



**International Indian Ocean
Science Conference**
16-20 March, 2020
Goa, India



**2nd International
Indian Ocean
Expedition**
2015-2020

International Indian Ocean Science Conference (IIOSC) 2020

(IIOSC2020.incois.gov.in)

16-20 March, 2020

Venue:

CSIR-National Institute of Oceanography (NIO), Goa

**Second
Announcement**

Conference Information

The Second International Indian Ocean Expedition (IIOE-2) was launched in December 2015 at the culmination of the Indian Ocean Symposium at Goa to mark the completion of 50 years of first International Indian Ocean Expedition. The IIOE-2 is a multi-national, multi-institutional programme to advance our understanding of the physical, chemical, biological, geological and climatological aspects of the Indian Ocean to enhance its role on the socio-economy of the region. IIOE-2 has been extremely successful in garnering the interests of International Oceanographic Community to study the different facets of the basin using modern observational tools and models. One of the major emphasis of the IIOE-2 was to translate the knowledge on the Indian Ocean for the benefit of the population residing in the countries on the rim. The IIOE-2 Steering Committee, that coordinates the activities of IIOE-2, met in Jakarta, Indonesia in March 2018 and in Port Elizabeth, South Africa in March 2019 has decided to organize a Science Conference in March 2020 to discuss the new results emerged/emerging due to the efforts of IIOE-2 since its launch.

The conference aims at assessing the progress and scientific knowledge gained during the last 4 years of IIOE-2 (during 2016-2020). The conference invites presentations focussing but not limited to all six themes of IIOE-2 Science plan (i.e., human impacts and benefits; boundary current dynamics and ecosystem impacts; monsoon variability and ecosystem response; circulation, climate variability and change; extreme events; and discovery of unique physical, geological, biogeochemical and ecological features of the Indian Ocean). It will provide an opportunity for the scientists working on different facets of the Indian Ocean to present their ideas and discuss the outstanding issues, identify the knowledge gaps and plan a way forward to address such issues. Presentations highlighting innovative ideas on “Translating benefits of Science to Society” or with societal implications are encouraged. The "International Indian Ocean Science Conference 2020 (IIOSC-2020)" sponsored by Ministry of Earth Sciences (MoES), Govt. of India, will be held during 16-20 March 2020 in Goa, India co-hosted by National Institute of Oceanography (NIO) Goa, National Centre for Polar Ocean Research (NCPOR) Goa, Goa University and Indian National Centre for Ocean Information Services (INCOIS) Hyderabad, India.

Call for abstract

The Conference will be conducted through several Keynote addresses, plenary talks and presentation of scientific papers (both oral and poster) organised under several major themes and breakout parallel sessions.

We are now inviting abstracts relevant to Indian Ocean for scientific sessions spread over themes. Papers/abstracts highlighting societal relevance of the research work are encouraged.

The abstracts/papers should be submitted online from 15 August, 2019 onwards at this below link:
<https://iiosc2020.incois.gov.in/IIOSC2020/Abstracts.jsp>

The last date for the submission of abstract is 15 October 2019.

Themes

Theme	Theme Name
01.	IIOE-2 contribution to sustainable development: toward the UN Decade of ocean science <i>[This session will focus on the benefits of IIOE-2 to society and how they can be maximized and sustained. The abstracts may highlight innovative ideas to generate useful information/products from existing knowledge. The session also invites abstracts which suggest what else can be done in terms of observation systems/models to help the translation of science to benefit society as well as blue economy and sustainable fisheries.]</i>
02.	Impacts of climate change on the Indian Ocean <i>[The Indian Ocean is warming faster than other two major oceans and there are reports of heat accumulation in the Indian Ocean. This session calls for abstracts related to impacts of climate change on the Indian Ocean. The scope of this session may include observed/modelled physical, biogeochemical and ecological changes related to global change and the impact of climate change on society.]</i>
03.	Circulation and Boundary currents in the Indian Ocean <i>[The Northern Indian Ocean has unique monsoonal circulation and this makes the Indian Ocean a "Nature's Laboratory" to understand and study different facets of oceanography while the Southern Indian Ocean is filled with classical wind driven gyres. Abstracts are solicited on studies focusing on reversing monsoonal circulation, coastal upwelling, boundary currents, Sub-tropical gyres, Southern Ocean circulation and dynamics, and their impacts on the Indian Ocean circulation.]</i>
04.	Ocean observations and data in the Indian Ocean: toward an ocean data information system <i>[Basin scale programmes such as Indian Ocean Observing System (IndOOS) and Global Ocean Observing System in the Indian Ocean (IOGOOS) have motivated recent advances in observing systems (such as moorings, Argo and drifters) and sensor-based observations including biogeochemical parameters (such as Chl, dissolved oxygen, Nitrate, pH and bio-optics). These new-age observation systems, including satellite based, have provided a tremendous amount of data that has helped in enhancing our understanding of the Indian Ocean. The session aims to highlight the recent results from such new generation observing systems, other emerging technologies and data information systems.]</i>
05.	Biogeochemistry and Microbiology of the Indian Ocean: Recent advances <i>[The Indian Ocean hosts one of the thickest oxygen minimum zones in the world ocean. It is also characterized by processes such as denitrification and annamox. The ecosystem response to global climate change has significant impacts on the microbial loop and hence on the biogeochemistry of the Indian Ocean. Ocean acidification is also likely to impact the marine ecosystem, particularly the species that have calcareous shells. The primary productivity is reported to have decreased over the last century and has shown signatures of decadal variability. The session invites abstracts on recent results and findings towards understanding the microbiology, biogeochemistry, deoxygenation and nutrient cycling in the Indian Ocean.]</i>
06.	Ecology of the Indian Ocean: Understanding and Predictability <i>[Countries around the Indian Ocean have large populations living along the coast that depend on resources from the sea for their livelihoods. Global warming has impacted coral reefs, mangroves and other ecosystems. via ocean acidification, eutrophication of the coastal seas and ecosystem response and has implications to fisheries and their sustainability. The recent advancements in the ocean biogeochemical and ecological models have potential, not only to understand the processes, but also to predict change in the future, including the impact on fisheries.]</i>
07.	Air-Sea interactions, exchange of trace gases and related processes <i>[Air-sea interactions in the Indian Ocean are important to understand the role of Indian Ocean in the global element cycles, heat exchange, circulation and hence regional climate. Trace gases such as N₂O, DMS, methane, CO, and halocarbons also play a significant role in modulating the climate and atmospheric chemistry on different time scales. This session invites abstracts related to ocean-atmosphere interactions, heat exchange, aerosol formation & deposition and trace gas fluxes.]</i>
08.	Atmospheric Chemistry and pollution <i>[The composition and chemistry of the atmosphere over the Indian Ocean region is dominated by the circulation of the South Asian (Indian) monsoon system: the winter monsoon is advecting gaseous and particulate pollution from the heavily populated and biofuel intensive regions out over the northern Indian Ocean. The resulting thick haze extends over millions of square kilometres to the ITCZ. Therefore, the Indian Ocean presents a globally unique, natural laboratory to the atmospheric scientist. Abstracts on atmospheric chemistry, troposphere/stratosphere exchange and atmospheric pollution may be contributed in this session.]</i>

Themes

Theme	Theme Name
09.	Coastal and estuarine processes: Anthropogenic impacts and vulnerabilities <i>[This session is expecting presentations on studies related to coastal processes such as shoreline changes, sea level increase, coastal inundations, vulnerabilities and coastal zone management. Nutrients are getting dumped into coastal waters via estuaries and have modified the coastal ecosystem considerably. The session also expects presentations related to coastal eutrophication, pollution, microplastics and toxins.]</i>
10.	Climate and monsoon variability: Lessons from paleo-climatic studies and links to polar regions <i>[The understanding of past is the key to the future. Various proxies such as ^{13}C, ^{18}O, and other isotopic tracers in lake sediments, cores, speleothems and tree rings provide critical insights into the climatic events of the past. Though global warming has led to decrease in ice cover on the Arctic Sea, it has increased over Antarctica for various reasons such as westerly wind forcing, southern annual mode, El Niño–Southern Oscillation (ENSO) and stratospheric ozone depletion. Therefore, it is imperative to understand the linkages of the polar ocean to the monsoon. This session is expecting presentations on paleo-climate studies and linkages of monsoon variability to the polar oceans using different proxies.]</i>
11.	Inter-basin interactions in the Indian Ocean <i>[Inter-basin interactions such as exchanges between Indian and Pacific Oceans via the Indonesian through flow and Agulhas retroflection between Indian and Atlantic Ocean significantly affect the dynamics of the Indian Ocean. Other processes in the Indian Ocean are precursors to El Niño, Indian Ocean Dipole, MJO and affect the global climate. This session expects presentations on inter-basin interactions and their impacts of global climate and ecosystems.]</i>
12.	Marginal seas of the Indian Ocean <i>[Marginal seas such as Red Sea, Persian Gulf, Andaman Sea and Timor Sea play a defining role in modulating water mass characteristics of the Indian Ocean. Some of them are sources of high salinity water and act as a source of oxygen into deeper layers. The Andaman Sea connects the equatorial Indian Ocean to the Bay of Bengal and play a significant role in freshwater distribution in the bay. Abstracts for this session may include presentations highlighting the role of marginal seas in modulating dynamics and biogeochemistry of the Indian Ocean.]</i>
13.	Geology, geophysics and seabed mapping of the Indian Ocean <i>[This session will cater to the presentations from Geology and Geophysics. The Indian Ocean is dynamic in terms of geological processes like, geodynamics and the expansion of sea floor, triple junction, subduction, earthquakes, sea mounts, canyons and mid oceanic ridges. Explorational aspects of minerals from the ocean floor (polymetallic nodules and gas hydrates) methods and equipment of geological and geophysical studies, discussion on the outer border of the continental shelf and relationship with continental framing structures may also be covered in this session.]</i>
14.	Extreme events and their impacts <i>[Extreme events such as cyclones, storm surges, heavy rainfall and droughts have catastrophic effects on the well-being of populations. The number of extreme events has increased in the recent past due to global warming and is expected to increase further in future. The proposed session invites abstracts on studies pertaining to extreme events, their genesis and future projections. Mitigation plans and risk assessment may also be covered in this session.]</i>

Workshop for Early-Career Scientists

The aim of this workshop is to bring all early-career scientists together to address and synthesize key unknowns and novel findings from the Indian Ocean, and priorities for future research. The aim of this Workshop would be to comprehensively summarize these conclusions into a peer-reviewed multi-author manuscript. The workshop is intended to facilitate the active participation of early career scientists into the global research efforts that is being conducted in the Indian Ocean.

Exhibition

About 600 participants from all over the world are expected to participate in the conference. The participants include researchers, students and industry from various fields of ocean observation, computation, instrumentation and technology.

An exhibition has been planned during the conference to showcase emerging observational systems and technology for oceanographic research, products developed by researchers, and premier public and private organisations. The exhibition will provide an opportunity to the exhibitors to showcase their products, emerging technologies and services. It will also provide a platform to explore the business opportunities.

The agencies involved in manufacturing ocean observation tools, software for data processing and allied sciences are invited to participate in the exhibition associated with the conference.

Facilities:

Number of Stalls available: 5 booths (Size: 3m X 3m X 2.5m).

Number of Stalls available: 5 booths (Size: 6m X 3m X 2.5m).

Each Stall will be provided with 2 spot lights, 1 table, 2 chairs, Facia (up to a maximum of 26 characters), two 5 amp power points (220 V, 50 Hz).

Fees:

Stall Size	Foreign Companies	Indian Companies
3m X 3m X 2.5m (L x W x H)	USD 5,000/-	INR 3,00,000/-
6m X 3m X 2.5m (L x W x H)	USD 8,000/-	INR 5,00,000/-

Stall Set up: **15 March, 2020**

Stall dismantling: **21 March, 2020**

Booking deadline: **31 December, 2019**

The exhibition stalls will be allocated on first come first serve basis. The fees will cover the registration and participation of two participants per booth during the conference. The exhibition registration fees are payable by demand draft/bankers cheque in favour of CSIR-NATIONAL INSTITUTE OF OCEANOGRAPHY, GOA payable at SBI Dona Paula.

Other details:

The IIOSC-2020 exhibition will have 24 hour security service during the period 15-21 March 2020. Exhibitors are responsible for protection of their equipment and insuring them if necessary. Exhibitors are advised to close down their booth after the exhibition closing time at 18:00 Hrs each day of the conference.

Interested exhibitors can contact at iiosc2020@nio.org

Venue

The venue of the conference is National Institute of Oceanography (NIO), Dona Paula, Goa

CSIR-National Institute of Oceanography (CSIR-NIO)
Conference Secretariat
Dona Paula, Goa-503 004,
India
Tel: +91-0832-2450450
Fax: +91-0832-2450602, 2450603
E-mail: iiosc2020@nio.org

www.nio.org



Accommodation

Accommodation for the participants will be available on payment at special rates of IIOSC-2020, in different hotels surrounding the venue.

In addition to the hotels, a few guest houses of state and central government organizations will be booked to accommodate the student participant at concessional rates.

Further details on accommodation will be updated soon on IIOSC-2020 Website.

Important Dates

Description	Dates
Abstract Submission opens	15 August, 2019
Abstract Submission closes	15 October, 2019
Abstract Acceptance	15 November, 2019
Registration opens on	01 October, 2019
Early Bird Registration	15 December, 2019
Last Date for Online Registration	15 January, 2020

Registration Fees

Dates	Participants from Developed Countries	Participants from Developing Countries	Students from Developed Countries	Students from Developing Countries	Participants from India	Students from India
Until 15 th Dec, 2019 (Early bird)	\$ 300	\$ 200	\$ 200	\$ 150	INR 8000	INR 6000
16 th Dec, 2019- 15 th Jan, 2020	\$ 350	\$ 250	\$ 230	\$ 180	INR 10000	INR 7500
Onsite	\$ 400	\$ 300	\$ 250	\$ 200	INR 12000	INR 9000

(* The registration includes registration kit, admission to all scientific sessions, lectures, inaugural function, lunch, coffee breaks and a cultural evening and one dinner)

Accompanying persons (spouse/ any other person) will be charged \$250/ INR 8000 each which includes symposium lunch, refreshments, one dinner and local sightseeing.

Local Tours

A half-day local tour during the conference will be arranged for interested participants. Further, paid local tours will be organized for interested groups/ individuals participating in the conference. More details on local tours will be published soon on IIOSC-2020 Website.

Sponsor/ Exhibitor

The International Indian Ocean Science Conference (IIOSC-2020) being held at CSIR- National Institute of Oceanography, Goa, will provide an opportunity to researchers and students to discuss the latest oceanographic research work and to plan future research in the Indian Ocean with regional and global implications. The global interactive event will facilitate discussions between scientists and technologists. Interested sponsors/ exhibitors may please fill in the Sponsors/ Exhibitor support form which will be available soon at website and send it back to us through e-mail (iiosc2020@nio.org) or fax.



International Indian Ocean Science Conference

16-20 March, 2020
Goa, India

Contact us:

Chairman, Local Organizing Committee
IIOSC-2020

CSIR-National Institute of Oceanography (CSIR-NIO)

Dona Paula, Goa-503 004, India

Tel: +91-0832-2450450

Fax: +91-0832-2450602, 2450603

E-mail: iiosc2020@nio.org

Website: <https://IIOSC2020.incois.gov.in>

Organizer



Hosts



Sponsor



Ministry of Earth Sciences
Govt. of India