

DATASHEET FOR RESEARCH SCHOLARS



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8. Contact Number: 9668900131
9. Funding Agency:
10. Date of commencement of Fellowship:
11. Period of Fellowship:
12. Title of Research Work: Assessment of microplastics and associated ecological and community health risk in Hirakud Reservoir, Sambalpur, Odisha.
13. Name of the Guide: Dr. Iswar Baitharu
14. Registration Number:
15. A Brief Abstract of your Research Work (Within 200 words):

Microplastic has emerged as a major global concern owing to its persistent and bio-accumulative nature. Microplastics' small size expedites their ingestion at each trophic level leading to biomagnification and bioaccumulation, which coupled with its chronic ubiquity and established detrimental ecotoxicological effects on humans and organisms alike, has raised public concerns. Further, the monomers of plastics and the additives present in them can be potential carcinogens and mutagens and can also cause ecological damage. Yet, there is a stark void in research pertaining to its presence in freshwater ecosystems. Studies on microplastics in reservoirs which can act as its potential sink, along with the ecological and community risks associated with it are found to be even more obscure. The present study is centered on Hirakud Reservoir located in the state of Odisha, which has been recently declared as a Ramsar site. Hirakud Reservoir provides water for industrial, agricultural and pisciculture activities to several districts of Odisha. It is also a major surface water source for drinking water treatment plants for the entire district of Sambalpur. Therefore the present study intends to isolate and quantify microplastics in water and sediments of Hirakud Reservoir, as well as drinking water of Sambalpur city, Odisha. Assessment of ecological risk associated with microplastics in Hirakud Reservoir and assessment of public health risk associated with ingestion of drinking water comprising of microplastics in city of Sambalpur, Odisha, through risk modelling are also objectives of this research. Data obtained in this study could provide a baseline for monitoring and assessing the microplastics, and facilitating future policies to overcome microplastic pollution in the Hirakud Reservoir region.

16. Status of Research Work:

- |                             |                                     |
|-----------------------------|-------------------------------------|
| a) Writing the Synopsis     | <input checked="" type="checkbox"/> |
| b) Review of Literature     | <input checked="" type="checkbox"/> |
| c) Data Collection          | <input checked="" type="checkbox"/> |
| d) Data Analysis            | <input type="checkbox"/>            |
| e) Writing the Draft Thesis | <input type="checkbox"/>            |

17. Do you have your profile in the following research networks?


- a) Google Scholar
- b) Research Gate
- c) Academia

18. Do you access the following e-resources subscribed by the university

- a) E-sodhSindhufromINFLIBNET
- b) ProQuest

19. Number of Papers published in referred journals with ISSN:

20. Mention any two of your best publications in APA standard:

  
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Countersigned by the Research Supervisor

Kiran Bala Patra

Signature of the Research Scholar



Countersigned by Head