

### Review Form 3

Journal Name:	<a href="#">International Journal of Environment and Climate Change</a>
Manuscript Number:	Ms_IJECC_123912
Title of the Manuscript:	Effect of sewage sludge, sewage sludge compost and sewage sludge biochar on heavy metal and it fractions
Type of the Article	Original Research Article

#### **General guidelines for the Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### **Important Policies Regarding Peer Review**

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**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript provides valuable insights into the effect of sewage sludge (SS), sewage sludge compost (SSC), and sewage sludge biochar (SC) on heavy metal content and its fractions. The use of SS-derived materials for agricultural and environmental management is a significant topic due to concerns over heavy metal contamination. By addressing composting and pyrolysis methods, this study contributes to understanding how different treatments influence heavy metal stabilization, offering practical applications for reducing the environmental risk of SS usage. I appreciate the study's comprehensive analysis of heavy metal fractions, which will benefit researchers interested in sustainable waste management.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title, "Effect of Sewage Sludge, Sewage Sludge Compost, and Sewage Sludge Biochar on Heavy Metal and Its Fractions," is clear and suitable for the article.</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract provides a clear overview of the study's focus on sewage sludge, compost, and biochar's impact on heavy metals and their fractions, which is commendable. However, it lacks specific data and key results that would make the research more compelling to the reader. Including a summary of the findings would significantly enhance its comprehensiveness. Additionally, removing redundant background information could improve the overall conciseness.</p> <p><b>Suggested Additions:</b></p> <ul style="list-style-type: none"> <li>• Include the quantitative results that show that biochar is particularly effective in immobilizing heavy metals.</li> </ul> <p>Mention the practical applications or broader environmental benefits of this research.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure are generally appropriate and well-organized, following a logical flow from introduction to conclusions. The clear division of sections makes it easy for readers to follow the study.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>While the manuscript is scientifically sound, there are certain areas where the rigour could be improved. The statistical analysis, although present, lacks depth in terms of explaining the variance and confidence intervals, which could provide a better understanding of the data reliability. Furthermore, the study could benefit from a broader comparison with similar research conducted in other regions or with different types of waste materials to contextualize the findings better. The absence of these comparisons somewhat limits the generalizability of the results. Additionally, the discussion on the long-term environmental impact of heavy metals and their fractions after applying sewage sludge biochar is not sufficiently addressed. Including a more detailed analysis of the potential ecological risks, as well as a more precise explanation of how the results contribute to sustainable waste management practices, would enhance the scientific robustness of the manuscript.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references in the manuscript are generally sufficient but could be improved by incorporating more recent studies from the past 5 years. Including recent research on modified biochars, heavy metal immobilization, and soil-plant interactions would enhance the manuscript's relevance</p>	

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<p>Minor REVISION comments</p> <p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<p><b>Minor revisions to be done:</b></p> <p><b>Abstract Enhancements:</b> The abstract should be revised to include specific data and key results, particularly highlighting the effectiveness of biochar in immobilizing heavy metals. This addition would make the abstract more compelling and informative. Furthermore, removing redundant background information could improve its overall conciseness.</p> <p><b>Statistical Analysis and Comparisons:</b> Enhance the depth of the statistical analysis by explaining variance and confidence intervals more thoroughly. The discussion should also include comparisons with similar studies from other regions or different waste types to better contextualize the findings and improve generalizability.</p> <p><b>Discussion on Environmental Impact:</b> Expand the discussion to include a more detailed analysis of the long-term environmental impact of heavy metals after applying sewage sludge biochar. This should cover potential ecological risks and explain how the results contribute to sustainable waste management practices.</p> <p><b>References and Language Quality:</b> Update the references to include recent studies from the past five years, particularly on modified biochars and heavy metal immobilization. Address awkward phrasing, grammatical errors, and inconsistencies in terminology through thorough proofreading to enhance readability and professionalism of the manuscript.</p> <ul style="list-style-type: none"> <li>• The manuscript exhibits several instances of awkward phrasing and grammatical errors, which detract from its clarity and overall quality. These issues could hinder the reader's understanding of complex concepts presented in the paper.</li> <li>• There are inconsistencies in terminology usage and sentence structure throughout the text, making some sections difficult to follow. A thorough proofreading process is necessary to enhance the readability and professionalism of the article.</li> </ul> <p><b>[Incorrect:</b> "The study aims to evaluate the impact on the environmental degradation caused by the project." <b>Corrected:</b> "The study aims to evaluate the impact of the project on environmental degradation."]</p>	
<p>Optional/General comments</p>		

**PART 2:**

	<p><b>Reviewer's comment</b></p>	<p><b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</p>
<p><b>Are there ethical issues in this manuscript?</b></p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

**Reviewer Details:**

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