

# NEWSLETTER

Perth Programme Office  
in support of UNESCO - IOC

October 2016



Dear Reader,

Welcome to the IOC Perth Programme Office (PPO) occasional e-newsletter.

If you have any questions or comments or would like to suggest an article for the next newsletter, please contact [Louise Wicks](#), Program Manager, IOC PPO or [Henriette Grimmel](#), Intern, IOC PPO.

Thank you, Nick D'Adamo, Head, IOC PPO.

This newsletter features the following:

- **2nd International Indian Ocean Expedition - updates**
    - General news from the JPO
    - IIOE-2 scientific cruises
    - Eastern Indian Ocean Upwelling Research Initiative (EIOURI)
    - Research endorsements under IIOE-2
    - IIOE-2 Early Career Scientists Network
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  - **Joint Capacity Development Training Course, Malaysia**
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  - **Indian Ocean Tsunami Warning and Mitigation System - update**
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    - New Head of IOTWMS Secretariat
  - **IOC PPO Office - update**
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## 2nd International Indian Ocean Expedition (IIOE-2) - UPDATES



The IOC PPO, hosting the Australian node of the IIOE-2 Joint Project Office (JPO), continues to facilitate involvement and participation of national, as well as international, stakeholders in the IIOE-2 in partnership with the Indian JPO and under the direction of the IIOE-2 Steering Committee.

### General news from the JPO

- *IIOE-2 Community & Mailing List* - If you are involved in the IIOE-2 in any capacity or know someone who is, please make sure to sign up to the IIOE-2 mailing list [here](#) or refer others to it. Thank you!
- *IIOE-2 Co-Chairs* for Science Theme & Working Group teams have been selected and published on the Expedition's website, see [here](#).
- The call for articles to be included in the next edition of the IIOE-2 Indian Ocean Bubble 2 newsletter closes on 30 October 2016. Please refer to the Expedition's website [here](#) for details on submissions.

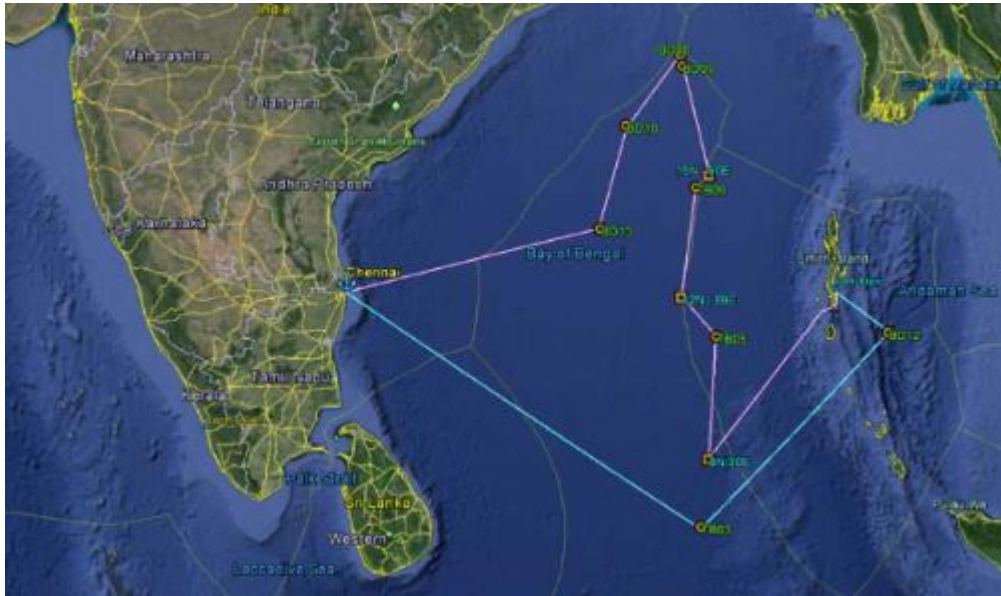
### IIOE-2 scientific cruises

Following the launch of IIOE-2 on 4 December 2015, several research cruises have already been completed and many more are being planned.

The start of IIOE-2 was marked by the first research cruise from Goa, India to Port Louis, Mauritius. The Indian Research Vessel *Sagar Nidhi* left the harbor for a 19 day cruise on the evening of 4 December 2015. The aim of this multi-disciplinary and multi-national cruise was to improve the understanding of water mass structure in the western Indian Ocean. Zooplankton was sampled and profiles of current, temperature, salinity, oxygen, light and chlorophyll taken.

The IIOE-2's second multi-national cruise, on board the Indian Research Vessel *Sagar Kanya*, was part of the continuing Ocean Mixing and Monsoon (OMM) programme (2013-17), which aims to understand the physics of the upper ocean and air-sea interactions in the Bay of Bengal. This cruise left Chennai 23 January and returned on 8 February, 2016.

The third cruise under the umbrella of the IIOE-2 was also in the Bay of Bengal, between 13 February and 14 March, 2016 on the *Sagar Kanya*, heading from Chennai to Port Blair. The cruise aimed to recover three RAMA moorings, deploy new moorings and service seven buoys maintained by the Indian National Institute of Ocean Technology (NIOT). These buoys will help evolve the understanding of the ocean dynamics of this region. [Read more](#)



Track of the 3rd research cruise of the IIOE-2 in the Bay of Bengal, from Chennai to Port Blair.

**Eastern Indian Ocean Upwelling Research Initiative (EIOURI)**

Following the release of the [EIOURI Science Plan](#) in February 2016, opportunities are being sought for associated in situ observations in the eastern Indian Ocean. EIOURI has entered its specific observation planning stage, with a number of research cruises already secured for 2017-2019. These will make important contributions to the initiative while EIOURI tries to obtain more ship time for potential projects through several channels of national funding.

Invitations to interested scientists to participate in EIOURI are being circulated through personal communications by the principal investigators. In response, several scientists have already expressed their interest and a strategy for their participation is under development. [Read more](#)

**Research endorsements under IIOE-2**

A total of five cruises (incl. the three completed IIOE-2 cruises) and one IIOE-2 related activity have been endorsed to date:

Endorsement	Project/Activity Name	PI	Institute
Dec 2015	1 <sup>st</sup> IIOE-2 Scientific Cruise	Dr P. N. Vinayachandran	Indian Institute of Science, Bangalore, India
Jan 2016	Air-Sea Interactions in the Northern Indian Ocean: Regional Initiative (ASIRI)	Dr M. Ravichandran	INCOIS, India
Feb 2016	Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction	Dr M. Ravichandran	INCOIS, India

Mar 2016	The Socio-Economic Benefits of the Second International Indian Ocean Expedition: A Study Proposal	Rashid Sumaila	The University of British Columbia, Vancouver, Canada
Aug 2016	Western Indian Ocean Upwelling Research Initiative (WIOURI)	Dr Michael Roberts	Nelson Mandela Metropolitan University (NMMU), Port Elizabeth, South Africa
Sep 2016	Pelagic ecosystem processes, nitrogen sources and Southern Bluefin Tuna larval ecology in the Indo-Australian Basin	Prof Lynnath Beckely	Murdoch University, Perth, Australia
	A coupled bio-physical, ecosystem-scale, examination of Australia's International Indian Ocean Expedition 110°E line		

*Announcement:*

### **Call for IIOE-2 science activities**

The IIOE-2 Steering Committee invites interested parties to submit scientific activities/projects to be considered for endorsement under IIOE-2. With regard to the two key documents that guide the engagement of IIOE-2: the [IIOE-2 Science Plan](#) (Hood et al., 2015) and the [Implementation Strategy](#) (IPC, 2015), projects should align to one of the scientific themes at a national or international scale in the Indian Ocean. A Project Endorsement Form and further details can be found [here](#). Interested persons are encouraged to apply and direct queries to either of the Joint Project Offices (JPO) in [Australia](#) or [India](#).

### **Early Career Scientists Network (ECSN) for IIOE-2**

The IIOE-2 ECSN continues to grow in strength since their inaugural workshop as part of the International Symposium on the Indian Ocean, Goa, 4 December 2015. The summary of research foci of, at last count, over 43 young researchers and how they relate to the IIOE-2's over-arching science themes has been compiled and is planned to be communicated through scientific journals and magazines. It highlights the valuable contribution that this group will make to advance our knowledge of the Indian Ocean, and future IIOE-2 symposia and related meetings will provide opportunities for further updates. Keep a look out for news via their [facebook page](#).

## Announcement of IIOE-2 symposia



### 1. Joint Assembly of IAPSO-IAGA-IAMAS "Good Hope for Earth Sciences"

Cape Town, South Africa 27 August – 1 September 2017

The IIOE-2 will be the subject of a scientific symposium on the IIOE-2 and related oceanic and atmospheric research at the Joint Assembly of the International Association for the Physical Sciences of the Oceans (IAPSO), the International Association of Geomagnetism and Aeronomy (IAGA) and the International Association of Meteorology and Atmospheric Sciences (IAMAS) in Cape Town, South Africa during 27 August to 1 September 2017. Registration is already open and further notification on abstract submission will be published soon. [Read more](#)

### 2. AMSA Conference "Connections through shallow seas"

Darwin, Australia 2 - 6 July 2017

The Australian JPO is applying to hold a symposium on current and future projects of the



IIOE-2 at the next annual conference of the Australian Marine Sciences Association in Darwin, Australia during 2 to 6 July 2017. [Read more](#)

(Keep an eye out for further information over the next few months if our proposal is successful.)

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## IOC/IIOE-2-Ocean Teacher Global Academy + Joint IORA Capacity Development Training Course



Within the scope of the IIOE-2's capacity development objectives, a 5-day (22 – 26 May 2016) workshop in research data management was held at the Malaysian OTGA ([Ocean Teacher Global Academy](#)) Regional Training Centre (RTC) at the Institute of Oceanography and Environment at the [University of Malaysia Terengganu](#). Under funding from Australia's Economic Diplomacy Fund in support of [IORA](#) (Indian Ocean Rim Association), the IOC PPO organized and co-funded the workshop in partnership with the Malaysian RTC, UNESCO [IODE](#) and the IORA Secretariat. Out of 83 received applications, 23 candidates were selected of which 20, including 6 women, attended the workshop, representing 11 IORA Member states and the IORA Secretariat.

The training opportunity allowed marine researchers, data/document managers and marine data librarians to advance their existing knowledge in research data management, to learn about the IIOE-2, to understand the roles of different data centres as well as to develop additional skills useful for data management planning. It was a successful workshop as it brought together a wide range of participants from around the Indian Ocean, strengthening regional cooperation and improving within country capacity and international best practice in research data management standards and tools. Additionally, it strengthened Australia's and the IOC's relationship with IORA Member States and the IORA Secretariat.

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*Announcement:*

**International Indian Ocean conference series in Perth, Australia, 30 Jan - 4 Feb 2017**

The IOC PPO and the University of Western Australian (UWA) Oceans Institute will host a series of Indian Ocean science conferences and meetings between 30 January - 4 February, 2017. The week's events will be held at the new Indian Ocean Marine Research Centre, located on campus at UWA, and include:

- 13th annual meeting of the Indian Ocean Global Ocean Observing System ([IOGOOS](#)) Regional Alliance
- 13th annual meeting of the CLIVAR/IOC-GOOS Indian Ocean Region Panel ([IORP](#))
- 7th annual meeting of the IMBER/IOGOOS Sustained Indian Ocean Biogeochemistry and Ecosystem Research ([SIBER](#)) group
- 7th annual meeting of the Indian Ocean Observing System Resources Forum (IRF); and
- inaugural meeting of the IIOE-2 Steering Committee.

The integration of these meetings in one location will provide a unique opportunity and detailed overview of the scientific research activities being undertaken by these scientific groups and linkages to IIOE-2 activities. It will also include several strategic discussions relating to the future infrastructure and observation needs of the Indian Ocean Observing System ([IndOOS](#)). Parallel to the meetings in the same week, a joint Australian and Indian research team working on [Bio-Argo](#) floats under the Australia-India Strategic Research Fund will hold a technical workshop to discuss the outcomes of their research.

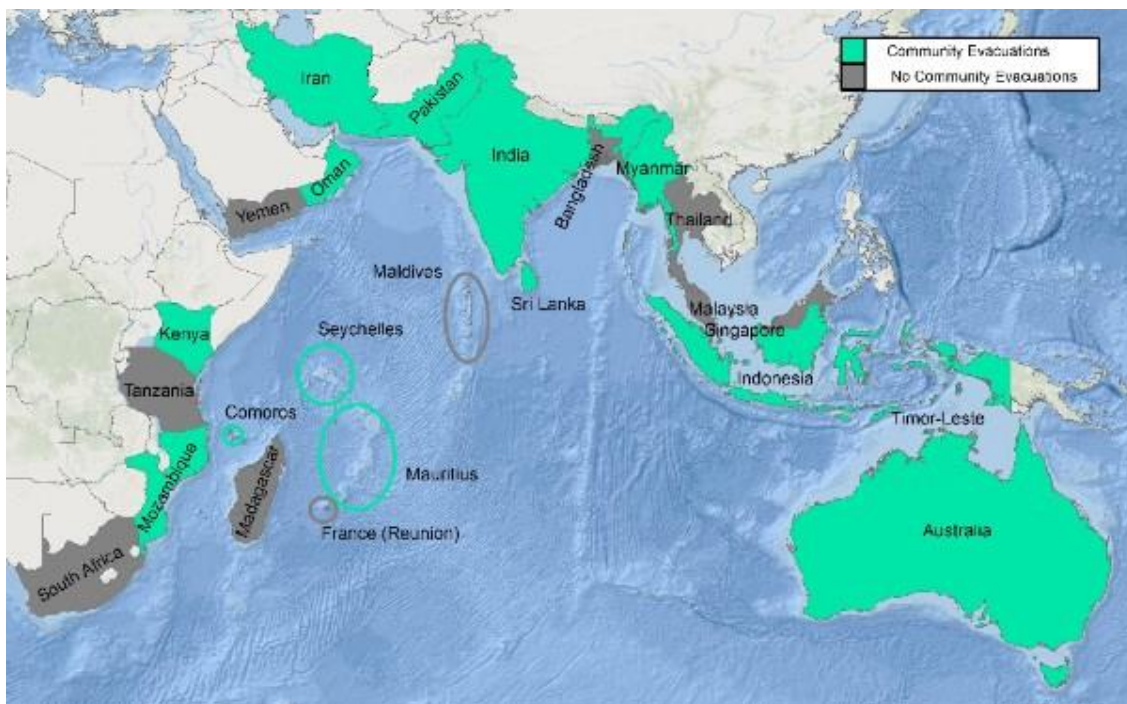
For more information, please contact IOC PPO Program Manager, [Louise Wicks](#).

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## Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) - UPDATE

### Exercise Indian Ocean Wave 2016 (IOWave16)

Twenty-four countries (see map below) bordering the Indian Ocean participated in a large scale tsunami simulation exercise organized under the auspices of UNESCO-IOC on 7 and 8 September 2016. The exercise, known as Indian Ocean Wave 2016 ([IOWave16](#)), tested communication links between all stakeholders of the Indian Ocean Tsunami Warning and Mitigation System ([IOTWMS](#)), as the rapid transmission of messages between authorities and populations at risk is crucial to save lives in the event of a tsunami.



Overview of participating countries in IOWave16 with reported community evacuations.

The exercise comprised two scenarios: the first simulated an earthquake with a magnitude of 9.2 south of Sumatra, Indonesia, on 7 September 2016; the second simulated an earthquake with a magnitude of 9.0 in the Makran Trench south of Iran and Pakistan on 8 September 2016.

Operations began when the respective Tsunami Service Providers of Australia, India and Indonesia issued alert notifications to the 24 IOTWMS Member States. Simulating tsunami waves travelling across the Indian Ocean, the exercise was conducted in real-time and lasted about 12 hours each day.

The exercise included community evacuation drills, involving over 50,000 participants, in Australia, Comoros, India, Indonesia, Iran, Kenya, Mauritius, Mozambique, Myanmar, Oman, Pakistan, Seychelles, Sri Lanka and Timor-Leste. In Sri Lanka 14 villages evacuated, involving some 7,000 participants. In Oman eight schools and about 8,000 students took part in simulated evacuations. In India, community level evacuations were carried out in about 350 villages involving 40,000 participants. An evaluation is being conducted to identify gaps and weaknesses in the system and to improve the IOTWMS.

Photographs and videos of Exercise IOWave16 can be found [here](#).

### **New Head of the Secretariat of the ICG/IOTWMS**

Existing staff at the co-located ICG/IOTWMS Secretariat and IOC PPO are enthusiastically awaiting the arrival of the new Head of the Secretariat of the ICG/IOTWMS in Perth. Dr Srinivasa Kumar Tummala was appointed to the role in June 2016 following the retirement of Mr. Tony Elliott. He is due to arrive in Perth and take up the position within the next few weeks.

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## **IOC Perth Programme Office - UPDATE**

- The IOC PPO continues to support the work of the Australian National Committee to IIOE-2 through the provision of secretariat services and links to the wider IIOE-2. This committee now involves institutional representatives from over twenty Australian agencies and universities with an interest in Indian Ocean research. It has collated an inventory of ongoing and planned Indian Ocean research projects of relevance to the IIOE-2 science themes and it is developing a strategic framework for Australian engagement in IIOE-2, which it will use to elicit future funding support for Australian research activities.

- The IOC PPO is taking part - for the 2nd year in a row - in the internship programme scheme of the European [Erasmus Mundus Master in Maritime Spatial Planning](#), allowing a student to intern for a 6 month period in the PPO in support of ongoing activities. After Cristina Cervera Nunez in 2015, the PPO welcomes Henriette Grimmel for the period September 2016 - March 2017.



- The IOC PPO was the subject of an independent review of the performance of the Office over the period 2012 - 2016, incorporating an external value assessment undertaken by Strickland-Park Economics. The review was led by an Independent Chair and panel representing the major interests of the IOC PPO's sponsors. The outcomes of the review will be adopted by the IOC PPO to ensure it



continues to provide value to its sponsors and stakeholders across their respective needs.



*Participants in the independent review of the IOC PPO*

- The IOC PPO would also like to give a warm 'shout-out' to Zdenka Willis, current Director of US IOOS, and wish her well in her retirement in January 2017 from NOAA. Zdenka has been a strong guiding force in GOOS and has always generously shared her valuable experience in running IOOS with a number of GOOS Regional Alliances, particularly in her time as Chair GRA Council. We wish you all the best.

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**For any further queries about the newsletter please contact (direct email link):**

[Ms Louise Wicks](#) or [Ms Henriette Grimmel](#)



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