

DATA SHEET FOR RESEARCH SCHOLARS



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2. Gender: Male
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8. Contact Number: 8917330317
9. Funding Agency: OSHEC(OURIIP).
10. Date of commencement of Fellowship: 06/07/2021
11. Period of Fellowship: Five Years
12. Title of Research Work: Assessment of Harmful Algal Blooms and major cyanotoxin variants and their seasonal variations in water of Hirakud Reservoir and Lentic aquatic bodies in Sambalpur City, Odisha

13. Name of the Guide: Dr. Iswar Baitharu

14. Registration Number: 115/2021/Env.Sc

15. A Brief Abstract of your Research Work (Within 200 words):

Sambalpur is one of the most densely populated city in Odisha state surrounded by number of mega mineral and mining industries. Most of the industry as well as the city populace depend upon Hirakud reservoir to fulfil their water demand. However, with time the reservoir water as well as the lentic aquatic bodies in and around Sambalpur city became eutrophic owing to the increased disposal of wastes rich in organic matter, Nitrogenous compounds and Phosphorus. Initial studies indicate the abundance of harmful algal species such as Microcystis, Anabaena, and Nodularia in algal blooms that are known to synthesize and secrete cyanotoxins. Reservoir water is being supplied to the community for drinking and other human purposes. Contamination of water with cyanotoxins could lead to numerous acute health impacts such as vomiting, nausea, diarrhoea, skin irritation and dermatitis and chronic diseases like tumours, cancer, liver inflammation, kidney disease and neurodegenerative diseases like Parkinson's and Alzheimer's diseases. However, no study has been conducted so far to evaluate the presence of cyanotoxins in reservoir water. The present study is therefore undertaken to detect, quantify as there has not been any significant studies conducted on such issues Nationally or regionally in this area including the major source i.e Hirakud reservoir on which western Odisha depends we must give an effort for the above issue.

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 checked="" 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

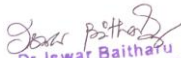
18. Do you access the following e-resources subscribed by the university

- a) E-sodh Sindhu from INFLIBNET
- b) ProQuest

19. Number of Papers published in referred journals with ISSN: 03(ISSN: 2141-226X,0971-765X,0257-8050)

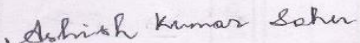
20. Mention any two of your best publications in APA standard:

- a) Sahu, Ashish Kumar & Dung, Manjil & Sahoo, Sawan & Mir, Showkat & Nayak, Binata & Baitharu, Iswar. (2023). Ecological and human health risk associated with heavy metals in sediments and bioaccumulation in some commercially important fishes in Mahanadi River, Odisha, India. Environmental Chemistry and Ecotoxicology. 5. 10.1016/j.eneco.2023.08.001.
- b) Rao, T & Ahmed, Syed & Sahu, Ashish Kumar & Shroff, S & Behera, Ajaya & Baitharu, Iswar. (2023). Impact of surface coal mining on soil properties of the region at Talabira mining area, Sambalpur, Odisha.



Dr. Iswar Baitharu
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Countersigned by the Research Supervisor



Ashish Kumar Sahu

Signature of the Research Scholar



Countersigned by Head