



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ
اللجنة الدولية الحكومية لعلوم المحيطات
政府间海洋学委员会

UNESCO - 1, rue Miollis - 75732 Paris cedex 15, France
<http://ioc-unesco.org> - fax: +33 (0)1 45 68 58 12 - contact phone: +33 (0)1 45 68 39 83/84
E-mail: w.watson-wright@unesco.org

Ref : IOC/WWW/MB/ei/1630

28 June 2013

Dear Mr Mathias,

In response to your letter of 12 December 2012, inviting UNESCO and its Intergovernmental Oceanographic Commission to contribute to Part II of the UN Secretary-General's report on Oceans and the Law of the Sea, pursuant to the General Assembly resolution entitled "Oceans and the law of the sea", I am pleased to transmit the attached contribution.

Yours sincerely,

Wendy Watson-Wright
Executive Secretary, IOC
Assistant Director-General, UNESCO

Mr Stephen Mathias
Assistant Secretary-General
in charge of the Office of Legal Affairs
United Nations
2 United Nations Plaza (Room DC2-0422)
New York, NY 10017- USA

cc: DOALOS Director
UNESCO New York Office

Chairperson

Dr Sang-Kyung BYUN
Principal Research Scientist
Climate Change & Coastal Disaster
Research Dept.
Korea Institute of Ocean Science
and Technology (KIOST)
787 Haeanlo
Ansan 426-744
REPUBLIC OF KOREA

Executive Secretary

Dr Wendy WATSON-WRIGHT
Intergovernmental Oceanographic
Commission — UNESCO

Vice-Chairpersons

Prof. Peter M. HAUGAN
Director, Geophysical Institute
University of Bergen
Allegaten 70
5007 Bergen
NORWAY

Dr Atanas PALAZOV
Director, Institute of Oceanology – Varna
Bulgarian Academy of Sciences
P.O. Box 152
Varna 9000
BULGARIA

Capt. Frederico Antonio SARAIVA
NOGUEIRA
Directorate of Hydrography
and Navigation
Rue Barão de Jaceguai, s/n°
Ponta da Armação
Niterói, Rio de Janeiro
CEP 24.048.900
BRAZIL

Prof. Yutaka MICHIDA
University of Tokyo
Member of National Committee for IOC
Kashiwa 5-1-5
Kashiwa 277-8564

Prof. Adoté Blim BLIVI
Chef de Recherche
Head of CGILE
Ministère de l'Enseignement
Supérieur et de la Recherche
University of Lomé,
B.P. 1515
Lomé 228
TOGO



Paris, 30 June 2013
Original: English

Ocean and the Law of the Sea

Contribution of the Intergovernmental Oceanographic Commission of UNESCO to the Report of the Secretary-General

EXECUTIVE SUMMARY

As a body with functional autonomy within the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Intergovernmental Oceanographic Commission (IOC) acts as the UN system-wide focal point for ocean science and ocean services under the guidance provided by the resolutions, decisions and instructions of the IOC Assembly and reports periodically on its programme and activities to contribute to the Report of the Secretary-General on Oceans and the law of the sea.

The IOC of UNESCO has conducted a global assessment of capacity development needs in the field of marine scientific research and ocean observation. This will lead to the formulation of a global strategy in capacity building to implement these needs in partnership with other agencies. IOC/UNESCO also maintains and updates the list of experts on marine scientific research for use in special arbitration under annex VIII of UNCLOS. The Commission has continued to provide scientific and technical support to the Regular Process, in line with the invitation of the relevant United Nations General Assembly resolutions. IOC participated in the Ad Hoc Working Groups of the Regular Process in April 2012 and 2013. It also participated in all UN regional workshops organised to promote the Regular Process at regional level.

The Regional Tsunami Service Providers of Australia, India and Indonesia assumed full operational responsibility for the provision of tsunami advisories for the Indian Ocean as from 31 March 2013. Tsunami information centres have now been established in four tsunami regions. The Commission has continued capacity development activities in support of tsunami and ocean related hazards. These are a combination of projects that encompass advice, technology transfer and training.

In the field of climate change, IOC/UNESCO provides support to the International Ocean Carbon Coordination Project (IOCCP) activities together with the US National Science Foundation and ICSU's Scientific Committee on Oceanic Research (SCOR). The Commission organised a series of International Symposia on the 'Ocean in a high CO₂ World', in partnership with SCOR and the International Geosphere-Biosphere Programme (IGBP) and has been active in projects on coastal adaptation in Africa. It also maintains a unique data base, the Ocean Biogeographical Information System (OBIS). The Commission now has a new Global Ocean Observing System Steering Committee and a work plan has been developed. The Argo profiling float network collected its one millionth profile of vertical temperature and salinity in November 2012.

DEVELOPMENTS IN THE FIELD OF OCEAN AFFAIRS AND THE LAW OF THE SEA (Part II)

Pursuant to the resolution entitled “Oceans and the law of the sea” adopted by the General Assembly on 11 December 2012 (A/67/L.21), the information below represents the contribution of the Intergovernmental Oceanographic Commission of UNESCO to the report of the General Secretary.

Capacity Building (In response paragraph 28 of the resolution)

Considering (i) paragraph 160 of the Outcome Document of the Rio+20 Conference entitled “*The Future We Want*”, (ii) the urgent need of developing a global Capacity-Building strategy mentioned in the Secretary General’s ‘*Ocean Compact*’ and following a voluntary Commitment on “*Building Global Capacity for Marine Sciences, Observation and Transfer of Marine Technology*” taken by at the Rio+20 conference, the Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO) has conducted a global and regional assessment of capacity development needs in the field of marine scientific research and ocean observation especially in developing nations and SIDS. This will lead to the formulation and implementation of a global strategy in capacity building to implement these needs, through partnership with countries, donors, UN Agencies, global financial institutions and the private sector. In this context a Joint Experts Group was organised by the IOC, the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS) and the UN-Division for Ocean Affairs and the Law of the Sea/ Office of Legal Affairs (DOALOS/OLA) on “the Significance of Marine Science and Technology for SIDS and the importance of Capacity Building and Marine Technologies Transfer to SIDS to support Sustainable Development” from 14 to 19 May 2013 in New York.

Regular Process

In line with Paragraph 237 of the resolution, IOC has continued to provide scientific and technical support to the Regular Process, in support of the relevant United Nations General Assembly resolutions. IOC participated in the Ad Hoc Working Groups of the Regular Process in April 2012 and 2013. It participated in all UN regional workshops organised to promote the Regular Process at regional level (Europe Workshop, Brussels, Belgium, June 2012, South East Asian Workshop, Sanya, People’s Republic of China, February 2012, Indian Ocean, Maputo, Mozambique, August 2012, Caribbean workshop, Miami, U.S.A, November 2012; Australia, Brisbane, February 2013). IOC was a co-organiser for three of these workshops (Sanya, Miami, Brussels) and provided substantial technical inputs. Together with UNEP, IOC provided support for the development of the Regular Process website. The site also provides a mechanism for the Regular Process authors to collaborate in the process of drafting the report. IOC has identified a number of contributions in terms of information and data products that will be made available to the Group of experts in charge of coordinating the drafting of the Global report. IOC participated as observer in the Regular Process Group of experts meetings (New York, November 2012 and May 2013) and offered inputs to the group.

Health of ocean ecosystems

IOC is leading the GESAMP WG40 Sources, fate & effects of micro-plastics in the marine environment aimed to setup the the current state of knowledge and knowledge gaps on; i) sources, distributions and trends of micro-plastics; ii) properties and degradation of polymers; and, iii) physical and chemical effects of micro-plastics. The expected outcome is the production of an assessment on the potential impact of micro-plastics on the marine environment, to assist decision-making within relevant UN Agencies, and in the wider community.

Development of mitigation and preparedness measures for natural disasters

In support of Paragraph 216 stressing the need for continued efforts in developing mitigation and preparedness measures for natural disasters, particularly following tsunami events caused by

earthquakes, the Regional Tsunami Service Providers (RTSP) of Australia, India and Indonesia assumed full operational responsibility for the provision of tsunami advisories for the Indian Ocean Area of Responsibility as from 31 March 2013. IOC expressed deep appreciation to the Governments of Japan and the United States of America for the provision of the Interim Tsunami Advisory Service for the Indian Ocean region by the Japan Meteorological Agency (JMA) and Pacific Tsunami Warning Centre (PTWC) from April 2005 to 31 March 2013.

For the North East Atlantic and Mediterranean Tsunami Warning System region, there has been steady progress towards the provision of tsunami watch services for the region. In July/August 2012 three nations officially announced to IOC that their national tsunami watch centres were operational and that they had the ability to act as Candidate Tsunami Watch Providers, pending their accreditation. They are the Kandilli Observatory and Earthquake Research Institute in Istanbul, Turkey; the French National Tsunami Warning Centre (hosted by the French Atomic Energy and Alternative Energy Commission) and the Athens National Observatory (Greece). These institutions can provide watch services and alert messages to any Member State of the region upon request.

Tsunami information centres have now been established in four tsunami regions. The Caribbean Tsunami Information Center has been set up in partnership with UNDP and the Department of Emergency Management (Barbados). The North East Atlantic and Mediterranean Tsunami Information Centre (NEAMTIC) was established in 2010 and has developed a number of tsunami information and awareness raising products (<http://neamtic.ioc-unesco.org/>). The project was funded by the EU Directorate for Humanitarian Aid & Civil Protection.

The Commission has continued capacity development activities in support of tsunami and ocean related hazards. These activities are a combination of short to medium term projects that encompass advice, technology transfer and training. In addition TSU has ongoing projects in Oman (i) Self Benefitting Funds in Trust towards development of a National Multi Hazard Early Warning System); (ii) Sea level network reinforcements in the Caribbean (funded by Brazil, Grenada and Monaco); (iii) IOC Strengthening Haitian capacities for tsunami early warning and preparedness in partnership with the UNESCO Port au Prince Office (funded by European Commission DIPECHO); (iv) Investigation of the written and oral history of tsunami events in the Makran Coastal Region in partnership with the UNESCO Jakarta Office (Funded by UNESCAP); and (v) Enhancing Tsunami Risk Assessment and Management, Strengthening Policy Support and Developing Guidelines for Tsunami Exercises in Indian Ocean Countries (funded by UNESCAP).

The Commission organized the Japan-UNESCO/UNU Symposium on The Great East Japan Tsunami on 11 March 2011 and one entitled: Tsunami Warning Systems: Policy Perspectives 16 - 17 February 2012 at UNU Tokyo. The Symposium was opened by His Imperial Highness Crown Prince Naruhito and Irina Bokova, Director General of UNESCO. Close to 300 people attended the symposium. The symposium offered a number of invited high level perspectives from decision makers and scientists and provided in-depth analyses of the event.

Climate change

In relation to paragraph 146 of the resolution, encouraging States, individually or in collaboration with relevant international organizations and bodies, to enhance their scientific activity to better understand the effects of climate change on the marine environment and marine biodiversity, the Intergovernmental Oceanographic Commission wishes to report on the following activities:

Cooperation between the International Ocean Carbon Coordination Project (IOCCP) and IOC/UNESCO: IOC/UNESCO provides support for IOCCP activities together with the US National Science Foundation and ICSU's Scientific Committee on Oceanic Research (SCOR). One major event during 2012 was the international time-series methods workshop, jointly convened by the IOCCP and the Ocean Carbon & Biogeochemistry (OCB) Program. The workshop offered a platform to compare time series in order to avoid duplication, to adopt common standards and to

maximize the utility of data. It focused specifically on the methods employed by the specific time series, aiming at enhancement of data comparability among sites. Currently IOC is working on a new compilation of existing biogeochemical time series and has put together the 33 sites presented at the Workshop with others from the North Atlantic (including the Baltic and the Mediterranean Seas). In total, 125 biogeochemical time series have been compiled from around the world, which could be the embryo for a monitoring network for standardized measurement of ocean acidification.

Third International Symposium on the Ocean in a High-CO₂ World: The series of International Symposia on the 'Ocean in a high CO₂ World', co-organized by the IOC, SCOR and the International Geosphere-Biosphere Programme (IGBP), began in Paris in 2004, followed by Monaco in 2008 and Monterey in 2012. The 3rd symposium in Monterey was attended by a total of 529 scientists from 34 countries. They presented new information about the ability or inability of organisms at different trophic levels to cope with decreasing pH levels. The conference clearly emphasized the need for combining the stressor CO₂ with other factors such as temperature, nutrient availability and hypoxia. An Ocean Acidification summary for policy makers, coordinated by the IGBP and the IOC, is under preparation. The information in the summary will identify advances and significant findings in our understanding of ocean acidification.

Coastal Adaptation: In June 2012, IOC completed the implementation of the Project on Adaptation to Climate Change on the Coasts of West Africa (ACCC). Through this four-year project funded by GEF, five countries (Senegal, Mauritania, Cape Verde, Gambia, and Guinea Bissau) received financial and technical assistance to develop coastal adaptation measures and to build adaptive capacity of coastal communities. A final regional symposium was organized in Dakar (June 2012) to present the results of the project and to plan for a second phase regional approach with potential donors. Furthermore, the ACCC project put together the first Coastal Adaptation Guidelines for Local Decision Makers, developed by African scientists for African practitioners, and available in three languages (English, French, Portuguese). A new ACCC website was launched in July 2012. It presents all the results achieved in the context of the project and provides access to technical resources for experts and managers. An educational video on coastal climate impacts was also produced and presented at the final Regional Symposium.

Ocean Biogeographical Information System (OBIS). The 25th Session of IOC Assembly (June 2009), adopted OBIS within its International Ocean Data and Information Exchange (IODE) Programme (IOC-XXV/4). A contract was established in 2011 with Rutgers University to ensure a continuation of the OBIS operations and a smooth transition from being a private foundation-led activity under the Census of Marine Life, to become part of an intergovernmental programme. The OBIS secretariat has now moved to the IOC Project Office for IODE in Oostende (Belgium). OBIS has continued to grow and has established a network of hundreds of data providers around the globe. In total, OBIS now integrates 1,130 datasets, and serves 35 million observations of 120,000 marine species. It provides the world's largest global online open-access database on the diversity, distribution and abundance of all known marine life and is an important baseline, against which future change can be measured. OBIS is used around the globe for planning ocean conservation policies, identifying biodiversity hotspots and global trends in species distributions. The 193 Parties to the Convention on Biological Diversity (CBD-COP10/) called upon IOC-UNESCO to facilitate availability and inter-operability of the best available marine and coastal biodiversity data sets and information across global, regional and national scales. In this context, OBIS data is used for the identification of Ecologically or Biologically Significant marine Areas (EBSAs), a process convened by the CBD secretariat. At this moment, EBSA sites are identified for 75% of the ocean. Workshops for the Arctic and North-West Atlantic are planned in 2014. OBIS data is also used for the identification of Vulnerable Marine Ecosystems, a process led by the Food and Agriculture Organization (FAO). Moreover, OBIS will provide information on the status of marine biodiversity for the 1st World Ocean Assessment.

Ocean Observation

Paragraph 214 of the resolutions stresses the importance of increasing the scientific understanding of the oceans-atmosphere interface, including through participation in ocean observing programmes. In this context, the new Global Ocean Observing System (GOOS) Steering Committee of the IOC met in June 2012. Significant progress on its work plan was achieved by the time of its second meeting (25-27 March 2013, Qingdao, China), supported in large part by the UNESCO Emergency Fund. Some highlights of this work plan include: (i) Establishment of three disciplinary panels to determine societal requirements for sustained observations of physical, geochemical, and biology/ecosystems variables. These panels are based on the Ocean Observation Panel for Climate (OOPC) for physics, the IOCCP for carbon/geochemistry, and a new panel for biology/ecosystems, building on the legacy of the Panel for Integrated Coastal Observations (PICO) and in cooperation with the GEO Biodiversity Observing Network and OBIS. (ii) Engaging with key conventions and assessments on their needs for ocean information, including with the Convention on Biological Diversity at their 11th Conference of the Parties (October 2011, Hyderabad, India), the UN World Ocean Assessment and the GEF-sponsored Transboundary Waters Assessment Programme (TWAP). (iii) Improving outreach and engaging with partners, including the Partnership for Observation of the Global Ocean, and identifying a role for GOOS in the emerging Global Framework for Climate Services. GOOS co-sponsored the GCOS-led "Workshop on Observations for Adaptation to Climate Variability and Change" (Offenbach, Germany, February 2013) which was a first effort at capturing requirements. (iv) Engaging IOC Member States, improving GOOS Regional Alliance implementation, and improving capacity development for GOOS. The GOOS Project Office was involved in two regional meetings focused on sustained ocean observations. One was held as a meeting of GOOS Experts from Africa in Cape Town in January 2013. Another meeting, funded by the Republic of Korea and Brazil, was held for Group III Member States (Rio De Janeiro, Brazil, March 2013).

In November 2012, the Argo profiling float network collected its one millionth profile of vertical temperature and salinity, twice the number collected by all research vessels in the 20th century. 120,000 new profiles are collected every year, about one new profile every four minutes.

Experts on Marine Scientific Research for use in Special Arbitration

IOC has updated the List of Experts on Marine Scientific Research for use in Special Arbitration under Annex VIII of UNCLOS.

The Experts in the list were directly nominated by States Parties among experts of recognized expertise in the field, who enjoy the highest reputation for fairness and integrity.

The list was updated as of 27 November 2012 and sent to the International Tribunal for the Law of the Sea (ITLOS) and the UN Division for Oceans Affairs & Law of the Sea (UN/OLA/DOALOS) which has posted it on the DOALOS web site:

(http://www.un.org/depts/los/settlement_of_disputes/expertsunclosVIII_iocunesco.pdf).

Intergovernmental Oceanographic Commission (IOC)
United Nations Educational, Scientific and Cultural Organization
1, rue Miollis
75 732 Paris Cedex 15, France
Tel.: +33 1 45 68 10 10
Fax: +33 1 45 68 58 12
<http://loc.unesco.org>