

Project Endorsement Form

1. PROJECT TITLE

Full title	Biogeochemistry of Trace Elements and Isotopes in the Indian Ocean
Acronym	GEOTRACES - India
Website	
Keywords (up to 10, describing the project research)	Biogeochemistry, Trace Elements, Isotopes, Indian Ocean, Bay of Bengal, Arabian Sea, Internal Cycling, OMZ, Hydrothermal, Boundary Exchange
New initiative or continuing programme?	Continuing Programme

2. APPLICANTS

Lead applicant / Project Leader / key research contact person:

First name	Sunil Kumar
Last name	Singh
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Other key participants / research team leaders: (repeat as needed)

First name	
Last name	
Role in the project	
Affiliation	
Country	
Email address	
Institutional or personal website	

First name	
Last name	
Role in the project	
Affiliation	
Country	
Email address	
Institutional or personal website	

N.B.: Please note that all these names and contact details will be added to the IIOE-2 membership database.

3. ABSTRACT– Brief description of the project: (1/4 page maximum)

This will be placed on the IIOE-2 Website after endorsement.

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Trace elements and isotopes (TEIs) play important role in the ocean as nutrients and as tracers of the contemporary and the past processes. Trace elements regulate ocean processes, such as marine ecosystem dynamics and carbon cycling. Several other trace elements also play vital roles in cell physiology and in biochemical reactions. However the role of these trace elements in controlling the structure and the productivity of marine ecosystems is not well understood. Their sources and sinks and biogeochemical cycling need to be understood to explain the spatial and temporal productivity variations in the global oceans. Knowledge of diverse sources and sinks, internal cycling as well as transport and chemical form of these trace elements in the ocean is required to understand the biogeochemical cycling of these micronutrients. Similarly, many of the stable and radiogenic isotopes in oceans serve as tracers to tag and time various oceanic processes and reconstruct paleo- climate/oceanographic records stored in sediments. Recently, some of these TEIs are also introduced into the oceans via anthropogenic processes and their distributions also provide information as environmental contamination. GEOTRACES (India) programme plans to map the distribution of trace elements and isotopes in the Indian Ocean and to identify the factors influencing these distributions. We have carried out five cruises (SK-304, 311, 312, 324, 325) and currently SK-338 is undergoing in the Indian ocean to meet the above objectives.

4. LINKS TO IIOE-2 SCIENCE PLAN:(1/2 page maximum)

How do you anticipate your project to contribute to the IIOE-2 strategy and science delivery, with reference to which (either one or more) of the six IIOE-2 Science Plan themes that your project responds. Please state the specific issues and questions addressed by your project in the context of the IIOE-2 Science Plan themes and key issues.

This research work is directly related to the “Theme 6: Unique Geological, Physical, Biogeochemical and Ecological Features of the Indian Ocean” of the IIOE-2 Science Plan. It plans to study the processes controlling the dynamics of the various micro-nutrients (trace elements) in the Indian Ocean and their impact on biogeochemical cycles and ecosystem dynamics. Application of isotopes to study the circulation system operating in the Indian Ocean influencing its biogeochemistry and ecology of the Indian Ocean.

5. REGION(S) OF STUDY

Provide a description of ‘where’ the research is to be conducted (for field based activities) and/or the region or regions to which the research pertains (you are encouraged to consider providing a figure as an addendum to your proposal).

Indian Ocean, Arabian Sea, Bay of Bengal, Southern Indian Ocean

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6. TIMETABLE OF THE PROJECT

Start date: April 2011	End date: March 2017, Likely to be continued for few more years
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7. LINKAGES WITH OTHER PROJECTS / PROGRAMMES / INITIATIVES

Is the project part of a related national or multi-national activity? Yes
If yes, provide the related activity title and website for reference, if available:

GEOTRACES; www.geotraces.org

Is your project part of, or affiliated to, another SCOR, IOC or IOGOOS activity or project?
If “yes”, please indicate which activity or project:

8. DATA MANAGEMENT

1. Will new data be collected as part of this project (yes or no?)

Yes

2. Contact information if any, of the person in charge of the data management from whom the metadata can be accessed by interested IIOE-2 stakeholders.
Please note that for all IIOE-2-endorsed projects, IIOE-2 will have developed its own metadata portal. Once the project is endorsed, the project leader will be asked to provide the metadata information of the project.

INCOIS, Hyderabad

9. FUNDING

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Please note that IIOE-2 strongly encourages funded/resourced projects. However, IIOE-2 may endorse projects yet to receive funding/resourcing if IIOE-2 endorsement can be clearly shown to significantly aid in prospects for funding/resourcing.

Has funding and resources to successfully achieve and undertake the project been obtained? Indicate the sources of funding and resources that have been approached and/or secured.

Funding has been secured from MoES, Govt of India.

10. BENEFITS FROM IIOE-2 ENDORSEMENT (1/4 page maximum)

Specify why you are seeking endorsement and how the activity would benefit from endorsement, and how the IIOE-2 SC could assist in the implementation of your project.

11. OPTIONAL: OTHER COMMENTS/INFORMATION/MATERIAL (length and detail may be at the discretion of and as deemed necessary by the applicant)

Please feel free to provide any other comments, information or materials that you feel relevant to your proposal for the IIOE-2 Steering Committee’s information and benefit. You may provide this as general information or provide the additional comments/information/materials as relevant to any of the specific Sections above.

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