

Date: Oct 23, 2023

"Aninditia Sabdaningsih" aninditiasabdaningsih@live.undip.ac.id To:

"Journal of Sea Research" support@elsevier.com From: Subject: Decision on submission to Journal of Sea Research

Manuscript Number: SEARES-D-23-00173R1

Environmental legacy of aquaculture and industrial activities in mangrove ecosystems

Dear Dr Sabdaningsih,

Thank you for submitting your manuscript to Journal of Sea Research.

On behalf of Editor-in-Chief Dr. Tiegang Li, we are pleased to inform you that your manuscript has been accepted for publication.

Our comments, and any reviewer comments, are below.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check, and you will also be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact you directly.

We appreciate and value your contribution to Journal of Sea Research. We regularly invite authors of recently published manuscript to participate in the peer review process. If you were not already part of the journal's reviewer pool, you have now been added to it. We look forward to your continued participation in our journal, and we hope you will consider us again for future submissions.

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Kind regards, Chengxuan Li **Editorial Office**

Journal of Sea Research

Editor and Reviewer comments:

Reviewer's Responses to Questions

Note: In order to effectively convey your recommendations for improvement to the author(s), and help editors make well-informed and efficient decisions, we ask you to answer the following specific questions about the manuscript and provide additional suggestions where appropriate.

1. Are the objectives and the rationale of the study clearly stated?

Please provide suggestions to the author(s) on how to improve the clarity of the objectives and rationale of the study. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: The authors had revised manuscript following the suggestions such as:

- 1. replaced old references with the newest 5 years old journal
- 2. revised objectives as This study aims to (1) examine the

historical development of aquaculture and industrial activities in mangrove areas using remote sensing and Geographical Information System (GIS), (2) investigate the biogeochemical legacy of such activities in the mangrove rehabilitation areas, and (3) propose the environmental management suited to the mangrove areas based on our findings. These strategies are intended not only to improve ecosystem and ecological sustainability but also to benefit coastal communities surrounding the sites.

Reviewer #2: OK

2. If applicable, is the application/theory/method/study reported in sufficient detail to allow for its replicability and/or reproducibility?

Please provide suggestions to the author(s) on how to improve the replicability/reproducibility of their study number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X: Yes [x] No [] N/A []

Provide further comments here:

The author stated the limitation funding influence the number of samples, but the samples are composites from triplicate that hopefully enough representatively.

Line 400. Conducting field sampling only during the dry season imposes certain limitations, e.g., the potential for over- or underestimating seasonal variability in water quality. However, we argue that elevated nutrient and heavy metal concentrations are typically observed during dry seasons as a result of lower dilution factor from runoff and tidal hydrodynamics compared to the wet season (Hong et al., 2021; Thanh-Nho et al., 2018). Hence, the findings from this study likely represent the upper range of possible nutrient and heavy metal concentrations at the sites. Nevertheless, we suggest using the findings from this study as a foundation for further seasonal investigations that focus on understanding the climatic control of nutrient and heavy metal dynamics in mangrove-rehabilitated areas.

Related to total samples, we indeed collected triplicate samples from sites, i.e., a total of 18 samples. However, due to financial limitations and we mixed the triplicate samples to be measured as one sample. We explained this in the line 144:

Each water and sediment sample consisted of composites from triplicate samples. The samples were collected from a depth of between 0-30 cm.

Reviewer #2: Mark as appropriate with an X:

Yes [x] No [] N/A []

Provide further comments here:

3. If applicable, are statistical analyses, controls, sampling mechanism, and statistical reporting (e.g., P-values, CIs, effect sizes) appropriate and well described?

Please clearly indicate if the manuscript requires additional peer review by a statistician. Kindly provide suggestions to the author(s) on how to improve the statistical analyses, controls, sampling mechanism, or statistical reporting. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Yes [x] No [] N/A []

Provide further comments here:

In the revision had provided statistical analysis as below:

Line 199. Alpha diversity of fecal bacteria was calculated based on 100 times repeated subsampling to the minimum library size of the dataset (n = 8,589). Indices such as OTU number (nOTU), Shannon, and inverse Simpson were calculated to represent alpha diversity. Except alpha diversity calculation, all of the downstream analyses were performed on nonsubsampled datasets. Beta diversity was assessed based on Bray-Curtis dissimilarities of

relative sequence abundances with average linkage clustering

Reviewer #2: Mark as appropriate with an X:

Yes [x] No [] N/A []

Provide further comments here:

4. Could the manuscript benefit from additional tables or figures, or from improving or removing (some of the) existing ones?

Please provide specific suggestions for improvements, removals, or additions of figures or tables. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Improvement had added in the revised manuscript

Reviewer #2: OK

5. If applicable, are the interpretation of results and study conclusions supported by the data?

Please provide suggestions (if needed) to the author(s) on how to improve, tone down, or expand the study interpretations/conclusions. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Yes [x] No [] N/A []

Provide further comments here:

Had been improved in the revised manuscript

Reviewer #2: Mark as appropriate with an X:

Yes [X] No [] N/A []

Provide further comments here:

6. Have the authors clearly emphasized the strengths of their study/theory/methods/argument?

Please provide suggestions to the author(s) on how to better emphasize the strengths of their study. Please 4 nber each suggestion so that the author(s) can more easily respond.

Reviewer #1: yes, in the conclusion

Reviewer #2: OK

7. Have the authors clearly stated the limitations of their study/theory/methods/argument?

Please list the limitations that the author(s) need to add or emphasize. Please number each limitation so that author(s) can more easily respond.

Reviewer #1: yes, particularly in the limited number of samples

Reviewer #2: OK

8. Does the manuscript structure, flow or writing need improving (e.g., the addition of subheadings, shortening of text, reorganization of sections, or moving details from one section to another)?

Please provide suggestions to the author(s) on how to improve the manuscript structure and flow. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Yes

Reviewer #2: Yes, it is fine now

9. Could the manuscript benefit from language editing?

Reviewer #1: Yes Reviewer #2: Yes

Reviewer #1: This field is optional. If you have any additional suggestions beyond those relevant to the questions above, please number and list them here.

Reviewer #2: This field is optional. If you have any additional suggestions beyond those relevant to the questions above, please number and list them here.

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