LPJmL input and output data handled through the LPJmLCoupler.

On the extension of neighbourhoods, I'd still suggest saying more about how this can be done, and any constraints on it (from your new sentence it appears there aren't any, but this implies a very loose structuring). It seems worth giving a bit more space to this as it's likely to be key functionality for users.

We expanded the description of neighbourhood structures in the model design section. In particular, we clarified that the currently implemented local neighbourhood can be extended or complemented by additional non-local social networks at regional or global scales. We further specified that such networks are based on the acquaintance network implementation of copan:CORE and can represent groups of agents distributed globally or within specific regions. This was added to clarify both the flexibility and the structural basis of network extensions within the framework.

Adding to that, some more (specific) text on extensions beyond the examples would be useful, just to give a short idea of what would be involved, any constraints etc. – aspects that really are completely unconstrained could of course be highlighted better then too.

We added a paragraph at the end of the discussion section to further clarify the extensibility and constraints of the framework beyond the examples presented in this paper. In particular, we now highlight that future extensions can build on the wide range of coupling interfaces, model variables, generic entity types, and process taxa provided by LPJmL and copan:CORE. At the same time, we also clarify that future developments remain constrained by the process representations and temporal coupling structure of LPJmL, computational limitations, and the need to balance model complexity with tractability and interpretability.