

Editor comments on manuscript version 2

I read the revised manuscript in detail with great interest. I have still quite a few detailed comments, mainly of an editorial nature. I also have one more substantive comment, that was not raised by any of the two reviewers but which I still find relevant for the authors to consider. They may ignore it, or if they agree, may improve the paper further. I start with the substantive comment, which is followed by detailed comments of a less substantive nature.

Response: *Dear editor, thank you for taking time reading the manuscript. We have responded to each comment as indicated below:*

1. Substantive comment

The paper reports a rather successful application of a serious game, successful in the sense that it indeed appears that participants did learn as a result of the game, which is exemplified by some of the graphs. These show that in each of the three games that were played, there was a significant reduction of what the authors call “subtractive” dynamics and a significant increase of “constructive” dynamics (Figure 8). This I found impressive. However, this positive trend is associated with a general increase in profits that all individual players achieved (Figure 9), with one main exception, namely the livestock keepers in Teleswani sub-catchment, whose profit in the fourth run was slightly (but not significantly) lower than in the first run.

My inference: none of the players was significantly worse off at the end of the game. This was highly surprising to me. In particular so, because the authors emphasised insistently from the start of the paper, that they were dealing with a wicked problem (used 13 times in the main text). As far as I understand, if there is a case of a wicked problem, there may not even be agreement what precisely the problem is, let alone its cause, and even less so its resolution. And if there is some kind of resolution, a “win-win” compromise is extremely unlikely - some, if not most or even all, may lose something.

This therefore raises a pertinent question: did the paper actually deal with a wicked problem? If it did, how then was it possible that none of the players was worse off at the end of each of the three games? Was there perhaps a flaw in the game set up that can explain this? Or didn't the paper deal with a wicked problem?

In my view we have to be careful (and economic) with labelling problems as “wicked” and only do so when we are really convinced they are. If we use it, let's be precise in defining the problem's wickedness. The paper defines it as “Problems, with many interdependent factors that make them very hard to solve, such as the differences in how humans view and interact with the dynamic physical environment” (lines 47-48). I am not an expert on this, so I am not in a position to assess how rigorous and adequate the used definition is.

Let's, for the argument, just assume that the problem central to the game was indeed wicked. Then there must have been a flaw in the game set-up. This flaw is not very difficult to identify. The set-up was such that the zero-sum game so typical for many water problems (and I guess in particular the wicked ones) could be circumvented, namely by creating new water. And not a little: at least 50% additional water was created in each of the three games sessions (line 594). This implies that the game “unwickeded” the problem! And if that's indeed the case then the frequent references to wicked problems in the paper may actually be a problem.

Response: Thank you for this substantial comment. To begin with the motivation for this research, the research emanated from the complex human-water challenges in the case study area. that can be described as ‘wicked’ in our opinion (i.e. many different actors, with different needs, different perspectives, which makes identifying the problem and the solution difficult). We presented the context of the case study area, where there have been human-water challenges including conflicts for over many years. Even the establishment of river basin organizations such as WRUAs (who have been in existence for over 30 years), have not yielded sustainable results. The situation has deteriorated (even with reported annual fatal conflicts), which can be linked to changing hydrological dynamics and evolving human dynamics e.g population growth. Our argument is that WRUAs have been engaging communities through conventional approaches e.g. workshops, community discussions, group discussions etc.

In the scientific arena, among a range of participatory approaches, the development and use of serious games has gained prominence as a tool to stimulate discussion and reflection among stakeholders about sustainable resource use and collective action. Hence, in **Ln 245**, we write“developing and testing an alternative participatory approach such as a serious game was considered timely”.....

We agree with the comment, however the serious games can be viewed to make the problems ‘less wicked’ by simplifying the real-world complexity, highlighting common pull resource elements, make the situation more

insightful and possible improvements. The participants in a game setup are not likely to forget the others or the future, it is one way to get out of the 'wicked trap'. In **Ln 158**, we write....."The purpose of this study was to assess the potential role of the ENGAGE game in strengthening stakeholder engagement toward addressing complex human-water challenges of a river catchment".....

By design, there are two phases in the actual game play. Phase one (which was meant reveal the 'wickedness') mimics reality, whereby individual values and preferences of the players were allowed to shape the game results. Phase one was meant to prepare players for phase two. By unpacking the wickedness in phase one, players were sensitized to the different needs of the other players and triggered to jointly look for a more sustainable alternative ways of management. In the second phase (i.e. a final round or 'reflection' round), the players were guided to reflect on the game results and experiences in phase one and think objectively about what the potential solutions to the human-water challenges could be (observed in phase one). Therefore, it is not that there is a flaw in the game (that we are aware of), but the actual game set-up, can explain the reason behind your inference that the game "unwickeded" the human-water problem. Undoubtedly, a different game design and set-up would have yielded different results. In the discussion section **Ln 623**, we write.... "conducting several game rounds without subjecting the participants to a final reflection round may be an alternative way to assess the emergence of gaming outcomes".... This would have resulted in game outcomes that would potentially reveal worse case scenarios even in the final round. However, we argue that this would require a larger number of game sessions to gather a sufficiently large sample size of game sessions in order to draw meaningful patterns....

Key changes made in the manuscript:

As a reminder to the reader and reduce the perception of a flaw in the game results, we have revised the following text as part of the limitation of the study (reminding the reader of the two phases of the gameplay):

....."We argue that conducting several game rounds without subjecting the participants to a final reflection round may be an alternative way to assess the emergence of gaming outcomes. Without a reflection round, we speculate some game sessions would have ended with worst case scenarios, which still would have been important results as an emphasis of 'wicked' nature of human-water challenges. Although this would require a larger number of game sessions to gather a sufficiently large sample size of game sessions. Assessing game outcomes from such a larger sample size may be desirable to study more patterns and more emergent patterns of this gaming approach".....

2. I have one additional query, which I address below, namely how the water harvesting was modelled.

So a criticism against this paper could easily be made as follows: the game set up was designed for success. This obviously compromises the realistic nature of the game, and its applicability for real world problems. In this light, I would have found it appropriate if the authors had played a counterfactual game without the option to make new water available (through water harvesting), and assess whether similar learning patterns did emerge or not.

I am not arguing that the authors should do this. I want to authors to consider this criticism and if needed make some more elaborate and grounded arguments in the discussion. Currently in the discussion it is rather superficially argued and weak, namely: "... guiding stakeholders to practically understand the importance of rainwater harvesting and storage is an important factor for water availability in the river catchment. This finding concurs with other studies that opine that rainwater harvesting can be a feasible solution for water scarcity problems during dry seasons (Velasco-Muñoz et al., 2019; Irshad et al., 2007)." (lines 598-602)

To argue for supply-side solutions is what is the conventional solution to most water problems, as if there would be no limit to "squeezing the cow" (Waalewijn, 2002), and as if that would really resolve the problem. Refer in this context also to the "reservoir effect" postulated by Di Baldassarre et al. (2018). (The references that the authors give in the above quote are not very convincing to me.)

Finally, and to close this substantive point: it is important for the serious reader to know how the water harvesting was included/incorporated in the game set up. Normally, the more water you harvest, the more effort you have to put in and the lower the yield will be. So there are clearly and significant decreasing returns to investment for this. Was this taken into account? I understand from Supplement 2, that the ability of players to harvest additional water was "randomized". I don't know what exactly this means, and why this was chosen to be done. What real world situation is this supposed to mimic?

Response: Thank you for the comment. Regarding the suggestion for "a counterfactual game without the option to make new water available (through water harvesting)", we think this is readily addressed by the development

of solution space. The solution space (with 1000 possible outcomes) gives the realm of possibilities based on participant choices in the ENGAGE game. Fig 11 shows the actual game results with rainwater harvesting and if no rainwater harvesting was implemented. Based on the solution space in Fig 11, it is possible to deduce that there are possibilities of some game outcomes (water availability results) falling below the critical threshold. However, the actual game results revealed increasing water availability, with harvesting decisions.

Hence, given the purpose (...“to assess the potential role of the ENGAGE game in strengthening stakeholder engagement toward addressing complex human-water challenges”.....), our argument in the quoted Ln 598 is that the ENGAGE game ...“guided stakeholders to practically understand the importance of rainwater harvesting”.....

Regarding the question on...“how the water harvesting was included/incorporated in the game set up”.... Yes, the more you harvest, the more the investment costs, hence lowering potential net income... in the supplement 1, the rainwater harvesting costs is set to be high at KES 50,000, equivalent to the costs of opening a new agricultural patch. Hence, the returns to investment were considered.

I do not understand the comment on“the ability of players to harvest additional was randomized”.... However, in my interpretation the comment refers to randomization described in Table S1. If this is the case, we did not randomize the ability of the players to harvest water. The randomization described in Table S1 was in the construction of the solution space where randomization between minimum and maximum values (of different game elements) was done to ensure a complete representation of all possibilities (in the 1000 runs).

Changes made to the manuscript:

We have revised the quoted text in the discussion section to also include ‘anticipated’ effects of the water harvesting solutions as follows:

.....“ There was a decline in water availability in the initial game rounds and then an increase toward the final game rounds. This could be attributed to rainwater harvesting decisions made by game participants in the final game rounds which saw water availability increasing between 50% and 91% in the three game sessions. Therefore, despite increases in agricultural land expansion and livestock units, guiding stakeholders to practically understand the importance of rainwater harvesting and storage is an important factor for water availability in the river catchment. This finding concurs with other studies that opine that rainwater harvesting can be a feasible solution for water scarcity problems during dry seasons (Irshad et al., 2007; Velasco-Muñoz et al., 2019). However, these are supply-side solutions which can readily fit the context of water scarcity problems where there is urgent need to provide ‘additional water’ to quell existing conflicts as conceptualized in this study. Overall, there could be thresholds to the extent to which the supply-side solutions are sustainable. Increasing water storage capacity, despite improving water supply can increase stakeholders’ vulnerability due to reservoir effect (Di Baldassarre et al., 2018), human displacement (Asmal, 2000; Kuil et al., 2018), inefficiency due to excess water ‘reallocation’ (Kuil et al., 2018), among other anticipated effects.”.....

3. Detailed comments

1. Line 1: I find the term "human-water-related challenges" confusing and ambiguous (it occurs 7 times in the text, and it features in the title of the paper). Omitting "-related" would instead make it straightforward, and this is also used (also 7x) in the text.

Response: Thank you for the suggestion. We have removed "-related" from the text.

2. Line 29: The addition "explored within a game environment" I found not very helpful.

Response: Thank you for the suggestion. This has been removed

3. Line 69: "Firstly, ..." This is, as far as I could see, not followed up by "Secondly, ...".

Response: Thank you for this comment. We have revised the text as follows:

.....Firstly, IWRM does not directly account for the dynamics of the interactions and feedback between water and people (Sivapalan et al., 2012). Secondly and most importantly, IWRM typically adopts participatory methodologies such as workshops, focus group discussions, dialogue groups, etc.....

4. Line 78: Not clear whether (UNSDG, 2020) is used here as a standard. Unclear

Response: Thank you for the comment, the intention was to give the reader a picture of existing stakeholder engagement standards at local or country level. We have revised the text as follows:

.....Even stakeholder engagement standards such as AA100AP (Kim et al., 2018) applicable at local level, or (UNSDG, 2020) applicable at national level, among other standards, fail to create a learning space that goes beyond participation and allows stakeholders to directly engage with.....

5. Line 80: Although we see this with increasing frequency, it is in my view not good practice to use "(Bielsa and Cazcarro, 2015) underlined the need ..." This should be: "Bielsa and Cazcarro (2015) underlined the need ..." See also Lines 226, 519, 640

Response: Thank you for the comment. This is well noted. This mostly happens when using referencing softwares such as Mendeley. We have checked and manually revised the references accordingly.

6. Line 83: "This will help ..." Always? Unlikely. So I would prefer: "This may help ..."

Response: Thank you for the comment. We have revised accordingly.

7. Line 86: Why should Speelman et al. (2021) have his initials included in the reference?

Response: Thank you for this observation. The initials have been removed.

8. Lines 92-124: This is largely a new text and is inserted in a paragraph that argues that serious gaming is an alternative approach for participation. In these new sections there are also frequent remarks concerning participatory modelling, but it remains not very clear why this is included in the argument. Especially the following sentence for me created some confusion:

"There are different ways to increase engagement of participants during workshops, such as participatory mapping, experimentation with art-based visuals, etc, however, these cannot be viewed as collaborative modelling. Basco-Carrera et al. (2017), attempts to differentiate what can be considered as 'participatory modelling' and 'collaborative modelling'." (lines 98-101)

The first part of this quote suffices (until the word "etc"), whereas the remainder confuses and can better be omitted. The paragraph that follows starts with serious gaming, but the second half of the paragraph again deals again with companion modelling. It is then, rather cryptically concluded that "As aforementioned, the politics that shape conventional processes (e.g. the influence of the 'outsider') are dealt with in the gaming approach through an iterative process that evolves with participatory modelling ..." (lines 120-122)

I really fail to understand what this sentence wishes to convey. And it remains obscure to me how (and why) serious games and participatory modelling appear to be intimately linked.

Response: Thank you for the comment. In our argument, the process of developing a serious game is done through a participatory modelling (a purposive learning process that incorporates stakeholders views in developing the game), and this is how we link the two concepts. The process of developing a serious game is similar to that of participatory modelling, as the first steps are the same with one leading to a computer model and the other with a game, but both are models (simplified representations of reality).

Despite the game development, the actual playing of the game can also be described as participatory modelling. This is because, the serious gaming is purposive (i.e. "serious") for instance, games used for social leaning where stakeholders are engaged to explore possibilities through participatory modelling that may give rise to different results using the same board game elements. Therefore, there is a close link between serious gaming and participatory modelling.

Regarding companion modelling, this part was inserted as a response to a reviewers comments regarding 'outsiders' influencing the game development. However, the 'outsiders' influence is diffused through a co-construction approach (where the designers and the participants collaborate to define game development) commonly referred to as companion modelling approach (but can easily be termed as participatory modelling approach).

Changes made to the manuscript:

To minimize the confusion to the reader, we have removed this text in Ln 100:

- ~~.... however, these cannot be viewed as collaborative modelling. Basco-Carrera et al. (2017); attempts to differentiate what can be considered as 'participatory modelling' and 'collaborative modelling':.....~~
- To align with the general text in the manuscript, we have also replaced 'companion modelling' with 'participatory modelling'

9. Lines 116-117: "However, the companion modelling approach needs to be improved to clearly define the horizontal and vertical dialogues by involving all stakeholder at all levels (Barnaud et al., 2008)." Why is this important? Can't this sentence be omitted?

Response: Thank you for the comment. This part has been removed.

10. Line 118: "stallholders" -> stakeholders

Response: Thank you for the observation. This has been corrected

11. Line 211: "The aridity values in the catchment change drastically between ..." -> "The aridity in the catchment changes drastically between ..."

Response: Thank you for the suggestion. This has been revised accordingly

12. Line 243-244: "... developing and testing an alternative participatory approach such as a serious gaming is timely." Rephrase into "... developing and testing an alternative participatory approach such as a serious game was considered timely."

Response: Thank you for the suggestion. This has been revised accordingly

13. Line 251: "the ARDI approach" Explain what ARDI stands for.

Response: Thank you for the comment. This has been inserted in the text.

14. Lines 253-254: the three subcatchments have already been named earlier. No need to repeat.

Response: thank you for the suggestion. This has been revised accordingly.

15. Line 256: "... in three sub-catchments." -> "... in the three sub-catchments."

Response: thank you for the suggestion. This has been revised accordingly.

16. Line 262: I would omit this entire line "Name of the Game: ENGAGE_v1 - "Exploring New Gaming Approach to Guide and Enlighten", and insert in the next line an explanation of what ENGAGE means (i.e. "Exploring New Gaming Approach to Guide and Enlighten")

Response: thank you for the suggestion. The line has been removed

17. Line 291: "... agricultural activities ..." This may create some confusion, because this excludes livestock, which follows later. Then this is about "arable agricultural activities".

Response: thank you for the suggestion. This has been revised accordingly.

18. Line 296: add "area" to grazing to make "grazing area"

Response: thank you for the suggestion. This has been revised accordingly.

19. Line 303: insert a missing parenthesis.

Response: thank you for your observation. This has been added

20. Line 309-310: "The effects of changes in the water balance are however heavily felt in the downstream zone." I would prefer: "The effects of changes in the water balance are however most heavily felt in the downstream zone."

Response: thank you for the suggestion. This has been revised accordingly.

21. Lines 375-378: "Water availability was accounted as the difference between the water generated from the water tower and total water demand. Rainwater harvesting was considered as 'additional water' for the board game, as this was done during the transition of game rounds." This may be correct, but this may create some confusion when interpreting the graphs (the Figures in the next section), which I have tried to indicate (see below).

Response: Thank you for the comment. We have responded to the specific comments below.

22. Line 388-389: "The number of livestock that survived within the board game system (at the end of each game round) was observed to be fewer than the available stock at the start of the game." Check whether this is correct or should state "... to be equal to or fewer than ..."

Response: Thank you for the comment. This has been checked and revised accordingly.

23. Figure 4:- Somehow Include somewhere (perhaps in a new series of graphs) the water availability per run (this should include and distinguish the "normal" water availability (which varies per run due to the dice thrown), as well as the water generated due to water harvesting initiatives of farmers during the run).

Response: Thank you for the comment. The water availability per run is already provided in Fig 10.

23.1. For each figure: Use identical y-axis throughout, so that the graphs are easily readable and comparable.

Response: Thank you for the comment. We have revised the Y-axis to ensure equal units.

23.2. Check why Figure 4G has four runs/rounds (shouldn't this be 3?)

Response: Thank you for this observation. We have checked and revised Fig 4G.

23.3. Explain in the caption of this figure the meaning of R1 to R4

Response: Thank you for the comment. We have added the explanations for R1-R4.

24. Figure 5: Identical Y-axis, please

Response: Thank you for the comment. This has been revised.

25. Figure 6: Same: identical axis

Response: Thank you for the comment. This has been revised.

26. Line 425: "Subtractive dynamics seem to reduce towards zero in the succeeding game rounds ...". Consider to rephrase this as: "Subtractive dynamics seem to reduce in the successive game rounds ..."

Response: Thank you for the comment. This has been revised.

27. Line 427: "... had a reverse trend ..." consider to rephrase this as "... had a reversal ..."

Response: Thank you for the comment. This has been revised.

28. Line 429: "... with the increase in knowledge gain and use of plural pronouns ..." -> "... with the increase in knowledge gain and the increased use of plural pronouns ..."

Response: Thank you for the comment. This has been revised.

29. Line 431-432: "... knowledge gain maintained to continuously increase throughout the different game rounds" -> "... knowledge gain continued to increase throughout the different game rounds"

Response: Thank you for the comment. This has been revised.

30. Figure 7: Consider reducing the values of the scores in all graphs of this figure to only one digit

Response: Thank you for the comment. This has been revised.

30.1. For Figs 7B, 7D and 7F: the colours orange and red are difficult to distinguish. Why not use blue for the red.

Response: Thank you for the suggestion. This has been revised.

31. Line 454: "... made by game participants (Fig SThe results show that ..." -> "... made by game participants (Fig S2). The results show that ..."

Response: Thank you for the comment. This has been revised.

32. Lines 460-462: "Plotting the game session results in the game solution space, showed that investment in agricultural expansion in the midstream zone may not necessarily lead to an increase in net profit, based on the best-fit line in Fig 9B." I didn't understand this. Perhaps I did not understand what the "best-fit line" actually meant.

Response: Thank you for the comment. The line of best fit is used here as an output of regression analysis (predicting the relationship between the net profit and the number of agricultural practices). To minimize confusion, we have deleted this part from the text.... "~~based on the best-fit line in~~"...

33. Figure 9: It is critical to use identical Y-axes here, as this would more clearly show that whereas most profits increased, those of the irrigators increased much more than that of livestock keepers.

Response: Thank you for the comment. This has been revised

33.1. Is the net profit per player or per group of players? What was the inequality index (or the variation of the profits between the individual players in each group)? Was it similar for the three groups (up, mid and downstream), or different? Wouldn't that give important additional information? Why was inequality between players not included as an indicator?

Response: Thank you for the comments and questions. The net profit in Fig 9 is calculated for each game round (based on the profit results of all players). This study did not analyze the inequality index between the individual players. The focus was more into observing the system level outcomes (i.e. catchment level perspectives). An analysis focusing on household level would best fit the suggestion of developing of individual economic indicators/indexes and especially where there is a focus is on economic dynamics.

33.2. What does the best fit line show?

Response: The line of best fit is used here as an output of regression analysis (predicting the relationship between the net profit and the investment in agricultural patches or livestock numbers).

34. Line 467-468: "However, the actual game results showed a reverse of this trend, where water availability increased especially toward the final game rounds (Fig 10)." I cannot see this in Figure 10: it reduced for Nyuki, it increased only very slightly but not significantly for Teleswani, and it did increase for Timau. The best fit line showed that the water availability decreased with the expansion but I still don't understand what this means.

Response: Thank you for the comment. The line of best fit is developed using the solution space simulation (the grey points). The actual game results were plotted inside the solution space. Using the line of best

fit/regression prediction, the water availability decreases with increase in the number of agricultural patches. However, the actual game results had a different trends where an increase in water availability was observed. This was linked to water harvesting decisions (see Ln 476:...." *The results reveal that an increase in water availability toward the final game rounds seems to coincide with increasing water harvesting decisions made by game participants (Fig 11A)*".....

Changes in the manuscript:

To minimize the confusion, we have revised the text to indicate the specific game sessions where the increase was observed as follows:

...."*However, the actual game results showed a reverse of this trend, where water availability increased in Teleswani and Timau game sessions especially toward the final game rounds (Fig 10)*".....

35. Figure 10: Does the water availability in this graph include the additional water created by water harvesting?

Response: Thank you for the question. Yes, the water availability also accounts for additional water.

35.1. Isn't the second line of the caption wishful thinking? Why is this remark included in the caption of this figure? If it is important, shouldn't it feature in the main text. Does it?

Response: Thank you for the comment. This part has been removed from the caption and placed in the main text.

36. Figure 11: For readability and comparability of both graphs it would be better to use the same colours for the lines of the three sub-catchments. The difference in Fig11B between with water harvesting and without could be indicated by e.g. using broken lines for the latter.

Response: Thank you for the suggestion. This has been revised accordingly.

37. Line 501-502: "Plotting of actual game results on net profits in the solution space revealed that upstream and midstream players aimed for profit maximization, compared to the pastoralist players in the downstream zone." Is this correctly phrased? Perhaps the livestock farmers also aimed to maximise profit, but simply could not achieve it?

Response: Thank you for the comment. The sentence has been revised as follows:

...."*Plotting of actual game results on net profits in the solution space revealed maximum profits for the upstream and midstream players, compared to the pastoralist players in the downstream zone*".....

38. Line 515-516: "For instance, the need to adopt rainwater harvesting as a strategy to reverse the negative consequences spontaneously emerged among the players." This remark came as a surprise to me and to me is highly suggestive. This is because it was earlier indicated in the paper that this was part of the game's design (see e.g. line 307: "The game participants may react by investing in rainwater harvesting ..."). So how "spontaneous" was this?

Response: Thank you for the comment. Yes, rainwater harvesting was one of the possibilities in the game design that could have been adopted by players. However, in the actual game play, this was not 'forced' among players and the need for additional water was 'spontaneous' in the successive rounds. In reality, rainwater harvesting is not a common strategy at household level. But when stakeholders are brought together in this game sessions, they need for harvesting additional water as a strategy to the water scarcity manifests. Actually, based on Fig 4, rainwater harvesting was absent in the 1st round, but increased in the subsequent game rounds.

39. Line 526 and 531: "emigration" -> "migration". (Emigration has the suggestion of permanence, whereas migration has a more generic and open meaning, which I think is more appropriate for this context.)

Response: Thank you for the comment. This has been revised.

40. Line 568-569: "The next steps on commitment to goals and means of implementation would depend on the way the game is part of a longer-term process of interactions." I would add the verb "made", as follows: "The next steps on commitment to goals and means of implementation would depend on the way the game is made part of a longer-term process of interactions."

Response: Thank you for the suggestion. This has been revised.

41. Line 676: "Water resources management stakeholders can work with the ENGAGE game as a starting point." This last sentence of the paper I didn't find very convincing. This may be true for the few irrigators and livestock keepers in the Ewaso Ng'iro, but the paper hasn't demonstrated that it can be used elsewhere.

Response: Thank you for the comment. We have revised the text by adding Ewas Ng'iro context as follows:

....."Water resources management stakeholders can work with the ENGAGE game as a starting point for catchments with similar context as Upper Ewaso Ng'iro basin".

42. References list: The references contain some odd entries, see lines 844, 850, 962, 1033, which need to be corrected according to the journal's standards, and then of course the references to these entries in the main text need to be corrected accordingly

Response: Thank you for this observation. This has been checked and corrected.

43. Incomplete references: lines 816, 856

Response: Thank you for the comment. The references have been corrected.

References

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