

# **Brief Technical Report on Integrated meetings of IOGOOS, IOP, SIBER and IRF**

**Goa, India  
December 5 – 9, 2015**

## **Introduction**

Indian Ocean Global Ocean Observing System (IOGOOS) was formerly established during the Mauritius conference in November 2002 and Indian National Centre for Ocean Information Services (INCOIS), India was recognized as IOGOOS Secretariat. Indian National Centre for Ocean Information Services (INCOIS) has since then acting as IOGOOS Secretariat. 29 Marine Institutions from 17 countries are Members of IOGOOS.

Members of IOGOOS collaborate and work together for developing programmes for the implementation of GOOS in the Indian Ocean and for promoting activities of common interest for the development of operational oceanography in the Indian Ocean region.

IOGOOS has already made significant progress in several areas. IOGOOS has a number of existing ‘projects’ within its portfolio and these projects have been accepted by members as being of relevance to IOGOOS at either a local level (for a specific member nation) or as generically relevant in respect to transferability of the projects outcomes and outputs to some or all member nations.

## **IOGOOS XII Annual Meeting:**

IOGOOS 12<sup>th</sup> annual meeting was held at Bogmallo Beach Resort, Goa, India during December 5-9, 2015. The meeting was held in conjunction with its allied projects Indian Ocean Panel (IOP), Sustained Indian Ocean Biogeochemistry and Ecosystem Research (SIBER)-5 and Indian Ocean Observing System (IndOOS) Resources Forum (IRF) meetings. These integrated meetings were held immediately after the International Symposium on Indian Ocean Dynamics held by National Institute of Oceanography (NIO) during November 30 – December 4, 2015. The first expedition of International Indian Ocean Expedition (IIOE)-2 was formerly launched on December 4, 2015 onboard India’s RV Sagar Nidhi. The RV Sagar Nidhi sailed from Goa to Mauritius covering various transect similar to IIOE-1 first expedition.

The IndOOS Resources Forum (IRF) Meeting was held on the first day i.e. December 5, 2015. IOP representatives presented the update on the Indian Ocean Observing System with reference to physics and coupled climate aspects. The update on NOAA’s IndOOS Bilateral agreements and the plan for the maintenance and servicing of the RAMA mooring arrays has been discussed. The SIBER representative has presented the biogeochemistry aspect of the IndOOS. The stakeholders of the IndOOS have summarized the requirement of resources in terms of ship time, financial support, etc. An update on the new structure of GOOS Steering Committee and GOOS Regional Alliances Forum was presented to the IRF members. A

detailed presentation on the new initiative on Tropical Pacific Observing System (TPOS) Project was made to IRF. The IPC Chair and IIOE-2 IOC Coordinator has made a presentation to update on the IPC Process, IIOE-2 Implementation Strategy and the IPC Joint Project Office established to coordinate the IIOE-2. Discussions were held on the opportunities to expand / support IndOOS in the context of IIOE-2 and the priority issues to be undertaken under IIOE-2. It was recommended by IRF that a review process needs to be taken up on IndOOS.

The IOP, SIBER projects have met together on the Second and Third day i.e. December 7-8, 2015 where IOGOOS Members have also participated. The two days meetings have mainly focused on the review of the Observing systems in the Indian Ocean, IIOE-2 and associated initiatives by various countries, new observing initiatives, and process studies that are in place or proposed to undertake under IIOE-2. The science talks on understanding the Southern Ocean processes and ecosystem responses - Results from the Indian Expeditions, decadal sea level variations of the Indian Ocean since 1950s, Indonesian Through Flow over recent decades and its impact on the Indian Ocean biogeochemistry, Bay of Bengal salinity variability & climatic implications, spatial and temporal variability of Arabian Sea Oxygen Minimum Zone over the holocene, microbial communities and chemical processes in Arabian Sea Oxygen deficient waters, results on Indian Ocean biophysical coupling, anomalous behavior of the Wyrтки jet, remote and local forcing of East Indian Ocean upwelling, prediction of ocean circulation during the DYNAMO program by a global coupled prediction system, etc. were presented. In addition to this, individual business meetings of IOP and SIBER were held in parallel to discuss on the Observing systems, next meeting, membership renewals, etc.

The IOGOOS Annual Meeting was held on December 9, 2015. The Co-chairs / Conveners of IOP, SIBER and IRF submitted the reports. The project leaders provided updates on the pilot projects modeling for Ocean Forecasting and Process studies, Indian Ocean Core Remote Sensing Project. A brief presentation on the Capacity development initiatives of Perth Programme Office was made. The IOGOOS Chair summarized his report on IOGOOS activities. The Secretary, IOGOOS addressed in the Secretariat Report

- the IOGOOS XI Annual Meeting Report,
- capacity building opportunities facilitated to IO rim countries,
- action taken report against the actions identified in the IOGOOS XI annual meeting,
- Governance, Elections and Financial summary (including the membership fees and the audit of accounts).

The remote sensing products made available to few IO countries under ChloroGIN - IO project being implemented through Indian Ocean Core Remote Sensing Project were showcased. Kuwait has shown interest in the products and requested to generate similar products for the Kuwait region and make it available. IOGOOS Secretariat was tasked to coordinate this. The Annual Meeting was informed that the Kuwait Institute for Scientific

Research (KISR) has joined IOGOOS as a member and the Annual Meeting appreciated and welcomed KISR.

The IOGOOS annual meeting discussed on the necessity the IIOE-2 to be considered as a Flagship programme of GOOS. The IOGOOS Chair was requested to send necessary communication mentioning that the IIOE-2 idea has evolved from IOGOOS and it needs to be considered as a flagship programme of GOOS project.

The IOGOOS Meeting has also discussed on the IIOE-2 Steering Committee to be evolved subsequently. As the IIOE-2 is led by IOGOOS, SCOR and IOC, the steering committee will be co-chaired by the representatives from IOGOOS, SCOR and IOC. In this regard, the meeting discussed about possible nomination from IOGOOS to the co-chair of IIOE-2 SC. Keeping in view of the vast experience and leadership of Dr. S.S.C. Shenoi, Director, INCOIS, India as IIOE-2 Interim Program Committee (IPC) chair, he was nominated and endorsed by the IOGOOS Members to be the Co-chair of IIOE-2 SC representing IOGOOS.

The IOGOOS Annual meeting also discussed the extent of possible sponsorship by IOGOOS to IIOE-2 as it is one of the Co-sponsor of IIOE-2. IOGOOS committed to provide USD 10000 per year for the next two years towards IIOE-2 activities.

### **Financial Report:**

The ESSO-National Centre for Antarctic and Ocean Research (NCAOR), Goa, India hosted in 2015 the integrated meetings of IOGOOS, SIBER and IRF. Most of the delegates found their own source of funding towards their participation. IOC/UNESCO through its Sub - commission for Africa has agreed to sponsor USD 20000 towards these integrated meetings. IOC UNESCO New Delhi Office facilitated the financial support. The sponsorship was utilized towards funding of 10+ delegates to participate in the integrated meetings of IOGOOS, IOP, SIBER and IRF. IOGOOS Secretariat, through the host institute INCOIS has made a contract with IOC/UNESCO New Delhi Office towards the above. IOGOOS Secretariat has provided the sponsorship amount to the delegates in the form of reimbursements towards their return air tickets, accommodation and per-diem. Few delegates are fully sponsored and few are partially sponsored under these funds. UN Operational Rates for November 2015 available at <http://treasury.un.org/operationalrates/OperationalRates.aspx> were used for conversion of foreign currency wherever there is no proof of USD paid by the delegate.

### **Acknowledgements**

IOGOOS Secretariat greatly acknowledges IOC/UNESCO for sponsoring the integrated meetings of IOGOOS. We also would like to place on record the support extended by IOC Perth Regional Programme Office, IOC/UNESCO Sub-commission for Africa and specially IOC UNESCO New Delhi Office and its staff towards facilitating this sponsorship. IOGOOS Secretariat also thanks the National Centre for Antarctic and Ocean Research (NCAOR) for hosting the meeting and for providing the local support.