



Agenda 5.3

Knowledge for emerging ocean issues/pressing demands since the last session (WESTPAC-XIII, 27-29 April 2021)

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Decade Coordination Office, IOC Sub-Commission for the Western Pacific



Fourteenth Intergovernmental Session of the IOC Sub-Commission for the Western Pacific
4-7 April 2023, Jakarta, Indonesia

GUIDELINES FOR THE ESTABLISHMENT OF WESTPAC WORKING GROUPS

(adopted at WESTPAC-VIII, 10-13 May 2010, Bali, Indonesia)

To further shape itself as one unique regional platform for sharing marine scientific knowledge and advancing marine scientific research in order to assist Member States in the study, protection and management of their coasts and oceans, WESTPAC would form, every two years, new working groups with life time of four years or less, aiming to attract leading scientists in the region to deliberate on specifically focused scientific topics, marine-related societal concerns and other international emerging issues which largely require marine scientific inputs. The groups are expected to hold up to one meeting per year over their life time to fulfill their terms of reference and develop a publication for the primary scientific literature, or a project proposal together with a detailed implementation plan, or a concrete action plan to be carried out within the framework of WESTPAC.

Looking back to move forward!

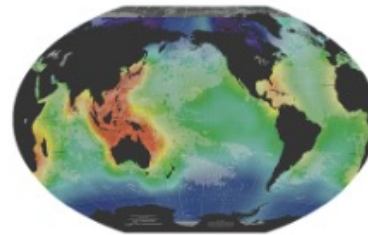
Major results of the 13th Session (27-29 April 2021, online, Bangladesh)



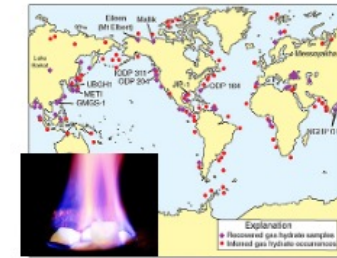
- WESTPAC current Working Groups



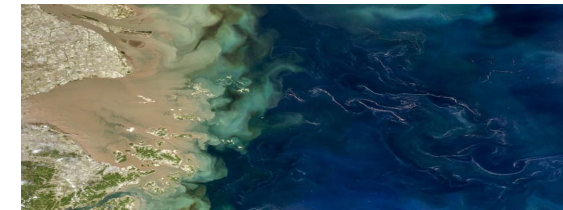
WG: Ocean Oxygen Network



WG: Indo-Pacific Convergent Center - Marine Ecosystem and Biodiversity (I3PCC-MEB)










WG: Gas hydrate study and methane flux



WG: Rapid detection technologies for harmful algal blooms

DECADE OUTCOMES

"THE OCEAN WE WANT"

-  **A clean ocean**
-  **A healthy & resilient ocean**
-  **A productive ocean**
-  **A predicted ocean**
-  **A safe ocean**
-  **An accessible ocean**
-  **An inspiring & engaging ocean**

WESTPAC KEY AREAS OF ACTIONS

- A: Ocean processes and climate change**
- B: Marine biodiversity and seafood safety and security**
- C: Ocean ecosystem health**
- D: Enhanced knowledge of emerging ocean science issues**
- Regional Network of Training and Research Centers (RTRCs) on Ocean Science**



WESTPAC PROGRAMMES/WORKING GROUPS

A 1: NEAR-GOOS	
A 2: MOMSEI (SEA-GOOS)	
A 3: OFS (SEA-GOOS)	
A 4: Ocean Acidification (SEA-GOOS)	
A 5: Air-Sea Interactions in the Kuroshio Extension	
A 6: Upwelling studies through data integration towards ocean health	
A 7: South China Sea Fluvial Sediment and its Environmental Changes	
A 8: Indo-Pacific Ocean Environmental Variations and Air-Sea Interactions	
A 9: 2 nd Cooperative Study of Kuroshio and adjacent region	
A 10: Asian Marginal Seas	
B 11: Coral Reef Conservation, Restoration and Resilience	
B 12: DNA taxonomy and recruitment monitoring	
B 13: Marine toxins and seafood safety	
B 14: Marine endangered species	
B 15: Harmful Algal Blooms	
C 16 : Ocean remote sensing for coastal habitat mapping	
C 17: Harmful jellyfish research and monitoring	
C 18: Marine microplastic research and monitoring	
C 19: Harmful algae blooms	
WG on Ocean Oxygen Network	
WG on Gas Hydrates and Methane Fluxes	
WG on RDT for HABs	
WG on Indo-Pacific Convergent Center	

Delivering knowledge for emerging ocean issues

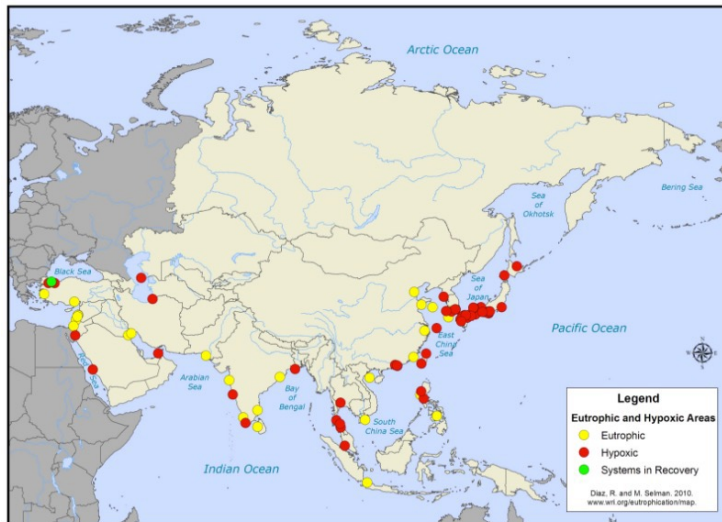


- **WG on Ocean Oxygen Network**



“The Ocean is Losing its Breath – and the WESTPAC region is particularly vulnerable”

Eutrophic and Hypoxic Coastal Areas of Asia



Updated sites (as of Jan 2023) in WESTPAC region that are hypoxic and/or eutrophic based on published papers. Almost 200 sites identified.

<http://www.wri.org/resources/maps/coastal-eutrophic-and-hypoxic-areas-asia>

IOC Sub-Commission for the Western Pacific (WESTPAC)
Advancing knowledge and cooperation for a healthy ocean and prosperous society

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Our Programme

Ocean Deoxygenation

What is the issue? Why is it important? What we do?

GO2NE
Global Ocean Oxygen Network

WEBINAR SERIES No. 17
Thursday, 8th December 2022, 14:00 – 15:00 CET

Moderator
Gil Jacinto, Marine Science Institute, University of the Philippines Diliman

Speakers
Lara Sotto, Marine Science Institute, University of the Philippines Diliman
Aileen Tan Shau Hwai, Centre For Marine & Coastal Studies, Universiti Sains Malaysia

Delivering knowledge for emerging ocean issues

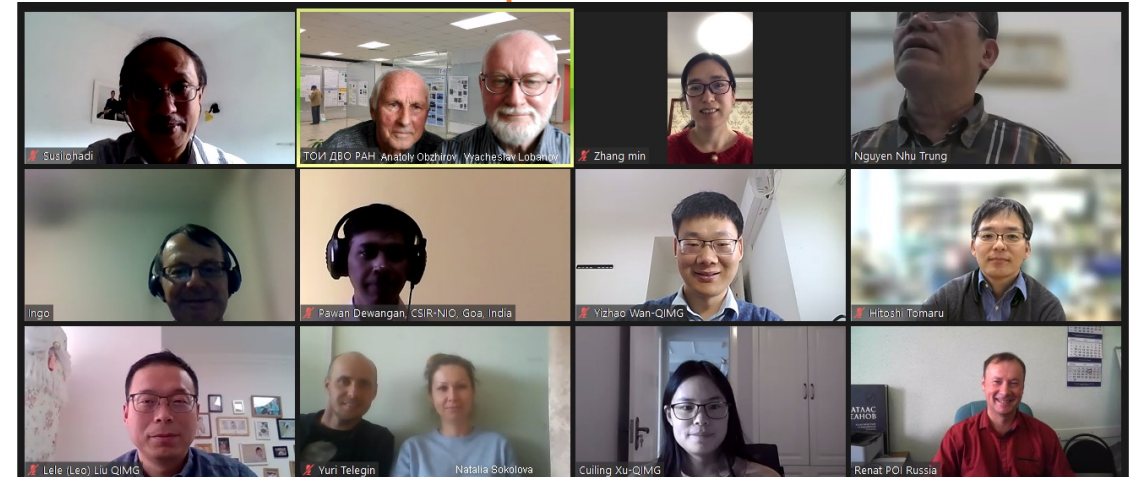


- **WG on gas hydrates and methane fluxes in the Indo-Pacific region and their impact on climate, ecosystem and socio-economic development**

Objective: to Prepare an international project to study gas hydrates and methane fluxes in the Indo-Pacific region and their impact on climate, ecosystem and socio-economic development

Workplan for 2023-2024

- 2nd CoSGas workshop, September, 2022 – presentation of national reports on related studies
- Development of the CoSGas Report on the status of the gas hydrates studies and associated phenomena in the WESTPAC countries – draft by Feb 1, 2023
- 3rd CoSGas workshop, Mar, 2023, and 4rd CoSGas workshop, Sept 2023: Discussion on main WG results and key items of the new project on Gas-hydrates and methane studies under WESTPAC .



- 1st CoSGas meeting, March 18, 2022, 15 participants: China, India, Indonesia, Japan, New Zealand, Russia, Vietnam
- 1st CoSGas workshop “Recent Advances and Current Challenges of Gas Hydrates and Methane Research in the Indo-Pacific Region”, May 17, 18 and 24, 2022, 12 participants: China, India, Indonesia, Japan, Russia, Vietnam

Delivering knowledge for emerging ocean issues



• WG on Integrated Investigation in Indo-Pacific Convergence Center: Marine Ecosystem and Biodiversity

Objective: Identify the priority issues on marine ecosystem and biodiversity research in the IPCC area from multi-circle and multi-disciplinary perspectives, which could address A Healthy and Resilient Ocean; Improve understandings on formation mechanism, current status, and trend of evolution of the biodiversity center in the IPCC and their socio-economic impacts.

Workplan for 2023-2024

- Organize several Co-design meetings to promote the I³PCC-MEB Programme and develop the Science Action Plan.
- Coordinate a I³PCC-MEB Side Event at the 4th Open Science Symposium on Western Pacific Ocean Circulation and Climate organized by NPOCE and engage more partners in Oct 2022.
- Organize International conference on Indonesian Throughflow (ITF) 2023 (Organizer: BRIN-RCO and IOCAS)
- Promote the communication and collaboration within the I³PCC-MEB framework



Organized two Scientific Committee meetings to identify the priority areas and common interests in the Indo-Pacific Convergent Center

Conducted a side event – “the Decade Action Incubator 8” at the UN Ocean Decade Regional Kickoff Conference for the Western Pacific and its adjacent areas

Delivering knowledge for emerging ocean issues



- WG on Rapid Detection Technology for Harmful Algal Blooms

Objective: to include, modify and apply the rapid detection technology for HABs based on molecular and remote sensing technique etc. So that a capability can be developed to detect the HABs at its earlier stage, and thus towards the early warning of HABs and its effective management.

Webinar:

Rapid Detection Technology for Harmful Algal Blooms (RDT-HAB)

Wednesday, 10 August, 14:00-17:30 Beijing time

This webinar aims to share the knowledge, exchange experience and up-to-date technologies studying HABs using the rapid detection technologies and further establish the communication network for the development of rapid detection techniques for HABs research and monitoring.

Speakers:

- Dr. **Chui-pin Leaw**, Institute of Ocean and Earth Sciences (IOES), University Malaya
- Dr. **Deo Florence Onda**, Marine Science Institute, University of the Philippines
- Dr. **Bangyi Tao**, Second Institute of Oceanography, Ministry of Natural Resources of the People's Republic of China
- Dr. **Pengbin Wang**, Fourth Institute of Oceanography, Ministry of Natural Resources of the People's Republic of China (Chair)

Register: hab@4io.org.cn