Review of: "Peat Mass Change and Water Level Influence on Regenerated Melaleuca Forest After a Fire in U Minh Thuong National Park, Vietnam"

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Various perspectives to consider restoring peat soil have been tested by this study. I agree the results such as peat thickness and chemical analysis are helpful for scientists and policy makers. However, the manuscript still seems not sufficient to support their conclusion well.

1. Introduction: Authors mentioned the increase of sea level is related to the increase of wildfire. However, there is no citation to support this opinion. Please, add how these two interacts to each other.

2. Introduction: The contents of Introduction are not covering the background about tree growth. The meaning about why differences between both peat soil and water were analyzed was also not explained well.

3. Typo of the expression of equation (1)

4. Figure 1: Map shoud be digitized. Add legend. Add longitude and latitude. Revise the caption about 'Malaysia' (→ 'Vietnam', maybe)?

5. "Peat, with a thickness of 5 – 56 cm, occupies most of the national park's core zone." → This sentence is vague. Could you clarify that the scale of 'most' means and 'core' means?

6. Carbon reserves (Mc) equation: What is the meaning of %C? The range is 0 - 100, or 0 - 1? I think it should be 0 - 1 based on the equation. However, I couldn't get a hint about that from the manuscript. Could you consider to revise the definition of %C more clearly?

7. Why did you choose Hooijer (2010)'s emission factor? There are many recent papers about emission factors. Please, add the reason why this was chosen in your research.

8. In CO_2 emission calculation: What is the meaning of CO_2 -1 ? Could you explain more about how to calculate average depth of underground water level?

9. Where did you analyzed about CO_2 emission using upper equations in this manuscript? Have you mentioned about CO_2 emission results in this article?

10. Table 1: Are areas where thickness was observed in 2002, 2003, and 2022 same?

11. Figure 2: Time range is out of the target period of this study. How did you get the data about 1998 - 2002? Was it your data or from some reference? If it was not your data, please, write and summarize about the others work in Material and Methods.

12. Figure 3: I suggest to improve the image resolution (dpi).

13. Figure 4: Please, mention about this figure 4 in manuscript.

14. Status of peatland before forest fire 2002: Authors mentioend about characteristics of black peat. Please, add some relevant references about this.

15. Peat status after forest fire 2003: I am not sure about whether this chapter can be located here or not, because it is not your result. If it is your work, there is no problems. I carefully suggest to check it and to consider revising this chapter.

16. Table 2 and 3: What was the main reason to decrease 'Areas(m2)' dramatically from Table 2 to Table 3?

17. Growth indicators of Melaleuca Forest by peat thickness:'The results are presented in Table 8 and Figure 7, where it can be seen that the growth was 3.87 cm when there was no peat layer (control).'→ "3.87 cm" was not found in anywhere of Table 8 and Figure 7.

18. Authors concluded peat thickness was validated to have relationships with tree growth. However, I think it would be hasty to conclude that. There may be differences in severity level of disturbance among sites, since frequency of experience of disturbance (e.g., forest fire) can reduce peat thickness. It is according to author's result that *Peat status after forest fire 2003* shows. Why don't you add discussion about disturbance level, as well? Furthermore, stand age of tree, deviations in photosynthetic active radiation of incident solar radiation, and fuel management including thinning existence and so on also can be thought as additional but very crucial factors.

That's all. I appreciate for giving me this opportunity to review your paper.

Best regards,