



Brief Report on Activities of Regional Education and Research Centre on Oceanography for West Asia (RCOWA) under the auspices of UNESCO

Iranian National Institute for Oceanography and
Atmospheric Science

June 2019

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Introduction

Following the agreement, signed between UNESCO and the Government of the Islamic Republic of Iran in January 2015, UNESCO Category 2 Regional Education and Research Centre on Oceanography for West Asia (RCOWA) was established under the auspices of the Iranian National Institute for Oceanography and Atmospheric Science (INIOAS).

The geographical region under the RCOWA responsibility covers the following 17 Member States: Pakistan, Iraq, Oman, Turkey, Indian, Qatar, Lebanon, Egypt, United Arab Emirates, Kuwait, Yemen, Bahrain, Saudi Arabia, Syria, Palestine, Jordan and Iran.

At present, the representatives of UNESCO, IR. of Iran, Oman, Iraq, Pakistan and India are members of the Centre Governing Board chaired by an expert from IR of Iran. UNESCO also nominated its representative in the Board.



RCOWA Activities (from the beginning of its activity - 2019)

From the beginning of its activity Regional Education and Research Centre on Oceanography for West Asia (RCOWA) under the auspices of UNESCO from the beginning of its activity has organized a few activities and among them: 2 Meetings of Governing Board, 4 workshops and an international conference. RCOWA also organized 3 events in cooperation cooperated with regional and international bodies in organizing 3 events including one workshop, one consultative meeting and an international UNESCO (IGG/IOTWMS XII) meeting took place in Kish Island, IR of Iran from 9-12 March 2019 preceded on the 8th of March by an Expert consultation on “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone” (a brief report is in Attachment 2)..

The list of the RCOWA activities from the beginning of its activity to 2019 is as follows:

- **First meeting of the Governing Board Regional Education and Research Center on Oceanography for West Asia (RCOWA) under the auspices of UNESCO, 17-18 July 2016**
- **First Workshop of Regional Education and Research Center on Oceanography for West Asia (RCOWA) under the auspices of UNESCO on "Fundamentals of Ocean Data Management", 5-7 March 2017**
- **"First International Conference on Oceanography for West Asia", 30-31 October 2017, Olympic Hotel, Tehran, IR. Iran**
- **Workshop on "The Ocean and Climate Change", 30 October 2017, Olympic Hotel, Tehran, IR. Iran**

- **Workshop on "A review of progress in satellite oceanography", led by Professor Stefano Vignudeli from the National Research Council (CNR), Italy, 30 October 2017, Olympic Hotel, Tehran, IR. Iran**
- **Second Session of the Governing Board Regional Education and Research Center on Oceanography for West Asia (RCOWA) under the auspices of UNESCO, 1 Nov 2017, Tehran, IR Iran**
- **Cooperation in: Training Course on “Modelling Aquatic Ecosystems with Ecopath, Ecosim and Ecospace” from 27-29 November 2017, Tehran, IR of Iran**
- **Cooperation in organizing "OceanTeacher Global Academy Training Course on: Marine Biogeographic Data processing using OBIS", 23 - 26 September 2018, Tehran, Iran (A brief report is attached-Attachment 1)**
- **Cooperation in 12th Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII) 9-12 March 2019 (A brief report is attached- -Attachment 2)**
- **Cooperation in Expert Consultation on “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone” 8 March 2019, Kish Island, Islamic Republic of Iran, 8 March 2019**
- **Ocean Acidification workshop: Developing regional capacity for ocean observations in support of SDG target 14.3, 8 – 9 June 2019, Tehran, Iran**

Attachment 1:

Report of "OceanTeacher Global Academy Training Course on: Marine Biogeographic Data processing using OBIS", 23 - 26 September 2018, Tehran, Iran

The "OceanTeacher Global Academy Training Course on: Marine Biogeographic Data processing using OBIS", was organized by the IODE- OceanTeacher Global Academy Center in Iran from 23 - 26 September 2018, in Tehran, Iran in cooperation with RCOWA under the auspices of UNESCO and the Iranian National Institute for Oceanography and Atmospheric Science. RCOWA contributed to organization of the workshop financially.

The course provided an introduction to the Ocean Biogeographic Information System (OBIS). This included best practices in marine biogeographic data management, data publication, data access, data analysis and data visualisation. With the numerous datasets were generated through various projects and some old data yet to be captured in the database, this training provided an opportunity to manage this wealth of scientific knowledge.

Course Instructors:

- [Keivan Kabiri](#)
- [Abdolvahab Magsoudlou](#)
- [Oleksandr Neprokin](#)
- [Hanieh Saeedi](#)

The training module was as follows:

- Install RStudio
- Install robis and obistools R packages
- Discover robis and obistools R package functions and features
- Reading data in R (txt, xlsx, DwC-A)
- Manipulating data in R
- Plotting data in R
- Mapping
- data in R



"OceanTeacher Global Academy Training Course on: Marine Biogeographic Data processing using OBIS", 23 - 26 September 2018, Tehran, Iran

Attachment 2:

Cooperation in holding Twelfth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII), 9–12 March 2019 and the Expert Consultation on “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone” 8 March 2019, Kish Island, Islamic Republic of Iran

Regional Education and Research Centre on Oceanography for West Asia (RCOWA) under the auspices of UNESCO supported holding the Twelfth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII) in Kish Island, Islamic Republic of Iran, 9–12 March 2019 and the Expert Consultation on “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone”, 8 March 2019. The events were held under the auspices of the IOC-UNESCO ICG/IOTWMS.

For more information about the ICG/IOTWMS XII, see the meeting website at: http://www.ioc-unesco.org/index.php?option=com_oe&task=viewEventDocs&eventID=2334

And for information about the Expert Consultation on “Scientific Tsunami Hazard Assessment of the Makran Subduction Zone” see:

http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewEventRecord&eventID=2385



Twelfth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XII), Kish Island, Islamic Republic of Iran, 9–12 March 2019

Attachment 3:

Report of "Ocean Acidification workshop: Developing regional capacity for ocean observations in support of SDG target 14.3", 8 – 9 June 2019, Tehran, IR. of Iran

In line with capacity building and regional strategy of the 2nd Session of RCOWA Governing Board, the "Ocean Acidification workshop: Developing regional capacity for ocean observations in support of SDG target 14.3" was held from 8 to 9 June 2019 in Tehran, IR. of Iran.

The Workshop supported by the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO), the Global Ocean Acidification Observing Network (GOA-ON) and the Iranian National Institute for Oceanography and Atmospheric Science.



Ocean Acidification workshop: Developing regional capacity for ocean observations, 8 – 9 June 2019, Tehran, IR. of Iran
Photo: Manoochehr Mohammadi

Four lecturers from Intergovernmental Oceanographic Commission of UNESCO and the Iranian National Institute for Oceanography and Atmospheric Science presented their lectures in the workshop. Twenty nine experts from Iran, Iraq and United Arab Emirate participated in the workshop.

Lecturers:

- Dr. Kirsten Isensee
Project Specialist - Ocean Carbon Sources and Sinks
Ocean Science Section
Intergovernmental Oceanographic Commission of UNESCO
- Dr. Katherina SCHOO
Consultant on Ocean Acidification
Intergovernmental Oceanographic Commission of UNESCO
- Dr Abolfazl Saleh,
Faculty Member & Head of Marine Geology & Physics Research Group of Ocean Science
Department of Iranian National Institute for Oceanography and Atmospheric Science
- Dr. Maryam Ghaemi
Faculty Member & Head of Persian Gulf (Bushehr) Research Station of Iranian National
Institute for Oceanography and Atmospheric Science

Executive Organizers:

- Fahimeh Foroughi,
Head of International Cooperation Office
Iranian National Institute for Oceanography and Atmospheric Science
- Zahra Nejad Fallah,
Scientific Cooperation Office
Iranian National Institute for Oceanography and Atmospheric Science

Ocean Acidification workshop: Developing regional capacity for ocean observations in support of SDG target 14.3

Workshop Agenda

8 – 9 June 2019

Day 1 – 8 June 2019

9:00	Welcome	RCOWA Official / Local Official
9:10	Introduction to the workshop: overview of the Agenda and expected outcomes	IOC-UNESCO (Kirsten Isensee & Local representative (tbc)
9:20	Tour de Table	Short introduction by everybody: Name, Organization, Country, Expertise
9:45	What is ocean acidification? Introduction to the threat of ocean acidification to ocean health and resources	IOC-UNESCO
10:30	Break	
10:45	SDG 14.3 – Ocean acidification in the framework of the UN 2030 Agenda and the role of national statistical agencies as well as National Oceanographic Data Centres	Kirsten Isensee (IOC-UNESCO)
11:30	Inorganic carbon chemistry in coral reefs and rocky intertidal shores of the northern Persian Gulf: implication for ocean acidification studies	Dr. Saleh
12:00	Mangrove and coastal acidification, case study: Mangrove ecosystems on the northern coasts of the Persian Gulf	Dr. Ghaemi
12:30	Carbonate chemistry of the Persian Gulf and Gulf of Oman (results of Cruise PGE1803, Sep. 2018)	Dr. Saleh
13:00	Lunch break	
14:00	Other regional and global ocean acidification science and observation networks – Science cooperation to address policy demands and best practices	Local representatives, Katherina Schoo, Kirsten Isensee (IOC-UNESCO)
14:30	Interactive Afternoon Short presentations by participants Discussion questions: What are key regional concerns related to OA? Can you address 14.3? What is missing to observe ocean acidification? Do you have access to equipment and trained experts? Do you use open access data centres? What is necessary increase regional and international collaboration?	Local scientists and stakeholders
17:30	Wrap up	

Day 2 – 9 June 2019

9:00	Technical capacity– what do we need to measure and how?, including introduction to the GOA-ON in a box	IOC-UNESCO
10:00	Ocean Acidification measurement resources: Presentation of e.g. GOA-ON data portal and Pier2Peer, IAEA resources, status of SDG indicator 14.3.1 online resources and others	Katherina Schoo (IOC-UNESCO)
10:30	Break	
11:00	Interactive Session in Breakout Groups (by specialty and/or subregion) Drafting of a Roadmap: Steps needed to implement a sustained ocean acidification observing network and related science activities in the West Asia Region to achieve target 14.3 by 2030. Questions to focus on: <ul style="list-style-type: none">• What existing capacity does your country/region have?• What additional resources does your country/region need?• Monitoring impact – what experimental facilities and OA research programmes do you have?• What partnerships need to be developed?• How can GOA-ON, IOC, IAEA, GOOS and other entities facilitate this work?• How will this work address SDG 14.3? What steps need to be taken to ensure this happens by 2030?	Keeping in mind the results from the discussions on day 1 Consider the roles of international and intergovernmental entities like GOA-ON, IOC, IAEA, GOOS, and how they can facilitate this
12:30	Lunch break	
14:00	Interactive Session – continued	
15:30	Break	
16:00	Presentations of breakout group findings and results	Lead from each group
17:00	Summary and steps forward – what next?	Kirsten Isensee & RCOWA Secretariat
17:45	Closing	

Ocean Acidification workshop: Developing regional capacity for ocean observations
8 – 9 June 2019
List of Participants

	Name	Email	Institution
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