

**FINAL EVALUATION FORM 1.1**

**PART 1:**

Book Name:	<a href="#">Geography, Earth Science and Environment: Research Highlights</a>
Manuscript Number:	Ms_BPR_4035
Title of the Manuscript:	Pharmaceutical Pollution in Aquatic Environments: Environmental Impact and Bioremediation Technologies as a Solution
Type of Article :	Book chapter

**PART 2:**

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
<p><b>Overall Evaluation:</b></p> <p>The authors have made significant revisions to the manuscript, addressing the majority of the concerns raised in the previous round. The improvements in the clarity and depth of the discussion, particularly regarding the bioremediation strategies, are notable. The manuscript is now more coherent and scientifically robust, and the integration of newer references strengthens the overall impact of the work.</p> <p><b>Specific Comments:</b></p> <ol style="list-style-type: none"> <li>1. <b>Clarity and Structure:</b> <ul style="list-style-type: none"> <li>○ The revisions have improved the manuscript's readability, particularly in sections on the sources of pharmaceutical pollution and the methodologies for bioremediation. However, there are still a few areas where the explanations could be further simplified for a broader audience. In particular, the section on the specific bioremediation methods (mycoremediation and microbial degradation) could benefit from clearer definitions of technical terms.</li> <li>○ <b>Suggestion:</b> Simplify the explanation of terms like "lignin-degrading enzymes," and provide additional context for readers unfamiliar with advanced bioremediation techniques.</li> </ul> </li> <li>2. <b>Scientific Rigor:</b> <ul style="list-style-type: none"> <li>○ The manuscript provides a solid overview of the environmental impacts of pharmaceutical pollution and offers a clear discussion of the various bioremediation techniques. The inclusion of newer studies on bioremediation methods such as mycoremediation is appreciated.</li> <li>○ However, the manuscript could benefit from a deeper exploration of potential limitations or challenges in implementing bioremediation on a large scale. The authors mention some challenges, but a more thorough discussion of factors such as the scalability, cost, and time constraints of bioremediation technologies would strengthen the manuscript.</li> <li>○ <b>Suggestion:</b> Include a subsection discussing the challenges and limitations of large-scale implementation of bioremediation, addressing potential hurdles like environmental factors, the need for specialized microorganisms, or long-term sustainability.</li> </ul> </li> <li>3. <b>Literature and References:</b> <ul style="list-style-type: none"> <li>○ The references have been updated appropriately, with a good balance of studies on both the environmental impact of pharmaceutical pollution and bioremediation strategies. However, there are still a few areas where additional recent studies (e.g., from 2023 or 2024) could be incorporated to further support the discussion.</li> </ul> </li> </ol>	

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<ul style="list-style-type: none"> <li>○ <b>Suggestion:</b> Consider adding more recent references to further support the advancements in bioremediation technologies, especially those related to microbial degradation of pharmaceuticals.</li> </ul> <p><b>4. Methodology:</b></p> <ul style="list-style-type: none"> <li>○ The methodology section has improved in clarity. The use of LC-MS for analyzing pharmaceutical residues is well-described, and the discussion of analytical techniques is appropriate.</li> <li>○ <b>Suggestion:</b> It would be beneficial to briefly mention any potential limitations of the analytical methods used in the studies cited, especially for large-scale application.</li> </ul> <p><b>5. Ethical and Environmental Considerations:</b></p> <ul style="list-style-type: none"> <li>○ The manuscript appropriately addresses the ethical considerations of pharmaceutical pollution and the importance of developing sustainable bioremediation methods. The discussion on regulatory concerns and the need for coordinated action is particularly relevant.</li> <li>○ <b>Suggestion:</b> A more explicit discussion of the potential health impacts of antibiotic-resistant bacteria in aquatic ecosystems could provide further context for the urgency of addressing pharmaceutical pollution.</li> </ul> <p><b>Final Recommendation:</b></p> <p>The manuscript has undergone significant improvement, and with minor revisions as outlined above, I believe it is now ready for publication. The authors should focus on the clarity of certain technical terms, expand on the challenges of large-scale bioremediation, and ensure that the manuscript reflects the most current literature on the topic.</p> <p><b>Decision: Accept with Minor Revisions</b></p>	
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**PART 3: Objective Evaluation:**

Guideline	MARKS for this REVISED manuscript
Give OVERALL MARKS you want to give to this REVISED manuscript ( Highest: 10 Lowest: 0 )  <b>Guideline:</b> Accept (8-10) Revision required: (4-8) Rejected: (0-4)	

**Reviewer Details:**

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