



2nd International
Indian Ocean
Expedition
2015-2020

Newsletter

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(A basin-wide research program co-sponsored by IOC-UNESCO, SCOR and IOGOOS)

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.

The IIOE-2: fueled by the spirit of collaboration

This article responds to the many queries we receive asking for a simple overview of just how the Second International Indian Ocean Expedition (IIOE-2) 'works', as a major undertaking harnessing many \$millions in research but with a very small cash budget. In essence, it has had to run (and still does) on a spirit of collaboration, leveraging and aligning personal, institutional and national resources via a community of practice in the form of the IIOE-2 Steering Committee, which comprises stakeholders at all levels: scientific, societal users, institutional, inter-governmental, community, early career, volunteers.

The IIOE-2 (<https://iioe-2.incois.gov.in>) follows the first such multi-national, collaborative, multi-disciplinary exploration of the Indian Ocean (i.e. IIOE-1) that was undertaken during 1959-65. The IIOE-2 is overseen by its three principal co-sponsors, providing the three Co-Chairs of the IIOE-2 Steering Committee, being from UNESCO Intergovernmental Oceanographic Commission (IOC), Scientific Committee on Oceanic Research (SCOR) and the Indian Ocean Global Ocean Observing System (IOGOOS) - a GOOS Regional Alliance.

The IIOE-2's first phase was planned during 2012-2015, launching on 4 Dec 2015. The IIOE-2 will now continue into the next decade, to at least 2025. It is a program that has brought together individuals, institutions, alliances, governments, scientists, government representatives and the community from non-scientific institutions along with early career researchers and emerging and interested stakeholders, including from the less-developed science nations of the Indian Ocean and beyond. The IIOE-2 is guided by two integrated frameworks in the form of a multi-disciplinary Science Plan (developed under the auspices of SCOR) and an Implementation Strategy (developed under the auspices of the IOC with IOGOOS support).

The IIOE-2 was conceived, framed and implemented (via its now 50+ and growing member 'Steering Committee') as a community of scientists and professionals, young and older, expert and non-expert, from developed and developing marine science countries, linked and not linked to governments and related institutions. The Steering Committee is constituted by those who have a direct stake in undertaking the IIOE-2's science, capacity development, data and information management and by those who have a direct stake in deriving the societal benefits of these elements. It is a classic bottom-up / top-down model.

The IIOE-2 does not have a budget to pay for the science in the traditional research funding mode (NSF, NERC etc.) - it is not a funding program in that sense.

Everyone is essentially voluntary. The IIOE-2 provides the framework for projects/initiatives to emerge where effort is leveraged from existing capacities aligning with the stakeholders in the projects per se.

It relies on those who enter the family of the IIOE-2 doing so with a spirit of wanting to achieve things because they believe in the IIOE-2's mission - not because they are looking for money to support corporate/institutional financial imperatives.

It may have no budget, but it provides the capacity for those who conceive ideas and then seek funds from other sources including government, conventional science grants, philanthropy, aid bodies, industry etc. They do so with the imprimatur of the IIOE-2 Steering Committee, which in turn has its own compelling imprimatur from IOC (i.e. intergovernmental), SCOR (i.e. science leaderships) and IOGOOS (community/science/users). It has already unlocked at least many tens of \$millions in an effort being brought to bear on the Indian Ocean, for initiatives and objectives that have relevancy not only to the Indian Ocean per se, but to neighboring oceans and terrestrial regions far away (via ocean/climate phenomena that tele-connect via the water and air). Over 30 major initiatives/projects have so far been conceived and endorsed, many implemented already, valued individually at up to millions of dollars (e.g a recent one involving a major (Australian) ocean-going research vessel for ~ 30 days at sea and involving up to 10 or more internationally renowned science leaders, with associated students, early career researchers etc.)

The IIOE-2 is administered and run, in a Secretariat sense, by two Nodes that constitute what is known as the 'IIOE-2 Joint Project Office' (*one Node based out of the Indian National Centre for Ocean Information Services, Hyderabad, India - funded by INCOIS of the Indian Ministry of Earth Sciences; the other based out of UNESCO/IOC Perth Programme Office (Australia), funded by the IOC PPO's three underpinning sponsors [Western Australian State Government, Australian Federal Govt via BoM Australia, and UNESCO IOC]. The two Nodes work hand in hand, collegiately. Each have their own respective, but complementary, roles as specified in the IIOE-2 Implementation Strategy.

The IOC, SCOR and IOGOOS all put in modest amounts of cash to 'fuel' and help run the Joint Project Office Nodes, the annual 'full' Steering Committee meetings and discreet gatherings of sub-groups of the Steering Committee throughout the year, from time to time and as required (e.g. the science leaders, operational representatives etc.). The annual Steering Committee meetings, where all members attend, are co-hosted by a local sponsor (e.g. 2017 from Perth, 2018 from Indonesia, 2019 from South Africa and 2020 will be from India).

The Steering Committee (SC) contains: representatives from important national and regional alliances, institutions (i.e. representing the region's key ocean/climate 'acronyms' if you like) having equal seats at the table in that entry point area of the SC; representatives of major 'endorsed' IIOE-2 projects, initiatives again on equal footing, including a representative from the IIOE-2 Early Career Scientists Network; and leaders of IIOE-2 'national groups' (in most cases calling themselves IIOE-2 National Committees) that have formed to develop coherent national science engagement plans for their interests and activities in IIOE-2.

There is a non-competitive spirit and frame of engagement amongst all Steering Committee members. It is not a forum where funds are competed over. In fact, there are no centralised 'research funds' to speak of or to apply for - so that means financial competition and territoriality in the traditional sense is not a characteristic of the IIOE-2. People, institutions etc. engage voluntarily because they see great intrinsic value in what can be achieved both for their own specific missions and for their mutually beneficial cross-cutting objectives. It is a forum to promote collegiate interchange, birth of project 'ideas', collaborations, building of relationships (these are the benefits of the Steering Committee and of being a part of it). This is all aimed at achieving elements of the guiding IIOE-2 frameworks, i.e. the Science Plan and the Implementation Strategy, both of which are documents designed by and for key players who eventually end up comprising the membership of the Steering Committee. The Steering Committee continues to grow today and continues to foster the creation and implementation of new scientific initiatives.

The IIOE-2 has now progressed through its initial 5 yr. 2015-20 phase and has achieved a momentum and set of outputs that have seen it be continued now for another 5 yrs. - i.e. to at least 2025, and in so doing is to be adopted as a ready-to-go tangible contribution to the UN Decade of Ocean Science for Sustainable Development 2021-30, because it speaks to most, if not all, of the elements of the Decade (<https://www.oceandecade.org/>).

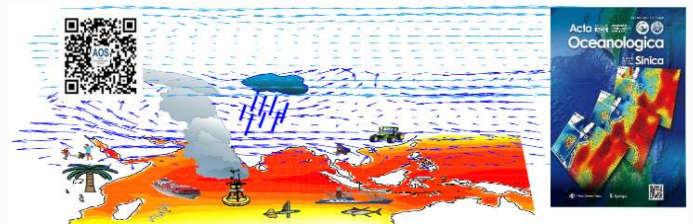
[Report Courtesy: Nick D'Adamo, IOC IIOE-2 Coordinator, Australia, E-mail: nick.dadamo@bom.gov.au]

Call for papers - Special Issue in Acta Oceanologica Sinica on “Environment and Ocean-Atmosphere Interaction in the Indian Ocean”

Manuscripts are being invited for a special issue in Acta Oceanologica Sinica. All manuscripts about the ocean dynamics, environment, air-sea interactions over the Indian Ocean (including the Maritime Continent and the Southern Ocean connected to the Indian Ocean) are welcome. Manuscripts on interdisciplinary studies related to physics or dynamics, interactions between ocean basins, and ocean-land interactions related to the Indian Ocean are also welcome.

The target date for submission is **December 31, 2019**

If you are interested in submitting a manuscript or would like more information, please contact Lei Zhou
(zhoulei1588@sjtu.edu.cn).



International Indian Ocean Science Conference-2020 (IIOSC-2020)- Call for Abstracts

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 at 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. The conference aims at assessing the progress and scientific knowledge gained during the last 4 years of IIOE-2 (during 2016-2020). It is also an opportunity for 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.

Scientists and colleagues who are interested in the Indian Ocean may kindly take note of this and freeze their dates for the conference. A detailed first announcement is made available at the below web link:

Conference Website: <https://iiosc2020.incois.gov.in/>

Second Announcement: <https://iiosc2020.incois.gov.in/documents/IIOE-2/IIOSC2020/SecondAnnouncement-IIOSC2020.pdf>

Call for Abstracts: <https://iiosc2020.incois.gov.in/IIOSC2020/Abstracts.jsp>

IMPORTANT DATES

- ✍ Abstract Submission Opens: 15 August, 2019
- ✍ Abstract Submission Closes: 15 October, 2019
- ✍ Abstract Acceptance: 15 November, 2019
- ✍ Registration opens on: 01 November, 2019
- ✍ Early Bird Registration: 15 January, 2020
- ✍ Last Date for Registration: 15 February, 2020



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 35 international, multi-disciplinary scientific projects have already been endorsed to date by the IIOE-2. Yours could be the next one!

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

Some Upcoming Events

- ☞ 36th International Geological Congress during 2-8 March, 2020, India EXPO Centre, Delhi, India. The call for Abstracts and Registration is now open and the deadline for online submission of the Abstracts is 31st October, 2019. <https://www.36igc.org>
- ☞ 14th International Conference on Copepoda (ICOC) during 14-19 June, 2020 at Kruger Park, South Africa. http://abevents.co.za/WEB_ICOC2020/index.php

CLIVAR August 2019 Bulletin is available online



The International CLIVAR Project Office distributes a monthly bulletin with announcements, funding opportunities, meeting notifications relevant to the ocean/climate science community.

The latest CLIVAR Bulletin August, 2019 is available at:

<https://mailchi.mp/clivar.org/clivar-august-2019-bulletin?e=0e7979fd09>

Call for Contributions

Informal articles/short notes of general interest to the IIOE-2 community are invited for the next (October-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 October, 2019**



Access the latest issue of Indian Ocean Bubble-2

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



Enroll yourself with IIOE-2 Community

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

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