Project Endorsement Form

The Steering Committee of IIOE-2 invites you to be a partner in the unique global scientific endeavour that is the Second International Indian Ocean Expedition (IIOE-2) and to submit a scientific activity to be considered for endorsement under IIOE-2.

Two key documents guide engagement in IIOE-2 (available at www.iioe-2.incois.gov.in): the IIOE-2 Science Plan (Hood et al., 2015) and the Strategic Framework for the Implementation of IIOE-2 (IPC, 2015). The Science Plan is ambitious and intentionally broad, providing a wide range of scientific themes for your consideration as potential research foci, at national and international scales for the Indian Ocean. The Science Plan includes reference to themes of coastal and regional interests to many Indian Ocean rim countries that may seek to pursue research under IIOE-2. The Implementation Strategy aligns with the Science Plan as a succinct 'guide' for the implementation of IIOE-2, with the specification and implementation of further detail to be overseen by the IIOE-2 Steering Committee.

The endorsement of a scientific proposal or a scientific activity by the IIOE-2 Steering Committee is a recognition of the proposal's or activity's alignment with the mission and objectives of IIOE-2, of its potential for contributing to an increased multi-disciplinary understanding of the dynamics of the Indian Ocean, and of its contribution to the achievement of societal objectives within the of the Indian Ocean region.

As the IIOE-2 develops and the number of participants, institutes and programs involved increases. IIOE-2 will provide the innovation, direction and coordination required to build a critical mass of multidisciplinary science and scientists towards this ambitious and globally important endeavour.

Considering the above and in order to facilitate the endorsement process, it is requested that proponents complete the Endorsement form (below) in English, 10 font Calibri. Please adhere to the length limits specified for the answers (however, you are free to provide additional information for any of the sections by way of addendums or provision of documents/materials, either in Section 6 or as attachments).

Please email your submission to the IIOE-2 Joint Project Office (JPO):

- Attn: Rajan Sivaramakrishnan, Coordinator, India Node IIOE-2 JPO, : iioe-2@incois.gov.in

1. PROJECT TITLE

Full title	Real-time Meteorological and Oceanographic data collection using moored buoy network in Indian Seas
Acronym	OON-India
Website	
Keywords (up to 10, describing the project research)	Ocean Observation, moored buoys, data validation, ocean dynamics
New initiative or continuing programme?	Continuing

2. APPLICANTS

Lead applicant / Project Leader / key research contact person:

First name	R
Last name	Venkatesan
Affiliation	Ocean Observation Systems, National Institute of Ocean Technology (Govt. Of India, Ministry of Earth Sciences)
Postal address	Velacherry – Tambaram Main Road, Pallikaranai, Chennai, India – 600100
Country	India
Telephone	+91-44-6678 3535
Email address	venkat@niot.res.in
Institutional or personal website	https://www.niot.res.in

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	

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.

The Indian Ocean possess many unique characteristics such as periodic reversals in wind/current associated with monsoon dynamics, limited northward extent, fewer islands, narrower continental shelf etc. Systematic time series observations are required to estimate various air-sea interaction processes, ocean dynamics and to model/forecast with better accuracy. Keeping this in view, Ocean Observation System (OOS), under the Ocean Observation Network (OON) program of Earth System Science Organization (ESSO), Ministry of Earth Sciences (MoES), India was established in 1996 with the objective of sustenance of the moored buoy network. Under this program 12 moored data buoys were deployed in Indian seas both in shallow and deep waters during 1997-98 to cater the needs of real time users for better prediction of ocean dynamics as well as satellite data validation, environmental monitoring, oceanographic/climate studies, port activities, harbour/offshore-structure development etc. The mooring program

initially started with measurement of Sea Surface Temperature, Sea Surface Salinity, surface current, waves and surface meteorological parameters. Presently OOS operates and maintains an extensive network of twelve OMNI (Ocean Moored Buoy Network for North Indian Ocean) buoys, four coastal buoys, two tsunami buoys, and one CALVAL buoy. The OMNI buoys measures in-situ parameters at one hour intervals of surface meteorological parameters such as Sea Level Pressure, Wind, Wave, Relative Humidity, Short Wave Radiation, Long Wave Radiation, Air Temperature, Precipitation and subsurface parameters such as vertical profiles of temperature, salinity up to 500m and currents up to 200m. The coastal buoys measure surface meteorological parameters and tsunami buoy measure the water level data whereas CALVAL is a buoy dedicated for validation and calibration of several satellite parameters. The data from all the buoys are transmitted in real time and is being disseminated to Indian National Centre for Ocean Information Service at Hyderabad, the data depository designated by MoES, India.

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.

The Ocean Observation Network envisages the sustenance of moored boy network in Indian Seas. The data sets are systematically collected at regular intervals and are widely utilized for various applications such as weather prediction, ocean state forecast, air-sea interaction processes, ocean dynamics, monsoon dynamics etc. Among the listed themes the following are coming under the applications of moored buoy data.

- Theme 2: Boundary current dynamics and upwelling variability : *The interaction between local and remote forcing on the oceanic currents and its variability in the Indian Ocean.*
- Theme 3: Monsoon variability: The factors controlling present, past and future monsoon variability and its impact in the Indian Ocean.
- Theme 4: Circulation, climate variability and change: *The variability in atmospheric and oceanic circulation of the Indian Ocean and the forcing related to topography and connectivity with the Pacific, Atlantic and Southern oceans.*
- Theme 5: Extreme events and their impacts: *The extreme events in the Indian Ocean and the climate change impact on the frequency and/or severity of extreme weather and oceanic events, such as tropical cyclones and tsunamis.*

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).

Primarily within the EEZ of India

6. TIMETABLE OF THE PROJECT

Start date:	End date:
Continuing Programme	

7. LINKAGES WITH OTHER PROJECTS / PROGRAMMES / INITIATIVES

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

Yes, the project on "Ocean Observation Network", is part of a National Initiative under MoES, Govt. of India and is jointly executed by National Institute of Ocean Technology (NIOT), Chennai and Indian National Centre for Ocean Information Services (INCOIS), Hyderabad.

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

Yes, the ocean Observation Network forms a part of the IOGOOS.

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.

Dr. R. Venkatesan, NIOT, Velacherry – Tambaram Main Road, Pallikaranai, Chennai, India – 600100. Email: venkat@niot.res.in

9. FUNDING

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.

The Project is fully funded by the Government 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.

The endorsement of the OON project by IIOE-2 would be a recognition of the project's alignment with the mission and objectives of IIOE-2. In addition, the endorsement would help in creating a more enhanced visibility to this National initiative, and provide an impetus for

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.