

This manuscript addresses important question on how land use change is linked to well-being. I was pleased to read this work. I found this work provides interesting insights. I also appreciate the author' mixed-methods, combining remote sensing analysis with workshop and interviews. However, I have several suggestions and questions mainly related to incomplete descriptions in the methods, result, and discussion sections.

1. Abstract

- The sentence *"Third, we identify three substitution processes that can mitigate ecosystem service loss' impact on wellbeing"* is somewhat cryptic. Readers are expected to know what these substitution processes are, but they are not introduced in the abstract. I suggest briefly naming the three processes.
- The abstract also does not mention when the workshops were conducted.

2. Supplementary Material (S2)

- *"In order to complete the final column on the flip chart, participants were prompted to articulate and elucidate the reasons behind any change in their satisfaction with specific well-being components"*. This sentence needs more explanation. Could you first explain how the flipchart looks like, what are the columns, what is final column about?
- *"These stickers were designated for placement on the components deemed "most difficult to satisfy at the present time" and those currently perceived as "most satisfied at the present time", respectively red and green stickers."* I am curious whether participants were only allowed to provide a binary answer, perhaps participants may have a more nuanced answer. Do they have chance to express different thing rather than sticker?

3. Reflection on our methodological approach:

"While our study provides valuable insights into the links between land use change and human well-being, several limitations should be acknowledged". I am not familiar enough with other existing human well-being assessment/ tools. It would be helpful if the authors could further reflect on strength and limitation the methods applied in this study **compared with other tools/ assessment**. It will help a lot the reader to understand the "positioning" of your assessment/ tool, including which aspect that captured well and less.

4. Methodological approach:

"Some results from the workshops and interviews have already been published for Madagascar (Llopis et al., 2020, 2022) and Myanmar (Schneider et al., 2020)." Elaborate more what are already published? Which element now included in the present publication? The word "some" is too vague and does not help readers understand the overlap between the previous publications and this study.

5. Land use change assessment

"Table 1. Land use category per case study site". Authors said satellite imagery is used for land use analysis. Could you give percentage of each land use class in the study sites? This is important for reader to understand the situation prior to land use change/ workshop. I was thinking also nice to plot location of the workshop/ participant (approximation) on the map because I argue that participants experience/ answer are likely to depend on the specific local land-use conditions where they live.

6. Data analysis

- *"We then analysed the data using qualitative content analysis approach with the aim to elicit any reported links between well-being components, ecosystem services affecting those, and land uses supporting ecosystem services. To link ecosystem services to land use, we considered those land uses identified as the most prevalent ones in each case study site (Table 1) and considered any direct connection made between land use and ecosystem service by the workshop participants or interview respondents"*
- *"For each country, an excel table was established containing a sheet for: (a) links between ecosystem services and well-being components, including the respective land use supporting the ecosystem services; (b) direct effects of land use changes on well-being components"*

Based on these two statements, the protocol used to establish the links is not fully clear. Were the LUC-well-being connection made directly by the participants or constructed (post-analysis) by the researcher? Elaborate in detail on this protocol.

7. Table 4

- Explain why several well-being components were not assessed in certain countries?
- Among the well-being components, I mostly understand the context, but the category agriculture (under control over one's environment) is less clear. It seems to eventually lead as agricultural production for income. Moreover in Figure 2, agriculture mostly linked with regulation of hydrological cycle (R&M) which originated from forest. Could you elaborate this maybe in the result/ discussion?

8. Table 5

It is super difficult to understand/ interpret this table. The title refers to the three most prevalent LUC in study area, but only two are shown for Laos and Madagascar. If the information is based on remote-sensing based analysis, it would be preferable to list all them here or perhaps classify other LUC categories as "other". Make sure the total percentage is 100% so its easy to understand. I also confuse with term "share of mapped area". Does this mean that only part of the study site was mapped, or does it refer to the whole mapped study area? Please clarify

9. Link between land use and human well being (section 4.3) and Figure 2.

"The greatest number of links between land uses and well-being components mediated through specific ecosystem services were reported in Madagascar (103 links supported by seven land uses),"

- It is unclear the number of links, represent by the thickness in the Sankey diagram, actually refers to. Does it represent the number of participants or number of statement or link constructed (post-analysis) by researcher analysing

workshop result? Since this graph is central for this research. Its recommended to clarify the protocol in creating this visualization/ underlying connection.

- The Sankey diagram visualization should be more organized. Now its a bit over the place make it difficult for reader to tracks and compare across countries. The ecosystem services in the middle could be ordered by ecosystem service category, and the ecosystem service components could be colour-coded using similar colours within each category.

10. Figure 3

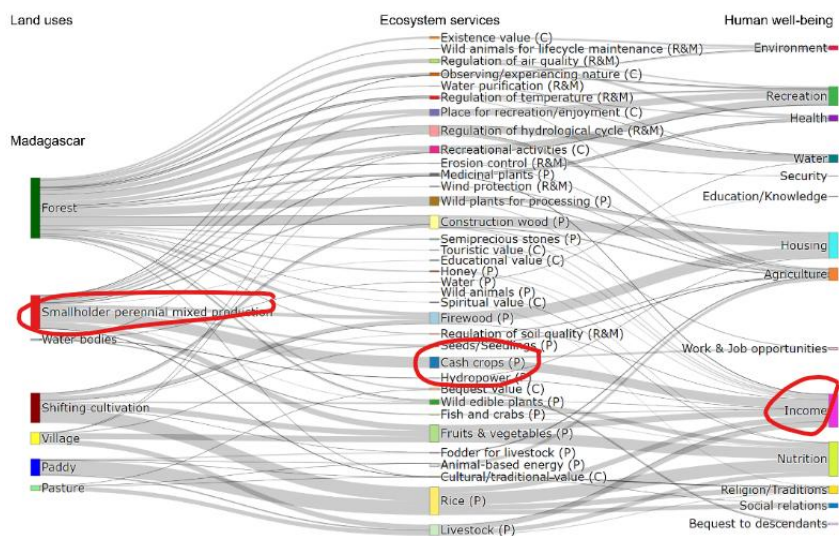
- How were the four impact categories derived (direct-undirect; positive-negative)? Were these categories explicitly stated by participants during the workshops, or were they interpreted by the researchers during analysis? If they were based on participant statements, it would be useful to provide typical examples of statements for each impact category, perhaps in the Supplementary Information.

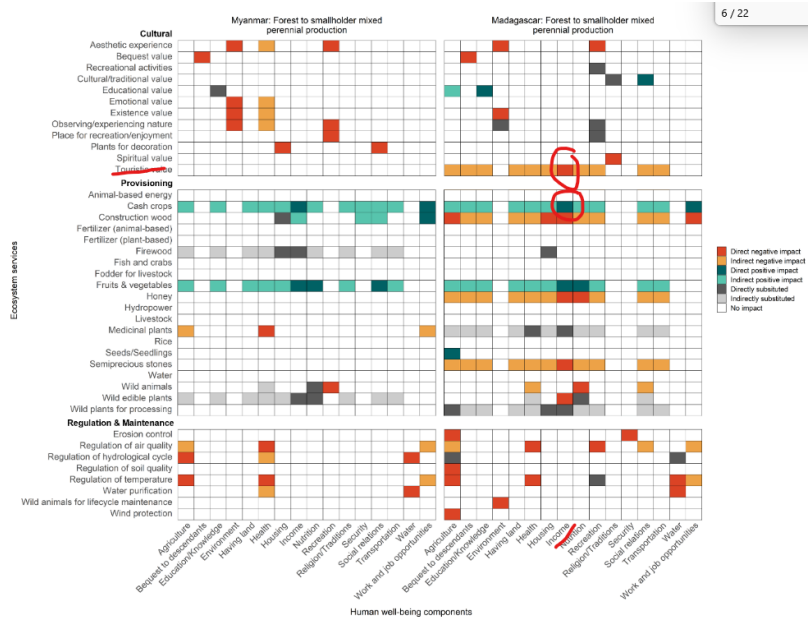
11. Mechanisms between land use change, ecosystem services and human well-being (section 5.2)

“These impacts should also be explored across different spatial scales because whether the relationship between ecosystem services and human well-being is positive, negative or non-existent is scale dependent (Liu et al., 2022).”

Could the authors further reflect on how their own findings relate to this statement, considering the level of detail available in the study?

12. Substitution processes: Discussion/ result (Figure 2 and Figure 3)





I want to better understand the result by interpreting Fig.2 and Fig.3 as well as the text. In case of LUC from forest to smallholder mixed perennial production in Madagascar, the newly established agriculture appears to provide more income from the cash crop cultivated in that land. In the same time they said decreases in income from tourism (I assume from forest loss) as well as from edible wild plants. I wondered, does this imply an income substitution in this case?

Could you elaborate “alternative income-based substitution” explanation in the manuscript using this specific case? Let us the reader know whether this is equal or lower/ higher substitution (based on workshop result)?