INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(of UNESCO)

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(WESTPAC-X)

Phuket, Thailand, 12-15 May 2015

NEW PROJECT PROPOSAL

ON

DEVELOPMENT OF THE INDO-PACIFIC OCEAN OBSERVATIONS AND SERVICES NETWORK (IPON)
Conceptualizing an Initiation towards the Establishment of the Scientific Steering Committee for Indo-Pacific Ocean Observations and Services Network (SC-IPON)

Version on 29 October 2014
A CALL FOR ACTION

For Conceptualizing an Initiation towards the Establishment of the 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 epicenter 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. Moreover, the global 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 collaboration by exploring any opportunity of synergizing existing and planned observations through the emerging Indo-Pacific Ocean Observation Network (IPON), and considering the feasibility of establishing an appropriate scientific mechanism, i.e. 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 programs (i.e., Global Ocean Observing System (GOOS), IOC International Oceanographic Data and Information Exchange (IOIDE), and Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology (JCOMM)), GEO task for Ocean and Society and regional programs (GOOS Regional Alliances (NEAR-GOOS\(^1\), SEAGOOS\(^2\), IOGOOS\(^3\), etc), TPOS\(^4\) (TAO-TRITON\(^5\) Buoy Arrays), IndOOS\(^6\) (RAMA\(^7\) Buoy Arrays), NPOCE\(^8\), GAIA\(^9\), POSEIDON\(^10\), ITF\(^11\), IOTWS\(^12\) 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.

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

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

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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 Tropic Pacific Observing System
5 Tropical Atmosphere Ocean/Triangle Trans-Ocean Buoy Network
6 Indian Ocean Observing System
7 Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction
8 Northwestern Pacific Ocean Circulation and Climate Experiment
9 Western Pacific Equatorial Time Series Observation
10 Northwestern Pacific Ocean Study on Environment and Interactions between Deep Ocean and Marginal Seas
11 Indonesian Through Flow
12 Indian Ocean Tsunami Warning and Mitigation System
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 and maintenance of the 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 conservation of marine biodiversity and ecosystems.

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

**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 Observations and Services Network, appointed by the IOC Sub-Commission for the Western Pacific (WESTPAC).

**Generic Terms of Reference:**

- Provide scientific and technical oversight for the planning, development and implementation of IPON;
- develop the relevant strategy and implementation plan of IPON by synergizing the present various observations/programmes, identifying and bridging the gap between present observations and the economic, social and environment protection needs through the development and promotion of a set of new initiatives;
- promote, facilitate and coordinate the development and implementation of the Indo-Pacific Ocean observations and Services Network 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 Observations and Services 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 analyze 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.

The Committee shall elect a Chairperson and Vice-chairperson(s) among the members. The Committee shall meet at least once per year but may meet more frequently if required. Other appropriately affiliated organizations can attend the sessions as observers. The Committee shall report to the IOC Sub-Commission for the Western Pacific (WESTPAC), communicate with GOOS SC if appropriate.

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.

Secretariat Support

An IPON Office shall be established at the host institution of the Chair of SC-IPON with staff mainly seconded by the institute. The main work of the Office is to provide support for the operation of SC-IPON in consultation with the WESTPAC Office.