



SIBER

Sustained Indian Ocean Biogeochemistry
and Ecosystem Research

12th Scientific Steering Committee Meeting

10.30-12.30 UTC 23rd March 2022

Report

SIBER-12 was held over Zoom in conjunction with the IIOE-2, IORP, IRF, IOGOOS and IOCINDIO meetings.

Participants:

SIBER SSC Members: Greg Cowie (Chair), Raleigh Hood (co-Chair), Lynnath Beckley, Jerry Wiggert, Mike Landry, Jenny Huggett, Francis Marsac, Birgit Gaye, P. N. Vinayachandran, Dwi Susanto, Makio Honda, Zainal Arifin, Mike Roberts.

SIBER IPO Staff: Aneesh Lotliker, Kiran Kumar

10:30 – 10:40: CONVENE SIBER SSC BUSINESS MEETING

- Overview of agenda and SSC meeting goals
Dr Greg Cowie provided an overview of the meeting agenda. Dr Cowie mentioned that all the SIBER members were present during the IIOE-2 meetings and the activity updates may be a repetition. Therefore, during the update session those who did not present during IIOE-2 may provide elaborated presentation and other may highlight the key significant points.
- Budget situation update, Report on IMBeR activities etc. (Cowie)
Dr Greg Cowie briefed SSC on the budget. Dr Cowie mentioned that the guaranteed funding support is available from IMBER till 2025 which is 7500 USD. There is also possibility of additional funds once in-person meetings are resumed.

10:40 – 10:45: SIBER SSC MEMBERSHIP/ROTATIONS: (Cowie/Hood)

- Review of membership and possible members to rotate off?
Dr Greg Cowie initiated the discussion to review the present SIBER membership and whether there is a need to rotate or replace some of the members. It is noted that Dr Somkiat Khokiattiwong, Phuket Marine Biological Centre, Thailand is not active. Prof. Raleigh Hood had communication with Dr Somkiat regarding continuing to be SIBER SSC member. Although Dr Somkiat wishes to continue as a SIBER member, he has not been active and not participated in any SIBER activities. Therefore, it is recommended to communicate to Dr Somkiat to step down as a member of SSC and nominate an alternative member from Thailand to bridge the regional gap along with the necessary expertise.

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It is noted that the co-chair of IIOE-2 ST-1: Human benefits and impacts, Dr Ben Milligan is also not active and will be replaced. The new co-chair of IIOE-2 ST-1 can be also new member of SIBER SSC.

There are no specific conditions from IMBER in selecting the SSC members in terms of either gender or nationality if the terms-of-reference are fulfilled and the working groups are active.

It is also noted that Joaquim Goes can be a member of SIBER SSC.

Action Item: Identify a possible nominee to replace Dr Somkiat having necessary expertise and leadership quality (SSC members). Also communicate with Jerry Wiggert whether he wants to continue as a member of SSC (Greg Cowie / Raleigh Hood).

10:45 – 10:50: SIBER BUSINESS MEETING (Cowie/Hood/Lotliker)

- Review of SIBER-12 report

Dr Aneesh Lotliker brief on the report of SIBER-11 SSC meeting. The 11th meeting of SIBER Scientific Steering Committee (SSC) was convened on 10th January 2022. The focus of the meeting was to introduce the activities of SIBER and its modus operandi to Dr Lotliker. The SSC also discussed on the available biogeochemical time-series data across the globe and advised on long-term time-series biogeochemical observations, using autonomous sensors, in the Indian Ocean. The SIBER-SSC also discussed on the low coast instrumentation for biogeochemical parameter known as CoLab (Coastal Lan in a Box). In addition, the agenda for next meeting was finalized. The 12th meeting of SIBER-SSC was convened on 23rd March 2022. During the meeting, SIBER-SSC reviewed the membership and possible funding. The co-chair provided updates on the SIBER products such as Deep-Sea Research Special Issues on IIOE-2/110°E, Biogeosciences review articles and Elsevier book on the Indian Ocean. The SSC members also presented the plans for biogeochemical observations in India, Germany, France, South Africa and United Kingdom. Subsequently, plans for SIBER post – 2025 was discussed. He subsequently mentioned two action items namely writing an article on 50 years of NIO, Karachi and OMZ in Arabian Sea in IO Bubble-2.

10:50 – 11:15: UPDATE ON SIBER PRODUCTS (Raleigh Hood)

- Deep-Sea Research Special Issues on IIOE-2/110°E

Most of the papers submitted in the Deep-Sea Research Special Issues on IIOE-2/110°E are at the various stages of review.

- Biogeosciences review articles

Total six synthesis papers are published in the Biogeosciences review articles.

- Elsevier book on the Indian Ocean

Total 20 synthesis chapters are to be included in the Elsevier book on the Indian Ocean. Most of which are in review. It is expected that the book will be published by the end of the year 2022.

- Other Special Issues related to IIOE-2/110°E/SIBER/IORP

The Volume 4 of DSR II special issue series is published and currently working on volume 6.

- Progress on motivating additional SIBER review papers on the SIBER SPIS themes and other topics.

This is remnants from the previous actions and there is no significant progress.

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- Motivating IO Bubble-2 and Newsletter Articles

There is significant progress on IO Bubble-2 and IIOE-2 Newsletters. A total of 15 issues of IO Bubble-2 are published and IIOE-2 Newsletters are published every month.

11:15 – 11:45: IIOE-2 UPDATES AND REPORTS

Update on EIOURI

- Japanese cruises (Honda)

Dr Makio Honda briefed on the Japanese activities including products from KH-18-06 (Nov/Dec 2018) and Cruise plan. Dr Honda presented the results from the six cruises carried out in the eastern Indian Ocean which are 1) Phytoplankton Dynamics as a response to physical events, 2) $\delta^{15}N$ of chlorophyll reveals N source for phytoplankton and 3) Observation of the deep Indonesian Throughflow (ITF) using Helium (He) isotopes. Subsequently Dr Honda presented the cruise plan during 2023 – 2025. The cruise is divided into two legs dedicated to Biogeochemistry (Leg-1) and Physical Oceanography (Leg-2).

- BLOOFINZ-IO (Bluefin Larvae in Oligotrophic Ocean Foodwebs, Investigations of Nutrients to Zooplankton) (Mike Landry)

Dr Mike Landry presented the project BLOOFINZ-IO. The aim of the project is End-to-End food web study. The cruise was conducted onboard R/V Roger Revelle during 20th January – 14 March 2022 in Indonesian Throughflow.

Update on WIOURI/SOLSTICE (Jenny Huggett)

- Summary research and cruise activity and other developments

Dr Jenny Huggett presented The Western Indian Ocean Upwelling Research Initiative (WIOURI) having the theme: Impact of climate change on WIO ecosystem. Dr Huggett, further presented the cruise plans of French led RESILIANCE cruise during 15th April – 20th May 2022 where capacity building is one of the component. Also presented WIO Regional Imagery Workshop during 30th August – 02nd August 2021 and IOGOOS Training Workshop on Biological Observations in the Indian Ocean (from microbes to megafauna) during 8 – 12 November 2021.

Update on proposals submitted and planned for other IIOE-2 activities (All SSC)

- Indian cruises and programs? (Aneesh Lotliker)

Dr Aneesh Lotliker presented the Indian cruise plans. All the cruises were suspended due to Covid-19 pandemic except for emergency maintenance of the observing systems. Dr Lotliker presented the status and plans of the autonomous biogeochemical observatory. Subsequently presented the future cruise plans as a part of EKAMSAT program designed to address the questions 1) Are recurring algal blooms (Noctiluca and Diatom), during winter monsoon in northern Arabian Sea, is leading to intensification and expansion of OMZ?, 2) Does the interplay between penetrative radiant flux, nutrient stoichiometry and mixed layer dynamics control the bloom in the northern Arabian Sea? And 3) What are major factors controlling acidification of the Arabian Sea?

- German cruises (Birgit Gaye)

Dr Birgit Gaye presented the German cruise plans. The cruises are expected to resume during the second half of the year 2023.

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- French cruises (**Marsac**)
Dr Francis Marsac briefed on the RESILIANCE: fRonts, EddieS and marIne Life in the wEstern iNdiAn oCEan. The focus of the project is on the Bio-physical coupling at fine-scale in fronts and eddies in the South West Indian Ocean. To achieve this, a cruise is planned during 19 April – 24 May 2022 onboard R/V Marion Dufresne with three focused areas i.e. Oceanic Fronts, Inshore-Offshore and Durban Eddy. There is also plan to deploy two moorings. Dr Marsac also presented the plan for The Indian Ocean Mission 2022 by the Monaco Exploration and Research Institutes onboard R/V AGULHAS II during October 11 – November 23, 2022.
- South African cruises (**Jenny Huggett**)
Dr Jenny Huggett presented
- ITF cruises (TRIUMPH and MINTIE) (**Dwi Susanto**)
Dr Dwi Susanto presented a multinational and multidisciplinary collaborative program TRIUMPH: Throughflow Indonesian Seas, Upwelling & Mixing Physics. The first cruise was conducted in November – December 2019 and the second cruise during February – April 2021. The third cruise (EUORI/Upwelling), during January – February 2022, was postponed which is expected to be during May 2022.
- SIBER related activities in the Eastern Indian Ocean (Lynnath Beckley)
Dr Lynnath Beckley presented the cruises conducted in the Eastern Indian Ocean. These includes RV Investigator Voyage to assess benthic biodiversity of seamounts around Christmas Island in 2021, follow up voyage to survey seamounts around Coco Island in 2022 and Planned R/V Investigator voyage to study benthic habitat of Gascoyne Marine Park. Dr Beckley also presented preparation of publications for DSR II special issue on 110⁰E voyage.

11:45 – 12:25: Other Business (Cowie)

- Expanded SIBER representation and involvement with IMBeR
IMBeR has asked to increase the SIBER representative that will be discussed subsequently.
- Plans for SIBER post-2025
IMBeR also asked the plans for SIBER post-2025. One suggestion is to explore the possibility to collaborate with IORP to continue funding beyond 2025. This will combine physical observations with biogeochemistry. CLIVAR or SCOR may also provide funding in the absence of IMBeR. This to be further discussed during SIBER-IORP joint meeting.
- Revisions to SIBER science plan – hot topics and challenges (**all SSC**)
To be discussed in the SIBER-IORP joint meeting.

12.25-12.30: Wrap up.

Dr Greg Cowie thanked all the participants and presenter and ask to provide one summary slide to be presented during IRF and IOGOOS.