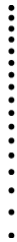


Intergovernmental Oceanographic Commission

Workshop Report No. 264



Research Directors' Forum

A Healthy and Safe Ocean for Prosperity in the Indo-Pacific region

Nha Trang, Vietnam
22 April 2014

WESTPAC 9th International Scientific Symposium,
Nha Trang, Vietnam, 22–25 April 2014



UNESCO

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Abstract

With a view to furthering sustained observations for improved services to the Indo-Pacific societies, the objectives of the forum were to:

- serve as an open-ended platform for directors from marine scientific institutes, academic faculties and/or operational agencies in the Indo-Pacific;
- build and enhance networks; exchange strategic directions of their institutions;
- identify scientific and technical challenges; and
- spark regional actions for future collaborations by exploring any opportunity of synergizing existing and planned observations through the emerging Indo-Pacific Ocean Observations & Services Network (IPON)

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- IV. LIST OF PARTICIPANTS
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EXECUTIVE SUMMARY

The Research Directors' Forum, as an integral part of the 9th WESTPAC International Scientific Symposium, was held in Nha Trang, 22 April 2014. Serving as an open-ended platform for directors from marine scientific institutes, academic faculties and/or operational agencies in the Indo-Pacific, the Forum aims to build and enhance networks; exchange strategic directions of their institutions; identify scientific and technical challenges; and spark regional actions in the framework of IOC for future collaborations by exploring any opportunity of synergizing existing and planned observations, and furthering operational oceanography through the emerging Indo-Pacific Ocean Observations and Services Network (IPON). To this end, directors are also expected to consider the feasibility of establishing an appropriate scientific mechanism, i.e. Scientific Steering Committee (Group of Experts), to further propel the development of the Network in question.

Close to fifty research directors, representatives and regional experts in the Indo-Pacific met at the Forum. The Forum culminated in the adoption and signing of one Joint Statement of Research Directors towards the attainment of the future we want: "A Healthy and Safe Ocean for Prosperity in the Indo-Pacific Region", calling for the following:

- urgent action to establish the Indo-Pacific Ocean Observations and Services Network (IPON);
- creation of the Scientific Steering Committee for Indo-Pacific Ocean Observations and Services Network (SC-IPON) as an arm to guide the development of IPON;
- heightened recognition from IOC/UNESCO Member States, regional leadership and policy decision makers on the need to establish IPON;
- marine scientific communities to undertake further research on, and sustained observations of, the ocean processes and climate, earth dynamics, and the impacts of climate change and anthropogenic activities on vulnerable marine biodiversity and ecosystems;
- continued support for GOOS and other IOC Subsidiary Bodies, and active engagement in, the development of sustained, integrated and multi-purpose observation and information system on ocean processes, earth dynamics and marine ecosystems for improved services to the Indo-Pacific societies through the development of IPON;
- increased assistance to developing nations in the Indo-Pacific region, including Small Island Developing States (SIDS);
- enhanced efforts in capacity building in developing nations in the Indo-Pacific region, in particular through the development of technical assistance programs and materialization of the "IOC Regional Network of Training and Research Centres on Marine Science".

1. INTRODUCTORY REMARKS

The Research Directors' Forum, serving as an open-ended platform for Directors from marine scientific institutes, academic faculties and/or operational agencies in the Indo-Pacific, aims to build and enhance networks; exchange strategic directions of their institutions; identify scientific and technical challenges; and spark regional actions in the framework of IOC for future collaborations by exploring any opportunity of synergizing existing and planned observations, and furthering operational oceanography through the emerging Indo-Pacific Ocean Observations Network (IPON). To this end, directors may consider the feasibility of establishing an appropriate scientific mechanism, i.e. Scientific Steering Committee (Group of Experts), to further propel the development of the Network in question.

This Forum took place on 22 April 2014 as an integral part of the 9th WESTPAC International Scientific Symposium, organized by the IOC Sub-Commission for the Western Pacific (WESTPAC), through a group of conveners consisting of Dr Dosoo Jang from the Korea Institute of Ocean Science and Technology, Dr Yutaka Michida from the University of Tokyo, and Mr Wenxi Zhu from WESTPAC Office, and the kind hosting of the Institute of Oceanography, Vietnam Academy of Science and Technology (VAST), Vietnam.

Mr Wenxi Zhu opened the Forum by briefing on the expected outcomes of this Forum. He drew particular attention of participants to two important working documents, namely the Joint Statement of Research Directors and the Concept Paper on the Establishment of the Scientific Steering Committee for the Indo-Pacific Ocean Observations Network (SC-IPON), which were revised with due consideration of all comments received before the Forum. The Forum was expected to examine and adopt, if possible, the Joint Statement of Research Directors, and to provide further inputs to the Concept Paper on SC-IPON for future improvement.

On behalf of the conveners group, Dr Yutaka Michida welcomed all participants to this important event. He expressed his condolence over the great loss of lives in the Sewol Ferry capsized in the coastal water of the Republic of Korea. Recalling the establishment history of WESTPAC, he emphasized the essential role of WESTPAC in the promotion of international cooperation on marine scientific research, observations, services and capacity building in the Western Pacific and its adjacent regions. On the occasion of the 25th Anniversary of WESTPAC, he highlighted the timeliness to organize this Forum, and further expected that all directors, representatives, and regional experts could actively engage in discussions and contribute to the future development of sustained observations and services for the benefit of Indo-Pacific societies.

Dr Wendy Watson-Wright, Executive Secretary of IOC congratulated WESTPAC on taking this initiative by bringing together research directors and regional leading scientists, either from developed countries or from developing countries in the region, to exchange strategic directions, identify scientific and technical challenges, and spark concrete actions. She underscored the importance of marine scientific research, sustained observations and services to sustain human livelihoods and countries' social and economic development in the region. At a time when we are facing far greater challenges, and the human impact on the ocean is growing exponentially, there are ever-increasing demands on IOC's leadership for ocean observations and knowledge against its diminishing resources, Dr Watson-Wright called for increased engagement of partners into the common undertakings towards the attainment of the future we want "A Healthy Ocean for Prosperity".

2. SELF-INTRODUCTION OF THE PARTICIPANTS

All participants were invited to give self-introduction for the meeting. The list of participants is attached as [Annex IV](#) to this report.

3. ADOPTION OF AGENDA

Dr Michida invited Mr Zhu to introduce the tentative agenda, and invited participants to provide comments on it.

It was suggested that general discussions be conducted first on the Concept Paper on the Establishment of the Scientific Steering Committee for the Indo-Pacific Ocean Observations Network (SC-IPON), instead of the Joint Statement of Research Directors, with understanding that the Concept Paper was expected to be further revised and submitted for approval at the 10th Session of WESTPAC in early 2015. This approach may be of help for directors to gain an overview of IPON and SC-IPON first, and lead to the final adoption of the Joint Statement at this Forum.

The Forum agreed to this suggestion, and adopted the revised Agenda, which is attached as [Annex I](#) to this report.

4. INTRODUCTION TO RESEARCH DIRECTORS' FORUM

Dr Dosoo Jang provided a brief introduction to this Research Directors' Forum. In view of the essential role of the coasts and ocean in the Indo-Pacific region and ever-increasing challenges facing the region in sustaining human lives, he stressed the importance of sustained ocean observations and improved service underpinning the sustainability of coastal and marine biodiversity and resources.

He pointed out that despite tremendous efforts made over the last two decades, our knowledge about the Indo-Pacific, its marine biodiversity, and its role in climate change and variability still remains limited mainly due to the lack of integrated multi-disciplinary research, and adequate sustained observations in a seamless manner. He then invited all research directors, representatives and regional experts to actively participate in discussions toward building consensus on the need for the Indo-Pacific Ocean Observations Network (IPON) through the adoption of the Joint Statement of Research Directors at the Forum. He also emphasized the positive impacts that IPON would generate, and encourage all to assist in the establishment of most appropriate working mechanisms, including the proposed Scientific Steering Committee, for the development and implementation of IPON in the near future.

5. SCIENTIFIC CHALLENGES

Three experts were invited to introduce key scientific issues/challenges in relation to ocean and climate, marine biodiversity and food security in the Indo-Pacific region, and recent efforts of IOC and its WESTPAC in the promotion and development of sustained observations and services in this region.

Dr Fangli Qiao from the First Institute of Oceanography, State Oceanic Administration of China, presented key scientific challenges in relation to ocean and climate in the Indo-Pacific region. While highlighting the importance of the Indo-Pacific in the Asian monsoon system, typhoon generation and development, and the global ocean conveyor belt, he explained that, the knowledge and forecasting capability on ocean dynamics and regional climate system in the Indo-Pacific remains quite limited due to lack of sustained, integrated observations in the Indo-Pacific region. In this regard, he further suggested that an

appropriate mechanism be established under the framework of WESTPAC towards integrated observations and data sharing among countries in the Indo-Pacific region, and that cutting edge ocean/climate models be jointly developed with improved services to be provided to the public in the Indo-Pacific region.

He briefed on China's present efforts to enhance the knowledge on the role of Indo-Pacific in global climate change and air-sea interaction, and the China-US Joint Program on the Indian-Southern Oceans Climatic Observation, Reanalysis and Prediction (ISOCORE). He concluded that it is timely to initiate the Forum by WESTPAC, and expressed the strong willingness of his institute to cooperate with all on joint observations, model development and ocean services as contributions towards the future of IPON.

Dr Zainal Arifin, Research Centre for Oceanography of Indonesian Institute of Sciences (RCO/LIPI), outlined key issues/challenges in relation to marine biodiversity, seafood security and health of ocean ecosystems in the Indo-Pacific region. The rapid growth of global population and new advancements in information and communications technology are resulting in ever-increasing demands for food and other natural resources. He presented three key challenges facing the Indo-Pacific in order to achieve the food security and healthy ocean ecosystems, namely, unsustainable fishing, pollution and wastes, and climate change and ocean acidification. To address those challenges, he suggested four collective actions be taken: reduce stressor and restore structure and function of marine systems; catalyse policy, legal and institutional reform for effective ocean governance; support the blue (or green) economy; and intensify marine scientific research and sustained observations in support of the health of ocean ecosystems.

Dr Sang-Kyung Byun, Chairman of IOC, briefed the participants on the recent efforts made in the promotion of sustained observations and services in the Indo-Pacific region. He introduced the outcome of the Indo-Pacific Ocean Forum entitled "Charting the Future of Sustained Ocean Observations and Services" held in Bangkok, Thailand, 25–28 November 2013. This Forum aimed to take stock of the major achievements of WESTPAC in ocean observations and services, build and enhance networks, and facilitate future collaboration with a view to furthering operational oceanography for improved services to the Indo-Pacific societies.

The Forum concluded that IOC had a need to respond to the issue of operational oceanography in a substantive manner. The Forum offered advice to move IOC forward: (i) become an advocate for operational oceanography at the global level; (ii) enhance recognition by governmental decision makers in the value of operational oceanography; (iii) rely upon the IOC regional subsidiary bodies as viable vehicle to promote operational oceanography regionally; (iv) take advantage of the opportunity to use operational oceanography to link global programmes to regions and enhance cooperation among Member States; (v) encourage WESTPAC, in the light of its achievement over the past 25 years, to strengthen and/or enhance its efforts in the development of operational oceanography and associated capacity building activities in the Indo-Pacific region.

6. REMARKS AND VIEWS ON THE CONCEPT PAPER ON SC-IPON AND THE JOINT STATEMENT OF RESEARCH DIRECTORS

All directors, representatives and regional experts were invited to provide comments on the Concept Paper on SC-IPON and the Joint Statement of Research Directors.

Recognizing the critical role of the Indo-Pacific in global and regional climate and earth system, and its vast social and economic importance, the Forum voiced their concerns over the unprecedented pressures and threats, posed by climate change and anthropogenic stresses, to the health of marine ecosystems in the Indo-Pacific region.

Having discussed scientific challenges towards the attainment of the *Future We Want* “A Healthy and Safe Ocean for Prosperity in the Indo-Pacific Region”, the Forum underscored the importance of coordinated, concerted, comprehensive and sustained observations and services in the Indo-Pacific for sharing the wealth of ocean to benefit all. The Concept Paper on SC-IPON represents a positive step forward.

The Forum expressed its appreciation for the tremendous efforts of IOC/UNESCO, and particularly its WESTPAC, in building the capacity of developing nations in the Indo-Pacific region for marine research, sustained observations and service, and unanimously agreed on the need for the establishment of Indo-Pacific Ocean Observations Network (IPON), and the creation of one Scientific Steering Committee in the framework of WESTPAC as an arm to guide the development of IPON, promote and enhance IPON in the Indo-Pacific region. Many institutes at the Forum expressed their strong willingness to join the development of IPON.

To further improve the Concept Paper on SC-IPON, several salient points were raised and summarized below:

- Key issues to be addressed in the Indo-Pacific region need to be prioritized when the SC-IPON, after its establishment, formulates the IPON strategy;
- An appropriate term of services for SC-IPON might be necessarily specified in its Terms of Reference;
- A phased approach should be applied to the development of IPON;
- Due regard should be given to building capacity for local experts and young scientists;
- Experience from earlier initiatives such as RAMA (Indian Ocean), TAO/TRITON (Pacific) and PIRATA (Atlantic) should be drawn on in the development of IPON;
- IPON should be widely advocated not only at the international and regional level, but, more importantly, at national levels to leverage support from national competent agencies.

The draft Concept Paper on SC-IPON is attached as [Annex III](#) to this report for further review and recommendations.

7. ADOPTION OF THE JOINT STATEMENT OF RESEARCH DIRECTORS

Following the agreement on the need for IPON, several specific suggestions were made for revisions to the draft Joint Statement. The Forum further examined and adopted by acclamation the Joint Statement with revisions made as follows,

- Modification of “Indo-Pacific Ocean Observations Network (IPON)” as “Indo-Pacific Ocean Observations and Services Network (IPON)”;
- Insertion of one separate paragraph on IOC High-Level Objectives for 2014–2021 into the first part of the Statement, after the paragraph “Recognizing...”;
- Insertion of “and furthering operational oceanography” into the first paragraph, after the clause “...by exploring any opportunity of synergizing existing and planned observations and services,”;
- Insertion of “GOOS and other IOC Subsidiary Bodies” into paragraph 7 of the part on Call for the following, after the clause “Continued support for...”;
- Insertion of “concerns over” into the first part of the Statement, after the clause “Mindful of...”

A signing ceremony was held on the morning of 23 April 2014. The signing ceremony was witnessed by all participants in the plenary session of 9th WESTPAC International Scientific Symposium with a total of eighteen research directors in the Indo-Pacific region signed the Joint Statement, which is attached as [Annex II](#) to this report.

8. OTHER MATTERS

Clarification was sought with regard to the timeline for the creation of SC-IPON and establishment of IPON. Dr Jang explained that immediate actions would be taken to further improve the Concept Paper on SC-IPON with full consideration of all comments and suggestions received from this Forum. The revised Concept Paper, together with the adopted Joint Statement of Research Directors, will be submitted for approval to the 10th Intergovernmental Session of WESTPAC, scheduled for early 2015. To this end, he further encouraged all directors, representatives and regional experts to bring this initiative to the attention of their national delegation to IOC and WESTPAC in order to seek their understanding in advance of the upcoming endorsement processes at the IOC and WESTPAC sessions, and leverage technical and financial support in the future development of IPON.

9. CLOSURE

The conveners group expressed thanks to all directors, representatives, and regional experts for their constructive suggestions and high spirit of cooperation reflected throughout the Forum, which ensured the success of the Forum.

All participants expressed their sincere appreciation once again to the Institute of Oceanography, Vietnam Academy of Science and Technology for their gracious hosting of the Research Directors' Forum and the excellent arrangements provided in Nha Trang.

The Research Directors Forum was declared closed at 1800 hours on Tuesday, 22 April 2014.

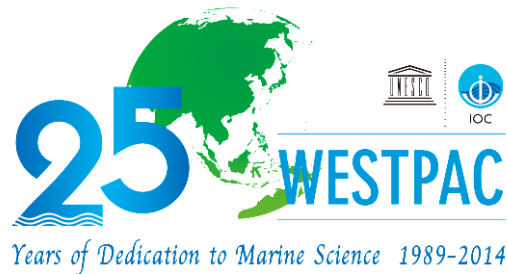
ANNEX I

AGENDA

- 13:10 - 13:30 **REGISTRATION**
- 13:30 - 14:00 **INTRODUCTORY REMARKS** (Lead Convener: Wenxi Zhu)
- 13:30 Welcome by Yutaka Michida on behalf of the Conveners Group
- 13:35 Welcome by UNESCO/IOC Executive Secretary Wendy Watson-Wright
- 13:40 Self-introduction of the participants
- 13:45 Adoption of agenda
- 13:50 Introduction to Research Directors' Forum by Co-Convener Dosoo Jang
- 14:00 - 14:40 **SCIENTIFIC CHALLENGES** (Lead Convener: Yutaka Michida)
- 14:00 Key scientific issues/challenges in relation to ocean processes and climate by Fangli Qiao, First Institute of Oceanography of SOA
- 14:15 Key issues/challenges in relation to marine biodiversity, seafood security and health of ocean ecosystems by Zainal Arifin, Research Center for Oceanography of LIPI
- 14:30 Recommendations of the Indo-Pacific Ocean Forum entitled "Charting the future of sustained observations and services in the Indo-Pacific region" (Bangkok, 25-28 November 2013) by IOC Chairman Sang-Kyung Byun
- 14:40 - 15:30 **REMARKS AND VIEW ON THE CONCEPT PAPER ON SC-IPON & THE JOINT STATEMENT OF RESEARCH DIRECTORS** (Lead Convener: Dosoo Jang)
- 15:30 - 15:50 **GROUP PHOTO & NETWORKING COFFEE BREAK**
- 15:50 - 17:20 **REMARKS AND VIEW ON THE CONCEPT PAPER ON SC-IPON & THE JOINT STATEMENT OF RESEARCH DIRECTORS (CONT'D)**
- 17:20 - 17:30 **ADOPTION OF THE JOINT STATEMENT OF RESEARCH DIRECTORS** (Lead Convener: Wenxi Zhu)
- 17:30 - 17:50 **OTHER MATTERS**
- 17:50 - 18:00 **SUMMARY & CLOSING REMARKS BY CO-CONVENERS**
- 18:00 **CLOSURE**
- 18:30 **JOIN SYMPOSIUM WELCOME RECEPTION**

ANNEX II

JOINT STATEMENT OF THE RESEARCH DIRECTORS



Research Directors' Forum
at the WESTPAC 9th International Scientific Symposium

22 April 2014
Nha Trang, Vietnam

The goal of the Research Directors' Forum is to serve as one open-ended platform for Directors from marine scientific institutes, academic faculties and operational agencies in the Indo-Pacific region to build and enhance networks; exchange strategic directions of their institutions; identify scientific and technical challenges; and spark regional actions in the framework of the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) for future collaboration by exploring any opportunity of synergizing existing and planned observations and services, and furthering operational oceanography through a coordinated scientific network in the Indo-Pacific region. This goal can only be met if effective action for furthering sustained observations is implemented in a timely manner to improve services for the Indo-Pacific societies.

We, Directors of marine scientific institutes and marine experts in the Indo-Pacific region (see the participants' list in appendix), met on 22 April 2014 in Nha Trang, Socialist Republic of Vietnam during the 9th WESTPAC International Scientific Symposium under the theme of “**A Healthy Ocean towards the Prosperity in the Western Pacific: Scientific Challenges and Possible Solutions**”;

Recognizing the critical role and importance of the ocean, seas and coastal areas of the Indo-Pacific region which constitutes one major influence on regional and global climate system, the epicentre of the world marine biodiversity, spawning and nursery grounds for diverse marine species, a potential reservoir of non-living resources, and major maritime shipping routes;

Recognizing further the IOC's High-Level Objectives for 2014–2021, namely healthy ocean ecosystems, early warning for ocean hazards, resiliency to climate change and variability, and enhanced knowledge of emerging ocean science issues;

Considering that the Indo-Pacific region contains close to half the world's population, possessing vast social and economic importance with over 70% of its total population living in coastal areas and relying economically on these ocean, seas and coastal areas;

Mindful of concerns over the pressures and threats to the health of marine ecosystems in the Indo-Pacific region, such as depletion of resources, marine pollutions, degradation of coastal habitats, and ocean acidification as well as the role of the Indo-Pacific regarding monsoons, droughts, typhoons/extreme weather events, and regional climate variability;

Emphasizing the essential role of IOC and its Sub-Commission for the Western Pacific (WESTPAC) in the promotion of international cooperation on marine scientific research, observations and services, and capacity building in the Indo-Pacific region; and

Having discussed the scientific challenges towards the attainment of the future we want: “**A Healthy and Safe Ocean for Prosperity in the Indo-Pacific region**”, we

Acknowledge the following:

1. Despite tremendous efforts made over the last decades, our knowledge about the Indo-Pacific, its marine biodiversity, and its role in climate change and variability still remains limited mainly due to the lack of integrated multi-disciplinary research, and adequate sustained observations in a seamless manner from the local to basin scale.
2. It is essential to foster cooperation among marine scientific institutes, academic faculties, and/or national operational agencies in the Indo-Pacific region, and hence to promote broad campaign with a goal of consolidating our scientific understanding on the critical oceanic processes from the coast to open ocean, from tropics to high-latitude areas, and on the ocean’s interaction with atmosphere and solid Earth.

Call for the following:

3. Urgent action to establish the Indo-Pacific Ocean Observations and Services Network (IPON) in the framework of IOC Sub-Commission for the Western Pacific (WESTPAC), realizing a future wherein decisions and actions for the benefit of the Indo-Pacific region are achieved by coordinated, concerted, comprehensive and sustained observations, and services including data and information, forecasting, etc.;
4. Creation of the Scientific Steering Committee for Indo-Pacific Ocean Observations and Services Network (SC-IPON) as an arm to guide the development of IPON, promote and enhance IPON among participants in the Indo-Pacific region in order to understand Indo-Pacific oceanic processes and their complex interactions with atmosphere, biosphere, lithosphere and humans, deliver benefits of ocean observations and services to the Indo-Pacific societies, and ensure marine biodiversity, food security, maritime safety and reduced vulnerability to ocean-related disasters in the region;
5. Heightened recognition from IOC/UNESCO Member States, regional leadership and policy decision makers on the need to establish IPON, which will contribute to underpinning the sustainable development in the region by providing the integrated oceanic information, forecasting and other services;
6. Marine scientific communities to undertake further research on, and sustained observations of, the ocean processes and climate, earth dynamics, and the impacts of climate change and anthropogenic activities on vulnerable marine biodiversity and ecosystems;

7. Continued support for GOOS and other IOC Subsidiary Bodies, and active engagement in, the development of sustained, integrated and multi-purpose observation and information system on ocean processes, earth dynamics and marine ecosystems for improved services to the Indo-Pacific societies through the development of the IPON;
8. Increased assistance to developing nations in the Indo-Pacific region, including Small Island Developing States (SIDS), to continue cultivating marine science talent, developing sustained observations and relevant infrastructure, and sharing the knowledge and data through capacity development activities;
9. Enhanced efforts in capacity building in developing nations in the Indo-Pacific region, in particular through the development of technical assistance programmes and materialization of the “IOC Regional Network of Training and Research Centres on Marine Science”.

Express our appreciation for the following:

10. The tremendous efforts of IOC/UNESCO, and particularly its WESTPAC, in building the capacity of developing nations, in the Indo-Pacific region for marine research, sustained observations and service underpinning the sustainability of ocean and coastal resources; and
11. The gracious hosting of the Research Directors’ Forum by the Institute of Oceanography of the Vietnam Academy of Science and Technology, and the excellent arrangements that have been provided in Nha Trang.

ANNEX III

**CALL FOR SUGGESTIONS: DRAFT CONCEPT PAPER ON THE SCIENTIFIC STEERING
COMMITTEE FOR THE INDO-PACIFIC OCEAN OBSERVATIONS AND SERVICES
NETWORK (SC-IPON)**

CALL FOR SUGGESTIONS

**Conceptualizing an Initiation towards
the Establishment of the Scientific Steering Committee for Indo-Pacific Ocean
Observations and Services Network (SC-IPON)**



Concept Paper

for the Research Directors' Forum
22 April 2014, Nha Trang, Vietnam

**at the WESTPAC 9th International Scientific Symposium
22–25 April 2014**

A CALL FOR ACTION

For Conceptualizing an Initiation towards the Establishment of the Scientific Steering Committee for Indo-Pacific Ocean Observations and Services Network (SC-IPON)

Preamble

The Indo-Pacific region spans over both the largest monsoon domain and the largest trade wind domain of tropical latitudes, being universally recognized as a major driver of the global climate system and helps shape the regional climate.

The Indo-Pacific region hosts the highest concentration of marine biodiversity and endemism in the world, serving as the epicentre of marine life abundance and diversity on the planet with more than 75% of all known coral species, 50% of the world's coral reefs, 3,000 fish species and a greater extent of mangrove forests than any other region in the world.

As a tackle, nevertheless, the Indo-Pacific region contains close to half the world's population, possessing vast social and economic importance with over 70% of its total population living in and relying economically on these coastal areas. The rapid coastal population growth and economic development are threatening the region's rich yet limited marine and coastal resources as a result of unsustainable fishing practices, discharge of marine pollutants, drifting marine debris, and others. The climate change such as extreme weather events, rising sea-levels, and ocean acidification further load challenges on sustaining human life and ocean ecosystems. The Indo-Pacific region is one of the most seismically active zones of the earth with frequent volcanic eruptions and frequent earthquake shocks. Some undersea earthquakes and volcanic eruptions could trigger tsunamis and other associated disasters, resulting in massive loss of human lives and properties.

Despite tremendous efforts made over the last decades, our knowledge about the Indo-Pacific Ocean, its biodiversity, and its role in climate change and variability still remains low mainly due to the lack of integrated multi-disciplinary research, and adequate sustained observations in a seamless manner from the local to basin scale. It is essential to foster cooperation among marine scientific institutes, academic faculties, and/or national operational agencies, and hence to promote broad campaign with target of consolidating our scientific understanding of the critical oceanic processes from the coast to open ocean, from tropics to high-latitude areas, and the ocean's interaction with atmosphere and solid earth.

Purpose of 'A Call for Action'

With a view to furthering sustained observations for improved services to the Indo-Pacific societies, and on the occasion of the 25th Anniversary of the IOC Sub-Commission for the Western Pacific (WESTPAC), the Sub-Commission would like to call for marine scientific institutes, academic faculties, and/or operational agencies in the Indo-Pacific region to build and enhance networks, exchange their strategic directions, identify scientific and technical challenges, and spark regional actions in the framework of IOC for future collaborations by exploring any opportunity of synergizing existing and planned observations through the emerging Indo-Pacific Ocean Observations and services Network (IPON), and considering the feasibility of establishing an appropriate scientific mechanism, i.e. Scientific Steering Committee (Group of Experts), to further propel the development of the Network in question (SC-IPON).

This collaboration may take place in the concerted context of both global programmes (i.e., Global Ocean Observing System (GOOS), IOC International Oceanographic Data and Information Exchange (IODE), and Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology (JCOMM)) and regional programmes (GOOS Regional Alliances (NEAR-GOOS¹, SEAGOOS², IOGOOS³, etc.), TAO-TRITON⁴ Buoy Arrays, RAMA⁵ Buoy Arrays, NPOCE⁶, GAIA⁷, POSEIDON⁸, ITF⁹, IOTWS¹⁰ and others).

Proposed Vision for the Indo-Pacific Ocean Observations and Services Network (IPON)

The vision for IPON is to realize a future wherein decisions and actions for the benefit of the Indo-Pacific region are achieved by coordinated, concerted, comprehensive and sustained observations, and services including data and information, forecasting, etc.

Proposed Mission for SC-IPON

The Mission for SC-IPON is to consolidate the in-depth understanding of our Indo-Pacific through a series of coordinated, integrated, and sustained observations and research campaigns. The knowledge-based planning and implementation of the sustained Indo-Pacific ocean observing systems underpin the sustainable development in the region through providing the integrated oceanic information and forecasting service.

Objective of SC-IPON

The objective of SC-IPON is to promote and enhance the coordination and cooperation among institutions in the Indo-Pacific region in the development of Indo-Pacific Ocean Observations and Services Network (IPON) in order to reveal the Indo-Pacific oceanic processes and their complex interactions with atmosphere, biosphere, lithosphere, and humans; and to deliver benefits of ocean observations and services to the Indo-Pacific societies, such as the reduction of loss of life and property from natural disasters, protection of human health and well-being, improvement of weather prediction, and sustained conservation of marine biodiversity and ecosystems.

SC-IPON should endeavour to address the following research priority areas in an integrated way, identified by the WESTPAC Advisory Group (ref.: IOC/SC-WESTPAC-Advisory Group 2013) and initiated by previous WESTPAC Officers at its first meeting in 2008. WESTPAC aims to identify the most compelling regional issues and improve understandings in the key areas of: 1) the role of the Indo-Pacific in climate change and

¹ North East Asian Regional Global Ocean Observing System

² South East Asian Global Ocean Observing System

³ Indian Ocean Global Ocean Observing System

⁴ Tropical Atmosphere Ocean/Triangle Trans-Ocean Buoy Network

⁵ Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction

⁶ Northwestern Pacific Ocean Circulation and Climate Experiment

⁷ Western Pacific Equatorial Time Series Observation

⁸ Northwestern Pacific Ocean Study on Environment and Interactions between Deep Ocean and Marginal Seas

⁹ Indonesian Through Flow

¹⁰ Indian Ocean Tsunami Warning and Mitigation System

variability; 2) ensuring marine biodiversity and food security; 3) the health of ocean ecosystems and its sustainability; and 4) ocean-related disaster risk reduction

Expected Impacts of IPON

- Recognition by governmental decision-makers of the value of sustained observations, and services;
- Development of a shared knowledge base, including scientific and technical publications, technical manuals, standards, and publicity materials;
- Improvement of climate prediction and ocean forecast capabilities;
- Strengthened and enhanced inter-basin cooperation, particularly in the Indo-Pacific region;
- Ship-time sharing among research institutes;
- Transfer of technology and knowledge and data sharing through capacity development activities; and
- Development of young science leaders.

Establishment of SC-IPON

Composition

SC-IPON should be comprised of experts nominated by institutions willing to participate in the development of the Indo-Pacific Ocean Observation Network, appointed by the IOC Sub-Commission for the Western Pacific (WESTPAC).

The Committee shall elect a Chairperson and Vice-chairperson(s) among the members. The Committee shall meet in regular annual sessions at the expense of the participating institutions as much as possible. Other appropriately affiliated organizations can attend the sessions as observers.

Generic Terms of Reference:

- develop the Indo-Pacific ocean observing strategy and its implementation plan, for approval of the IOC Sub-Commission for the Western Pacific (WESTPAC), by synergizing the present various observations/programmes, identifying and bridging the gap between present observations and the economic, social and environment protection needs;
- promote, facilitate and coordinate the development and implementation of the Indo-Pacific Ocean observing strategy among various participating institutes, international programmes, and agencies;
- promote and coordinate the development and implementation of ocean and climate forecasting system(s) especially for the Indo-Pacific region;
- facilitate and coordinate outreach, education, training, research, and communication related to the Indo-Pacific Ocean Observation Network;
- identify the capacity building needs for the development of sustained ocean observations and services in the region, and undertake relevant capacity building activities;

- develop a shared knowledge base, collect and analyse research results, presenting periodically at ad-hoc workshops and/or a series of the WESTPAC International Scientific Symposia;
- promote the sharing of ship-time among participating institutions, and shared use of infrastructures

Funding

The total cost for operating SC-IPON will be significant. Most of the resources will be provided through existing national and international mechanisms, and by voluntary contributions to special projects.

Unless otherwise agreed, any costs arising from the operation of SC-IPON activities will be borne, on a basis of voluntary financial contribution, by the Member or Participating Organization that incurs. But such activities will be subject to the availability of funds, personnel, and other resources.

Whom to Be Invited to the Research Directors' Forum

- Research Institutes' Directors who have authority over a functional entity with manpower / equipment / infrastructural resources
- Senior officials or scientists who have authority to present the current status of ocean observations and services in their country
- IOC and WESTPAC Officers, WESTPAC Advisory Group

Timeline

- Apr 2014: Review of the concept paper on an initiation of SC-IPON at Research Directors' Forum during the 9th WESTPAC International Scientific Symposium (Nha Trang, Vietnam)
- Mar-Apr 2015: Endorsement of the creation of SC-IPON at the 10th WESTPAC Session (Thailand)
- Aug 2015: Completion of the member nomination of SC-IPON, its Chairman, and associated secretariat arrangement

[DRAFT: April 22, 2014]

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ANNEX V

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GOOS	Global Ocean Observing System
IOC	Intergovernmental Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
IOGOOS	Indian Ocean Global Ocean Observing System
IOTWS	Indian Ocean Tsunami Warning and Mitigation System
IPON	Indo-Pacific Ocean Observations and Services Network
ISOCORE	Indian-Southern Oceans Climatic Observation, Reanalysis and Prediction
ITF	Indonesian Through Flow
JCOMM	Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology
NEAR-GOOS	North East Asian Regional Global Ocean Observing System
NPOCE	Northwestern Pacific Ocean Circulation and Climate Experiment
POSEIDON	Northwestern Pacific Ocean Study on Environment and Interactions between Deep Ocean and Marginal Seas
RAMA	Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction
SC-IPON	Scientific Steering Committee for Indo-Pacific Ocean Observations and Services Network
SEAGOOS	South East Asian Global Ocean Observing System
SIDS	Small Island Developing States
TAO-TRITON	Tropical Atmosphere Ocean/Triangle Trans-Ocean Buoy Network
UNESCO	United Nations Educational, Scientific, and Cultural Organization
WESTPAC	IOC Sub-Commission for the Western Pacific

IOC Workshop Reports

The Scientific Workshops of the Intergovernmental Oceanographic Commission are sometimes jointly sponsored with other intergovernmental or non-governmental bodies. In most cases, IOC assures responsibility for printing, and copies may be requested from:

Intergovernmental Oceanographic Commission – UNESCO
1, rue Miollis, 75732 Paris Cedex 15, France

No.	Title	Languages	No.	Title	Languages	No.	Title	Languages
1	CCOP-IOC, 1974, Metallogenesis, Hydrocarbons and Tectonic Patterns in Eastern Asia (Report of the IDOE Workshop on); Bangkok, Thailand, 24-29 September 1973 UNDP (CCOP).	E (out of stock)		5-9 June 1978 (UNESCO reports in marine sciences, No. 5, published by the Division of Marine Sciences, UNESCO).		40	24-29 September 1985. IOC Workshop on the Technical Aspects of Tsunami Analysis, Prediction and Communications; Sidney, B.C., Canada, 29-31 July 1985.	E
2	CICAR Ichthyoplankton Workshop, Mexico City, 16-27 July 1974 (UNESCO Technical Paper in Marine Sciences, No. 20).	E (out of stock) S (out of stock)	20	Second CCOP-IOC Workshop on IDOE Studies of East Asia Tectonics and Resources; Bandung, Indonesia, 17-21 October 1978	E	40 Suppl.	First International Tsunami Workshop on Tsunami Analysis, Prediction and Communications, Submitted Papers; Sidney, B.C., Canada, 29 July-1 August 1985.	E
3	Report of the IOC/GFCM/ICSEM International Workshop on Marine Pollution in the Mediterranean; Monte Carlo, 9-14 September 1974.	E, F E (out of stock)	21	Second IDOE Symposium on Turbulence in the Ocean; Liège, Belgium, 7-18 May 1979.	E, F, S, R	41	FAO/IOC/WHO/IAEA/UNEP Project on Monitoring of Pollution in the Marine Environment of the West and Central African Region (WACAF/2); Dakar, Senegal, 28 October-1 November 1985.	E
4	Report of the Workshop on the Phenomenon known as 'El Niño'; Guayaquil, Ecuador, 4-12 December 1974.	E (out of stock) S (out of stock)	22	Third IOC/WMO Workshop on Marine Pollution Monitoring; New Delhi, 11-15 February 1980.	E, F, S, R	43	IOC Workshop on the Results of MEDALPEX and Future Oceanographic Programmes in the Western Mediterranean; Venice, Italy, 23-25 October 1985.	E
5	IDOE International Workshop on Marine Geology and Geophysics of the Caribbean Region and its Resources; Kingston, Jamaica, 17-22 February 1975	E (out of stock) S	23	WESTPAC Workshop on the Marine Geology and Geophysics of the North-West Pacific; Tokyo, 27-31 March 1980.	E, R	44	IOC-FAO Workshop on Recruitment in Tropical Coastal Demersal Communities; Ciudad del Carmen, Campeche, Mexico, 21-25 April 1986.	E (out of stock) S
6	Report of the CCOP/SOPAC-IOC IDOE International Workshop on Geology, Mineral Resources and Geophysics of the South Pacific; Suva, Fiji, 1-6 September 1975.	E	24	Workshop on the Inter-calibration of Sampling Procedures of the IOC/WMO/UNEP Pilot Project on Monitoring Background Levels of Selected Pollutants in Open-Ocean Waters; Bermuda, 11-26 January 1980.	E (out of stock)	44 Suppl.	IOC-FAO Workshop on Recruitment in Tropical Coastal Demersal Communities, Submitted Papers; Ciudad del Carmen, Campeche, Mexico, 21-25 April 1986.	E
7	Report of the Scientific Workshop to Initiate Planning for a Co-operative Investigation in the North and Central Western Indian Ocean, organized within the IDOE under the sponsorship of IOC/FAO (IOFC)/UNESCO/ EAC; Nairobi, Kenya, 25 March-2 April 1976.	E, F, S, R	25	IOC Workshop on Coastal Area Management in the Caribbean Region; Mexico City, 24 September- 5 October 1979.	E, S	45	IOCARIBE Workshop on Physical Oceanography and Climate; Cartagena, Colombia, 19-22 August 1986.	E
8	Joint IOC/FAO (IPFC)/UNEP International Workshop on Marine Pollution in East Asian Waters; Penang, 7-13 April 1976	E (out of stock)	26	CCOP/SOPAC-IOC Second International Workshop on Geology, Mineral Resources and Geophysics of the South Pacific; Noumea, New Caledonia, 9-15 October 1980.	E	46	Reunión de Trabajo para Desarrollo del Programa "Ciencia Oceánica en Relación a los Recursos No Vivos en la Región del Atlántico Sud-occidental"; Porto Alegre, Brasil, 7-11 de abril de 1986.	S
9	IOC/CMG/SCOR Second International Workshop on Marine Geoscience; Mauritius 9-13 August 1976.	E, F, S, R	27	FAO/IOC Workshop on the effects of environmental variation on the survival of larval pelagic fishes. Lima, 20 April-5 May 1980.	E	47	IOC Symposium on Marine Science in the Western Pacific: The Indo-Pacific Convergence; Townsville, 1-6 December 1966	E
10	IOC/WMO Second Workshop on Marine Pollution (Petroleum) Monitoring; Monaco, 14-18 June 1976	E, F E (out of stock) R	28	WESTPAC Workshop on Marine Biological Methodology; Tokyo, 9-14 February 1981.	E	48	IOCARIBE Mini-Symposium for the Regional Development of the IOC-UN (OETB) Programme on 'Ocean Science in Relation to Non-Living Resources (OSNLR)'; Havana, Cuba, 4-7 December 1986.	E, S
11	Report of the IOC/FAO/UNEP International Workshop on Marine Pollution in the Caribbean and Adjacent Regions; Port of Spain, Trinidad, 13-17 December 1976.	E, S (out of stock)	29	International Workshop on Marine Pollution in the South-West Atlantic; Montevideo, 10-14 November 1980.	E (out of stock) S	49	AGU-IOC-WMO-CPPS Chapman Conference: An International Symposium on 'El Niño'; Guayaquil, Ecuador, 27-31 October 1986.	E
11 Suppl.	Collected contributions of invited lecturers and authors to the IOC/FAO/UNEP International Workshop on Marine Pollution in the Caribbean and Adjacent Regions; Port of Spain, Trinidad, 13-17 December 1976	E (out of stock), S	30	Third International Workshop on Marine Geoscience; Heidelberg, 19-24 July 1982.	E, F, S	50	CCALR-IOC Scientific Seminar on Antarctic Ocean Variability and its Influence on Marine Living Resources, particularly Krill (organized in collaboration with SCAR and SCOR); Paris, France, 2-6 June 1987.	E
12	Report of the IOC/FAO/UNEP International Workshop on Marine Pollution in the Caribbean and Adjacent Regions; Port of Spain, Trinidad, 13-17 December 1976	E, F, S	31	UNU/IOC/UNESCO Workshop on International Co-operation in the Development of Marine Science and the Transfer of Technology in the context of the New Ocean Regime; Paris, France, 27 September-1 October 1982.	E, F, S	51	CCOP/SOPAC-IOC Workshop on Coastal Processes in the South Pacific Island Nations; Lae, Papua-New Guinea, 1-8 October 1987.	E
13	Report of the IOC/FAO/UNEP International Workshop on Marine Pollution in the Gulf of Guinea and Adjacent Areas; Abidjan, Côte d'Ivoire, 2-9 May 1978	E, F	32 Suppl.	Papers submitted to the UNU/IOC/ UNESCO Workshop on International Co-operation in the Development of Marine Science and the Transfer of Technology in the Context of the New Ocean Regime; Paris, France, 27 September-1 October 1982.	E	52	SCOR-IOC-UNESCO Symposium on Vertical Motion in the Equatorial Upper Ocean and its Effects upon Living Resources and the Atmosphere; Paris, France, 6-10 May 1985.	E
14	Report of the IOC/FAO/UNEP International Workshop on Marine Pollution in the South-East Pacific; Santiago de Chile, 6-10 November 1978.	E (out of stock)	33	Workshop on the Improved Uses of Research Vessels; Lisbon, Portugal, 28 May-2 June 1984.	E, F, S	53	IOC Workshop on the Biological Effects of Pollutants; Oslo, 11-29 August 1986.	E
15	Workshop on the Western Pacific, Tokyo, 19-20 February 1979.	E, F, R	34	Papers submitted to the IOC/FAO Workshop on the Improved Uses of Research Vessels; Lisbon, 28 May-2 June 1984	E	54	Workshop on Sea-Level Measurements in Hostile Conditions; Bidston, UK, 28-31 March 1988.	E
16	Joint IOC/WMO Workshop on Oceanographic Products and the IGOS Data Processing and Services System (IDPSS); Moscow, 9-11 April 1979.	E, S	35	IOC/FAO Workshop on the Improved Uses of Research Vessels; Lisbon, 28 May-2 June 1984	E	55	IBCCA Workshop on Data Sources and Compilation, Boulder, Colorado, 18-19 July 1988.	E
17	Papers submitted to the Joint IOC/WMO Seminar on Oceanographic Products and the IGOS Data Processing and Services System; Moscow, 2-6 April 1979.	E	36	IOC/UNESCO Workshop on Regional Co-operation in Marine Science in the Central Eastern Atlantic (Western Africa); Tenerife, 12-17 December, 1963.	E	56	IOC-FAO Workshop on Recruitment of Penaeid Prawns in the Indo-West Pacific Region (PREP); Cleveland, Australia, 24-30 July 1988.	E
17 suppl.	IOC/UNESCO Workshop on Syllabus for Training Marine Technicians; Miami, U.S.A., 22-26 May 1978 (UNESCO reports in marine sciences, No. 4 published by the Division of Marine Sciences, UNESCO).	E (out of stock), F, S (out of stock), R	37	CCOP/SOPAC-IOC-UNU Workshop on Basic Geo-scientific Marine Research Required for Assessment of Minerals and Hydrocarbons in the South Pacific; Suva, Fiji, 3-7 October 1983.	E	57	IOC Workshop on International Co-operation in the Study of Red Tides and Ocean Blooms; Takamatsu, Japan, 16-17 November 1987.	E
18	IOC Workshop on Marine Science Syllabus for Secondary Schools; Llantwit Major, Wales, U.K.,	E (out of stock), S, R, Ar	38	IOC/ROPME/UNEP Symposium on Fate and Fluxes of Oil Pollutants in the Kuwait Action Plan Region; Basrah, Iraq, 8-12 January 1984.	E	58	International Workshop on the Technical Aspects of the Tsunami Warning System; Novosibirsk, USSR, 4-5 August 1989.	E
19	IOC Workshop on Marine Science Syllabus for Secondary Schools; Llantwit Major, Wales, U.K.,	E (out of stock), S, R, Ar	39	CCOP (SOPAC)-IOC-IFREMER-ORSTOM Workshop on the Uses of Submersibles and Remotely Operated Vehicles in the South Pacific; Suva, Fiji,	E	58 Suppl.	Second International Workshop on the Technical Aspects of Tsunami Warning Systems, Tsunami Analysis, Preparedness,	E

No.	Title	Languages	No.	Title	Languages	No.	Title	Languages
59	Observation and Instrumentation. Submitted Papers; Novosibirsk, USSR, 4-5 August 1989.	E, F, S		Meeting for the Organization of an International Conference on Coastal Change; Bordeaux, France, 30 September-2 October 1992.		103	Liège, Belgium, 5-9 May 1994.	E
	IOC-UNEP Regional Workshop to Review Priorities for Marine Pollution Monitoring Research, Control and Abatement in the Wider Caribbean; San José, Costa Rica, 24-30 August 1989.		83	IOC Workshop on Donor Collaboration in the Development of Marine Scientific Research Capabilities in the Western Indian Ocean Region; Brussels, Belgium, 12-13 October 1992.	E	104	IOC Workshop on GIS Applications in the Coastal Zone Management of Small Island Developing States; Barbados, 20-22 April 1994.	E
60	IOC Workshop to Define IOCARIBE-TRODERP proposals; Caracas, Venezuela, 12-16 September 1989.	E		International Workshop on the Black Sea; Varna, Bulgaria, 30 September - 4 October 1991		105	Workshop on Integrated Coastal Management; Dartmouth, Canada, 19-20 September 1994.	E
61	Second IOC Workshop on the Biological Effects of Pollutants; Bermuda, 10 September-2 October 1988.	E	84	Workshop on Atlantic Ocean Climate Variability; Moscow, Russian Federation, 13-17 July 1992	E	105 Suppl.	BORDOMER 95: Conference on Coastal Change; Bordeaux, France, 6-10 February 1995.	E
62	Second Workshop of Participants in the Joint FAO-IOC-WHO-IAEA-UNEP Project on Monitoring of Pollution in the Marine Environment of the West and Central African Region; Accra, Ghana, 13-17 June 1988.	E	85	IOC Workshop on Coastal Oceanography in Relation to Integrated Coastal Zone Management; Kona, Hawaii, 1-5 June 1992.	E	106	Conference on Coastal Change: Proceedings; Bordeaux, France, 6-10 February 1995	E
63	IOC/WESTPAC Workshop on Co-operative Study of the Continental Shelf Circulation in the Western Pacific; Bangkok, Thailand, 31 October-3 November 1989.	E	86	International Workshop on the Black Sea; Varna, Bulgaria, 30 September - 4 October 1991	E	107	IOC/WESTPAC Workshop on the Paleographic Map; Bali, Indonesia, 20-21 October 1994.	E
64	Second IOC-FAO Workshop on Recruitment of Penaeid Prawns in the Indo-West Pacific Region (PREP); Phuket, Thailand, 25-31 September 1989.	E	87	Taller de trabajo sobre efectos biológicos del fenómeno «El Niño» en ecosistemas costeros del Pacífico Sudeste; Santa Cruz, Galápagos, Ecuador, 5-14 de octubre de 1989.	S only (summary in E, F, S)	108	IOC-ICSU-NIO-NOAA Regional Workshop for Member States of the Indian Ocean - GODAR-III; Dona Paula, Goa, India, 6-9 December 1994.	E
65	Second IOC Workshop on Sardine/Anchovy Recruitment Project (SARP) in the Southwest Atlantic; Montevideo, Uruguay, 21-23 August 1989.	E	88	IOC-CEC-ICSU-ICES Regional Workshop for Member States of Eastern and Northern Europe (GODAR Project); Obninsk, Russia, 17-20 May 1993.	E	108 Suppl.	UNESCO-IHP-IOC-IAEA Workshop on Sea-Level Rise and the Multidisciplinary Studies of Environmental Processes in the Caspian Sea Region; Paris, France, 9-12 May 1995.	E
66	IOC ad hoc Expert Consultation on Sardine/Anchovy Recruitment Programme; La Jolla, California, U.S.A., 1989	E	89	IOC-ICSEM Workshop on Ocean Sciences in Non-Living Resources; Perpignan, France, 15-20 October 1990.	E	109	UNESCO-IHP-IOC-IAEA Workshop on Sea-Level Rise and the Multidisciplinary Studies of Environmental Processes in the Caspian Sea Region; Submitted Papers; Paris, France, 9-12 May 1995	E
67	Interdisciplinary Seminar on Research Problems in the IOCARIBE Region; Caracas, Venezuela, 28 November-1 December 1989.	E (out of stock)	90	IOC Seminar on Integrated Coastal Management; New Orleans, U.S.A., 17-18 July 1993.	E	110	First IOC-UNEP CEPPOP Symposium; San José, Costa Rica, 14-15 April 1993.	E
68	International Workshop on Marine Acoustics; Beijing, China, 26-30 March 1990.	E	91	IOC-UNEP Workshop on Training Requirements in the Field of Eutrophication in Semi-enclosed Seas and Harmful Algal Blooms, Bremerhaven, Germany, 29 September-3 October 1992.	E		IOC-ICSU-CEC regional Workshop for Member States of the Mediterranean - GODAR-IV (Global Oceanographic Data Archeology and Rescue Project) Foundation for International Studies, University of Malta, Valletta, Malta, 25-28 April 1995.	E
69	IOC-SCAR Workshop on Sea-Level Measurements in the Antarctica; Leningrad, USSR, 28-31 May 1990.	E	92	SAREC-IOC Workshop on Donor Collaboration in the Development of Marine Scientific Research Capabilities in the Western Indian Ocean Region; Brussels, Belgium, 23-25 November 1993.	E	111	Chapman Conference on the Circulation of the Intra-Americas Sea; La Parguera, Puerto Rico, 22-26 January 1995.	E
69 Suppl.	IOC-SCAR Workshop on Sea-Level Measurements in the Antarctica; Submitted Papers; Leningrad, USSR, 28-31 May 1990.	E	93	IOC-UNEP Workshop on Impacts of Sea-Level Rise due to Global Warming; Dhaka, Bangladesh, 16-19 November 1992.	E	112	IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials (GESREM) Workshop; Miami, U.S.A., 7-8 December 1993.	E
70	IOC-SAREC-UNEP-FAO-IAEA-WHO Workshop on Regional Aspects of Marine Pollution; Mauritius, 29 October - 9 November 1990.	E	94	BMTC-IOC-POLARMAR International Workshop on Training Requirements in the Field of Eutrophication in Semi-enclosed Seas and Harmful Algal Blooms, Bremerhaven, Germany, 29 September-3 October 1992.	E	113	IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials (GESREM) Workshop; Miami, U.S.A., 7-8 December 1993.	E
71	IOC-FAO Workshop on the Identification of Penaeid Prawn Larvae and Postlarvae; Cleveland, Australia, 23-28 September 1990.	E	95	SAREC-IOC Workshop on Donor Collaboration in the Development of Marine Scientific Research Capabilities in the Western Indian Ocean Region; Brussels, Belgium, 23-25 November 1993.	E	114	IOC Regional Workshop on Marine Debris and Waste Management in the Gulf of Guinea; Lagos, Nigeria, 14-16 December 1994.	E
72	IOC/WESTPAC Scientific Steering Group Meeting on Co-Operative Study of the Continental Shelf Circulation in the Western Pacific; Kuala Lumpur, Malaysia, 9-11 October 1990.	E	96	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	115	International Workshop on Integrated Coastal Zone Management (ICZM) Karachi, Pakistan; 10-14 October 1994.	E
73	Expert Consultation for the IOC Programme on Coastal Ocean Advanced Science and Technology Study; Liège, Belgium, 11-13 May 1991.	E	96 Suppl.	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	115	IOC/GLOSS-IAPSO Workshop on Sea Level Variability and Southern Ocean Dynamics; Bordeaux, France, 31 January 1995	E
74	IOC-UNEP Review Meeting on Oceanographic Processes of Transport and Distribution of Pollutants in the Sea; Zagreb, Yugoslavia, 15-18 May 1989.	E	97	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	116	IOC/WESTPAC International Scientific Symposium on Sustainability of Marine Environment: Review of the WESTPAC Programme, with Particular Reference to ICAM, Bali, Indonesia, 22-26 November 1994.	E
75	IOC-SCOR Workshop on Global Ocean Ecosystem Dynamics; Solomons, Maryland, U.S.A., 29 April-2 May 1991.	E	97 Suppl.	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	117	IOC-UNEP-NOAA-Sea Grant Fourth Caribbean Marine Debris Workshop; La Romana, Santo Domingo, 21-24 August 1995.	E
76	IOC/WESTPAC Scientific Symposium on Marine Science and Management of Marine Areas of the Western Pacific; Penang, Malaysia, 2-6 December 1991.	E	98	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	118	IOC Workshop on Ocean Colour Data Requirements and Utilization; Sydney B.C., Canada, 21-22 September 1995.	E
77	IOC-SAREC-KMFRI Regional Workshop on Causes and Consequences of Sea-Level Changes on the Western Indian Ocean Coasts and Islands; Mombasa, Kenya, 24-28 June 1991.	E	99	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	119	IOC-UNEP-NOAA-Sea Grant Fourth Caribbean Marine Debris Workshop; La Romana, Santo Domingo, 21-24 August 1995.	E
78	IOC-CEC-ICES-WMO-ICSU Ocean Climate Data Workshop Goddard Space Flight Center, Greenbelt, Maryland, U.S.A., 18-21 February 1992.	E	99	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	120	IOC Workshop on Ocean Colour Data Requirements and Utilization; Sydney B.C., Canada, 21-22 September 1995.	E
79	IOC/WESTPAC Workshop on River Inputs of Nutrients to the Marine Environment in the WESTPAC Region; Penang, Malaysia, 26-29 November 1991.	E	100	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	121	IOC Workshop on Ocean Colour Data Requirements and Utilization; Sydney B.C., Canada, 21-22 September 1995.	E
80	IOC-SCOR Workshop on Programme Development for Harmful Algae Blooms; Newport, U.S.A., 2-3 November 1991.	E	101	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	122	International Training Workshop on Integrated Coastal Management; Tampa, Florida, U.S.A., 15-17 July 1995.	E
81	Joint IAPSO-IOC Workshop on Sea Level Measurements and Quality Control; Paris, France, 12-13 October 1992.	E	102	IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	123	Atelier régional IOC-CERESCOR sur la gestion intégrée des zones littorales (ICAM), Conakry, Guinée, 18-22 décembre 1995	F
82	BORDOMER 92: International Convention on Rational Use of Coastal Zones. A Preparatory	E		IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	124	IOC-EU-BSH-NOAA-(WDC-A) International Workshop on Oceanographic Biological and Chemical Data Management; Hamburg, Germany, 20-23 May 1996	E
				IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E	125	Second IOC Regional Science Planning Workshop on Harmful Algal Blooms in South America; Mar del Plata, Argentina, 30 October-1 November 1995.	E, S
				IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E		GLOBEC-IOC-SAHFOS-MBA Workshop on the Analysis of Time Series with Particular Reference to the Continuous Plankton Recorder Survey; Plymouth, U.K., 4-7 May 1993.	E
				IOC-UNEP-WMO-SAREC Planning Workshop on an Integrated Approach to Coastal Erosion, Sea Level Changes and their Impacts; Submitted Papers	E		Atelier sous-régional de la COI sur les ressources marines vivantes du Golfe de Guinée; Cotonou, Bénin, 1-4 juillet 1996.	E

No.	Title	Languages	No.	Title	Languages	No.	Title	Languages
126	IOC-UNEP-PERSGA-ACOPS-IUCN Workshop on Oceanographic Input to Integrated Coastal Zone Management in the Red Sea and Gulf of Aden. Jeddah, Saudi Arabia, 8 October 1995.	E	127	IOC Regional Workshop for Member States of the Caribbean and South America GODAR-V (Global Oceanographic Data Archeology and Rescue Project); Cartagena de Indias, Colombia, 8-11 October 1996.	E	128	Atelier IOC-Banque Mondiale-Sida/SAREC-ONE sur la Gestion Intégrée des Zones Côtières ; Nosy Bé, Madagascar, 14-18 octobre 1996.	E
129	Gas and Fluids in Marine Sediments, Amsterdam, the Netherlands; 27-29 January 1997.	E	130	Atelier régional de la COI sur l'océanographie côtière et la gestion de la zone côtière ; Moroni, RFI des Comores, 16-19 décembre 1996.	E	131	GOOS Coastal Module Planning Workshop; Miami, USA, 24-28 February 1997	E
132	Third IOC-FANSA Workshop; Punta-Arenas, Chile, 28-30 July 1997	S/E	133	Joint IOC-CIESM Training Workshop on Sea-level Observations and Analysis for the Countries of the Mediterranean and Black Seas; Birkenhead, U.K., 16-27 June 1997.	E	134	IOC/WESTPAC-CCOP Workshop on Paleogeographic Mapping (Holocene Optimum); Shanghai, China, 27-29 May 1997.	E
135	Regional Workshop on Integrated Coastal Zone Management; Chabahar, Iran; February 1996.	E	136	IOC Regional Workshop for Member States of Western Africa (GODAR-VI); Accra, Ghana, 22-25 April 1997.	E	137	GOOS Planning Workshop for Living Marine Resources, Dartmouth, USA; 1-5 March 1996.	E
138	Gestión de Sistemas Oceanográficos del Pacífico Oriental; Concepcion, Chile, 9-16 de abril de 1996.	S	139	Sistemas Oceanográficos del Atlántico Sudoccidental, Taller, TEMA; Furg, Rio Grande, Brasil, 3-11 de noviembre de 1997	S	140	IOC Workshop on GOOS Capacity Building for the Mediterranean Region; Valletta, Malta, 26-29 November 1997.	E
141	IOC/WESTPAC Workshop on Co-operative Study in the Gulf of Thailand: A Science Plan; Bangkok, Thailand, 25-28 February 1997.	E	142	Pelagic Biogeography ICoPB II. Proceedings of the 2nd International Conference. Final Report of SCOR/IOC Working Group 93; Noordwijkhout, The Netherlands, 9-14 July 1995.	E	143	Geosphere-biosphere coupling: Carbonate Mud Mounds and Cold Water Reefs; Gent, Belgium, 7-11 February 1998.	E
144	IOC-SOPAC Workshop Report on Pacific Regional Global Ocean Observing Systems; Suva, Fiji, 13-17 February 1998.	E	145	IOC-Black Sea Regional Committee Workshop: 'Black Sea Fluxes' Istanbul, Turkey, 10-12 June 1997.	E	146	Taller Internacional sobre Formación de Capacidades para el Manejo de las Costas y los Océanos en el Gran Caribe. La Habana, - Cuba, 7-10 de Julio de 1998/ International Workshop on Management Capacity-Building for Coasts and Oceans in the Wider Caribbean, Havana, Cuba, 7-10 July 1998	S/E
147	IOC-SOA International Training Workshop on the Integration of Marine Sciences into the Process of Integrated Coastal Management, Dalian, China, 19-24 May 1997.	E	148	IOC/WESTPAC International Scientific Symposium - Role of Ocean Sciences for Sustainable Development Okinawa, Japan, 2-7 February 1998.	E	149	Workshops on Marine Debris & Waste Management in the Gulf of Guinea, 1995-97.	E
150	Primera Sesión del Grupo de Trabajo COI sobre Algas Nocivas en el Caribe y Regiones Adyacentes (IOCARIBE-ANCA)/First Meeting of the IOC Working Group on Harmful Algae in the Caribbean and Adjacent Region (IOCARIBE-ANCA), 29 June - 1 July 1998, Havana, Cuba.	S/E (electronic copy only)	151	Taller Pluridisciplinario TEMA sobre Redes del Gran Caribe en Gestión Integrada de Áreas Costeras Cartagena de Indias, Colombia, 7-12 de septiembre de 1998.	S	152	Workshop on Data for Sustainable Integrated Coastal Management (SICOM) Maputo, Mozambique, 18-22 July 1998	E
			153	IOC/WESTPAC-Sida (SAREC) Workshop on Atmospheric Inputs of Pollutants to the Marine Environment Qingdao, China, 24-26 June 1998	E	154	IOC-Sida-Flanders-SFRI Workshop on Ocean Data Management in the IOCINCWIO Region (ODINEA project) Capetown, South Africa, 30 November-11 December 1998.	E
			155	Science of the Mediterranean Sea and its applications UNESCO, Paris 29-31 July 1997	E	156	IOC-LUC-KMFRI Workshop on RECOSCIX-WIO in the Year 2000 and Beyond, Mombasa, Kenya, 12-16 April 1999	E
			157	'98 IOC-KMI International Workshop on Integrated Coastal Management (ICM), Seoul, Republic of Korea 16-18 April 1998	E	158	The IOCARIBE Users and the Global Ocean Observing System (GOOS) Capacity Building Workshop, San José, Costa Rica, 22-24 April 1999	E
			159	Oceanic Fronts and Related Phenomena (Konstantin Fedorov Memorial Symposium) - Proceedings, Pushkin, Russian Federation, 18-22 May 1998	E	160	Under preparation	
			161	Under preparation		162	Workshop report on the Transports and Linkages of the Intra-american Sea (IAS), Cozumel, Mexico, 1-5 November 1997	E
			163	Under preparation		164	IOC-Sida-Flanders-MCM Third Workshop on Ocean Data Management in the IOCINCWIO Region (ODINEA Project), Cape Town, South Africa, 29 November - 11 December 1999	E
			165	An African Conference on Sustainable Integrated Management; Proceedings of the Workshops, An Integrated Approach, (PACSIKOM), Maputo, Mozambique, 18 -25 July 1998	E, F	166	IOC-SOA International Workshop on Coastal Megacities: Challenges of Growing Urbanization of the World's Coastal Areas; Hangzhou, P.R. China, 27 -30 September 1999	E
			167	IOC-Flanders First ODINAFRICA-II Planning Workshop, Dakar, Senegal, 2-4 May 2000	E	168	Geological Processes on European Continental Margins: International Conference and Eight Post-cruise Meeting of the Training-Through-Research Programme, Granada, Spain, 31 January - 3 February 2000	E
			169	International Conference on the International Oceanographic Data & Information Exchange in the Western Pacific (IODE-WESTPAC) 1999, ICWIP '99, Langkawi, Malaysia, 1-4 November 1999	E	170	IOCARIBE-GODAR-I Cartagena, Colombia, February 2000	under preparation
			171	Ocean Circulation Science derived from the Atlantic, Indian and Arctic Sea Level Networks, Toulouse, France, 10-11 May 1999	E	172	(Under preparation)	
			173	The Benefits of the Implementation of the GOOS in the Mediterranean Region, Rabat, Morocco, 1-3 November 1999	E, F	174	IOC-SOPAC Regional Workshop on Coastal Global Ocean Observing System (GOOS) for the Pacific Region, Apia, Samoa, 16-17 August 2000	E
			175	Geological Processes on Deep-water European Margins, Moscow-Mozhenka, 28 Jan.-2 Feb. 2001	E	176	MedGLOSS Workshop and Coordination Meeting for the Pilot Monitoring Network System of Systematic Sea Level Measurements in the Mediterranean and Black Seas, Haifa, Israel, 15-17 May 2000	E
			177	(Under preparation)		178	(Under preparation)	
			179	(Under preparation)		180	Abstracts of Presentations at Workshops during the 7 th session of the IOC Group of Experts on the Global Sea Level Observing System (GLOSS), Honolulu, USA, 23-27 April 2001	E
			181	(Under preparation)		182	(Under preparation)	
			183	Geosphere/Biosphere/Hydrosphere Coupling Process, Fluid Escape Structures and Tectonics at Continental Margins and Ocean Ridges, International Conference & Tenth Post-cruise Meeting of the Training-through-Research	E	184	Programme, Aveiro, Portugal, 30 January-2 February 2002	
						185	(Under preparation)	
						186	(Under preparation)	
						187	(Under preparation)	
						188	Geological and Biological Processes at deep-sea European Margins and Oceanic Basins, Bologna, Italy, 2-6 February 2003	E
						189	Proceedings of 'The Ocean Colour Data' Symposium, Brussels, Belgium, 25-27 November 2002	E
							Workshop for the Formulation of a Draft Project on Integrated Coastal Management (ICM) in Latin America and the Caribbean (LAC), Cartagena, Colombia, 23-25 October 2003	E F
							Taller de Formulación de un Anteproyecto de Manejo Costero Integrado (MCI) en América Latina y el Caribe (ALC), Cartagena, Colombia, 23-25 de Octubre de 2003	(electronic copy only)
						190	First ODINCARSA Planning Workshop for Caribbean Islands, Christchurch, Barbados, 15-18 December 2003	E
						191	North Atlantic and Labrador Sea Margin Architecture and Sedimentary Processes - International Conference and Twelfth Post-cruise Meeting of the Training-through-research Programme, Copenhagen, Denmark, 29-31 January 2004	E
						192	Regional Workshop on Coral Reefs Monitoring and Management in the ROPME Sea Area, Iran I.R., 14-17 December 2003	E
						193	Workshop on New Technical Developments in Sea and Land Level Observing Systems, Paris, France, 14-16 October 2003	E
						194	IOC/ROPME Planning Meeting for the Ocean Data and Information Network for the Central Indian Ocean Region	(under preparation)
						195	Workshop on Indicators of Stress in the Marine Benthos, Torregrande-Oristano, Italy, 8-9 October 2004	E
						196	International Coordination Meeting for the Development of a Tsunami Warning and Mitigation System for the Indian Ocean within a Global Framework, Paris, France, 3-8 March 2005	E
						197	Geosphere-Biosphere Coupling Processes: The TTR Interdisciplinary Approach Towards Studies of the European and North African Margins; International Conference and Post-cruise Meeting of the Training-Through-Research Programme, Morocco, 2-5 February 2005	E
						198	Second International Coordination Meeting for the Development of a Tsunami Warning and Mitigation System for the Indian Ocean, Grand Baie, Mauritius, 14-16 April 2005	E
						199	International Conference for the Establishment of a Tsunami and Coastal Hazards Warning System for the Caribbean and Adjacent Regions, Mexico, 1-3 June 2005	E
						200	Lagoons and Coastal Wetlands in the Global Change Context: Impacts and Management Issues - Proceedings of the International Conference, Venice, 26-28 April 2004 (ICAM Dossier N° 3)	E
						201	Geological processes on deep-water European margins - International Conference and 15th Anniversary Post-cruise Meeting of the Training-Through-Research Programme, Moscow/Zvenigorod, Russian Federation, 29 January-4 February 2006	E
						202	Proceedings of 'Ocean Biodiversity Informatics': an international conference on marine biodiversity data management Hamburg, Germany, 29 November-1 December 2004	E
						203	IOC-Flanders Planning Workshop for the formulation of a regional Pilot Project on Integrated Coastal Area Management in Latin America, Cartagena de Indias, Colombia, 16-18 January 2007	E
						204	Geo-marine Research along European Continental Margins, International Conference and Post-cruise Meeting of the Training-through-research Programme, Bremen, Germany, 29 January-1 February 2007	E
						205	IODE/ICAM Workshop on the development of the Caribbean marine atlas (CMA), United Nations House, Bridgetown, Barbados, 8-10 October 2007	E
						206	IODE/JCOMM Forum on Oceanographic Data Management and Exchange Standards, Ostend, Belgium, 21-25 January 2008	(Under preparation)
						207	SCOR/IODE Workshop on Data Publishing, Ostend, Belgium, 17-18 June 2008	(Under preparation)

No.	Title	Languages	No.	Title	Languages	No.	Title	Languages
208	JCOMM Technical Workshop on Wave Measurements from Buoys, New York, USA, 2–3 October 2008 (IOC-WMO publication)	(Under preparation)	233	2010 Meeting of the Joint IODE-JCOMM Steering Group on the Global Temperature-Salinity Profile Programme	E (electronic copy only)	263	International Coastal Atlas Network Workshop 6: Expanding Participation in Coastal Web Atlas Development and Use, 16–17 June 2013, University of Victoria, British Columbia, Canada	
209	Collaboration between IOC and OBIS towards the Long-term Management Archival and Accessibility of Ocean Biogeographic Data, Ostend, Belgium, 24–26 November 2008	(Under preparation)	234	Ocean CO ₂ Atlas (SOCAT) Workshop, CSIRO Marine Laboratories, Hobart, Tasmania 16–18 June 2010	E (electronic copy only)	264	9th WESTPAC International Scientific Symposium, Research Directors' Forum: A Healthy and Safe Ocean for Prosperity in the Indo-Pacific region, Nha Trang, Viet Nam, 22 April 2014	E (electronic copy only)
210	Ocean Carbon Observations from Ships of Opportunity and Repeat Hydrographic Sections (IOCCP Reports, 1), Paris, France, 13–15 January 2003	E (electronic copy only)	235	The Caribbean Marine Atlas (CMA) Review and Planning Workshop and Saint Lucia National Coastal Atlas Stakeholder Event, Bay Gardens Inn, Rodney Bay, Saint Lucia, 2–6 August 2010	E (electronic copy only)	265	Electoral Group 1 Consultation on the Future of the IOC, Utrecht, The Netherlands, 26–27 May 2014	E (electronic copy only)
211	Ocean Surface pCO ₂ Data Integration and Database Development (IOCCP Reports, 2), Tsukuba, Japan, 14–17 January 2004	E (electronic copy only)	236	First Session of the IODE Steering Group for the IODE OceanDataPortal (SG-ODP-I), 20–22 September 2010, Ostend, Belgium	E (electronic copy only)			
212	International Ocean Carbon Stakeholders' Meeting, Paris, France, 6–7 December 2004	E (electronic copy only)	237	Ad hoc meeting of the IODE Steering Group for OBIS, Ostend, Belgium 18–19 November 2010	E (electronic copy only)			
213	International Repeat Hydrography and Carbon Workshop (IOCCP Reports, 4), Shonan Village, Japan, 14–16 November 2005	E (electronic copy only)	238	Implementing Adaptation to Climate Change in Western and Eastern Africa, Nairobi, Kenya, 3–5 November 2010	E (electronic copy only)			
214	Initial Atlantic Ocean Carbon Synthesis Meeting (IOCCP Reports, 5), Laugavátn, Iceland, 28–30 June 2006	E (electronic copy only)	239	2nd Advisory Workshop on enhancing forecasting capabilities for North Indian Ocean Storm Surges, 11–15 February 2011, New Delhi, India	E (electronic copy only)			
215	Surface Ocean Variability and Vulnerability Workshop (IOCCP Reports, 7), Paris, France, 11–14 April 2007	E (electronic copy only)	240	Ocean Biogeographic Information System (OBIS) Infrastructure Meeting, INCOIS, Hyderabad, India, 2–4 March 2011	E (electronic copy only)			
216	Surface Ocean CO ₂ Atlas Project (SOCAT) 2nd Technical Meeting Report (IOCCP Reports, 9), Paris, France, 16–17 June 2008	E (electronic copy only)	241	Best Practice on Tsunami and Coastal Hazards Community Preparedness and Readiness in Central America and the Caribbean, 11–13 August 2008, Panama City, Panama	E (electronic copy only)			
217	Changing Times: An International Ocean Biogeochemical Time-Series Workshop (IOCCP Reports, 11), La Jolla, California, USA, 5–7 November 2008	E (electronic copy only)	242	Integrated Coastal Area Management (ICAM) Training Workshop for the English Speaking Caribbean States, 16–18 March 2011, Bridgetown, Barbados	E (electronic copy only)			
218	Second Joint GOSUD/SAMOS Workshop, Seattle, Washington, USA, 10–12 June 2008	E (electronic copy only)	243	Cancelled				
219	International Conference on Marine Data management and Information Systems (IMDIS), Athens, Greece, 31 March–2 April 2008	E	244	SCOR/IODE/MBLWHOI Library Workshop on Data Publication, 4 th Session, British Oceanographic Data Centre, Liverpool, United Kingdom, 3–4 November 2011	E (electronic copy only)			
220	Geo-marine Research on the Mediterranean and European-Atlantic Margins. International Conference and TTR-17 Post-cruise Meeting of the Training-through-research Programme, Granada, Spain, 2–5 February 2009	E (electronic copy only)	245	Cancelled				
221	Surface Ocean CO ₂ Atlas Project Pacific Regional Workshop, Tsukuba, Japan, 18–20 March, 2009 (IOCCP Report Number 12)	E (electronic copy only)	246	NEAMTIC/ICAM Workshop on Coastal Management Approaches for Sea-Level Related Hazards, Paris, UNESCO, 5–7 December 2011	E (electronic copy only)			
222	Surface Ocean CO ₂ Atlas Project Atlantic and Southern Oceans Regional Meeting, Norwich, UK, 25–26 June, 2009 (IOCCP Report Number 13)	E (electronic copy only)	247	Technical Workshop on the IODE OceanDataPortal, IOC Project Office for IODE, Ostend, Belgium, 27–29 February 2012	E (electronic copy only)			
223	Advisory Workshop on enhancing forecasting capabilities for North Indian Ocean Storm Surges, Indian Institute of Technology (IIT), New Delhi, India, 14–17 July 2009	E (electronic copy only)	248	Inter-sessional working group for updating the IOC Strategic Plan for Oceanographic Data and Information Exchange (2012–2015), Ostend, Belgium, 1–2 March 2012	E (electronic copy only)			
224	2009 International Nutrients Scale System (INSS) Workshop Report, Paris, France, 10–12 February 2009	E (electronic copy only)	249	Operational Oceanography of IOC (for Group II Member States), 20–22 March 2012 Paris, UNESCO (Advisory Workshop)	E (electronic copy only)			
225	Reunión subregional de planificación de ODINCARSA (Red de Datos e Información Oceanográficos para las Regiones del Caribe y América del Sur)/ ODINCARSA (Ocean Data and Information Network for the Caribbean and South America region) Latin America sub-regional Planning Meeting, Universidad Autónoma de Baja California (UABC), Ensenada (México), 7–10 December 2009, 2010	E/S (electronic copy only)	250	Advisory Workshop on The Future of IOC towards next ten years and its Implications for Member States, Varna, Bulgaria, 19 March 2012	E (electronic copy only)			
226	OBIS (Ocean Biogeographic Information System) Strategy and Work plan Meeting, IOC Project Office for IODE, Ostend, Belgium, 18–20 November 2009	E (electronic copy only)	251	Second Technical Meeting of Ocean Biogeographic Information System (OBIS), Ostend, Belgium, 21–22 June 2012	E (electronic copy only)			
227	ODINAFRICA-IV Project Steering Committee, First Session, Ostend, Belgium, 20–22 January 2010, 2010	E (electronic copy only)	252	SCOR/IODE/MBLWHOI Library Workshop on Data Publication, 5 th Session, Woods Hole Oceanographic Institution, Woods Hole, USA, 9–10 October 2012	E (electronic copy only)			
228	First IODE Workshop on Quality Control of Chemical Oceanographic Data Collections, Ostend, Belgium, 8–11 February 2010, 2010	E (electronic copy only)	253	Second IODE Workshop on Quality Control of Chemical and Biological Oceanographic Data Collections, 22–24 October 2012, IOC Project Office for IODE, Ostend, Belgium	E (electronic copy only)			
229	Surface Ocean CO ₂ Atlas Project Equatorial Pacific, North Pacific, and Indian Ocean Regional Workshop, Tokyo, Japan, 8–11 February 2010, 2010 (IOCCP Report Number 18)	E (electronic copy only)	254	Consultation on Scientific and Technical Aspects of Sustained Ocean Observations and Services, 5 th March, 2013, Rio de Janeiro, Brazil	E (electronic copy only)			
230	SCOR/IODE/MBLWHOI Library Workshop on Data Publication, Paris, France, 2 April 2010	E (electronic copy only)	255	Earthquake and tsunami hazard in Northern Haiti: Historical events and potential sources (Meeting of experts)	E (electronic copy only)			
231	First ODINAFRICA Coastal and Marine Atlases Planning Meeting, Ostend, Belgium, 12–14 October 2009	E (electronic copy only)	256	Sexto Taller Regional de Planificación Científica sobre Floraciones de Algas Nocivas en Sudamérica, Guayaquil, Ecuador, 22–24 Octubre 2003	S (electronic copy only)			
232	Eleventh International Workshop on Wave Hindcasting and Forecasting and Second Coastal Hazard Symposium, Halifax, Canada, 18–23 October 2009	E (electronic copy only)	257	(Under preparation)				
			258	(Under preparation)				
			259	Noveno Taller Regional-COI de Planificación Científica sobre Florecimientos de Algas Nocivas en Sudamérica, 11–13 enero 2011, Puerto Varas, Chile	S (electronic copy only) (Summary in E)			
			260	Caribbean Marine Atlas Review and Planning Meeting, Miami, USA, 10–13 December 2013				
			261	Indo-Pacific Ocean Forum on "Charting the Future of Sustained Ocean Observations and Services", Bangkok, Thailand, 25–28 Nov. 2013	E (electronic copy only)			
			262	First Planning Workshop For The Ocean Data And Information Network For The Westpac Region (ODINWESTPAC), Tianjin, China, 4–7 March 2014				