Review Form 1.7

Journal Name:	**Microbiology Research Journal International**
Manuscript Number:	**Ms_MRJI_113576**
Title of the Manuscript:	**Microbial Perspectives on Polythene Biodegradation: Exploring the Role of Microorganisms in Addressing Plastic Pollution**
Type of the Article	**Review**

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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(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)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. Works of the provided manuscript is a fruitful article for guiding readers about enzymatic plastic degradation.** **2. The title is good and relevant to the work.** **3. The abstract is also grammatically correct, suggesting specific future perspectives from both environmental and economic points of view. [Suggested to prepare won graphical abstract.]** **4. It is good and the flow of writing is also organized.** **5. Not a major contradiction.** **6. Suggested to add more relevant references. Also lack of recent references. There is almost no recent reference from the last three years.** **7. Surface Erosion should be writing a bit more detail, suggested to mention others works in this field, analyze the mechanism, process, etc.** **8. How do microbial films act to degradation? What is the effective condition? Appropriate references should be added.** **9. Metabolic pathway demands a little explanation. Need to mention specific metabolic pathways?** **10. Synergistic interaction also demands little introduction. Interaction among what? It's not clear to others. Need to extract recent works and mention them.** **11. In Polythene-Degrading Microorganisms, what is the ideal condition of culture? Which factors affect on effectiveness of microorganisms?** **12. Exploration of Microbial Communities, need to mention relevant research works, specific enzymes, their efficiency, and working mechanism and conditions** **13. The characterization of Enzymes is unclear, suggested adding more relevant data.** **14. Factors Influencing Microbial Diversity and Plastic Degradation. Readers are clueless here. It's crucial to mention details about temperature, pH, and humidity.** **15. Temperature, pH, according to conditions temperature changed Need to mention specific data. Need to mention the pH range for each class of enzymes. No specific range was mentioned for moisture.** **16. No specific range was mentioned about oxygen availability.** **17. Microbial Consortia Development, Demands more elaboration and recent trends, economic and environmental impacts.** **18. Combining microorganisms with what? What is the condition? How did their performance change with the combination?** **19. Need to write something about Enzyme and protein engineering. How specifically do they affect and compare the performance before and after modification?** **20. Genetic Engineering of Microorganisms: On which type of enzyme? What is the recent**	

	work on it? Is it economically viable? **21.. What type of changes occurred or Are there any optimum requirements in the ratio of C: N:P?** **22. Suggest adding more figures, tables, and comparisons.** **23. *What could be the significant drawbacks? Does this process need to collaborate with others or have any further impact on the existing ecosystem?***	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The grammar portion is considerable. Writing language as a research article there is space for further work.	
Optional/General comments	Required Major revision.	

PART 2:

	Reviewer's comment	**Author's comment** *(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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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