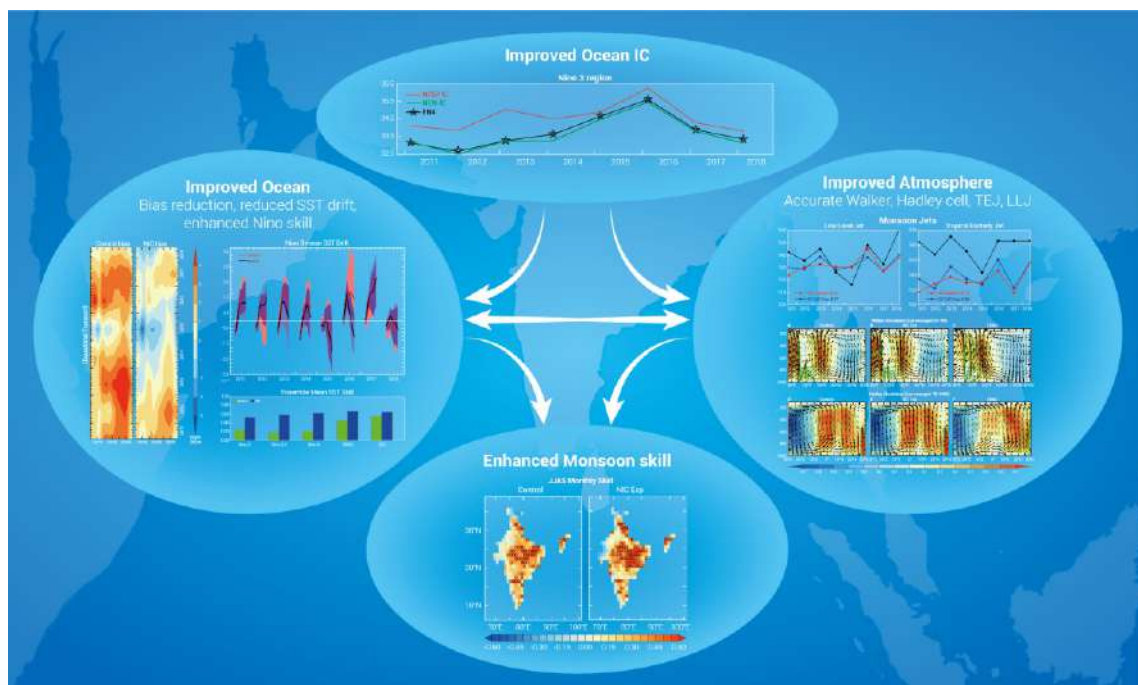




To advance our understanding of interactions between geologic, oceanic and atmospheric processes that give rise to the complex physical dynamics of the Indian Ocean region, and to determine how those dynamics affect climate, extreme events, marine biogeochemical cycles, ecosystems and human populations.

Role of Improved Ocean Initial State in the Seasonal Prediction of Indian Summer Monsoon: A Case Study

Seasonal forecasting of Indian summer monsoon rainfall (ISMR) has been attempted for almost a century due to its immense usefulness for the Indian economy and livelihood of the inhabitants. Numerous efforts have been made to enhance the skill of ISMR forecasting using the atmosphere-ocean general circulation coupled model, but with limited success. Among them ocean initialization has been one of the important parameters. This case study shows the impact of improved ocean initial conditions (ICs) in a coupled forecast system (CFSv2) simulation of ISMR. CFSv2 is used as an operational dynamical model for the seasonal prediction of ISMR by the India Meteorological Department (IMD). Here, we show an improved ISMR skill by initializing the ocean component of CFSv2 using new improved ocean ICs based on Global Ocean Data Assimilation System (GODAS) analysis. This new analysis is better than the NCEP GODAS, which uses the earlier-generation ocean model MOM4p0d and assimilates observed temperature and synthetic salinity using the 3DVar assimilation scheme. However, the new improved GODAS analysis uses the MOM4p1 ocean model and assimilates observed salinity instead of synthetic salinity. We performed twin sets of nearly identical model experiments differing only in their ICs, with one set using NCEP ICs and the other using the new ICs (NIC). The NIC experiment shows better ISMR prediction skill. The improved ocean ICs have led to substantial improvements in both oceanic and atmospheric variables in a coupled feedback system contributed to the improved ISMR skill as shown in the schematic



Citation: Pokhrel S, Rahaman H, Saha SK, Chaudhari H, Hazra A, Ravichandran M. Role of Improved Ocean Initial State in the Seasonal Prediction of Indian Summer Monsoon: A Case Study. Ocean- Land-Atmos. Res. 2024;3:Article 0034. <https://doi.org/10.34133/olar.0034>

[Report Courtesy: Hasibur Rahman, INCOIS, India; E-mail: rahman@incois.gov.in]

DEEP-SEA RESEARCH PART II



Special
Issue

Submit your paper >



The 2nd International Indian Ocean Expedition (IIOE-2): Motivating New Exploration in a Poorly Understood Basin (Volume 7)

Deep Sea Research Part II: Topical Studies in Oceanography

Edited by

Raleigh Hood, Birgit Gaye, Lynnath Beckley, VVSS Sarma, Laure Resplandy, P.N. Vinayachandran

THE SUBMISSION PORTAL FOR VOL. 7 OF THE DEEP-SEA RESEARCH II SPECIAL ISSUE SERIES ON THE IIOE-2 IS NOW OPEN

Submission of manuscripts that describe the results of studies related to the physical, chemical, biological, and/or ecological variability and dynamics of the Indian Ocean (including higher trophic levels) is encouraged.

Submission of manuscripts from students and early career scientists is also encouraged.

If you are interested in submitting a manuscript, please contact Raleigh Hood (rhoo@umces.edu).

Important Dates:

Date the first submission is expected: February 15, 2024

Manuscript Submission Deadline: August 15, 2024

Editorial Acceptance Deadline: February 15, 2025

For more details please visit

<https://www.sciencedirect.com/journal/deep-sea-research-part-ii-topical-studies-in-oceanography/about/call-for-papers#the-2nd-international-indian-ocean-expedition-iioe-2-motivating-new-exploration-in-a-poorly-understood-basin-volume-7>

INDIAN OCEAN REGIONAL DECADE CONFERENCE 2024 during 1-3 February 2024 at DCC-IOR, INCOIS, Hyderabad, India.

As part of the Ocean Decade framework, INCOIS proposal 'Decade Collaborative Centre for Indian Ocean Region (DCC-IOR)' has been endorsed by IOC (2021-2030). India on its part has constituted through Ministry of Earth Sciences (MoES) the National Decade Coordination Committee (NDCC) to address Ocean Decade



2021
2030
United Nations Decade
of Ocean Science
for Sustainable Development



Decade Collaborative Centre
Indian Ocean Region

Actions at the national level by providing scientific coordination and planning, identifying collaboration opportunities, awareness raising and stakeholder engagement apart from interacting with the Decade Coordination Unit at IOC. The DCC-IOR, as its part of commitment, is organizing the 'Indian Ocean Regional Decade Conference 2024: Bridging Billions to Barcelona', an Official Prelude to the Ocean Decade Conference-2024' during 1-3 February, 2024 at DCC-IOR, INCOIS, Hyderabad, India with the following objectives:

1. To involve and engage stakeholders of the Indian Ocean Region in Ocean Decade activities.
2. To provide a platform for deliberating on the future priorities for the Ocean Decade Challenges that are emerging via the Vision 2030 process with focus to the IOR and feed regional inputs to the 2024 Ocean Decade Conference in Barcelona in April 2024.
3. To interact and network among the IOR stake holders including the national decade coordination committees of the Region.
4. To provide a platform to voice the concerns and expectations of the stakeholders from ECOPS, Academicians, Industries, Social Scientists, NGOs and other ocean stakeholders.

For more details, please visit the Conference Website at <https://incois.gov.in/dcc-ior/IORDC2024.jsp>



2nd International
Indian Ocean
Expedition
2015-2025



GLOBAL OCEAN OBSERVING SYSTEM FOR INDIAN OCEAN



United Nations
Educational, Scientific and
Cultural Organisation



Intergovernmental
Oceanographic
Commission



International Council for Scientific
Research
Scientific Committee on Oceanic Research

ICES - PICES 7th International Zooplankton Production Symposium during Autumn 17-22 March 2024, Hobart, Australia

SCOPE

We are living in the Anthropocene. Our oceans are warmer, more acidic, have widespread plastic and other pollution, and are subjected to increasing exploitation including overfishing. Zooplankton play a pivotal role in our oceans, as grazers of primary production, as drivers of carbon and nutrient cycles, and as prey for higher trophic level consumers including both harvested fish species and iconic marine mammals and seabirds. How zooplankton will respond to the dramatic changes in our marine ecosystems will impact the health and productivity of our oceans and our planet.



To better understand zooplankton in a changing world, ICES and PICES are holding the 7th International Zooplankton Production Symposium as a forum to discuss the latest zooplankton research. The ICES/PICES Zooplankton Production Symposium will bring together the top zooplankton researchers globally, showcasing recent advances. Understanding the current and evolving role of zooplankton will require new insights provided by:

- Assessing the impact on zooplankton of climate change, fishing, and pollution such as microplastics
- State-of-the-art sampling techniques such as DNA, imaging, and bioacoustics
- Biochemical methods applied to unravelling complex trophic ecology
- The application of cutting-edge approaches in zooplankton modelling, including size and trait-based biogeochemical and ecosystem models
- Revealing the role of microzooplankton in biogeochemical cycling and food webs
- Exploring the structure and functioning of macrozooplankton communities and their impact on carbon sequestration and trophic ecology
- Examining zooplankton in fisheries science, including dynamics of fish larvae, the impact of zooplankton on fish larval mortality and growth, and the commercial harvest of zooplankton
- Elucidating the vital role of zooplankton in polar environments
- Understanding the role of gelatinous filter feeders and jellyfish in carbon sequestration and trophic ecology
- The use of zooplankton as ecosystem indicators in a changing ocean

Our Symposium will be held over five days in the historic waterfront district of Hobart, Australia, during Autumn, from 17-22 March 2024. This event will be held in-person and provide the first opportunity since 2016 for zooplankton researchers to meet, build networks, and hear the latest science. We are monitoring the COVID-19 situation closely and will adapt our plans as needed.

The Organizing Committee invites proposals for sessions to be held during the Symposium. Proposals are welcome for sessions incorporating talks and posters, panel discussions and/or workshops. Sessions could cover, but are not limited to, the key areas listed above.

The symposium website may be accessed here: <https://meetings.pices.int/meetings/international/2024/zps7/scope>

Proposals may be submitted here: <https://meetings.pices.int/meetings/international/2024/zps7/proposals>

AOGS2024

21ST ANNUAL MEETING

Pyeongchang, Gangwon-do
Home to Winter Olympics
23 to 28 Jun 2024



Asia Oceania Geosciences Society (AOGS) was established in 2003 to promote geosciences and its application for the benefit of humanity, specifically in Asia and Oceania and with an overarching approach to global issues. Asia Oceania region is particularly vulnerable to natural hazards, accounting for almost 80% human lives lost globally. AOGS is deeply involved in addressing hazard related issues through improving our understanding of the genesis of hazards through scientific, social and technical approaches. AOGS holds annual conventions providing a unique opportunity of exchanging scientific knowledge and discussion to address important geo-scientific issues among academia, research institution and public. Recognizing the need of global collaboration, AOGS has developed good co-operation with other international geo-science societies and unions such as the European Geosciences Union (EGU), American Geophysical Union (AGU), International Union of Geodesy and Geophysics (IUGG), Japan Geo-science Union (JpGU), and Science Council of Asia (SCA).

The website may be accessed here: <https://www.asiaoceania.org/aogs2024/public.asp?page=home.asp>

Session-OS06: Physics, Biogeochemistry, and Climate Dynamics of the Indian Ocean

Session Details

Section(s):

OS - Ocean Sciences (Primary)

AS - Atmospheric Sciences



Announcements

SUBMIT ABSTRACTS

17 Oct 2023 – 02 Jan 2024

[Instructions](#) | [Submit Now](#)

APPLY FUNDING SUPPORT

17 Oct 2023 – 02 Jan 2024

[Instructions](#) | [Apply Now](#)

2024 AWARD NOMINATIONS

17 Oct 2023 – 02 Jan 2024

[Guidelines](#)

Conveners

* Prof SungHyun Nam (Seoul National University)

Dr Nicolino (Nick) D'Adamo (Adjunct Research Fellow, Oceans Institute of the University of Western Australia)

Dr Dong-Jin Kang (Korea Institute Of Ocean Science And Technology)

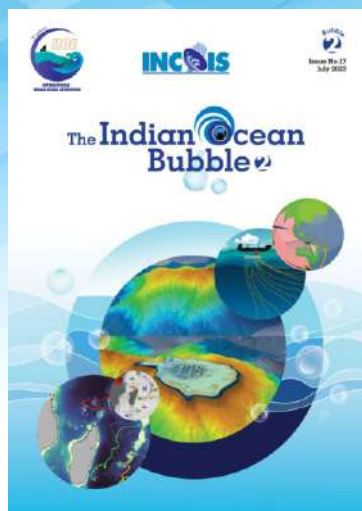
Dr Yukio Masumoto (The University of Tokyo)

Session-OS06: Description

Recent increases in extreme events such as flooding, droughts, heatwaves, and tropical cyclones have a large impact on the population living in the Asia and Oceania countries. Increasing evidence on the roles of Indian Ocean in impacting climate extremes, climate variability, and climate change via changes in energy, hydrological and biogeochemical cycles has been reported. The Indian Ocean is of particular interest, for example, as influenced by the seasonally reversing monsoon forcing and upwelling centers in the Indian Ocean are found in the off-equatorial regions unlike in the easterly wind-forced Pacific and Atlantic Oceans. The northern region is dominated by the monsoons whereas the seasonal reversal is less pronounced in the southern region. This session invites contribution of physics, biogeochemistry, and climate dynamics of Indian Ocean based on in-situ and remotely-sensed observations, models, theories, and paleo proxies that reveal processes, variability, and projected changes within the Indian Ocean. This includes, but not limited to 1) Indian Ocean variability such as Indian Ocean Basin Mode, Indian Ocean Dipole Mode, Madden-Julian Oscillations, 2) Upwelling in the Indian Ocean such as open-ocean upwellings or thermocline ridge/dome (e.g., Seychelles-Chagos Thermocline Ridge) and coastal upwellings at both western and eastern sides, 3) Processes underlying basin-scale or regional circulation, 4) Ocean-atmosphere interaction processes (heat, freshwater, momentum, carbon, etc.), 5) Biogeochemistry of the Indian Ocean water masses, 6) Links between ocean sciences and socio-economic requirements in the Indian Ocean, and 7) Interactions and exchanges between the Indian Ocean and other basins. Abstracts on related activities, such as capacity building, education, outreach, project development in the Indian Ocean, contributing to the UN Decade of Ocean Science for Sustainable Development and to the Second International Indian Ocean Expedition are also welcome.

Keyword(s): Indian Ocean; Physics; Biogeochemistry

The Indian Ocean Bubble, Issue No.17 is now available online



Web Link: https://iioe-2.incois.gov.in/IIOE-2/pdfviewer_pub.jsp?docname=IIOE-2-DOC_OM_260.pdf

Informal articles are invited for the next issue. Contributions referring Indian Ocean studies, cruises, conferences, workshops, tributes to other oceanographers etc. are welcome.

Articles may be up to 1500 words in length (Word files) accompanied by suitable figures, photos (separate .jpg files)

Send your contributions as usual to iioe-2@incois.gov.in

Endorse your projects in IIOE-2

Don't miss the opportunity to network, collaborate, flesh out your research project and participate in IIOE-2 cruises!!

The endorsement of your scientific proposal or a scientific activity focusing on the Indian Ocean region 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 Indian Ocean region. Over 52 international, multi-disciplinary scientific projects have already been endorsed to date by the IIOE-2. Yours could be the next one!

Visit <https://iioe-2.incois.gov.in/IIOE-2/EndorsementForm.jsp> for further details and for projects already endorsed by IIOE-2 https://iioe-2.incois.gov.in/IIOE-2/Endorsed_Projects.jsp.

Call for Contributions

Informal articles/short notes of general interest to the IIOE-2 community are invited for the next (February-end) issue of the IIOE-2 Newsletter. Contributions referring IIOE-2 endorsed projects, cruises, conferences, workshops, "plain language summary" of published papers focused on the Indian Ocean etc. are welcome. Articles may be up to 500 words in length (Word files) accompanied by suitable figures, photos.(separate.jpg files).

Deadline: **25 February, 2024**



Access the latest issue of Indian Ocean Bubble-2

<https://iioe-2.incois.gov.in/IIOE-2/Bubble.jsp>



Enroll yourself with IIOE-2 Community

<https://iioe-2.incois.gov.in/IIOE-2/Signup.jsp>

Follow us:



iioe-2.incois.gov.in



@IIOE2



@iioe_2



The IIOE-2 Newsletter is published online by:



Feedback? iioe-2@incois.gov.in

