

FINAL DRAFT MINUTES as at 22 Feb 2024

(minutes shown in blue italics throughout)

**Fifteenth meeting of the Indian Ocean
Observing System (IndOOS) Resource Forum
(IRF-15)**

0900-1030AM AWST (Australian Western Standard Time)

Thursday 9 February 2023

(0100-0230 UTC, Thursday 9 February 2023)

**As part of the (International Indian Ocean Science Conference 2023
(IIOSC 2023))**

Meeting Title	Fifteenth Meeting of the Indian Ocean Observing System (IndOOS) Resource Forum (IRF-15)
Date	Thursday 9 February 2023
Time & Duration	UTC 0100-0230 AM (Please see below for specific major city times). Duration – allow maximum 1.5 hours.
Location	Remote Access Via MS teams: https://msteams.link/4Y3E
Chair	Sidney Thurston, Ph.D.
Convener	Nick D'Adamo, Ph.D.
Rapporteur	Nick D'Adamo or TBA
Invited Participants	<i>IRF members, IRF ex-officios and previous meeting's (IRF-14) observers.</i>

	<i>Additional observer attendance welcomed by a-priori request to Chair. Convener also facilitated requests via nick.dadamo@uwa.edu.au</i>
Hosts	<i>IRF-15 comprised an in person meeting, as part of the IIOSC2023, as well as a URL link provided for those not attending in person.</i>
Remote Access	Remote Access Via MS teams : https://msteams.link/4Y3E Courtesy of INCOIS India. MS teams Manager Dr Aneesh Lotlicker

*The IRF-15 meeting was an in-person meeting (with remote participation option)
0900-1030 AM AWST (Australian Western Standard Time) Thursday 9 February 2023
(0100-0230 AM UTC, Thursday 9 February 2023)*

At conference venue:

Indian Ocean Marine Research Centre (IOMRC), situated on the grounds of the University of Western Australia, 63 Fairway (corner of 'Fairway' and 'Service Road 4'), Crawley, Western Australia, 6009, Australia. <https://iomrc.org/>

As part of:

the INTERNATIONAL INDIAN OCEAN SCIENCE CONFERENCE 2023 comprising:

IIOE-2 International Steering Committee (6th major meeting)

IOGOOS (18th major meeting)

IORP (18th major meeting)

IRF (15th major meeting)

SIBER (13th major meeting)

KUDOS Workshop

Monday 6 to Friday 10 February 2023

Registration for IIOSC2023, on a day by day basis, *was* via EVENTBRITE.

For the IRF meeting day (9 Feb 2023) – register via:

<https://www.eventbrite.com/e/iiosc-2023-integrated-meetings-iioe-2-iogoos-iorp-irf-siber-6-9-feb-2023-tickets-440774878527>

See the latest version of the IIOSC 2023 Information Booklet for full logistical details of the IIOSC 2023, including for those opting to come to Perth, Western Australia for IIOSC 2023. The IIOSC 2023 Information Booklet is added to this agenda.

Please join IRF-15 from your computer, tablet or smartphone:
15th IndoOS Resource Forum (IRF-15)

0100-0230AM UTC, Thursday, 9 February 2023

Remote Access Via MS teams

<https://msteams.link/4Y3E>

IndoOS Resource Forum IRF-15, selected City Times

City	UTC	Meeting start time 01:00 am Hrs UTC	Meeting end time 02:30 am Hrs UTC
Melbourne	UTC + 10 Hrs	06:00	07:30
Perth	UTC + 8 Hrs	09:00	10:30
Hyderabad	UTC + 5:30 Hrs	06:30	08:00
Paris	UTC + 1 Hrs	02:00	03:30
Cape Town	UTC + 2 Hrs	03:00	04:30
London	UTC + 0 Hrs	01:00	02:30
New York / Washington DC	UTC - 5 Hrs	20:00 (Wed 8 Feb 2023)	21:30 (Wed 8 Feb 2023)
Jakarta	UTC + 7 Hrs	08:00	09:30
Tokyo	UTC + 9 Hrs	10:00	11:30
California	UTC - 7 Hrs	18:00 (Wed 8 Feb 2023)	19:30 (Thur 9 Feb 2023)

Fifteenth Meeting of the Indian Ocean Observing System Resource Forum (IRF-15) 09:00 – 10:30 AM UTC, Thursday, 9 February 2023

Agenda as at 5 February 2023

1. Chair’s welcome & objectives, confirmation of agenda, and identification of “any other business” for the agenda. (IRF Chair, All – 5 minutes)
 - Announcement of NOAA Retirement, retention of WMO Duties (SC-ON and JCB)
 - *Done. Sidney Thurston announced formally his retirement as Chair. Nick D’Adamo thanked, echoing the sentiments of all, Sidney for his efforts in re-energising IRF as Chair and for the pleasure of working for him as Convener.*
 - Thanks to outgoing members, and welcome to new members.
 - *Done.*
 - Overview of the IRF-15 agenda which was circulated ahead of the meeting.
 - *Done.*
 - Any other business (for Agenda Item 6).
 - *None.*

2. Convener's brief report. (IRF Convener – up to 10 minutes)

- Report on key issues, including:
 - Draft minutes of IRF-14, for ratification (**Please see Separate IRF-14 Draft Minutes**).
Ratified.
 - Status of Action Items from IRF-14 (**Please see Appendix 1**)
Noted.
 - Updated IRF membership as at IRF-15, for ratification and/or further advice from Members (**Please see Appendix 2**).
Noted.
 - For noting and reference, as a standing item – IRF ToR (**Please see Appendix 3**).
Noted.
 - Full Information Booklet of IIOSC 2023, **Appendix 4**.
Noted.

David Legler (US Member) added comments: Thanked Sidney for his service as Chair. Noted US Govt recent \$2-5M commitment for RAMA. Noted MOES (India) and NOAA signing a 5 year renewal for collaboration, highly relevant to IO science

3. Status of RAMA following the setbacks due to COVID-19. (Mike McPhadden – 15 mins)

Action 15.1 Mike McPhaden presented. Mike's PPT will be sent to Convener and available to all.

Highlights: Noted - BKMG Indonesia and KIOST Korea (eg KUDOS) increasing activities in the IO; OMNI-RAMA and related data portal; emerging number of papers written relating to RAMA data (52 papers since Jan 22, ie during the COVID IndOOS hiatus). Noted that the dire state of RAMA that ensued during COVID era (RAMA reducing to near 0%) now being redressed, with RAMA likely to be back to 70% by end 2023.

4. Brief updates in IndOOS progress from IORP and SIBER perspectives.

- a. Roxy Koll or Juliet Hermes for IORP (10 mins)

Action 15.2 Juliet. Report to be sent to Convener. Will be available to all. Noted and thanked Roxy for his Co-Chairing, further noting and welcoming Janet Sprintall as incoming Co-Chair.

- b. Greg Cowie or Raleigh Hood for SIBER (10 Mins)

Action 15.3 Raleigh. Report to be sent to Convener. Will be available to all. Reminded all of SIBER's key role in original planning and inception for IIOE-2, and that IIOE-2 remains a key motivating focus for SIBER. Noted the growing number (six to date) of IIOE-2 special issues (DSR) in which many SIBER members are represented. Mentioned a 'book' on SIBER related research forthcoming. Further advice will be given in coming meetings.

A number of other comments relevant to IndoOS, IORP, SIBER and IIOE-2 were made by various participants:

(i) ?

(ii) ?

(iii) ?

...

5. Invitation to IORP and SIBER to highlight high level concerns and/or resource needs for IndoOS – for IRF noting and future consideration.

- a. Roxy Koll or Juliet Hermes for IORP (5 mins)
- b. Greg Cowie or Raleigh Hood for SIBER (5 Mins)

Done as part of Item 4, above.

Action 15.4 IORP Resources Request will be sent to Convener and available to all.

Action 15.5 SIBER Resources Request will be sent to Convener and available to all.

6. Election of new Chair. (Led by IOGOOS through IOGOOS Chair Srinivasa Kumar – 10 mins).

Dr Srinivasa Kumar as Chair IOGOOS spoke. Warmly thanks Dr Sidney Thurston for his wonderful Chairing of IRF these past few years, and noted the manner in which he re-energised IRF and gave much of his own time and energy to its functioning. Nktd Sidney's history in IOGOOS, dating back to Sid signing the original MOU in Mauritius 2002.

Dr Kumar advised that Nick D'Adamo agreed and would act as Interim Chair during an IOGOOS run out-of-session search for a replacement Chair whilst maintaining his role as Convener also. This is as per the IRF ToR. Dr Kumar advised that IOGOOS would work towards having a new Chair installed in practical time before IRF-16. Nick advised he was happy to continue to support IRF in both roles until both are filled.

Action 15.6 Chair IOGOOS to facilitate process to find new Chair and Convener for IRF, preferably in practical time for IRF-16.

7. Identify Action Items for next Quarterly IRF Remote Access Meetings (IRF Convener –5 minutes)

Apart from obvious follow-up relating to above items, TBA as any come to hand.

8. Any other business (IRF Chair to lead – 5 mins or time remaining).

None.

- a. Next meeting IRF-16 (IRF Chair).

Will be part of IIOSC 2024. TBA when more is known about location/dates for IIOSC 2024.

Action 15.7 Convener to advise IRF Members and invitees of IRF-16 meeting location, date.

End.

IRF 15 - APPENDIX 1

Updated based on IRF-15 meeting

IRF Convener's live progress table for IRF-15 Action Items Status as of 13 October 2023 (includes reference to any carry-over Actions from recent IRF meetings)		
Action Item No.	Action item	Progress, comments
15.1	<i>M McPhaden to send IRF Convener PPT on 'Status of RAMA following the setbacks due to COVID-19', as was presented at IRF-15.</i>	
15.2	<i>Co-Chair(s) IORP to send IRF Convener Brief update in IndoOS progress from IORP perspective, as presented at IRF-15.</i>	
15.3	<i>Co-Chair(s) SIBER to send IRF Convener Brief update in IndoOS progress from SIBER perspective, as presented at IRF-15.</i>	
15.4	<i>Co-Chair(s) IORP to send IRF Convener IORP's annual statement RE: Resources Request as mooted at IRF-15.</i>	
15.5	<i>Co-Chair(s) SIBER to send IRF Convener SIBER's annual statement RE: Resources Request as mooted at IRF-15.</i>	
15.6	<i>Chair IOGOOS to facilitate process to find new Chair and Convener for IRF, preferably in practical time for IRF-16.</i>	
15.7	<i>Convener to advise IRF Members and invitees of IRF-16 meeting location, date.</i>	
14.1	<i>Members to advise IRF (through Dr Pattabhi Rao, on behalf of the MoES-NOAA Joint OMNI-RAMA Indian Ocean Data Portal) of any prospective cruises that could be relevant to Argo deployment opportunities, to help facilitate enhanced deployments of Argo to redress emergent gaps in the Indian Ocean's Argo network.</i>	<i>Dr Pattabhi to update at IRF-15</i> <i>Done</i>
14.2	<i>Include a new standing agenda item for IRF meetings: that reports to be given by members who can speak to national progress on IndoOS.</i>	<i>Note any reports at IRF-15</i> <i>Done, see notes in IRF-15 minutes above.</i>
14.3	<i>Members are requested to communicate through their own most effective means significant emerging contributions to IndoOS, across its spectrum of components, to help build awareness of and increase the constituency for IndoOS.</i>	<i>Note any inputs in regard to this item, at IRF-15</i> <i>Standing item</i>
14.4	<i>Members are requested to provide documented summaries at IRF meetings of</i>	<i>Note any inputs in regard to this item, at IRF-15</i>

	<i>emerging nascent projects that build IndOOS and which involve ‘co-design’ across providers of ocean observations and benefits to users.</i>	<i>Standing item</i>
14.5	<i>N D’Adamo to coordinate planning for next quarterly meeting of IRF (ie IRF-14), aiming for around July 2022.</i>	<i>Done. IRF-15 built into IIOSC 2023, with IRF-15 1330-1700 pm AWST on 9 February 2023 as part of IIOSC 2023 6-9 February 2023. IIOSC 2023 Information Booklet refers (Appendix 4 of IRF-15 minutes).</i>
14.6	<i>N D’Adamo to coordinate planning for and provide timely advice on the prospect of hosting major (annual) meetings of IRF with IIOE-2, IOGOOS, IORP, SIBER, at University of Western Australia Indian Ocean Marine Research Centre early Feb 2023.</i>	<i>Done. IIOSC 2023 Information Booklet refers (Appendix 4 of IRF-15 minutes).</i>
12.4	<i>Sidney to lead discussions with participants intersessionally to develop key milestones for preparing the supplement to meet the anniversary.</i>	<i>Sid invited to update on any progress. Done.</i>
12.5	<i>Nick to provide an update on the Monaco Exploration Society’s Indian Ocean Expedition 2022 at the next IRF meeting.</i>	<i>Nick invited to update on any progress. Done.</i>
11.1	<i>Roxy to send IRF participants the link to the online IndOOS-2 track sheet.</i>	<i>If necessary, Roxy to confirm link</i>
11.2	<i>(i) Sidney, Nick and Roxy to work together offline to contact China re candidate representative(s) on IRF. (ii) Sidney to contact to Nelly Florida re an alternate representative to attend IRF. (iii) Sidney to contact to KIOS re a representative to attend IRF. (iv) Nick to contact Gilbert Siko via Juliet Hermes regarding an alternate representative to attend IRF.</i>	<i>(i) Done. See Membership table for progress. (ii) Done. See Membership table for progress. (iii) Sidney Thurston invited to update on any progress. (iv) Juliet invited to update on any progress</i>
11.4	<i>(i) Ming to continue dialogue with relevant agencies to develop TFS consortium.</i>	<i>Ming invited to update on any progress. Done.</i>
11.5	<i>Venkat to connect Jim Costopulos with Graham at JCOM.</i>	<i>Venkat invited to update on any progress.</i>
11.9	<i>GOOS Implementation Plan to be presented at next meeting by a relevant GOOS leader/stakeholder, to be identified via the GOOS Project Office/Secretariat, Paris.</i>	<i>Nick invited to update on any progress.</i>

IRF 15 - APPENDIX 2

For reference of IRF-15 meeting

IRF Membership as revised by Convener for IRF-15 on 26 January 2023. Including:

- Any routine changes in membership that have occurred during the intervening period between IRF-15 and previous meetings; and
- Outstanding membership issues as noted.

IRF Members (and alternates, where provided)		
IRF Members – National links		Alternate
Chair	Dr. Sidney Thurston Overseas Program Development, NOAA Global Ocean Monitoring and Observing Program (GOMO) 1315 East West Highway Silver Spring, MD 20910-5603, USA Sidney.Thurston@noaa.gov	
Australia	Ms. Michelle Heupel Director, Integrated Marine Observing System (IMOS) University of Tasmania Private Bag 110 Hobart TAS 7001, Australia Email: Michelle.Heupel@utas.edu.au	<i>Former Alternate, Dr Indi Hodgson-Johnston was thanked by IRF as an outgoing member.</i> <i>IMOS advised that Dr Paul van Ruth, IMOS Senior Science Officer, is the new Alternate. Paul.vanRuth@utas.edu.au.</i>
China	Dr. Chen Zhi Deputy Director General Department of Ocean Prediction and Disaster Reduction Ministry of Natural Resources No. 64 Fu-Cheng-Men-Nei Ave, Beijing 100812, P. R. China Email: chenzhi@nmefc.cn	<i>Dr Weidong Yu advised IOGOOS & IRF Chairs (email 11 Mar 2022) that Dr Feng Zhou of the China MNR (Ministry of Natural Resources agency) is the nominee to replace Dr Chen Zhi. IOGOOS consideration is pending.</i> <i>Dr Feng Zhou's nomination was formally accepted by Chair IOGOOS (email to Convener and Chair IRF, 24 May 2022)</i> <i>A note of thanks will be sent by IOGOOS to Dr Chen Zhi for his support of IRF during his Membership and to Dr Feng Zhou thanking and welcoming Dr Zhou to IRF.</i>
France	Yet to be represented. <i>Dr Marie Alexandrine-Sicre advised that she would check on this matter.</i>	
India	Dr M Ravichandran Ministry of Earth Sciences (MoES) Delhi, India Email: secretary@moes.gov.in	Dr. Srinivasa Kumar Director, Indian National Centre for Ocean Information Services (INCOIS) (Ministry of Earth Sciences, Government of India) "Ocean Valley", Pragathi Nagar, Nizampet P.O

	(Note: Replacing former Secretary. To be formally confirmed at IRF-13)	Hyderabad - 500 090, India Email: srinivas@incois.gov.in
Indonesia	Nelly Florida Director for Research Badan Meteorologi, Klimatologi, Dan Geofisika (BKMKG) Jakarta, Indonesia Email: nelly.florida@bmkg.go.id	Convener to contact: invite as new member. <i>Convener checked with IOGOOS Chair and Dr Florida on this matter (by email 4 Mar 2022).</i> <i>IOGOOS Chair Dr Srinivasa Kumar welcomed Dr Nelly Florida as the new Member for Indonesia (via emailed confirmation on 5 March 2022)</i>
Iran	Professor Behrooz Abtahi Director, Iranian National Institute for Oceanography and Atmospheric Science (INIOAS) #3 Etemad Zadeh St., Fatemi Ave Tehran, Iran inioas@inio.ac.ir	
Japan	Dr Shuhei MASUDA Japan Agency for Marine-Earth Science and Technology (JAMSTEC) Director, Global Ocean Research Centre, Research Institute for Global Change (RIGC) 2-15 Natsushima, Yokosuka, 237-0061, Japan smasuda@jamstec.go.jp	<i>Dr. Kentaro Ando (former IRF Member for Japan) nominated Dr MASUDA. IOGOOS Chair is formalizing the appointment, as per the IRF ToR.</i> <i>IOGOOS Chair Dr Srinivasa Kumar is to advise on IOGOOS's consideration of Dr Shuhei Masuda as a proposed Member for Japan.</i>
Kuwait	Dr. Faiza Al Yamani, IOGOOS Officer West Indian Ocean KISR, Kuwait Email: faizayamani@gmail.com	<i>IOGOOS Chair Dr Srinivasa Kumar is to advise on IOGOOS's consideration of Dr Faiza Al Yamani as a proposed Member for Kuwait.</i>
South Korea	Yet to be advised. <i>IRF Chair Dr Sidney Thurston advised that he would check on this matter.</i>	Yet to be advised. <i>IRF Chair Dr Sidney Thurston advised that he would check on this matter.</i>
South Africa	Dr Dismore Gilbert Siko Director – Marine and Polar Research, Paleosciences. Department of Science and Innovation (DSI), Pretoria 111111, South Africa Gilbert.Siko@dst.gov.za	<i>IRF Convener to check on whether the lead person for the South African research vessel, S.A Agulhas II, may be amenable to becoming a Member of IRF.</i>
USA	Dr David Legler Director, NOAA Global Ocean Monitoring and Observing Program (GOMO) 1315 East West Highway Silver Spring, MD 20910-5603, USA david.legler@noaa.gov	Dr Sidney Thurston (alternate) Overseas Program Development, NOAA Global Ocean Monitoring and Observing Program (GOMO) 1315 East West Highway Silver Spring, MD 20910-5603, USA Sidney.Thurston@noaa.gov
IORP	Dr. Roxy Mathew Koll, IORP Co-Chair Centre for Climate Change Research,	

	<p>Indian Institute of Tropical Meteorology, Pashan, Pune - 411 008, India. http://www.climate.rocksea.org/ Email: roxy@tropmet.res.in</p>	
IORP	<p>Dr. Juliet Hermes, IORP Co-Chair Manager: SAEON Egagasini node jc.hermes@saeon.nrf.ac.za</p> <p>A/Professor, Department of Oceanography, University of Cape Town, jc.hermes@uct.ac.za</p> <p>Honorary Professor, Institute for Coastal and Marine Research, Nelson Mandela University, juliet.hermes@mandela.ac.za Cell (+27) (0)834729159 South African Environmental Observation Network https://orcid.org/0000-0001-7858-514X https://www.nrf.ac.za/email-legal-notice.php http://www.nrf.ac.za/email-legal-notice.php</p>	
SIBER	<p>Prof. Raleigh R. Hood, SIBER Co-Chair Horn Point Laboratory University of Maryland Centre for Environmental Science P.O. Box 775 Cambridge, MD 21613 email: rhood@umces.edu</p>	
SIBER	<p>Dr. Greg Cowie, SIBER Chair University of Edinburgh Centre for Earth System Dynamics School of Geosciences, Global Change / Oceans and Past Climate Email: Dr.Greg.Cowie@ed.ac.uk</p>	
SIBER	<p>Dr. Aneesh Lotlicker SIBER Secretary Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences (MoES), Govt. of India "Ocean Valley", Pragathi Nagar (BO), Nizampet (SO), Hyderabad, Andhra Pradesh-500 090, India Email: aneesh@incois.gov.in</p>	<i>Dr Aneesh Lotlicker was thanked and welcomed by IOGOOS Chair.</i>
IOGOOS	<p>Dr. Srinivasa Kumar, IOGOOS Chair Director, Indian National Centre for Ocean Information Services (INCOIS)</p>	

	<p>(Ministry of Earth Sciences, Government of India) "Ocean Valley", Pragathi Nagar, Nizampet P.O Hyderabad - 500 090, India Email: srinivas@incois.gov.in</p> <p>(Note: Replacing former Director. To be formally confirmed at IRF-13)</p>	
IOGOOS	<p>Mr. M. Nagaraja Kumar, IOGOOS Secretary, Indian Ocean Global Ocean Observing System (IOGOOS), Scientist In-charge, PFZ Mission, Indian National Centre for Ocean Information Services (INCOIS), 'Ocean Valley', Pragathi Nagar BO, Nizampet SO, Hyderabad-500054, Andhra Pradesh, India Email: raja@incois.gov.in ; raja.masuluri@gmail.com</p>	
IOGOOS	<p>Dr. Brett Molony, IOGOOS Officer – East Indian Ocean CSIRO, Perth, Western Australia Email: brett.molony@csiro.au</p>	
IOGOOS	<p>Dr. Faiza Al Yamani, IOGOOS Officer West Indian Ocean KISR, Kuwait Email: faizayamani@gmail.com</p>	
IOGOOS	<p>Dr. Jenny Huggett, IOGOOS Officer, Project Representative Email: jenny.huggett@gmail.com</p>	
IOGOOS	<p>Dr. Elaine McDonough, IOGOOS Officer, Project Representative Email: elmc@norceresearch.no</p>	
IRF Convener	<p>Dr Nick D'Adamo. Adjunct Research Fellow, Oceans Institute of the University of Western Australia. Email: nick.dadamo@uwa.edu.au</p> <p><i>Note: Nick D'Adamo continues as interim Convener in a voluntary capacity, pending resolution of Convener replacement by IOGOOS (to be addressed at IRF-13)</i></p>	
IRF Members – International Organisations		Alternate
IOC	<p>Dr. Vladimir Ryabinin Executive Secretary, UNESCO IOC, 7 Place de Fontenoy, 75007, Paris, France Email: v.ryabinin@unesco.org</p>	<p><i>UNESCO IOC was invited to nominate an Alternate.</i></p>
ICPO	<p>Dr Jose Luis Santos Davila Executive Director International CLIVAR Project Office (ICPO)</p>	<p>Dr Jing Li Staff Scientist International CLIVAR Project Office</p>

	c/- First Institute of Oceanography, MNR 6 Xianxialing Rd Laoshan District Qingdao, China, 266061 Email: jose.santos@clivar.org	First Institute of Oceanography, MNR Qingdao, China 266061 Tel: +86-532-88891090 Email: jing.li@clivar.org
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IRF-15 APPENDIX 3

IndOOS Resource Forum

Terms of Reference (TOR)

Revised Version as ratified at IRF-12 on 16 March 2021

1. Establishment

The IndOOS Resource Forum (IRF) was established by resolution of IOGOOS, incorporating the institutions that are currently committing resources to the Indian Ocean Observing System (IndOOS).

2. Composition

Members and **Ex-Officios** of the IRF will be invited by the Chair of IOGOOS.

- **Members** will be comprised of representatives of institutions/organizations allocating or facilitating resources to accomplish the overall goals of IndOOS. The initial term for each member is two years, with possible extensions on a two-yearly basis.
- **Ex-Officios** will be Co-Chairs of the CLIVAR/IOC-GOOS Indian Ocean Region Panel (IORP) and the Chair and Co-Chairs of the Scientific Steering Committee of Sustained Indian Ocean Biogeochemistry and Ecosystem Research (SIBER) and representatives from the Indian Ocean Global Ocean Observing System (IOGOOS).

The Forum will review membership at each meeting and invite additional members as required. A member shall be deemed to be inactive if he/she does not attend an IRF meeting for 2 consecutive years and they are not actively contributing to the functions of the Forum. In these circumstances, the Secretariat will advise the Forum and write to that member notifying them that they will be rotated off the Forum.

3. Functions

The main function of the IRF is to provide a multi-institutional forum to facilitate the alignment of resources for implementation of IndOOS, including the following:

- 3.1 To review the requirements for the implementation of IndOOS;

3.2 To facilitate and coordinate resources that may be applied to the system, especially ship time for the Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction (RAMA);

3.3 To encourage scientific and technological initiatives, in the participating countries, to meet the objectives of IndOOS;

3.4 To enhance and facilitate data and information sharing with regard to IndOOS; and

3.5 To report on its activities to the Heads of the institutions providing resources.

4. Scientific and Technical Advisory Bodies

In performing its tasks, the IRF should be guided by the scientific objectives and research strategy formulated by the IORP and the SIBER Scientific Coordinating Committee, which are regarded as the main scientific bodies to advise the IRF.

5. Organization of Meetings

5.1 The meetings of IRF will be organised annually. IRF will hold meetings at dates and places to be decided at the previous meeting. The Secretariat will be responsible for arranging meetings and will send invitations to attend to:

- All IRF Members and Ex-Officios;
- Experts invited as Observers by the Chair of the IRF, as deemed necessary for the deliberations in that specific session of the IRF.

5.2 At the close of every other meeting (i.e. every 2 years), the IRF will elect from its members a Chair who will serve in that capacity for the next 2 years. An individual shall normally serve no more than two consecutive terms as Chair (i.e. 4 years total). However, if the IRF membership believes it is in the interests of IRF to retain an effective Chair for longer than two consecutive terms then this may be done by consensus of the IRF at the close of every other meeting (i.e. every 2 years). In the event of periods for which the Chair position is not designated and vacant, the IRF Convenor will represent that role as a pending measure.

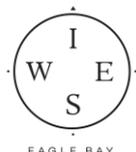
5.3 Sessions will be conducted in English and reports published in that language.

5.4 IOGOOS will seek Secretariat support for the Forum from the UNESCO IOC Perth Programme Office. This role will be referred to as the IRF Convenor.

Appendix 4 IRF-15

PARTICIPANT INFORMATION BOOKLET INTERNATIONAL INDIAN OCEAN SCIENCE CONFERENCE 2023 (IIOSC 2023) (AS AT 5 Feb 2-023)

Sponsors



PARTICIPANT INFORMATION BOOKLET

(SUBJECT TO MINOR UPDATES AS THE EVENT APPROACHES)

Updated by N D'Adamo 2 February 2023

INTERNATIONAL INDIAN OCEAN SCIENCE CONFERENCE 2023 comprising:

IIOE-2 International Steering Committee (6th major meeting)

IOGOOS (18th major meeting)

IORP (18th major meeting)

IRF (15th major meeting)

SIBER (13th major meeting)

KUDOS Workshop

Monday 6th to Friday 10th February 2023

REGISTRATIONS

FULL DAY REGISTRATIONS 6th, 7th, 8th and 9th February 2023

Full day registrations (0900am-1700pm) for 6th, 7th, 8th and 9th February 2023 at \$85 AUD per day, via EVENTBRITE at

<https://www.eventbrite.com/e/iiosc-2023-integrated-meetings-iioe-2-iogoos-iorp-irf-siber-6-9-feb-2023-tickets-440774878527>

MORNING PLENARY SESSIONS 6th and 7th February 2023

To attend only the morning plenary registrations (0900-1100am) of 6th and 7th February 2023: at \$30 AUD per plenary session per day (0900-1100am), by advisory to Nick D'Adamo at nick.dadamo@uwa.edu.au Ph 0409680247 and then direct bank transfer to WESTPAC Australia Bank

WAGOOS account

BSB 036034

Account No. 221981

KUDOS WORKSHOP 10th February 2023

KUDOS Workshop registration (for 0900am-1330pm, 10 February 2023) at \$60 AUD, via EVENTBRITE at

<https://www.eventbrite.com.au/e/kudos-workshop-at-iiosc-2023-0900am-1330pm-friday-10-february-2023-tickets-512272509867>

Conference venue

Indian Ocean Marine Research Centre (IOMRC), situated on the grounds of the University of Western Australia, 63 Fairway (corner of 'Fairway' and 'Service Road 4'), Crawley, Western Australia, 6009, Australia. <https://iomrc.org/>

Information Booklet ref: Dr Nick D'Adamo, University of Western Australia – Oceans Institute
nick.dadamo@uwa.edu.au



This sixth IIOSC 2023 brings members and secretariats of IIOE-2, IOGOOS, IORP, IRF and SIBER back to Perth, Western Australia, after the first IIOSC of 2017, to meet again together in an integrate collegiate format in the Indian Ocean Marine Research Centre at the University of Western Australia. This year will also see the addition of a KUDOS Workshop* (by invitation) on Friday 10th February 2023.

IIOE-2 (2015-25) - *Second International Indian Ocean Expedition of UNESCO IOC, SCOR and IOGOOS*

IOGOOS - *Indian Ocean Global Ocean Observing System* (a GOOS Regional Alliance)

IORP - *Indian Ocean Region Panel of CLIVAR/IOC-GOOS*

IRF - *Indian Ocean Observing System Resources Forum of IOGOOS*

SIBER - *Sustained Indian Ocean Biogeochemistry and Ecosystem Research of IMBeR and IOGOOS*

*KUDOS Workshop – for the 'Korea-US inDian Ocean Scientific (KUDOS) Research Program on the Physical, Biogeochemical and Ecological Dynamics of the Seychelles-Chagos Thermocline Ridge' (convened by KIOST and NOAA)

1. HOSTS

University of Western Australia (UWA) Oceans Institute (OI) courtesy of the facilities of the Indian Ocean Marine Research Centre (IOMRC). <https://iomrc.org/>

Principal organizers

- Dr Nick D'Adamo, Adjunct Research Fellow, UWA OI, contact: nick.dadadmo@uwa.edu.au, Ph+61 (0) 409 680 247
- Professor Charitha Pattiaratchi, UWA OI, chari.pattiaratchi@uwa.edu.au

2. CONFERENCE SPONSORS

The Indian Ocean Marine Research Centre is the venue for the conference and provides for the logistical needs of the conference, with the support of the tenants of the IOMRC.

CSIRO is a major sponsor in support of the conference's special events.

The Western Australian Global Ocean Observing System Inc. (WAGOOS) is providing sponsorship and administrative support.

The Scientific Committee on Ocean Research (SCOR) is supporting IIOE-2 Early Career Scientists Network participation.

Wise Wine, Margaret River, Western Australia, is supporting the Opening Reception event.

3. CONFERENCE VENUE

Indian Ocean Marine Research Centre (IOMRC), on the grounds of the University of Western Australia (UWA), 63 Fairway (corner of 'Fairway' and 'Service Road 4'), Crawley, Western Australia, 6009, Australia (<https://iomrc.org/>). See Attachment B for a general location map of the IOMRC on the University of Western Australia campus.

The Indian Ocean Marine Research Centre is situated in the south-west corner of the UWA campus. A 5 storey-building, the Centre includes UWA's Oceans Institute, the Australian Institute of Marine Science (AIMS), CSIRO, DPIRD and the Western Australian Marine Science Institution.

The main meeting room for the conference is the auditorium located on the ground floor of the building. This will cater for the larger group meetings (eg IIOE-2), plenary talks and any formal ceremonies. Other (smaller group) meetings can take place in other rooms (TBA) on other levels of the building, and participants will be guided to these rooms by the organisers or student assistants.

Due to the multipurpose use of the building, it has security protocols. Access to the building and its floors is key card restricted.

Organizers and student assistants (identified by "STAFF" logos on their badges) will be present to facilitate mobility, however we ask you to be respectful of the people going about their daily jobs within the building and for security purposes request that you do not wander around the building and floors or occupy rooms other than those assigned.

4. REGISTRATION/CHECK-IN

Please note that registration is required on a **day-by-day** basis, so that the organisers may keep a day-by-day track, for administrative and catering purposes, of individual names and days that respective registrants register.

Registration is: \$85 AUD (Australian dollars) per the full days for 6, 7, 8, 9 February; \$60 AUD for the partial day of 0900-1330hrs Friday 10th February 2023; and \$30 AUD for the partial days of the morning plenary sessions 0900-1100hrs 6th and 7th February 2023. Registration will cover necessary non-sponsored logistical expenses and:

- Lunch
- Morning tea with light food
- Afternoon tea with light food
- All day coffee, tea and water

Please register for your own required participation as follows:

FULL DAY REGISTRATIONS 6th, 7th, 8th and 9th February 2023

Full day registrations (0900am-1700pm) for 6th, 7th, 8th and 9th February 2023 at \$85 AUD per day, via EVENTBRITE at

<https://www.eventbrite.com/e/iiosc-2023-integrated-meetings-iioe-2-iogoos-iorp-irf-siber-6-9-feb-2023-tickets-440774878527>

MORNING PLENARY SESSIONS 6th and 7th February 2023

To attend only the morning plenary registrations (0900-1100am) of 6th and 7th February 2023: at \$30 AUD per plenary session per day (0900-1100am), by advisory to Nick D'Adamo at nick.dadamo@uwa.edu.au Ph 0409680247 and then direct bank transfer to WESTPAC Australia Bank

WAGOOS account

BSB 036034

Account No. 221981

KUDOS WORKSHOP 10th February 2023

KUDOS Workshop registration (for 0900am-1330pm, 10 February 2023) at \$60 AUD, via EVENTBRITE at

<https://www.eventbrite.com.au/e/kudos-workshop-at-iiosc-2023-0900am-1330pm-friday-10-february-2023-tickets-512272509867>

A reception desk will be set-up in the lobby on the ground floor of the IOMRC building and be staffed at the following times:

- Monday 6 February 2023: 0800-1000 AM
- Tuesday 7 February 2023: 0800-1000 AM
- Wednesday 8 February 2023: 0800-1000 AM
- Thursday 9 February 2023: 0800-1000 AM
- Friday 10 February 2023: 0800-1000 AM

On arrival each day please refer to the reception coordinators at the desk, confirm your information and receive your conference badge along with other useful information. The desk will have records of the days you have registered and paid to attend. If you arrive when the desk is un-attended, please identify yourself to one of the meeting organisers who should be available near the desk or call on Dr Nick D'Adamo or Professor Charitha Pattiaratchi.

Please wear your badge at all times within the building as due to security it is important that you are identifiable as a conference attendee.

5. CONFERENCE OPENING CEREMONY

The Conference will be officially opened on Monday 6 February 2023 in the IOMRC Auditorium, commencing at 1715pm. The opening will include an acknowledgement of traditional owners and a number of speeches by the conference hosts and major and supporting co-sponsors. A number of invited guests will attend these events. A program for the opening ceremony will be provided in due course.

6. SCHEDULE & MEETING ROOMS

The schedule with meeting room allocations as currently known is included in Attachment C. The full meeting room allocations will be finalised closer to the event and in liaison between the hosts and respective Secretariats of the groups meeting during 6-10 February 2023.

7. AGENDAS & PRESENTATIONS

Detailed agendas for all meetings will be circulated to participants via the respective group secretariats of IIOE-2, IOGOOS, IORP, IRF, SIBER and KUDOS responsible for their own meetings. Refer questions on agendas to the relevant co-chairs/secretariats.

Please note that all co-chairs/secretariats will be required to provide their own laptop from which to run their meetings.

Please note that it is intended that all presentations given at the conference will be made available to participants (in PDF format) following the conclusion of the conference and subject to the approval of authors.

It is intended, as customary for these IIOSC events, for the IIOSC 2023 to be a fully in-person conference.

8. INTERNET & POWER

Wi-Fi access is available, either by:

- [eduroam](#) – provided you have a log in through your home academic institution; or
- via [Guest Login](#), for which details will be provided on the opening day of the conference.

Voltage in Australia is 230V 50Hz.

Plug/wall sockets in Australia have two upper flat metal pins shaped like a “V” (Type I) and some contain a third flat pin at the bottom centre. Participants are recommended to bring appropriate Power Adapters to enable use of wall sockets.



Meeting co-chairs/secretariats please be aware that all of the AV facilities in the building are HDMI compatible. There is no VGA in the building. We strongly recommended that you bring the appropriate adaptors to ensure you can connect your laptops to enable you to run your meeting sessions. Similarly anyone with an Apple computer will also likely need a HDMI adaptor.

Note:

- (1) Please be informed that phone reception inside the IOMRC building can be patchy and in certain areas non-existent. However, the signal is good immediately outside of the building.
- (2) Power outlets are limited within the meeting rooms. Please be aware and come with your devices charged. Thank you.

9. WATER, TEA and COFFEE

Water and all-day self-service tea and coffee will be available in the foyer kitchenette adjacent to the Auditorium over the course of the entire week.

Note: Water from the taps at UWA and in Perth in general is safe for drinking.

10. CATERING

Lunch and morning and afternoon tea will be provided each day in the foyer adjacent to the Auditorium. Vegetarian and vegan items will be labelled clearly (including at all functions).

For participants wishing food to be Halal, please let that be known to the organisers well ahead of the conference (Section 1, above).

11. CAMPUS SERVICES

The UWA Student Guild precinct (or GUILD VILLAGE as it is also known) on the eastern side of the UWA campus includes a number of shops and services open during normal weekday working hours. These include a branch of the WESTPAC Bank, several ATM/cash machines, a Pharmacist/Chemist, gift shops (where phone cards can be purchased) and the UWA Medical centre. Please note that there is no currency exchange facility on campus. Paying for goods and services in Perth will require you to have cards or cash in Australian Dollars.

Campus cafes

There is a selection of cafes across the UWA campus - for instance in the Guild Village or next to the campus library; all within 5-10min walking distance from the IOMRC.

Food outlets

Should you require a location for breakfast or dinner within the campus grounds, we recommend visiting any of the campus restaurants (e.g. library or Guild Village).

Dinner option on the grounds of UWA

A dinner option on the grounds of UWA is the UWA Tavern (an approximate 5 minute eastward walk from the IOMRC). It is open until 9 PM Monday to Friday, with the restaurant providing meals and drinks at reasonable prices.

Ref: <https://www.uwastudentguild.com/venue/the-uwa-tavern>.

Other food options near to UWA

There are also a number of reasonably priced cafes, restaurants, lunch bars and bars/hotels within a 1 km walk of the IOMRC. EG the Bayside Kitchen (daily, 7.30 AM to early afternoon) located east off campus, on the opposite (east) side of Hackett Drive, by the shore of the Swan River. There are also daytime and evening venues along Hampden Road to the north of IOMRC and along Broadway to the south of IOMRC. A hotel that provides bar, café and restaurant food & beverages is also within 1.5 km and hence reasonable walking distance of UWA – Steve’s Bar and Café (Ref: <http://www.steves.com.au/>).

These and many others appear easily by www searching, for example, search ‘food near UWA’.

12. TAXI, PARKING & PUBLIC TRANSPORT

Taxis, rideshare:

If you are travelling by local Taxis or other rideshare services to the IOMRC, we suggest you instruct your driver that the building is located “**on the corner of ‘Fairway’ and ‘Service Road 4’ on the University of Western Australia campus in Crawley**”.

Parking:

There are several options for paid parking near the IOMRC building and around campus (e.g. on Fairway or Hackett Drive). There is no guarantee of available spaces at any given distance to the venue, and restrictions may apply to length of stay. Please refer to information on ticket machines for costs and duration limits.

Public transport:

There are several bus routes that service the UWA campus. To find routes that may suit your requirements, please visit the Transperth Journey Planner: <http://www.transperth.wa.gov.au/Journey-Planner>. See also the advice below.

13. ACCOMMODATION AND RELATED TRANSPORT ADVICE

The organisers are not managing bookings for accommodation or transport. Participants can easily access hotels etc within near walking, car or bus reach of the conference venue at the IOMRC through internet searching/booking. However, some information to assist in relation to accommodation and transport is provided herewith.

These are only meant to be optional starting suggestions to assist you in your own search. We do not guarantee that there will be availability. Please book as early as possible as it will be summer / holiday season in Perth.

Hotels, apartments etc

You may go to the usual search sites for accommodation. However, these are just a few suggestions to help you search: they are either within 1-2km walking distance of the venue or relatively close to the free Purple CAT Bus route between the Perth City area and UWA (see below).

University based accommodation - within 0.5-1 km of conference venue (IOMRC)

- University Hall (<https://www.unihall.uwa.edu.au/>)
- St George’s College (<https://stgc.uwa.edu.au/our-rooms>)
- St Thomas More College (<https://www.stmc.uwa.edu.au/>)
- Forrest Hall <https://www.forrestresearch.org.au/forrest-hall/>
- St Catherine’s on Park <https://www.stcatherinesonpark.com.au/>

Nedlands/Crawley areas - within 1-2 km of conference venue (IOMRC)

- Trinity on Hampden Hotel <https://www.trinityonhampden.com.au/>
- Broadway Short Term Apartments <https://perthshortterm.com/>

West Perth / City areas – within 5-6 km of conference venue (IOMRC)

- <https://shortrentalperth.com.au/west-perth> (apartment style accommodation)
- Hotels: Quest on Rheola, Quest Kings Park, Tribe Perth Kings Park, Holiday Inn West Perth

Near the Elizabeth Quay Bus Station and Perth Central City areas – within 5-6 km of conference venue (IOMRC)

- There are many hotels in the city within walking distance to the Elizabeth Quay Bus Station, locatable using standard accommodation www search sites.

Related transport suggestions.

In addition to the usual car-based transport (Taxis, rideshare apps etc) there is the free Purple CAT Bus route, connecting Elizabeth Quay Bus Station (Perth City) and University of Western Australia.

- See the map below: the route runs both ways between the City and UWA and passes by the West Perth and Nedlands/Crawley areas.
- This is a free bus, as are all of the CAT buses that service the Perth City and immediate surrounds.
- For example, the Purple CAT Bus timetable is found at <https://www.transperth.wa.gov.au/timetables>
- This free bus runs from early morning (~0530AM) to late night (~2300PM). See route map below.



Purple CAT (free bus) route connecting Perth (at Elizabeth Quay Bus Station) and University of Western Australia.

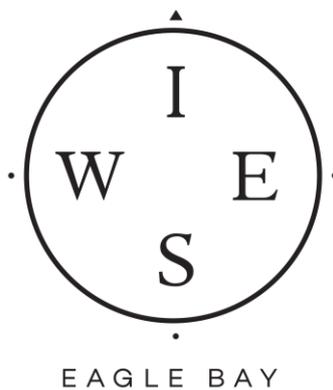
14. PARTICIPANTS

See below, for the general regions from which participants across all IIOSC 2023 meetings derive.

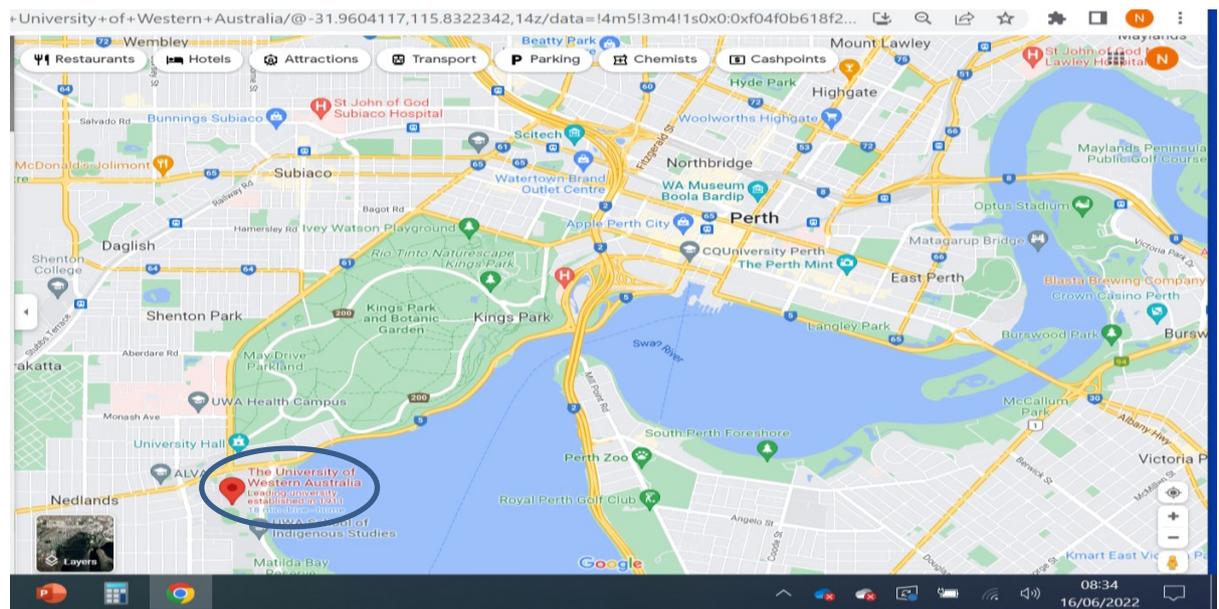
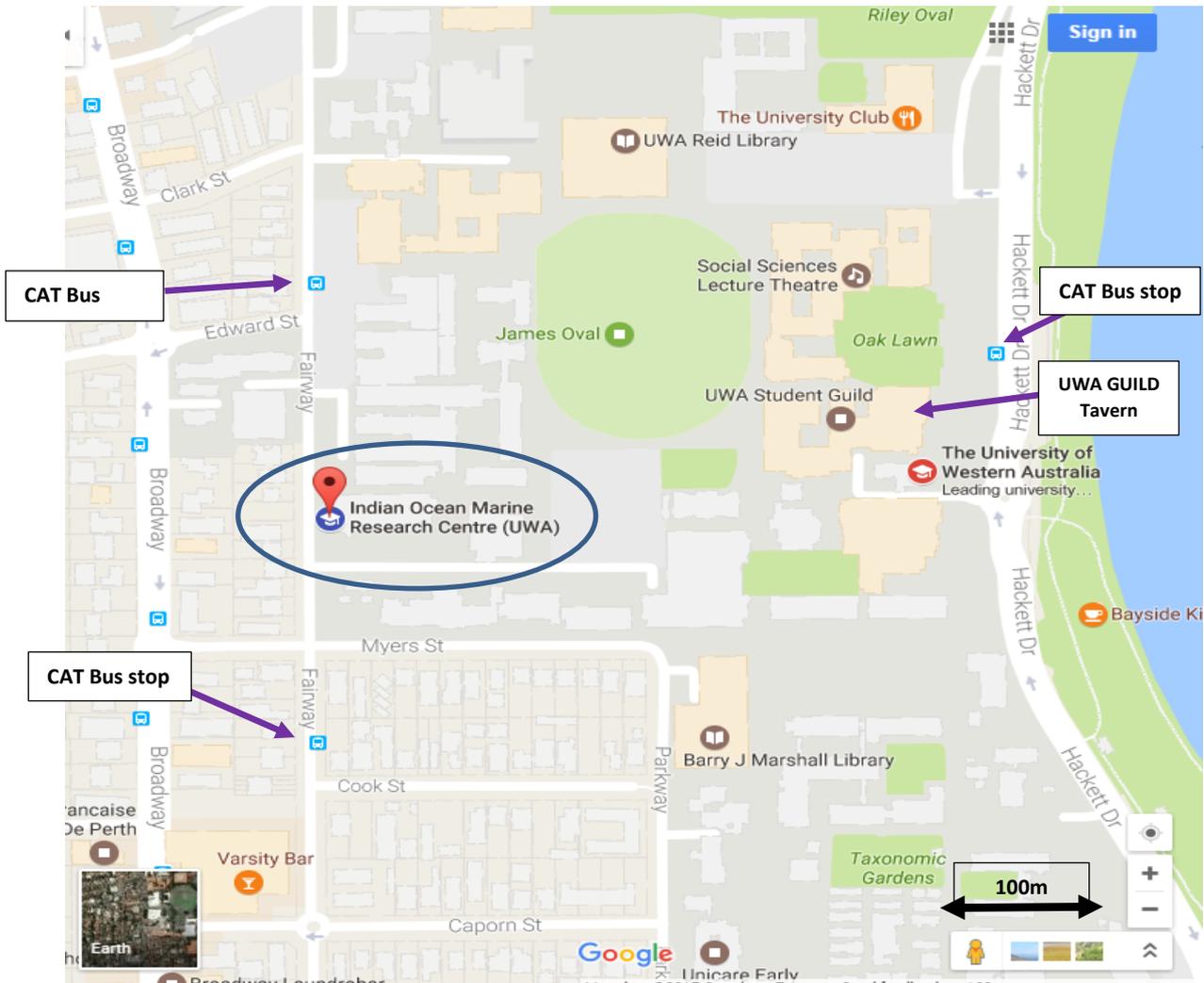


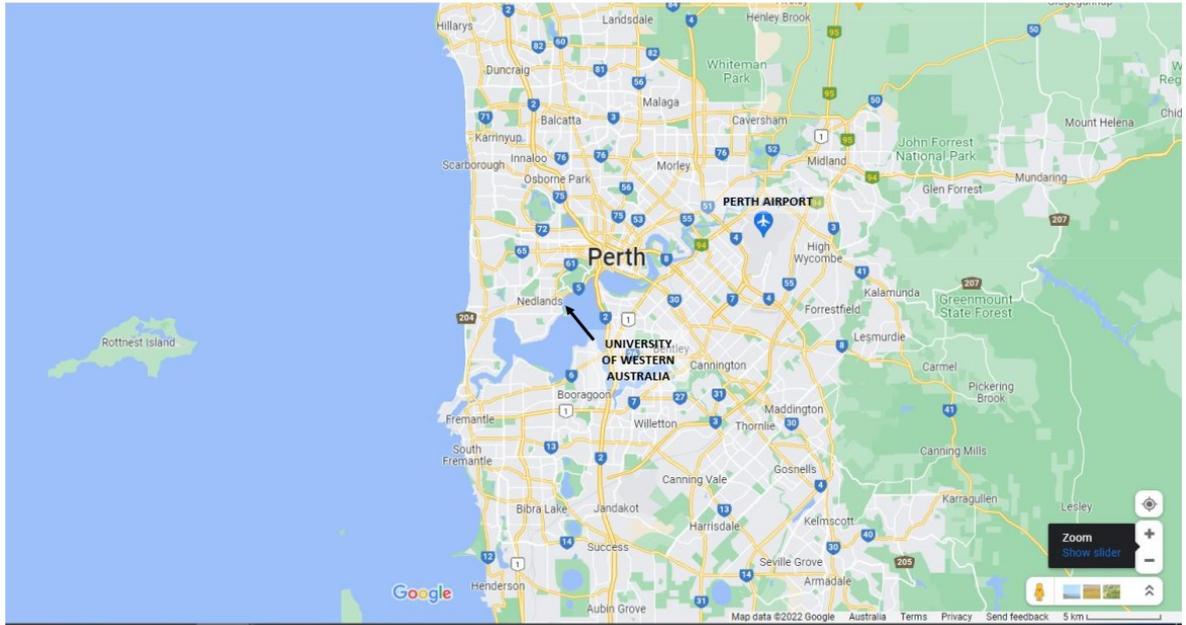
Countries from where members and endorsed participants of IIOE-2, IOGOOS, IORP, IRF and SIBER derive.

Attachment A – Major conference and supporting co-sponsors



Attachment B– Indian Ocean Marine Research Centre, UWA Guild Tavern and nearby Purple CAT Bus stops – General location map. Note: ~500 m walk through UWA grounds from IOMRC to Tavern





Attachment C – CONFERENCE SCHEDULE

PROVISIONAL SCHEDULE, MAY BE FURTHER REVISED PRIOR TO CONFERENCE IIOSC 2023 <i>Annual meetings: IIOE-2 Steering Committee No 6, IOGOOS-18, IORP-18, IRF-15, SIBER-13.</i> Workshop: KUDOS Meeting rooms at IOMRC will be advised in due course and advertised at the Reception Desk (0800-1000 AM, each morning)						
Time (shown as Perth, Western Australia times, which is UTC + 8hrs)	Mon 6 Feb	Tues 7 Feb	Wed 8 Feb		Thur 9 Feb	Fri 10 Feb
0800-1000	Registration	Registration	Registration		Registration	Registration
0900-1030	<p>Plenary keynotes. Ground floor auditorium.</p> <p>Speakers to be advised.</p> <p style="text-align: center;">IIOE-2 <i>Second International Indian Ocean Expedition (2015-25) – Progress, status and the future.</i></p> <p style="text-align: center;"><i>Provision for local/international plenary talks, incl. from Western Australian and Australian ocean research communities – relevant to IIOE-2.</i></p>	<p>Plenary keynotes. Ground floor auditorium.</p> <p>Speakers to be advised.</p> <p style="text-align: center;"><i>Provision for local/international plenary talks, incl. from Western Australian and Australian ocean research communities – relevant to IIOE-2.</i></p>	<p>Plenary keynotes. Ground floor auditorium.</p> <p>Speakers to be advised.</p> <p style="text-align: center;">IORP and IndoOS-2 <i>Decadal Review 2021-2030 of the Indian Ocean Observing System - and priorities for related ocean/climate research.</i></p> <p style="text-align: center;">SIBER <i>Progress in Indian Ocean biogeochemistry and ecosystem research.</i></p>		IRF-15	<p>Workshop: KUDOS - <i>Research and Cruises Seychelles-Chagos Thermocline Ridge.</i></p> <p>Conveners: Drs Dong-Jin Kang KIOST and Mike McPhadden NOAA.</p> <p>Invitation only.</p> <p style="text-align: center;">Ground floor auditorium</p>
1030-1100	Morning break					
1100-1230	IIOE-2 SC6	IIOE-2 SC6	IORP-18	SIBER-13	<p style="text-align: center;">IOGOOS <i>Celebrating the first two decades of the Indian Ocean Global Ocean Observing System</i></p> <p style="text-align: center;">IOGOOS-18 General Business & Reporting (incl. leaders of IIOE-2,</p>	KUDOS Workshop continued

					IORP, SIBER & IRF)	
1230-1330	Lunch					
1330-1500	IIOE-2 SC6	IIOE-2 SC6	IORP-18	SIBER-13	IOGOOS-18 Business AGM (incl. leaders of IIOE-2, IORP, SIBER & IRF)	Provisional.
1500-1530	Afternoon break					
1530-1700	IIOE-2 SC6	IIOE-2 SC6	IORP-18 & SIBER-13 joint session		Provisional - for any extra time that may be required by IIOE-2023 groups.	Provisional.
1715-1800	Conference opening ceremony.					
1800-2100	1800-2100 Cocktail reception. Confirmed Members of IIOE-2, IOGOOS, IORP, SIBER, IRF, KUDOS. (Others by invitation)	1845-2100 Conference dinner. Confirmed. 1700-1715 Welcome to Country by Robyn Collard, with Didgeridoo accompaniment by Tryse Rioli 1715-1730 Keynote dinner address by Dr Brett Molony, Science Director, CSIRO Members of IIOE-2, IOGOOS, IORP, SIBER, IRF, KUDOS. (Others by invitation)				