



**GESAMP**

Joint Group of Experts on the  
Scientific Aspects of Marine  
Environmental Protection

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## **REPORT OF THE ADMINISTRATIVE SECRETARY OF GESAMP**

### **Activities and achievements of the Sponsoring Organizations of GESAMP since the 41st session**

#### **Introduction**

1 The Executive Committee met once by teleconference in the intersessional period, on 28 January 2015 to discuss WG and Task Teams arrangements, WG funding issues, preparations of reports and additional support for the GESAMP Office. Occasional e-mail communication took place with individual members of the Executive Committee, including the Chairman and Vice-Chairman of GESAMP. It should, however, be noted that GESAMP's Working Groups and Task Teams have been very active, as will be reported under agenda item 4.

2 GESAMP 42 will be informed of the outcomes of the next session of the Executive Committee, which will be held on Monday, 31 August 2015.

#### **Activities and achievements of the Sponsoring Organizations of GESAMP**

3 The Administrative Secretary of GESAMP traditionally reports on the activities and achievements of the Sponsoring Organizations of GESAMP with the aim to provide GESAMP with an account of their involvement in the protection of the marine environment and their interest in the activities GESAMP undertakes. This document provides a summary of the Organizations' achievements since GESAMP 41 (1 to 4 September 2014) from IMO, IAEA, UNESCO-IOC, UNDP, UNEP and the UN.

#### **GESAMP Office**

4 The GESAMP Office, established at IMO as a co-sponsoring arrangement between the current sponsors of GESAMP, has not been fully staffed since the support arrangement with the Swedish Agency for Development Cooperation (SIDA) expired on 31 December 2010. In July 2015, IMO assigned an Administrative Coordinator (Mrs. C. Kolia) to the GESAMP Office<sup>1</sup> and is currently also relying on the staff of the Marine Environment Division to carry out the Secretariat functions. During its meeting by teleconference in January 2015, the ExCom welcomed the proposal by IMO to formalize the support by the World Maritime University (WMU) to the GESAMP Office, which, once operational, will further strengthen the support arrangements for GESAMP.

5 Since September 2014, the main activities of the GESAMP Office have been the following:

- .1 supporting the activities of the existing Working Groups of GESAMP, including the various peer review activities;

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<sup>1</sup> IMO provides the time of the Administrative Secretary and Technical Secretary (extended support to the Office, in addition to the normal duties of the Technical Secretary) and a General Service Staff member as an in-kind contribution. Furthermore, IMO provides office space and equipment, storage, publication support etc. as well as financial and legal advice and support.

- .2 implementation of the GESAMP Funding Strategy, in co-ordination with the Chairman of GESAMP;
- .3 assisting in the publication of two GESAMP reports;
- .4 maintenance of the GESAMP website and communication with its users, as and when required;
- .5 supporting the activities of the GESAMP Transboundary Waters Assessment (TWA) Project Task Team;
- .6 preparation of the current session of GESAMP and the side-event on desalination; and
- .7 organizing and facilitating the GESAMP workshop on mine tailings (10 to 11 June 2015 in Lima, Peru).

## IMO

### Implementation of the Ballast Water Management Convention

6 The Ballast Water Management Convention was adopted in February 2004 and aims to prevent, minimize and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments. The Convention will enter into force 12 months after the date on which not less than 30 States, the combined merchant fleet of which constitute not less than 35 per cent of the world's gross tonnage, have ratified it. Currently, a total of 44 States, representing 32.86 per cent of the world merchant fleet tonnage, have ratified the Convention.

7 IMO's Marine Environment Protection Committee (MEPC), at its 67th and 68th sessions, granted Basic Approval to 5 and Final Approval to 1 ballast water management system that make use of Active Substances, based on the recommendations of the 30th and 31st meetings of the GESAMP Ballast Water Working Group (BWWG). MEPC 68 further noted that there are already 57 type-approved ballast water management systems available.

8 MEPC 68, having noted the outcome of the Sixth Stocktaking Workshop on the activity of the GESAMP-BWWG, endorsed a revision of the GESAMP-BWWG Methodology for information gathering and conduct of work. The revised Methodology has been disseminated as BWM.2/Circ.13/Rev.3.

9 Important progress was made with regard to guidance for enforcing the BWM Convention with the adoption by MEPC 67 of the *Guidelines for port State control inspection for compliance with the BWM Convention* (resolution MEPC.252(67)) and with the approval by MEPC 68 of the revised *Guidance on ballast water sampling and analysis for trial use in accordance with the BWM Convention and Guidelines (G2)* (BWM.2/Circ.42/Rev.1).

10 MEPC 68 continued the work on the agreed review of the *Guidelines for approval of ballast water management systems (G8)*, and considered the interim report of the Correspondence Group on the review of the Guidelines. The Correspondence Group was re-established to continue working on the review and submit its report to MEPC 69 scheduled for April 2016.

11 A "Roadmap for the implementation of the BWM Convention" was agreed by MEPC 68, which emphasises that early movers, i.e. ships which install ballast water management systems approved in accordance with the current Guidelines (G8), should not be penalized. The Roadmap invites the Committee to develop guidance on contingency measures and to expand the trial

period associated with the Guidance on ballast water sampling and analysis (BWM.2/Circ.42/Rev.1) into an experience-building phase.

12 MEPC 68 further developed draft amendments to regulation B-3 of the BWM Convention to reflect Assembly resolution A.1088(28) on application of the Convention, with a view to approval at MEPC 69 and consideration for adoption once the Convention enters into force. The draft amendments will provide an appropriate timeline for ships to comply with the ballast water performance standard described in regulation D-2 of the Convention.

13 MEPC 69 is further expected to consider the report of a study, initiated by MEPC 67, on the implementation of the ballast water performance standard described in regulation D-2 of the BWM Convention, and to develop further guidance for granting exemptions under regulation A-4 of the BWM Convention.

### **Ship recycling**

14 Following the adoption of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, in May 2009, the MEPC has finalized and adopted all six guidelines required under the terms of the Convention to facilitate the global implementation of its requirements in a uniform and effective manner. Thus the whole package for Member Governments to ratify the Convention is in place. At its 68th session, in May 2015, the MEPC adopted the *2015 Guidelines for the development of the Inventory of Hazardous Materials* (resolution MEPC.269(68)).

### **Review of MARPOL Annex V (Garbage)**

15 The revised MARPOL Annex V was adopted by resolution MEPC.201(62) and entered into force on 1 January 2013, thus establishing a prohibition on the discharge of all types of garbage into the sea except in the cases explicitly permitted under the Annex. The MEPC is currently considering amendments to MARPOL Annex V on Record of Garbage Discharge, aimed at addressing discrepancies between the text of the Annex and the Form of Garbage Record Book. MEPC 68, due to time constraints, agreed to defer consideration of this matter to MEPC 69.

### **Issues related to MARPOL Annex II and IBC Code**

16 MEPC 68 approved a number of matters related to MARPOL Annex II and the IBC Code as follows:

- .1 modifications to the issue date of the annual MEPC.2/Circular on *Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code* and to the expiry dates for tripartite agreements (i.e. issue date of 1 December and expiry dates for tripartite agreements of 31 December) and agreed that these changes would be implemented in December 2015;
- .2 a generic entry for Used cooking oil in list 1 of the MEPC.2/Circular with validity for all countries, without an expiry date;
- .3 evaluation trade-named mixtures presenting safety hazards for inclusion in list 3 of the MEPC.2/Circular, with validity for all countries and no expiry date and of a number of cleaning additives for inclusion in annex 10 to the MEPC.2/Circular; and
- .4 *Revised PPR Product Data Reporting Form and related guidance notes*, subsequently issued as MEPC.1/Circ.857.

**Unified interpretations of paragraph 15.13.5 of the IBC Code**

17 MEPC 68 and MSC 95 approved unified interpretations of paragraph 15.13.5 of the IBC Code for products requiring oxygen-dependent inhibitors, subsequently issued as MSC-MEPC.5/Circ.10.

**Mandatory Polar Code**

18 As reported to the last session, in view of the increased interest in the polar regions with the projected growth in shipping traffic therein and the need to further promote the safety of navigation and prevention of pollution from ship operations in those areas, IMO developed a mandatory International Code for Ships Operating in Polar Waters (Polar Code). The maritime safety requirements of the Code were adopted by MSC 94 in November 2014 by resolution MSC.385(94), together with new SOLAS chapter XIV to make it mandatory under the SOLAS Convention; and the marine pollution prevention requirements of the Code were adopted by MEPC 68 in May 2015, together with amendments to MARPOL Annexes I, II, IV and V to make them mandatory.

**MARPOL Annex VI (Prevention of air pollution from ships)**

19 Amendments to MARPOL Annex VI, Regulations for the prevention of air pollution from ships, adding a new chapter 4 to Annex VI on Regulations on energy efficiency for ships to make mandatory the Energy Efficiency Design Index (EEDI), for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships entered into force on 1 January 2013.

**Amendments to MARPOL Annex VI and associated guidelines**

20 MEPC 67 adopted amendments to MARPOL Annex VI, concerning regulation 2 (Definitions), regulation 13 (Nitrogen Oxides (NO<sub>x</sub>) and the Supplement to the International Air Pollution Prevention Certificate (IAPP Certificate), in order to include reference to gas as fuel and to gas-fuelled engines.

21 MEPC 68 considered a number of amendments and revisions to existing guidance and requirements related to air pollution measures and in particular:

- .1 adopted the *2015 Guidelines for exhaust gas cleaning systems*. The update relates to certain aspects of emission testing, regarding measurements of carbon dioxide (CO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>), clarification of the washwater discharge pH limit testing criteria and the inclusion of a calculation-based methodology for verification as an alternative to the use of actual measurements;
- .2 approved, for adoption at MEPC 69, draft amendments to the NO<sub>x</sub> Technical Code 2008 to facilitate the testing of gas-fuelled engines and dual fuel engines for NO<sub>x</sub> Tier III strategy;
- .3 approved, for adoption at MEPC 69, draft amendments to MARPOL Annex VI regarding record requirements for operational compliance with NO<sub>x</sub> Tier III emission control areas;
- .4 approved *Guidance on the application of regulation 13 of MARPOL Annex VI Tier III requirements to dual fuel and gas-fuelled engines*; and
- .5 adopted amendments to the *2011 Guidelines addressing additional aspects to the NO<sub>x</sub> Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with Selective Catalytic Reduction (SCR) Systems (resolution MEPC.198(62))*.

22 The Committee continued its work on further developing guidelines to support the uniform implementation of the regulations on energy-efficiency for ships (chapter 4 of MARPOL Annex VI).

23 MEPC 67, in October 2014 adopted;

- .1 *2014 Guidelines on survey and certification of the Energy Efficiency Design Index (EEDI)*, updating the previous version to include, for example, identification of the primary fuel for the calculation of the attained EEDI for ships fitted with dual-fuel engines using LNG and liquid fuel oil; and
- .2 amendments to the *2013 Interim Guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions*, to make the guidelines applicable to phase 1 (starting 1 January 2015) of the EEDI requirements.

24 MEPC 68, in May 2015 also adopted:

- .1 amendments to update the *2014 Guidelines on survey and certification of the Energy Efficiency Design Index (EEDI)* and endorsed their application from 1 September 2015, at the same time encouraging earlier application;
- .2 amendments to the *2013 Interim Guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions*, for the level-1 minimum power lines assessment for bulk carriers and tankers, and agreed on a phase-in period of six months for the application of the amendments; and
- .3 amendments to update the *2014 Guidelines on the method of calculation of the attained EEDI for new ships*.

### ***EEDI review***

25 Regulation 21.6 of MARPOL Annex VI requires, at the beginning of phase 1 (1 January 2015), the Organization to “review the status of technological developments and, if proven necessary, amend the time periods, the EEDI reference line parameters for relevant ship types and reduction rates set out in this regulation”. MEPC 67 established a correspondence group to review the status of technological developments relevant to implementing phase 2 of the EEDI regulatory framework which begins in January 2020.

26 MEPC 68 considered a progress report from the correspondence group and following consideration and clarification of the terms of reference re-established the correspondence group to further the work and submit an interim report to MEPC 69.

### ***Further technical and operational measures to enhance energy efficiency***

27 MEPC 67 agreed, in principle, to develop a data collection system for ships and, having agreed on the general description of the data collection system for fuel consumption of ships, to the re-establishment of an intersessional correspondence group to develop full language for the data collection system for fuel consumption that can be readily used for voluntary or mandatory application of the system. The core elements of the data collection system include: data collection by ships, flag State functions in relation to data collection and establishment of a centralized database by the Organization.

28 MEPC 68, having considered the report of the correspondence group, agreed text for its further development to be the full language for the data collection system for fuel consumption of ships, which can be readily used for voluntary or mandatory application of the system. In this regard, the Committee noted that a purpose of the data collection system was to analyze energy efficiency

and for this analysis to be effective some transport work data needs to be included, but at this stage the appropriate parameters have not been identified.

29 MEPC 68 also agreed to recommend to the IMO Council the holding of an intersessional working group to: further consider transport work and/or proxies for inclusion in the data collection system; further consider the issue of confidentiality; consider the development of guidelines identified in the text; and to submit a report to MEPC 69.

### ***Reduction of GHG emissions from ships***

30 MEPC 67, in October 2014, approved the Third IMO GHG Study 2014 providing updated estimates for greenhouse gas emissions from ships. The Study estimates that international shipping emitted 796 million tonnes of carbon dioxide (CO<sub>2</sub>) in 2012, against 885 million tonnes in 2007. This represented 2.2% of the global emissions of CO<sub>2</sub> in 2012, against 2.8% in 2007. However, the “business as usual” scenarios continue to indicate that those emissions are likely to grow by between 50% and 250% in the period to 2050, depending on future economic and energy developments.

31 MEPC 68 considered a submission from the Marshall Islands, calling for a quantifiable reduction target for greenhouse gas emissions from international shipping. Whilst expressing gratitude to the Marshall Islands for the submission, the Committee took the view that the priority at this stage should be to continue its current work, in particular, to focus on further reduction of emissions from ships through the finalization of a data collection system. The Marshall Islands proposal could then be further addressed at an appropriate future session of the Committee. The need to consider the proposal further was recognized and the Committee also looked forward to a successful UN climate change conference (UNFCCC COP 21 meeting) in Paris from 30 November to 11 December 2015.

### ***Fuel oil availability***

32 MEPC 67 reviewed a progress report from the correspondence group which had been instructed to develop a draft framework for a methodology to examine whether sufficient fuel meeting the requirements set out in regulation 14 (Sulphur Oxides (SO<sub>x</sub>) and Particulate Matter) of MARPOL Annex VI is likely to be available by the effective date of those requirements, taking into account the global market supply and demand for fuel oil, trends in fuel oil markets, and any other relevant issues.

33 MEPC 68 agreed terms of reference for the review, required under regulation 14 (Sulphur Oxides (SO<sub>x</sub>) and Particulate Matter) of MARPOL Annex VI, of the availability of compliant fuel oil to meet the global requirements that the sulphur content of fuel oil used on board ships shall not exceed 0.50% m/m on and after 1 January 2020. The IMO Secretariat was requested to initiate the review by 1 September 2015, with a view to the final report of the fuel oil availability review being submitted to MEPC 70 (autumn 2016) as the appropriate information to inform the decision to be taken by the Parties to MARPOL Annex VI.

34 MEPC 68 also established a Steering Committee consisting of 13 Member States, one intergovernmental organization and six international non-governmental organizations to oversee the review.

### ***Fuel oil quality***

35 MEPC 67, following a discussion on fuel oil quality, established a correspondence group to develop draft guidance on quality-assurance for fuel oil delivered for use on board ships and to consider the adequacy of the current legal framework in MARPOL Annex VI in relation to fuel oil quality. MEPC 68 considered the report of the group and re-established it to: further develop draft guidance on best practice for assuring the quality of fuel oil delivered for use on board ships; further

examine the adequacy of the current legal framework in MARPOL Annex VI for assuring the quality of fuel oil for use on board ships; and submit a report to MEPC 69.

### *Black Carbon*

36 MEPC 68 agreed to a definition for Black Carbon emissions from international shipping, based on the “Bond et al.” definition which describes Black Carbon as a distinct type of carbonaceous material, formed only in flames during combustion of carbon-based fuel, distinguishable from other forms of carbon and carbon compounds contained in atmospheric aerosol because of its unique physical properties.

### **OPRC and OPRC HNS Protocol**

37 MEPC 67 approved *the Guidance on the safe operation of oil pollution combating equipment*. This Guidance provides information on the identification, assessment and mitigation of the risks to the responders in transporting and operating oil pollution combating equipment, taking into account the lessons learnt by government and industry from oil spill response operations of recent years.

38 MEPC 68 considered and subsequently approved two sets of guidelines to assist in oil spill response. These included the *Guidelines on international offers of assistance in response to a marine oil pollution incident*, intended as a tool to assist in managing requests for spill response resources and offers of assistance from other countries and organizations when confronted with large, complex or significant oil spill incidents. The Committee also approved *Guidelines for the use of dispersants for combatting oil pollution at sea Part III* (Operation and technical sheets for surface application of dispersants) which will be published together with Part I (Basic information) and Part II (National Policy) which had already been approved. These are an update on guidance published by IMO and UNEP in 1995.

39 In its upcoming sessions, MEPC will consider, inter alia, the update of the IMO OPRC model training course, the update of the IMO Manual on oil pollution Section II – Contingency planning, in addition to the Guide on oil spill response in ice and snow conditions and the final part of the Guidelines for the use of dispersants for combatting oil pollution at sea, specifically dealing with subsurface application.

### **London Convention and Protocol (LC/LP)**

#### ***Marine geoengineering including ocean fertilization***

40 Following the adoption, in 2013, of resolution LP.4(8) on the amendment to the London Protocol to regulate the placement of matter for ocean fertilization and other marine geoengineering activities, the Meeting of Contracting Parties to the London Protocol approved:

- .1 Guidance for consideration of (future) marine geoengineering activities; and
- .2 a description of arrangements for a roster of experts on marine geoengineering involved in the consultation process on proposals for activities listed in annex 4 of resolution LP.4(8).

41 The Scientific Groups under the London Convention and Protocol, held a Symposium on marine geoengineering on 23 April 2015, as part of their annual ‘Science Day’. The Symposium was attended by some 50 participants and by Dr. Alex Baker (GESAMP). A full list of speakers and topics, as well as copies of the presentations is available at: <http://www.imo.org/en/OurWork/Environment/LCLP/recentevents/Pages/default.aspx>. The outcomes of this event are being fed into the development of a scoping document on this topic for consideration by GESAMP at its 42nd session.

*Marine disposal of tailings and associated wastes from mining operations*

42 The Meetings, having noted advice prepared by the IMO Legal Affairs and External Relations Division that the London Convention/Protocol (LC/LP) may, in the framework of UNCLOS, complement regulatory activities undertaken under the auspices of other organizations that are involved in the issue of marine disposal of wastes from mining operations and that the issue whether marine disposal of wastes from mining operations is included in the definition of dumping under LC/LP has to be interpreted by the State Parties to LC/LP, agreed to continue to gather information on best practices and existing guidance and legislation and other relevant issues of marine and riverine disposal of mine tailings around the world; and, identify any gaps in best practices and existing guidance.

43 As indicated last year, the Office for the LC/LP and Ocean Affairs of IMO, successfully organized, in cooperation and assistance of the Peruvian Maritime Authorities, the GESAMP International Workshop on the impacts of mine tailings in the marine environment. This was held on 10 and 11 June 2015, in Lima, Peru and was attended by some 100 participants including relevant researchers, policy makers, coastal and marine managers and industry, as well as Dr. Mike Huber and Dr. Ana-Carolina Ruiz as representatives of GESAMP. All presentations can be downloaded at: [http://www.dicapi.mil.pe/taller/en/down\\_workGesamp.html](http://www.dicapi.mil.pe/taller/en/down_workGesamp.html). The primary focus was to increase the scientific understanding of impacts on the marine environment of deep sea tailings placement. The workshop noted that there were strong correlations between the issues identified for marine disposal of mine tailings and those identified for wastes produced during deep sea-bed mining and that any further work or studies should address both activities as much as possible to reduce effort and costs. The outcomes of the Workshop will be presented to GESAMP 42, with a view to consider establishing a Working Group on this topic.

*Deep seabed mining*

44 The Meetings of Contracting Parties reviewed the objectives and workings of the International Seabed Authority (ISA) in areas beyond national jurisdictions and ISA's work on the development of a Mineral Exploitation Code. The Meetings, having noted, inter alia, that there are areas of overlap between the work of the LC/LP and ISA, but also potential gaps in the development of the environmental obligations in the Code, particularly in relation to the waste disposal in the marine environment. The LC/LP agreed that the regulatory and technical regimes of the two bodies would need to be aligned. The Meetings agreed to explore ways to strengthen cooperation and instructed the Secretariat to initiate a dialogue with ISA to ensure a closer cooperation for future joint work.

45 The Meetings also considered deep seabed mining within national jurisdictions and noted that, while the definition of dumping in the Protocol (or Convention) excludes exploration and exploitation of seabed mineral resources, a potential gap in international standards or codes of practice was evident and hence the LC/LP bodies could offer technical advice in managing wastes arising from such activities. The Secretariat is currently collecting information on existing national and regional or other forms of legislation applicable to seabed mining in the EEZ to identify gaps and shortcomings in such regulations.

*Twenty-five-year scientific review of all radioactive wastes and other radioactive matter*

46 At their last meetings, the Contracting Parties recalled that, in 1993, when the London Convention was amended to ban the dumping of radioactive wastes or other radioactive matter (resolution LC.51(16)), the amendment also included an agreement that, within twenty-five years of the entry into force of the amendment, a scientific study, relating to all radioactive wastes and other radioactive matter other than high level wastes or other matter, shall review the position of



such substances in LC article 12 of Annex I. Similarly, the London Protocol (Annex 1, article 3) provides for an analogous review with the same timeframe. The amendment of LC article 6 of Annex I entered into force on 20 February 1994, and thus a scientific study should be completed before 2019.

47 The Meetings, agreed that a step by step assessment approach could be employed, in order to determine the type and level of review that would be needed to fulfil the requirements of the LC/LP. This could include, inter alia, a literature review focusing on the period after 1993, and a review of the Intergovernmental Panel of Experts on Radioactive Waste report. To this end the Meetings established a correspondence group, under the co-lead of the United Kingdom and the IAEA, to submit a full proposal for a work plan for the twenty-five-year review to the next meeting of the governing bodies; and agreed to establish a second correspondence group, to prepare a communications plan and develop possible options for e.g. an interpretative resolution, under the co-lead of the United Kingdom and the United States.

## IAEA

48 Following the agreement made at the 41 GESAMP, IAEA/NAEL provided € 5,000 to the UNInMAR-UNAM (Institute of Marine sciences and Limnology, University of Mexico) for completing the digitisation of the core profiles from LMEs undertaken in the framework of the WG 39 "Global trends in pollution of coastal ecosystems".

### **Radiometrics Laboratory (RML) activities**

#### *IAEA's project for "Marine Monitoring: Confidence Building and Data Quality Assurance"*

49 In the framework of the IAEA's Nuclear Safety Action Plan, the IAEA collaborates with Japan to assist in the implementation of the marine monitoring programme set in place following the 2011 earthquake, tsunami and resulting Fukushima Daiichi Nuclear Power Station nuclear accident. Activities under this project are a follow-up to the the International Peer Review Mission on Mid- and Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4, which visited Tokyo and the Fukushima Prefecture in November-December 2013. The project started in 2014 and will run for 3 years, including 2 interlaboratory comparisons and one proficiency test for radionuclides in marine samples organized each year.

#### *IAEA's Regional Technical Cooperation project RCA RAS/07/021 "Marine Benchmark Study on the Possible Impact of the Fukushima Radioactive Releases in the Asia-Pacific Region"*

50 This is an IAEA Regional Technical Cooperation Project running in the Asia-Pacific region under the "Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific" (RCA) aiming to assist Member States in the region to build capacity allowing them to assess eventual impacts of the radioactive releases from the Fukushima Daiichi Nuclear Power Station on the marine ecosystems. The project, running between 2011-2015, was already successful in training scientists and laboratory staff from the region in analytical and assessment techniques and in updating the ASPAMARD regional database with 100 000 data on radioactivity in seawater, sediment and biota. The final project meeting is scheduled in November 2015.

#### *Analytical quality services*

- Production of Certified Reference Materials for radionuclides in marine samples Sediment from Bikini Atoll and Pacific Ocean:
  - Two candidate certified reference sediments (IAEA-412 and IAEA-410) are in advanced stage of certification. It is expected they will be available for distribution in 2016.

- Two new sediment samples IAEA-465 (Baltic sea sediment) and IAEA-469 (Ibaraki Pacific Ocean sediment) are in preparation for future use.
- Proficiency Testing: After finalising 3 PTs in 2012, 2013 and 2014 the Environment Laboratories have organised in 2015 a fourth PT exercise with seawater samples spiked with Sr-90, Cs-134, Cs-137 and H-3. Sixty participants take part in this proficiency test. The PT activities are carried out in the framework of the IAEA's Regional Technical Cooperation project RCA RAS/07/021 "Marine Benchmark Study on the Possible Impact of the Fukushima Radioactive Releases in the Asia-Pacific Region" and the IAEA's Nuclear Safety Action Plan project for "Marine Monitoring Confidence Building and Data Quality Assurance".

#### *MARIS database*

51 In 2014-2015 the IAEA's MARine information System (MARiS), a global database for marine radioactivity measurements accessible on Internet through the IAEA's NUCLEUS portal, is being upgraded and developed. Development areas include updating the dataset, improving the website, and linking with larger environmental data networks. MARiS is now exploring links to both the Group on Earth Observations (GEO) and their data network GEOSS (Global Earth Observation System of Systems), and the iMarine virtual research environment. Furthermore, with the increasing need to educate the wider general audience on the topic of marine radioactivity and the issues surrounding it, MARiS also re-established links to the UN Atlas of the Oceans, a web portal that provides information relevant to the sustainable development of the Oceans. The UN Atlas of the Oceans is developed and maintained by the FAO and works in close collaboration with UN-Oceans, an inter-agency mechanism to coordinate ocean related activities. In 2015 new data were uploaded on Pacific Ocean radioactivity.

#### **Radioecology Laboratory (REL) activities**

##### *Strengthening capabilities for biotoxin monitoring in seafood through research and development, training and cooperation*

52 The receptor binding assay for harmful algal bloom (HAB) toxin detection has been in full operation at NAEL for research and development application or for technology transfer and capacity building. This method is being used to study biotoxin food web transfer and metabolism. It is being optimized for application to the emerging ciguatera toxins and its proficiency assessed on new seafood sample matrices to broaden its regulatory application.

53 NAEL provides technical and scientific support to 30 Member States (MSs) in Latin America, Asia-Pacific and Africa to build capacity in HAB management through national and regional projects. NAEL also hosted several fellowship and internship to transfer the RBA technology to IAEA MSs. NAEL is joining efforts with other national and international organisation (IOC-UNESCO, US-NOAA, Malarde Institute in French Polynesia) to improve knowledge and enhance capabilities in HAB management.

54 A new Coordinated Research Project (CRP) on the application of the RBA technique for improving coastal management has been developed and the initial meeting of the will take place in 2015.

##### *Partnership with the Collaborative Research Centre, SFB 754, at the University of Kiel, Germany*

55 SFB 754 addresses the threat of ocean deoxygenation and its consequences on the global climate-biogeochemistry system. Originally, the low oxygen content of oxygen minimum zones (OMZ) is due to a natural process of enhanced oxygen consumption related to the remineralization of sinking organic matter produced in the nutrient rich surface waters. Some of the richest fisheries

in the world supported by these nutrient rich surface waters are predicted to be highly impacted by the oxygen decline.

56 After two intensive field work campaigns in upwelling areas off the coast of Peru and Mauritania, REL participated in February 2015 in the SFB 754 science retreat to exchange and discuss recent results. REL will continue the collaboration with scientists involved in SFB 754, to further contribute with more detailed data on carbon fluxes to the ongoing studies of the climate-biogeochemistry system.

*Research and development of nuclear application for studying contaminants and essential elements in marine biotas*

57 During the last year, REL continued to use radiotracers to investigate bioaccumulation of contaminants and essential elements in marine organism and to also assess seafood safety. The focus for this period was on (1) Cesium in various invertebrates and fish, (2) factors affecting accumulation of trace metals in cockles consumed in West Africa, (3) effect of low pH (ocean acidification) on fish larvae and (4) the food transfer of contaminants and essentials nutrients in fish species produced in aquaculture. For caesium experiments, REL team investigated the exposure of different marine species through different exposure pathways to understand fate of accidental release of this radionuclide in the marine environment and to respond to key questions: How CS is accumulated? What is the major pathway and what is the transfer through the food chain? What is the environmental risk? The results of these studies will help to better understand for example, the high levels found in some species tissues in Fukushima using laboratory experiments and modelling.

*Activities of the "Ocean Acidification International Coordination Centre (OA-ICC)"*

58 The OA-ICC co-organized two regional training courses on ocean acidification that benefited 28 scientists from 14 developing IAEA Member States. The first training course (1-7 September 2014) focused on the Mediterranean region and took place in La Spezia, Italy, in partnership with ENEA and MARES. The second one (9-16 November 2014) covered Latin America and was organized in co-operation with the University of Concepcion in Chile.

59 The OA-ICC supported 15 scientists from developing IAEA Member States to attend the 3rd International Symposium "Effects of climate change on the world's oceans", Brazil, March 2015. The project also sponsored the participation of two young Chilean researchers in a series of ocean acidification-related activities at the UNFCCC COP20 in Lima, Peru in December 2014.

60 In January 2015 the OA-ICC and the Scientific Centre of Monaco organized the 3rd International Workshops "Bridging the gap between ocean acidification and economic valuation" at the Oceanographic Museum of Monaco. More than 50 natural and social scientists, as well NGOs and government representatives gathered to discuss the impact of ocean acidification on coastal communities. The results of the workshop were translated into a brochure for policy makers launched on World Oceans Day (8 June 2015).

61 The 2nd Meeting of the Ocean Acidification international Reference User Group took place at the Oceanographic Museum of Monaco on 14-16 January 2015 and focused on future research priorities and policy options. The meeting set the basis for the elaboration of The Monaco Ocean Acidification Action Plan – a guiding document for policy makers and resource managers, also published on World Oceans Day (8 June 2015).

62 The OA-ICC supported the second meeting of the Oceans 2015 Initiative (20-22 April 2015), working towards the inclusion of ocean acidification in the climate negotiations to be carried out during the UNFCCC COP21 in Paris in December 2015.

63 The results of one of the OA-ICC's inter-comparison activities - comparing ten public packages that compute ocean carbonate chemistry - were presented in a peer-reviewed scientific paper that was published in the journal Biogeosciences in March 2015. The OA-ICC has also

contributed to several major international publications: a chapter in the CBD/UNEP report on ocean acidification, an ocean acidification box in the WMO Greenhouse Gas Bulletin, an article in the Annual WMO Bulletin and a chapter in an Inter-Agency UNDESA publication.

64 From September 2014 to June 2015, the OA-ICC news stream (news-oceanacidification-icc.org) hosted nearly 1100 posts, received almost 35,000 visitors and was viewed more than 85,000 times by people from 172 countries. The OA-ICC website (www.iaea.org/ocean-acidification) has been constantly expanded and enriched with resources grouped according to target audience and language. The project has started producing "OA-ICC Highlights" - quarterly updates on its activities, also available on the OA-ICC website.

65 The OA-ICC co-organized an exhibit booth and three side events on ocean acidification at the UNFCCC COP20 in Lima, Peru in December 2014.

### **Marine Environmental; Studies Laboratory (MESL) Activities**

#### *Production of Certified Reference Materials and Intarlaboratoy Comparison exercises*

66 Three new Certified Reference Materials for trace elements and Methyl Mercury were finalised: IAEA-461 (marine biota - Clam), IAEA-456 (marine sediment) and IAEA-470 (marine biota - Oyster). The CRMs were produced to assist Member States improving quality of measurement results in the analysis of Mercury and Methyl Mercury in marine environmental samples, in view of assessing Mercury pollution in line with the requirements of the Minamata Convention on Mercury and for enhancing seafood safety.

67 NAEL/MESL also participated in three Interlaboratory Comparisons (ILC) on Mercury, Methyl Mercury, trace elements and organotin determination in marine samples, organised by Brooks Rand, Quasimeme and the Warsaw Institute of Biosciences and Technology, in two ILCs organised by the Bohn OSINet Group for the identification of oil spill and paraffin sources using biomarkers and carbon stable isotopes and in one ILC on the analysis of Persistent Organic Pollutants in plastic pellets collected on the beach, organised by the International Plastic Pellet Watch programme.

#### *Strengthening data quality assurance of Regional Seas laboratories participating in marine monitoring programmes*

68 MESL provided technical support for strengthening the capability of Mediterranean laboratories to accurately analysing contaminants in marine samples, the framework of the MED POL marine pollution monitoring programme (MED POL is the Programme for the Assessment and Control of Pollution in the Mediterranean Region of UNEP/Mediterranean Action Plan). Designated national monitoring laboratories in Mediterranean countries benefit by being able to use the analytical support of MESL in the development in their quality assurance programs for determination of trace elements and organic contaminants in the marine environment.

69 In the framework of an agreement with UNEP/MAP, NAEL/MESL provided technical support on strengthening data quality assurance in marine pollution monitoring in the Mediterranean region. MESL organised two Proficiency Tests with the participation of 43 laboratories from 13 Mediterranean Member States and two Training Courses with the participation of 13 Mediterranean scientists:

- Analytical Performance Study for MEDPOL: Determination of trace elements in marine biota sample (IAEA-MEL-2014-01 PT/TE)
- Analytical Performance Study for MEDPOL: Determination of chlorinated pesticides, PCBs and petroleum hydrocarbon in sediment sample (IAEA-MEL-2014-01 PT/ORG)

- Training workshop on the analysis of Trace Elements in marine samples for laboratory practitioners in MEDPOL countries, 3-14 November 2014
- Training workshop on the analysis of Organic Contaminants in marine samples for laboratory practitioners in MEDPOL countries, 3-14 November 2014

70 A new agreement was signed on May 2015 between IAEA/NAEL and UNEP/MAP to continue the collaboration on strengthening data quality assurance in marine pollution monitoring in the Mediterranean region. Already 2 Proficiency Tests and 2 Training Courses are under preparation. The project is on-going and will be completed within 2015.

71 Also an agreement was signed on March 2015 between IAEA/NAEL and the Regional Organisation for the Protection of the Marine Environment of the Gulf (ROPME). In the framework of this agreement, MESL, RML and REL are assisting the Gulf Member States implementing the regional ROPME Mussel Watch Programme, by jointly analysing oyster and sediment samples from the coastal zone of the Gulf Member States, for trace elements, organic contaminants, radionuclides and Harmful Algal Blooms related biotoxins. The project is on-going.

*Developing tools for assisting MSs to analyse contaminants and long lived radionuclides in marine samples and to identify their sources*

72 MESL continued the development and validation of monitoring methods, which were published in peer reviewed journals and presented in International Conferences.

Methods were developed on:

- Mercury and Methyl-Mercury analysis in sediment and marine biota
- Long-lived radionuclides (Plutonium, Uranium, Americium, and Thorium) analysis in marine samples
- Persistent organic compounds and petroleum hydrocarbons analysis in the marine samples
- Application of compound specific carbon isotope analysis to fingerprint petroleum hydrocarbons in polluted coastal water
- Lead stable isotopes analysis for identifying lead sources and pollution history

## **IOC of UNESCO**

### **Ocean acidification**

73 Ocean acidification (OA) is an emerging global concern and is a risk to marine biodiversity, ecosystems and human society. In terms of new research and networking the IOC is co-leading the Global Ocean Acidification Observing Network (GOA-ON) which is aimed to coordinate and improve ocean observation to detect the impacts of ocean acidification. The GOA-ON roadmap was published in September 2014 and the most recent development was the establishment of a biological working group, co-chaired and coordinated by IOC-UNESCO, in order to improve measurements detecting the impact of increasing CO<sub>2</sub> levels on marine life. Furthermore together with the support of the Ocean Acidification International Coordination Center of the IAEA a session focusing on OA during the Third International Symposium on the Effects of Climate Change on the World's Oceans in March 2015 in Santos, Brazil. COP20, was organized. To enhance the awareness among policymakers IOC contributed to a side event in Lima during the COP20 and currently prepares OA workshops and side events towards the COP21. Regarding communication with the general public and permanent delegations here at UNESCO, IOC celebrated the World Oceans Day, which included one session on ocean acidification. The TV corner, which was

procuded for the Second International Ocean Research Conference in November 2014, received a lot of positive feedback and was used again during other occasions.

### **Blue Carbon**

74 The Blue Carbon Initiative, established in 2011 by the IOC, the International Union for the Conservation of Nature (IUCN) and Conservation International (CI) works to develop management approaches, financial incentives and policy mechanisms for ensuring the conservation, restoration and sustainable use of coastal blue carbon ecosystems. The IOC is highly involved in the Blue Carbon Scientific Working Group, which provides the scientific foundation for the Blue Carbon Initiative by synthesizing current and emerging science on blue carbon and by providing a robust scientific basis for coastal carbon conservation, management and assessment. Priority research of the Scientific Working Group functions in close partnership with the Initiative's Policy Working Group. Internationally applicable standards for quantifying and monitoring carbon storage, sequestration, and emissions in coastal ecosystems on regional and local scales were identified and the manual "Coastal Blue Carbon: methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrass meadows" was published and launched at the last meeting of the Scientific working group of the Blue Carbon Initiative in Rio Grande, Brazil, in October 2014. The distribution via internet in its pdf format is ongoing.

### **De-oxygenation**

75 De-oxygenation is a global problem in coastal and open regions of the ocean, and has led to expanding areas of oxygen minimum zones and coastal hypoxia. In the coastal ocean, the number of reported dead zones has increased exponentially since the 1960s with more than 479 systems now. The recent expansion of hypoxia in coastal ecosystems has been primarily attributed to global warming and enhanced nutrient input from land and atmosphere. The global extent and threat to human health and marine ecosystem services of ocean deoxygenation are just beginning to be appreciated; the social and economic consequences have yet to be determined but are likely to be significant. Therefore the IOC supports a group of scientists trying to create awareness among policymakers and the general public, e.g. via publishing a scientific fact sheet via the 'Ocean and Climate' platform on deoxygenation, as well as via assisting in the establishment of a global network of experts within this field.

### **Time Series**

76 In a growing effort to distinguish between natural and human-induced earth system variability, the IOC is paying attention to sustained ocean time-series measurements. Shipboard biogeochemical time-series programmes provide the oceanographic community with the multi-year, high-quality data needed for characterizing ocean biogeochemistry and ecosystem variability and have taken a renewed importance as they represent one of the most valuable tools that scientists have to characterize and quantify ocean fluxes and their associated links to ecosystem functioning in a changing ocean. Under the auspices of the IOC the International Group for Marine Ecological Time Series – IGMETS, compiled data from more than 400 time series sites worldwide. It is envisaged that the analysis of these data sets, to be published in November 2015, will serve to disentangle natural and human-induced change in marine ecosystems. The initiative shows that the assessment of present data is critical to improve the information delivered to decision makers so that they understand marine ecosystem responses to a changing climate and plan accordingly.

### **IOC Joint action with ICES and IMO on Ballast and other Ship Vectors**

77 The ICES/IOC/IMO Working Group on Ballast and Other Ship Vectors (WGBOSV) critically reviews and reports on the status of shipping vector research with an emphasis on new developments in ballast water treatment technology, risk assessment, ballast water sampling devices, and selection of ballast water exchange zones. The WG also discusses and evaluates

the sampling strategies to ensure that international guidelines are based on accurate scientific information, thereby helping to achieve consensus on difficult and technical issues.

78 In 2015 the WG continued to critically review and report on the status of shipping vector research with an emphasis on studies of shipping transport vectors, shipping vector management activities and risk assessment. WGBOSW discussed and evaluated sampling and analysis strategies for type approval and compliance testing of ballast water treatment technologies under consideration at IMO or by other regulators (e.g. U.S. Environmental Protection Agency). WGBOSV further discussed and evaluated available information on the effects of treated or exchanged ballast water on the aquatic environment and provided input on strategies which could be used to increase confidence surrounding environmental safety of treated ballast water being discharged. Other terms of reference were to provide input to WGITMO in connection with OSPAR 1/2015 request, to review a draft OSPAR JAMP Eutrophication Guidelines on phytoplankton species composition, and to investigate and report on new developments in non-native species issues in the Arctic, as a result of climate change and resource developments. Finally WGBOSV investigated and reported (incl. via AquaNIS) on new molecular tools for identification, early detection and monitoring of non-native species, in collaboration with ICES Working Group on Integrated Morphological and Molecular Taxonomy (WGIMT). Full report at <http://www.ices.dk/community/groups/Pages/WGBOSV.aspx>

### **Nutrient's coastal Impacts research**

79 Nutrient over-enrichment of coastal ecosystems is a major environmental problem globally, contributing to problems such as harmful algal blooms, dead zone formation, and fishery decline. Yet, quantitative relationships between nutrient loading and ecosystem effects are not well defined. The IOC Nutrients and Coastal Impacts Research Programme (N-CIRP) is focusing on integrated coastal research and coastal eutrophication, and linking nutrient sources to coastal ecosystem effects and management in particular. A key component in the implementation strategy is a four-year Joint UNEP-IOC Global Environment Facility (GEF) Project 'Global foundations for reducing nutrient enrichment and oxygen depletion from land-based pollution' which was launched in March 2012. The IOC is leading the Project research component which delivers global and local models for impact of nutrient loading. As part of the implementation strategy for N-CIRP, IOC also actively participates in a UNEP led 'Global Partnership on Nutrient Management' (GPNM) with intergovernmental organizations, non-governmental organizations and governments. GPNM has an online information portal to enable GPNM partners to monitor progress on implementing activities related to the sustainable use of nutrients. The platform provides a knowledge hub, networking opportunities and promotes global discussions on sustainable nutrient management.

### **Microplastics**

80 The Group of Experts on the Scientific Aspects of Marine environmental Protection (GESAMP) WG 40 'Sources, fate and effects of micro-plastics in the marine environment: a global assessment' has completed its work under the leadership of the IOC-UNESCO. It has started a second phase with a joint co-sponsorship shared by the IOC, UNEP and FAO. The new TORs were agreed by the three organizations plus GESAMP and the kick-off meeting was held in Rome last 21-23 April. The most immediate milestone for this group is to present a report on the impact of microplastics on fish by May 2016. The IOC is also acting as an advisory body on potential plastics projects funded by the European Union Joint Programming Initiative on Oceans (EU JPI Oceans).

### **Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-Economic Aspects – World Ocean Assessment**

81 IOC continued to follow closely the preparation of the World Ocean Assessment (WOA) report under the UN Regular Process, providing technical comments to the chapters related to its expertise. IOC also contributed financial resources to assist the UN Division for Ocean Affairs and

the Law of the Sea (DOALOS) with the editorial process of the report. In December 2014, the Secretariat of the Regular Process (Division of Ocean Affairs and Law of the Sea) informed the Commission that the draft of the first global integrated marine assessment of the Regular Process was completed and ready to be reviewed by Member States and relevant intergovernmental organizations. Through IOC Circular letter 2564, IOC Member States were invited to take part in the review process that concluded on 15 March 2015. In parallel, the IOC secretariat also provided a technical review for the chapters particularly relevant to the IOC field of expertise.

82 The WOA report is now being finalized by Group of Experts and will be ready in September 2015 for consideration by the UN Ad Hoc Working Group of the Whole. In the context of the WOA consideration by UN Member States, an evaluation of the 1<sup>st</sup> cycle of the Regular Process implementation may be conducted, reviewing the effectiveness of the arrangements and drawing lessons for improving the next cycle of the Regular Process.

83 In 2009, the Group of Experts leading the Assessment of Assessments (preliminary phase of the Regular Process) recommended that the Regular Process be serviced by an inter-agency secretariat co-located in one single intergovernmental organization. However, when the General Assembly decided to set up the Regular Process and its arrangements, it was decided to establish the Secretariat within the Division on Ocean Affairs and the Law of the Sea (DOALOS) in New York. The impact of this decision has resulted in a limited engagement of relevant intergovernmental bodies and programmes such as FAO, UNEP, IMO and IOC, or of scientific advisory groups such as GESAMP, in the operations of the Regular Process. The adequate provision of supporting resources is critical to facilitate the work of the Group of Experts as well as the inclusion of the state of the art scientific knowledge. The next cycle of the Regular Process may consider the use of indicators and reference points to compare status and trends over time. This would require a heavy investment in the development of an indicator-based methodology. This is an area where IOC, building on its experience with the Transboundary Water Assessment Programme (TWAP), is well placed to contribute to.

### **Transboundary Water Assessment Programme**

84 IOC is leading the implementation of the marine components of the Transboundary Water Assessment Programme (TWAP) funded by GEF. The project will provide a number of core ecological, socio-economic and governance indicators for the marine environment (64 Large Marine Ecosystems and Open Ocean areas) using globally available datasets. From the IOC perspective, TWAP is the first integrated and global marine assessment that the Commission is leading, and the results produced have the potential to inform a number of ocean governance mechanisms; these include the GEF, other UN agencies with an ocean mandate, other global assessment processes such as WOA and Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES), regional seas organizations, and LME commissions, as well as Member States. In order to conduct this assessment, IOC established a consortium of institutional partners and experts for the current Open Ocean and LMEs assessments (these include for e.g. NOAA, IGBP, GESAMP, UNEP-WCMC, University of British Columbia, National Center for Ecological Analysis and Synthesis (NCEAS), amongst others). This consortium is crucial for the conduct of the assessments, as the members provide the necessary expertise, tools and data that underpin the assessments. The final TWAP deliverables will be released in September 2015. There will be two technical assessment reports (IOC Technical Series, 119, vol. 1: LME and Vol.2: Open Ocean; IOC/2015/TS/119) and a joint web portal displaying the indicators globally and providing access to the underpinning data. (see <http://www.geftwap.org>).



## UNDP

### Highlights of relevant marine/coastal activities undertaken during the intersessional period

#### ***Sulu-Celebes Seas Sustainable Fisheries Management Project (SCS)***

85 Fish and fishery products have a critical role in global food security and nutritional needs of people in developing and developed countries. Thus the threats that imperil the rich biodiversity of our oceans—overfishing, pollution, global climate change and others—also threaten the people and countries reliant on the oceans for their food and livelihoods. Working with the Governments of Indonesia, Malaysia and the Philippines, UNDP is supporting efforts to improve the condition of fisheries in the Sulu-Celebes Seas through integrated, collaborative and sustainable tri-national management. In the Philippines, by undertaking a scientific study on the local sardine fish stocks in a demonstration site, and leveraging the findings, the project successfully advocated for the seasonal closure of that fishery to allow for the recovery of sardine stocks, which was adopted by the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) with overwhelming support from commercial fishing companies and other critical stakeholders. During the first two years of the enforcement of this policy, the fishing companies reported a 30% increase in the volume of their catch. The continued effective management of this economically and nutritionally important species will benefit the Philippines, particularly the local communities—with spillover effects in the two other countries—by improving food security through the increased supply of affordable protein; providing sustainable livelihoods among marginalized sectors; and conserving the coastal and marine ecosystems. Due to the success of that seasonal closure policy, other fishing fleets and local government units are encouraging the BFAR to adopt similar policies for other fishing grounds.

#### ***Towards Ecosystem Based Management of the Humboldt Current Large Marine Ecosystem***

86 The Humboldt Current large marine ecosystem (HCLME) is an important, highly productive zone that hosts the world's biggest single fishery, the anchovy, which—with other key HCLME stocks—contributes around 15% of global marine fish yields. This ecosystem therefore has a major role to play in global food supply, and thus investment in its sustainable management is critical. With support from UNDP financed by the GEF, the Governments of Peru and Chile are working together to improve the governance and sustainable use of the living marine resources and services of the HCLME, which are currently valued at upwards of US\$ 12 billion per year. Artisanal fisherfolk in San Juan de Marcona, Peru are applying ecosystem-based management principles to manage marine macroalgae beds to improve the health of the fisheries; these fisherfolk are protecting a 23 kilometer stretch of coastline where they collect beached macroalgae, the sale of which represents a sustainable contribution to their livelihoods. Their coastal management efforts have been instrumental in protecting the algal beds where commercially important benthic species live. In 2014, with support from UNDP, the Chilean Government endorsed a proposal for a 1.2 million hectare multiple-use coastal marine protected area around the Juan Fernandez Islands, which will be conserved through a nuanced management approach that combines restrictions (no-take zones) with sustainable use.

#### ***Timor and Arafura Seas Program***

87 In 2014, with support from UNDP and GEF, Ministers from Timor-Leste, Indonesia and the Australian Ambassador to Indonesia endorsed a regional Strategic Action Programme (SAP) that will promote the restoration, conservation and management of marine and coastal ecosystems for the Arafura and Timor Seas – known as the ATS region. This significant area, that links the Indian and Pacific Oceans, provides livelihoods for millions of people and makes a substantial contribution to domestic food and exports. These seas contain some of the most pristine and also highly threatened coastal and marine ecosystems in the world, underscoring the urgent need for trans-boundary management. Both seas also play an important economic and ecological part in

the three countries bordering them: Indonesia, Timor-Leste and Australia. The area is extremely rich in marine resources as well as oil and gas reserves.

88 The Declaration endorses the key environmental issues addressed in the regional Strategic Action Programme, including: recovering and sustaining fisheries; restoring degraded habitats; reducing land-based and marine sources of pollution; protecting marine species and supporting adaptation to the impacts of climate change in relevant sectors. UNDP, working closely with relevant Ministries, provided the technical expertise to help shape the regional Strategic Action Programme, raise necessary funds for its implementation, and now look to the future to support the training, policies, governance and community-based projects to implement the Programme.

89 The Declaration also approved the creation of a regional mechanism between the Government of Indonesia, the Democratic Republic of Timor Leste and the Government of Australia to ensure that the essential coordination and capacity are in place for sustainable and integrated management of the region. The Government of Indonesia has committed to provide a Regional Secretariat for this coordinating mechanism to be located in Bali. The Strategic Action Programme may be accessed at: <http://www.atsea-program.org/publication-1/atsea-strategic-action-programme>.

90 The GEF/UNDP/IMO **GloBallast** project continued to make significant progress at all levels. In 2014, a Global TestNet MoU was established and a Global R&D Forum conducted with almost 0.5 million co-financing from the Republic of Korea. The project developed two new ballast water management guidance documents and initiated a new training series on compliance monitoring and enforcement with emphasis on shipboard sampling and analysis of ballast water. The project was able to leverage its training and awareness raising tools to expand its outreach to a much larger geographical coverage with the support of Regional Coordinating Organization (RCO) and National Focal Points (NFP). These RCOs and NFPs continued to take the ownership of the project at regional and national level.

91 The project continues to be a flagship GEF International Waters project being highlighted and showcased as a successful example of GEF intervention, through a number of GEF and UNDP publications. The catalytic role of GloBallast in accelerating ratification of the Global Convention on Ship's Ballast Water and Sediments is evident from the fact that Argentina, Turkey and Jordan (Three Project LPCs) announced their ratification decision during the reporting year. The shipping industry also acknowledges the incremental role of GloBallast in preparing the countries through the preparation work especially on the compliance monitoring and enforcement area that the project started focusing on in 2014. Another key achievement was the signing of a global MOU between all technology testing facilities, which was mediated by GloBallast. In sum, the project made considerable progress towards all of its expected outcomes which involve 5 regions, 15 Lead Partner Countries and over 70 Partner Countries.

## UNEP

### ***UNEP's Marine and Coastal Strategy<sup>2</sup>***

92 UNEP's marine and coastal strategy covers four major areas: the land-ocean connection, ecosystem services, balancing use and conservation, and vulnerable people and places. The outcomes are achieved by focusing on UNEP's core competencies of scientific assessment, policy, planning and communications, providing objective science-based information and enhancing users' capacities. UNEP's work focuses on using sound science to apply ecosystem management to factors that cause decline of ecosystem services in marine and coastal areas.

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<sup>2</sup> <http://www.unep.org/depi>

93 The strategy cuts across the seven sub-programme areas of the UNEP work programme: climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency and sustainable consumption and production, and environment under review.

94 The Division of Environmental Policy Implementation (DEPI) is the lead Division for UNEP's marine and coastal programme. Activities are supported by the other UNEP Divisions such as the Division for Early Warning and Assessments (DEWA), Division for Environmental Law and Conventions (DELIC), Division for Technology, Industries and Trade (DTIE) as well as UNEP collaborating Centres such as UNEP World Monitoring and Conservation Centre (UNEP-WCMC) and GRID-Arendal. A key strength of the marine and coastal ecosystem programme is its ability to facilitate cooperation at global, regional and national levels through the Regional Seas Programme and the Global Programme of Action for the Protection of Marine Environment from Land-based Activities (GPA).

95 The key areas of work include management of marine litter, wastewater and nutrients, and environmental aspects of fisheries; integrated management of marine protected areas; marine biodiversity and ecosystems; green economy for oceans; and impacts of climate change on the marine environment.

96 UNEP continues to provide technical support and capacity building for integrated management of marine and coastal ecosystems within the framework of its marine and coastal strategy. In particular support, is given to member states through the platforms of the GPA and the Regional Seas Conventions and Action Plans such as Abidjan Convention, Barcelona Convention, Cartagena Convention, COBSEA, Nairobi Convention, and NOWPAP. There is also extensive collaboration with UN Agencies such as United Nations Educational Scientific and Cultural Organization- Intergovernmental Oceanographic Commission (UNESCO/IOC), United Nations Development Programme (UNDP), International Maritime Organization (IMO), United Nations Food and Agriculture Organisation (FAO), United Nations Division for Ocean Affairs and the Law of the Sea (UN DOALOS), United Nations Department of Economic and Social Affairs (UN DESA), United Nations Human Settlements Programme (UN-Habitat) and the World Bank.

### **Regional Seas Programme<sup>3</sup>**

97 UNEP has been coordinating the Regional Seas Programme since 1974. The Regional Seas Conventions and Action Plans are among the most important regional mechanisms for promoting conservation and sustainable use of the marine and coastal environment. There are currently eighteen Conventions and Action Plans (RSCAPs) around the world, encompassing 143 countries. UNEP administers six of the eighteen RSCAPs.

98 The Regional Seas Programme celebrated its 40<sup>th</sup> anniversary during 2014. From 29 September to 1 October 2014, UNEP organized the 16th Global Meeting of the Regional Seas Conventions and Action Plans in Athens, Greece. It focused on: a review of the implementation of Regional Seas Strategic Directions 2013-2016<sup>4</sup>, Sustainable Development Goals for oceans, and implementation of the Global Partnership for Marine Litter. In addition, a report<sup>5</sup> "*Regional Seas @40: Setting a Course for Regional Seas*" was published online to celebrate the 40<sup>th</sup> anniversary.

99 UNEP is preparing the 17<sup>th</sup> Global Meeting of the Regional Seas Conventions and Action Plans in October 2015 to be held in Istanbul, Turkey which will discuss the future directions of the programme considering its growing importance as a regional implementation platform under the post-2015 development agenda. A renewed Regional Seas strategy for 2017 – 2020 is also expected to be developed.

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<sup>3</sup> <http://www.unep.org/ecosystemmanagement/water/regionalseas40/>

<sup>4</sup> <http://www.unep.org/regionalseas/globalmeetings/15/RegionalSeasStrategicDirections2013-2016REV.pdf>

<sup>5</sup> <http://www.unep.org/ecosystemmanagement/water/regionalseas40/Resources/RegionalSeasReport/tabid/1060396/Default.aspx>

**Activities in the regions:***Abidjan Convention*<sup>6</sup>

100 The establishment of a Regional Coordination Centre for Marine Pollution Emergency marks an important milestone of the Abidjan Convention. On 10 July 2014, Nigeria was formally notified of the approval to host the centre, following the decision at the Convention's 11<sup>th</sup> Conference of Parties. The centre should be operational in 2015 and will coordinate activity against transboundary marine pollution across the 22 coastal countries under the Convention's jurisdiction.

101 In recognition of the need to be pro-active in the face of oil spills, the Abidjan Convention Secretariat held a number of technical meetings to draft regional environmental standards for the exploration of offshore oil and gas in West, Central and Southern Africa. A regional set of environmental standards to regulate offshore oil and gas activities, the first of its kind, will be tabled at the next Conference of Parties due in 2017.

102 Under the Canary Current Large Marine Ecosystem (CCLME) project, the Secretariat has developed a geographic database on habitats, biodiversity and training while completing the biodiversity assessment of the CCLME area, including marine protected areas and endangered species. It has assessed the impact of land-based activities on water and sediment quality, identified policy and legislative gaps for the transboundary diagnostic analysis, and compiled data relevant to pollution and ecosystem health in the CCLME region.

103 The "Securing the foundations for fish food security in a changing ocean, West, Central and South Africa" project is on-going with support from the Government of Norway. If successful, the project may be expanded to other regions. A workshop has been held to mark the initiation of the project. Future projects being prepared by the Secretariat include pilot projects on the sustainable development of coastal urban areas in Côte d'Ivoire, Ghana and Togo in partnership with UN-Habitat. Other projects on economic growth and institutional capacity-building are under preparation.

*Cartagena Convention*<sup>7</sup>

104 The Secretariat continued to execute the GEF Wastewater Management (CRew) Project. Awareness of wastewater management issues at ministerial levels has increased through the engagement of Ministers of Environment in High Level Sessions. Guyana, Antigua and St. Lucia have new and updated national policies, legislation and regulations for wastewater management. Wastewater Baseline Assessments have been completed and more than 400 persons were trained in various aspects of wastewater management.

105 A new project developed by the Secretariat, "Implementing Integrated Water, Land and Ecosystems Management in Caribbean SIDS (IWeco)," received GEF CEO endorsement in April 2015. It includes ten participating Caribbean Small Island Developing States<sup>8</sup>. Other projects developed and supported by the Secretariat in the Wider Caribbean Region include the Caribbean Large Marine Ecosystem Projects, CLME and CLME+, and the GEF-UNDP-IMO GloBallast Partnership Project which benefited the Bahamas, Jamaica, Trinidad and Tobago and Venezuela. A regional strategy for lionfish control<sup>9</sup> and better practices has also been widely implemented, and marine spatial planning was applied to scenario building<sup>10</sup> for the transboundary management of marine mammals. The Secretariat is also working towards the development of the first State of the Convention Area Report (SOCAR).

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<sup>6</sup> <http://abidjanconvention.org/>

<sup>7</sup> <http://www.cep.unep.org/cartagena-convention>

<sup>8</sup> <http://www.cep.unep.org/gef-iweco>

<sup>9</sup> <http://www.car-spaw-rac.org/?Invasive-Lionfish-A-Guide-to,454>

<sup>10</sup> <http://www.car-spaw-rac.org/?Scenarios-for-marine-mammal>

106 The Specially Protected Areas and Wildlife (SPAW) Sub-Programme saw the completion of its Mentorship Programme during 2014, with three mentorship agreements and capacity-building activities successfully concluded between mentors of at least three Marine Protected Areas (MPA) sites (Bonaire Marine Park; La Caleta, Dominican Republic; and Hol Chan, Belize) which are listed under the SPAW Protocol. A Cooperation Programme was launched to provide small grants to support listed Protected Areas (PAs), and assist with additional nominations. By the end of 2014, 13 PA listed sites were added under the SPAW Protocol, bringing the total to 31 areas from the Wider Caribbean Region listed by Parties. Parties have also applied the Protocol's criteria for species listing and included four coral reef species as fully protected under Annex II.

107 A major project "Biodiversity for Sustainable Development in the Caribbean through Ecosystem Based Management" was launched in April 2015. It builds on the outcomes of regional support provided during 2011-2013 for the Caribbean Challenge Initiative. This new project will include capacity building and pilot activities for SPAW Parties aiming at the successful application of Ecosystem Based Management (EBM) approaches and tools as a contribution to the conservation and sustainable management of coastal and marine resources, including the application of Marine Spatial Planning (MSP) and Decision Support Systems (DSS) tools. In 2014 the Convention and its SPAW Protocol, together with Parties and partners, also facilitated the identification of Ecological or Biological Significant Marine Areas (EBSAs) in the Wider Caribbean and Western Mid-Atlantic under the CBD.<sup>11</sup>

108 The Regional Action Plan on Marine Litter Management in the WCR was revised and will form the basis for new Marine Litter projects in the Wider Caribbean Region.

#### *Coordinating Body on the Seas of East Asia (COBSEA)*<sup>12</sup>

109 COBSEA has continued to support UNEP in reducing the negative impacts of dive tourism on coral reefs, through the Green Fins Initiative. This is an innovative private/public partnership conservation initiative to reduce negative impacts of dive tourism on coral reefs by promoting private sector compliance with a code of conduct and raising awareness among regulators, diving companies and their customers. In 2014 the Initiative was introduced in two additional countries and total membership now stands at more than 400 diving and snorkelling operators across six countries in Asia, who are continuously improving their business practices to mitigate negative environmental impacts. A comprehensive Green Fins Toolbox of guidance materials and tools is being developed to facilitate further replication.

110 COBSEA has supported seven countries in preventing/reducing the impacts of natural disasters, climate change and sea-level rise, by building the capacity of national authorities through the development of national assessment reports on coastal erosion. Such reports are considered by countries to be major and fundamental documents and reference material for coastal erosion control and coastal development and management, and for the development of new or updated national plans, policies, strategies and programmes on coastal erosion at national and local levels. COBSEA has supported four countries in producing national review reports on natural resource governance frameworks, including a resource toolkit for community involvement. Capacity building and pilot-scale demonstration interventions focusing on communities and local government have been identified and implemented, to support the reform of natural resource governance.

#### *Mediterranean Action Plan (Barcelona Convention)*<sup>13</sup>

111 Within the Mediterranean Action Plan (UNEP/MAP) Barcelona Convention, the ecosystem approach has been strengthened at the regional level. It has been confirmed as a guiding principle for the overall work of UNEP/MAP Barcelona Convention, and has been implemented in practical

<sup>11</sup> See more at <https://www.cbd.int/marine/ebsa/booklet-02-wcar-en.pdf>

<sup>12</sup> <http://www.unepmap.org/index.php?module=content2&catid=001001004w.cobsea.org>

<sup>13</sup> <http://www.unepmap.org/index.php?module=content2&catid=001001004>

terms, by agreeing on region-wide common Ecological Objectives, Indicators and Targets. These serve as a basis for an Integrated Monitoring and Assessment Programme, covering regional-level monitoring and assessment of biodiversity, non-indigenous species, pollution, marine litter, coast and hydrography, in an integrated manner<sup>14</sup>.

112 The Mediterranean Action Plan (MAP) adapted the framework of the UNEP/MAP Barcelona Convention to establish a Regional Plan on Marine Litter, with legally-binding measures and operational targets to be adopted by 2025 in order to minimize and prevent marine litter.

113 On the regional level, work is ongoing in the framework of UNEP/MAP Barcelona Convention, towards the development of a Regional Climate Change Adaptation Framework. This aims to provide a regional approach to coordinating and assisting policy-makers and stakeholders at all levels across the Mediterranean to promote the right enabling environment for mainstreaming adaptation in national and local planning; promote and exchange best practices and low-regret measures; promote leveraging of necessary funding; and exchange and access best available data, knowledge, assessments and tools on adaptation. The objective is to increase the resilience of the Mediterranean marine and coastal natural and socioeconomic systems to the impacts of climate change<sup>15</sup>.

#### *Nairobi Convention*<sup>16</sup>

114 The Nairobi Convention has prepared a Regional State of the Coast Report (RSOCR)<sup>17</sup> which responds to the requirements of the Nairobi Convention and contributes to the United Nations-led production of the World Ocean Assessment (WOA) reports and to other global and regional processes, such as the Global Environment Outlook coordinated by UNEP.

115 Following the capacity building workshops organised under the Regular Process for Global Reporting and assessment of the state of the marine environment including socioeconomic aspects, the Nairobi Convention decided to prepare its first baseline integrated assessment of the state of the marine and coastal resources. The aim of the workshops was to provide a background to the Regular Process; improve skills and knowledge for conducting integrated assessments of the state of coastal and marine environment; and introduce a uniform assessment methodology. The RSOCR aims to integrate the socio-economic and ecological systems of the WIO region by using a uniform methodology based on the Opportunities Framework and the DPSIR (Drivers, Pressures, Status, Impacts, and Responses) approach. The RSOCR's approach has been adapted from the WOA framework; however the content and organization of the concluding chapters are based on the distinct needs of the WIO region. The political process and mandate was led by the Contracting Parties and their National Focal Points to the Nairobi Convention, and the technical process was guided by the Western Indian Ocean Marine Science Association and involved a representative set of scientists with broad experience in the region. The RSOCR's main objectives are to provide a comprehensive baseline, highlight main opportunities, describe successes and challenges, identify capacity building needs, identify knowledge gaps, and propose policy options. The RSOCR was launched during the 8th Conference of Parties (CoP) held 22-24 June 2015 in Mahe, Seychelles.

116 The Nairobi Convention Secretariat in collaboration with the Western Indian Ocean Marine Scientists Association prepared the Climate Change Strategy for the Nairobi Convention Area in the period 2013-2015. The Strategy was presented and discussed by the Contracting Parties at the Eighth CoP. The Strategy will be finalized by December 2015 and will enable the Contracting

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<sup>14</sup> The Contracting Parties to the Barcelona Convention, at their 18th Meeting, in December 2013, adopted by Decision IG. 21/7 a Marine Litter Regional Plan, which entered into force on the 8th of July 2014. Specific marine litter regional reduction target will be submitted for adoption to the 19th Meeting of the Contracting Parties to the Barcelona Convention in February 2016.

<sup>15</sup> The Contracting Parties to the Barcelona Convention, at their 18<sup>th</sup> Meeting, in December 2013, supports by Decision IG. 21/17 the preparation of a Climate Change Adaptation Framework, to be reviewed by MCSD and submitted for consideration to the 19<sup>th</sup> Meeting of the Contracting Parties in February 2016.

<sup>16</sup> <http://www.unep.org/nairobiconvention/>

<sup>17</sup>[http://www.unep.org/NairobiConvention/Publications/Regional\\_State\\_of\\_Coast\\_Report\\_for\\_the\\_Western\\_Indian\\_Ocean.asp](http://www.unep.org/NairobiConvention/Publications/Regional_State_of_Coast_Report_for_the_Western_Indian_Ocean.asp)

Parties to the Nairobi Convention to integrate relevant recommendations of the Climate Change Strategy into their national climate change strategies and develop policies, programmes and projects on climatic variability and climate change.

117 “Blue economy”, as a model to improve socio-economic development in the Western Indian Ocean Region in the ocean and coastal sectors, is gaining momentum in the development agenda of the Contracting Parties to the Convention. As a follow up to the first workshop held 11-13 December 2013, a second workshop was organized 17-18 June 2015 in Mahe, Seychelles. The aim was to facilitate intergovernmental dialogue on the principles, valuation and enabling frameworks for blue economy. As a result, South Africa has developed Operation PHAKISA, Seychelles has blue economy and Mauritius has ocean economy, while other countries are in the process of defining and developing blue economy pathways.

#### *Northwest Pacific Action Plan (NOWPAP)*<sup>18</sup>

118 Within the framework of the NOWPAP Medium-term Strategy (MTS) 2012-2017, NOWPAP Regional Coordinating Unit and four Regional Activity Centres continue to address marine and coastal environmental issues such as harmful algal blooms (HAB) and accidental spills of oil and hazardous chemicals. NOWPAP experts are also implementing projects focusing on major threats to marine and coastal biodiversity: eutrophication, destruction of coastal habitats and introduction of alien invasive species. Other projects are related to sea grass and seaweed habitat mapping and assessment of the status of threatened and endangered marine and coastal species in the region. In September 2014, a regional workshop was organized to discuss Ecological Quality Objectives for the NOWPAP region.

119 The NOWPAP Regional Action Plan on Marine Litter is also being implemented in cooperation with central and local governments in the NOWPAP member states as well as non-governmental organizations (NGOs). NOWPAP is actively participating in the Global Partnership on Waste Management (GPWM) and Global Partnership on Marine Litter (GPML), hosting the NW Pacific regional node of the GPML since 2014.

#### **Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)**<sup>19</sup>.

120 The GPA focused its efforts mainly on the three pollution source categories of nutrients, wastewater, and marine litter, through establishment and management of global partnerships, in response to the Manila Declaration.

121 The wastewater portfolio has strengthened the normative basis for better wastewater management. The GPA is coordinating activities under the UN-Water Task Force on Wastewater. The key activity of the Task Force was publication of an Analytical Brief on Wastewater, launched in February 2015. The Brief encourages governments to view treated wastewater as a valuable resource, and a priority for the post-2015 development agenda. It also warns that untreated wastewater, if not addressed, will increasingly pose a threat to human health, economic activity and water security.

122 The programme also completed an economic valuation of the impacts of wastewater, published in June 2015. GPA provided support to the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) in developing Regional Guidelines on Wastewater Management in Coastal Cities on the Red Sea and Gulf of Aden. The aim is to help improve wastewater management and reduce the pollution loads in the coastal cities of the PERSGA region.

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<sup>18</sup> <http://www.nowpap.org/>

<sup>19</sup> <http://www.gpa.unep.org/>

123 The Swiss Government gave approval for the initiative on the development of a Global monitoring mechanism for wastewater, water quality, and water resource management, with substantial financial support from the Swiss Development Cooperation (SDC). The GPA is also working in close collaboration with the UN-Habitat on the Greener Cities Partnership which was launched at the World Urban Forum in April 2014. Focusing on wastewater activities, the partnership was set up in response to the call of the Executive Directors of UNEP and UN-Habitat to raise the visibility and profile of the inter-agency cooperation.

124 The Global Wastewater Initiative (GW2I), launched by the Executive Director in 2013, is expanding, with more partners engaging in the promotion of demonstration projects on wastewater management. One project in Georgia, implemented by Women in Europe for Common Future (WECF), aims to reduce the pollution load in the Black Sea, by introducing sustainable wastewater and nutrient management in rural Georgian communities. Knowledge products have been generated for decision-makers and practitioners, including a technology matrix on wastewater treatment technologies and supportive policies and financial instruments for integrated wastewater management and reuse.

125 One of the main focuses of the GPA during the period under review was continued development of the Global Partnership on Marine Litter (GPML). Launched during the United Nations Conference on Sustainable Development, Rio + 20 in June 2012, GPML is a voluntary open-ended partnership for international agencies, governments, businesses, academia, local authorities, and civil society. As well as supporting the Global Partnership on Waste Management, GPML seeks to protect human health and the global environment through several specific objectives, with reduction and management of marine litter as its main goal. UNEP provides the Secretariat for the GPML in line with the mandate received in the “Manila Declaration on Furthering the Implementation of the GPA”, and leads on the focal area on land-based sources of marine litter. FAO and IMO lead the focal area on sea-based sources of marine litter. Much support has been provided to various organizations, including Regional Seas Conventions and Action Plans.

126 Various activities are underway in collaboration with partners, including a major publication “Plastics in Cosmetics”, launched on World Oceans Day in June 2015. The most significant development in the area of marine litter was its inclusion in the Declaration of the G7 meeting in June 2015.

127 During the First Session of the UN Environment Assembly (UNEA-1) in June 2014, Member States requested the UNEP Executive Director, in consultation with other relevant institutions and stakeholders, to undertake a study on marine plastic debris and marine micro-plastics; building on existing work and taking into account the most up-to-date studies and data. The study is to be delivered to UNEA-2 in May 2016 and to feed into policy discussions. Various entities have been engaged in parallel processes to implement the different components. UNEP, through the GPA, as Secretariat of the GPML, is overseeing the process. The core study is being undertaken by the GESAMP Working Group 40 (WG 40). The kick-off workshop for the development of the UNEA-2 study was held in Rome from 20 to 22 April and hosted by FAO.

128 GRID-Arendal has been engaged to produce awareness-raising products and tools that can be used to reach out to policy-makers and decision-makers. Key among this is Vital Graphics on Marine Litter. The material will also target non-specialized audiences, including private sector stakeholders and the consumers, since they are the ones who, in cooperation with policy makers, can actually contribute to more resource-efficient use and sound management of plastics and micro-plastics.

#### **UNEP coral reef-related work**

129 Global change and local pressures are driving declining coral reef health around the world, and accelerated loss of ecosystem services will increasingly affect people dependent on these



reefs in more than 100 countries. In 2014, UNEP initiated a Global Coral Reef Partnership to support countries to deliver internationally-agreed coral reef commitments, including Aichi Target 10. Developed in response Global Strategic Directions for the Regional Seas 2013-2016, the partnership brings together RSCAP, participating countries, and NGOs, academic institutions and private sector partners, to collaborate to achieve ecosystem-based management of coral reefs. The partnership is the primary vehicle for strengthening implementation of the International Coral Reef Initiative (ICRI) call to action through RSCAP.

130 The four substantive work areas of the partnership address key challenges facing coral reefs: building coral reef resilience to climate change and ocean acidification; strengthening use of coral reef ecosystem service values in public and private decision-making; enhancing data and information provision for ecosystem-based coral reef planning and management; and securing institutional support and outreach. UNEP hosts the partnership secretariat.

131 The Partnership is making progress in all its thematic work areas:

- In collaboration with NOAA and other partners, guidelines on use of resilience indicators and assessments to support spatial as well as sectoral planning in coral reef areas are being developed. This also encompasses development of datasets on future climate change exposure scenarios at a spatial scale that enables better prioritization of reef management actions.
- A report on mesophotic reefs and their role in supporting resilience of shallow-reef habitat, prepared in collaboration with GRID-Arendal, and a science-to-policy brief on wastewater pollution on coral reefs, prepared through collaboration with the Global Wastewater Initiative, will be launched in the third quarter of 2015.
- A demonstration project on the use of economic instruments to finance reef management through the establishment of a marine managed area, development of a public private partnership agreement, and a scheme for payment for ecosystem services, is being initiated in Barbados. This will develop guidance on the use of economic instruments, based on the ecosystem services provided by coral reefs.
- The Global Coral Reef Monitoring Network (GCRMN) report *Status and Trends of Caribbean Coral Reefs: 1970-2012* was launched in 2014. Based on its recommendations, standard indicators and methods for coral reef monitoring in the Wider Caribbean have been developed, and their application in national programmes is being supported through the Regional Activity Centre for Specially Protected Areas and Wildlife of the Caribbean Environment Programme. Drawing on this experience, a regional GCRMN reporting process has been initiated in the Western Indian Ocean through the Indian Ocean Commission and Nairobi Convention.
- Partnership work and outputs are also reflected in decisions of intergovernmental bodies. These include the priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, as contained in the annex to CBD CoP decision XII/23; the Abidjan Convention Conference of Parties Decision 11/6 on coral reefs, which emphasizes the importance of preserving coral reef ecosystem services, and collaboration on development and tools and methods as well as a network of marine protected areas for management of coral reefs; the recommendations of the Scientific and Technical Advisory Committee of the SPAW protocol to the Cartagena Convention in relation to strengthening regional coral reef monitoring and the implementation of the "ICRI Regional Strategy for the Control of Invasive Lionfish in the Wider Caribbean" developed with support from UNEP.

## **The Regular Process**

132 The current process referred to as **World Oceans Assessment (WOA)**, with its secretariat (UN DOALOS) and member states, is implementing the first integrated assessment cycle 2010-2015. UNEP has been providing technical and scientific support in the following areas: a) communication: initial support to set up a communications portal for use by the Group of Experts and member states; b) assessments: sharing its extensive knowledge gained through the GEO processes and in the development of integrated assessments; c) capacity building: support to member states on the Regular Process in the organization/facilitation of regional workshops through the platform of the Regional Seas Conventions and Action Plans; and d) resource mobilization: engagement with potential donor countries to support the Regular Process.

133 In 2009, the UN General Assembly approved the framework for the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (Regular Process). The framework consists of: the overall objective for the Regular Process; a description of the scope of the Regular Process; a set of principles to guide its establishment and operation; and best practices on key design features for the Regular Process as identified by the Assessment of Assessments.

134 From 2009 to 2011, the UN General Assembly set up, on the recommendations of the Ad Hoc Working Group of the Whole (AHWG), the main institutional arrangements for the Regular Process. The Group of Experts proposed a draft outline for this first global integrated assessment of the marine environment – World Ocean Assessment I. After detailed dialogue, revision and consideration by the AHWG, this outline was endorsed by the UN General Assembly in 2012 (with an amendment approved by the AHWG in 2014).

135 The chapters on specific themes have been prepared by writing teams of one or more members, led by Convenors from the Group of Experts or the Pool of Experts. One or more lead members from the Group of Experts have overseen the preparation of (or, in some cases, prepared) each draft chapter. The draft chapters have been reviewed, in some cases by one or more commentators and, in all cases, by the Group of Experts as a whole. A first round of editing was done in 2014. In December 2014, all chapters were sent out for review to Member States, peer reviewers and intergovernmental organizations. By March 2015, nearly 5,000 comments had been received. The writing teams and the Group of Experts responded to these and revised the chapters accordingly. In July 2015, all chapters were sent to the Bureau of the AHWG, to be approved for submission to the AHWG. A final round of editing will be done before the document is published. The summary will be issued as a document of the UN General Assembly for its final approval by the Assembly at its 70th session. Editing of the report has been supported by UNEP and UNESCO.

## **The GEF Transboundary Waters Assessment Programme (TWAP)**

136 The Transboundary Waters Assessment Programme (TWAP) is completing the first indicator-based global assessment of five recognized transboundary water system categories (aquifers and SIDS groundwater, lakes and reservoirs, river basins, large marine ecosystems, and the open ocean). It has also formalized the institutional partnerships for the current assessment, which may seed future expert and management practitioner networks for subsequent global assessments of international waters. Fulfilling these main goals, the TWAP envisions that its knowledge products and expert networks will be useful in assisting the GEF and other international organizations to improve the setting of priorities. In addition, the thematic (biophysical, socioeconomic and governance) indicators developed by TWAP may be used to help track the impacts of management interventions in terms of changes in the states of the aquatic environments under consideration. Integration of the methods, indicators and baseline results of TWAP into mainstream work plans of UNEP and its partner agencies, as the main platforms for sustaining the assessment and monitoring of international waters, is in process.

137 The five water-category assessments cover 199 transboundary aquifers and groundwater systems in 43 small island developing states, 206 transboundary lakes and reservoirs, 286 transboundary river basins, 66 large marine ecosystems, and the open ocean, with a total of 758 international water systems. The assessment results are organized into five technical reports, with a sixth volume providing a cross-category analysis of status and trends. Each will include a summary for policy makers. The TWAP Data Portal at <http://www.geftwap.org> aims to provide access to all the indicators that are used in the global assessment, and complements category-specific websites that will showcase water system profiles and databases. Publication of all TWAP products is being completed in 2015 and will be formally launched in 2016.

138 The execution of the TWAP is coordinated by UNEP (Division of Early Warning and Assessment as executing unit and the Division of Ecosystem Policy Implementation as implementing unit, project-wide) and involves many partners already engaged in assessment efforts. Lead organizations at the project component scale are: Transboundary aquifers and SIDS groundwater systems: UNESCO's International Hydrological Programme (IHP); Transboundary lake/reservoirs basins: International Lake Environment Committee (ILEC); Transboundary river basins: UNEP-DHI Centre for Water and Environment (lead); Large marine ecosystems: Intergovernmental Oceanographic Commission of UNESCO (IOC of UNESCO); Open ocean: IOC of UNESCO; Crosscutting Analysis: UNEP-DEWA; and Data and information management: UNEP/DEWA/GRID-Geneva.

### **UNEP's activities in support of Small Islands Developing States (SIDS)**

139 Building on the issues identified by the Foresight Process for SIDS: Emerging Issues for Small Island Developing States<sup>20</sup>, the Global Environment Outlook (GEO) for SIDS provided an outlook on four key areas: Green/blue economy, reconnecting with nature, priorities for island communities, and nature technological leap-frogging. The GEO for SIDS Outlook report was launched during the SIDS summit in September 2014. In addition, UNEP has made available relevant data flows and knowledge related to key SIDS issues on its new web-based knowledge management platform UNEP-Live<sup>21</sup>.

140 UNEP-Live, a new system-wide approach to keeping the environment under review, has been developed by UNEP with the aim of supporting assessment processes through the provision of substantiated, contextualized knowledge about the environment by developing richer sets of data and knowledge flows and bringing together diverse communities of practice. It also aims to facilitate the exchange and sharing of the latest data, information, assessments and knowledge among member countries, research networks, communities of practice, indigenous peoples and society, in order to keep the environment and emerging issues under review.

### **Global Resources and Information Data Centre (GRID-Arendal)**

141 GRID-Arendal a centre collaborating with the UNEP, supporting informed decision making and awareness-raising through: a) Environmental information management and assessment; b) Capacity building services; and c) Outreach and communication tools, methodologies and products.

142 GRID-Arendal has been actively involved in building capacity in ecosystem-based marine management in developing countries. Marine spatial planning, polar and mountain environments and state of the environment reporting are some of the other areas of focus of marine and coastal activities for GRID-Arendal.

143 Having worked with UNEP and the International Oceanographic Commission (IOC) of UNESCO to develop a 'Capacity Building for State of the Marine Environment Reporting' programme, a draft work plan has now been prepared by GRID-Arendal, and consultations are

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<sup>20</sup> [http://www.unep.org/pdf/Emerging\\_issues\\_for\\_small\\_island\\_developing\\_states.pdf](http://www.unep.org/pdf/Emerging_issues_for_small_island_developing_states.pdf)

<sup>21</sup> <http://www.uneplive.org/>

ongoing with UNEP and IOC. GRID-Arendal also helped UNEP draw up a global support programme for the Regional Seas Programme; this is now being tested in West Africa.

144 Geomorphic habitat map: For the Pacific, GRID-Arendal, in collaboration with Conservation International (CI) and Geoscience Australia, published the first digital map of global seafloor geomorphology. The spatial data for the map has been made available to support planning, research and improved environmental management.

145 GRID-Arendal has provided the global seafloor geomorphic habitat map and additional analysis of seamounts, canyons and marine minerals to the Pacific Ocean Ecosystem Analysis (PACIOCEA) project. This project is exploring marine spatial planning in the island nations of the South-western Pacific and is jointly run by the French Marine Protected Areas Agency and coordinated by the Secretariat of the Pacific Regional Environment Programme (SPREP). Staff from GRID-Arendal attended a PACIOCEA project workshop in August 2014 in Noumea to present this analysis and engage with other project partners in exploring spatial issues in the wider Pacific Region.

146 Support to the regional seas conventions and action plans: GRID-Arendal continued to support the Regional Seas Conventions and Action Plans; the Interim Secretariat of the Tehran Convention was supported in preparing the key documents to inform the Fifth Conference of the Parties (COP5) and further development of the Caspian Environmental Information Center. The State of the Marine Environment (SoME) web-based reporting portal commissioned by the Secretariat of the Abidjan Convention was delivered and presented at the 11th Conference of the State Parties to the Abidjan Convention in March 2015. The basic approach was also adopted by the states parties in decision CP11/13, for implementation throughout the entire region.

147 The Secretariat of the Abidjan Convention also received support for implementation of the formal partnership agreement between GRID-Arendal and the Convention Secretariat. The specific objective of this agreement is to support the Secretariat in increasing the awareness and capacity of member states of the Abidjan Convention to: a) apply the ecosystem-based management approach; b) report on the state of the marine environment; c) implement a 'blue carbon' approach to coastal habitat protection (e.g. mangrove habitats) and the promotion of sustainable livelihoods; d) understand the socio-economics of the West African Coast and its marine and coastal communities; and e) enable first-hand marine research by young marine scientists from the Abidjan Convention region.

148 In late 2013, some coastal countries in West African agreed to a joint submission to the Commission on the Limits of the Continental Shelf (CLCS). A document for joint submission was prepared with the seven countries of the West African Continental Shelf Initiative. GRID-Arendal and Norwegian Petroleum Directive (NPD) experts made excellent progress in analyzing and compiling the necessary technical information. There was agreement amongst all coastal states that the submission was ready to be lodged with the CLCS. The joint submission was lodged in September 2014 and will be presented to the CLCS in August 2015.

149 A submission for Somalia was prepared by GRID-Arendal as part of collaboration between Norway and Somalia. The submission was lodged with the CLCS in 2014, following an examination by the Somali government. Although no national experts were involved in the main submission preparation work, one national expert did receive technical training in the first quarter of 2015.

150 Blue carbon initiative: The Abu Dhabi Blue Carbon Demonstration Project was closed in 2014. One of the deliverables of the Abu Dhabi Blue Carbon Demonstration Project was a report entitled Building Blue Carbon Projects: An Introductory Guide. This report, put together with many international partners including UNEP, explores how blue carbon can work, by using the value of carbon stored and sequestered in coastal and marine ecosystems to support conservation and sustainable management. The international GEF/UNEP Blue Forests Project, with

demonstrations and project work in five continents was launched. In November 2014, GRID-Arendal presented an invited webinar on the blue carbon initiative, through the Ecosystems-based Management (EbM) Tools Network and the Open Channels Forum for Ocean Planning and Management.

### **UNEP-World Conservation Monitoring Centre (WCMC)**

151 UNEP-WCMC is the specialist biodiversity assessment arm of the UNEP based in Cambridge, UK. The focus of Marine Programme of the UNEP-WCMC is to develop and share data, tools, and analyses to inform decisions regarding the conservation of marine and coastal biodiversity. During the period under review, the Programme focused on three main areas: Improving and enhancing data, the effective use of data through analysis and interpretation and supporting marine spatial planning for improved conservation and resource use.

152 The Programme has developed an Ocean Data Viewer, which provides easy access to a range of biodiversity-related datasets drawn from internationally-respected scientific institutions and organizations. The quality of datasets has been improved with detailed metadata and background information that accompany them.

153 The first global map of saltmarshes as well as an online tool to facilitate collection of coastal habitat data has been developed. The importance of such coastal habitats to communities was also highlighted in a recent report produced by the programme, entitled Importance of Mangroves to People: A Call to Action<sup>22</sup>. Tailored marine biodiversity information and analyses were provided to the business industry through UNEP-WCMC's industry collaboration, Proteus, with more than 25 oil and gas companies. Use of marine data in the course of screening for new projects was a key focus and a journal paper<sup>23</sup> investigated how 'Critical Habitat' could be mapped in accordance with the International Finance Corporation's Performance Standard six criteria.

154 The centre worked with The Nature Conservancy (TNC) and other collaborators to develop the first global map of marine ecosystem services using our protected area data and expertise. This was used to assess the extent to which marine ecosystem services are represented within protected areas. The project was presented at the World Parks Congress in November 2014. Significant work was undertaken to improve the marine protected areas (MPAs) data within UNEP-WCMC's World Database on Protected Areas which has resulted in a better understanding of the global number of MPAs. This formed the basis of a journal paper<sup>24</sup> which evaluated official marine protected area coverage in relation to Aichi Target 11 and was also presented at the World Parks Congress. In order to bridge the gap between biodiversity data and policy reporting needs, the marine programme published<sup>25</sup> the identification and analysis of 'Essential Biodiversity Variables'. Substantial improvements were made to the Madingley Model (the first general ecosystem model) by facilitating the integration of fisheries data in order to improve understanding of the holistic structure and function of ecosystems and of how to mitigate associated impacts.

155 Within a UNEP DEPI/GEF STAP funded initiative, the centre hosted a workshop and developed a global survey of MSP initiatives to establish the challenges and enabling factors that influence MSP success. Preliminary results were published<sup>26</sup> in support of the Convention on Biological Diversity (CBD) Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). As part of a 5-year GEF-funded FAO/UNEP project, UNEP-WCMC began work to test how existing area-based planning tools could be applied to ABNJ deep-sea conservation and resource use. The project will be piloted in the Southeast Pacific Ocean and Western Indian Ocean, in collaboration with CPPS and the Nairobi Convention respectively.

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<sup>22</sup> C:\Users\chrim\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\E4PJDR8W\wcmc.io\ImportanceOfMangroves

<sup>23</sup> [A global map to aid the identification and screening of critical habitat for marine industries](#)

<sup>24</sup> [Evaluating official marine protected area coverage for Aichi Target 11: appraising the data and methods that define our progress](#)

<sup>25</sup> [Bridging the gap between biodiversity data and policy reporting needs: An Essential Biodiversity Variables perspective](#)

<sup>26</sup> [Marine Spatial Planning in Practice—transitioning from planning to implementation](#)

**DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA, (DOALOS)  
OFFICE OF LEGAL AFFAIRS  
(June 2012-June 2014)**

**Introduction**

156 Among its core functions, the Division for Ocean Affairs and the Law of the Sea (DOALOS), Office of Legal Affairs, United Nations, carries out the responsibilities entrusted to the Secretary-General under the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the 1995 Fish Stocks Agreement and as provided by the General Assembly through its annual resolutions on oceans and the law of the sea and on sustainable fisheries. This section is intended to highlight relevant information on developments related to oceans and the law of the sea issues since January 2012.

**United Nations Conference(s)**

***Rio+20 Conference and post-Rio implementation***

157 The outcome of the 2012 United Nations Conference on Sustainable Development, entitled the “Future we want”, gives pre-eminence to the role of oceans and seas in achieving sustainable development. At the Conference, Member States recognized the 1982 United Nations Convention on the Law of the Sea (UNCLOS) as the legal framework for the conservation and sustainable use of the oceans and seas and their resources, as well as the importance of the Convention in advancing sustainable development. In addition, building on the work of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (“the Working Group”), Member States committed to address, before the end of the sixty-ninth session of the General Assembly (September 2014-September 2015), on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including taking a decision on the development of an international instrument under UNCLOS. In its resolution 68/70 of 9 December 2014, the General Assembly endorsed this commitment and established a process, within the Working Group, to facilitate its action on the matter (see information on the work of the Working Group below).

158 The outcome document also mandated the development of sustainable development goals for incorporation in the post-2015 development agenda.<sup>27</sup> Upon the end of its work, the General Assembly Open-ended Working Group on Sustainable Development Goals (July 2014), adopted 17 goals and targets, including goal 14 entitled: “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”. Its targets include references to the need to protect marine and coastal ecosystems to avoid significant adverse impacts, to address ocean acidification including through enhanced scientific cooperation, and to increase scientific knowledge, develop research capacities in order to improve ocean health and to enhance contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed States.<sup>28</sup>

159 In this regard, the Rio+20 outcome also called for the convening of the third United Nations Conference on Small Island Developing States, which took place in Apia, Samoa, from 1 to 4 September 2014. Along with the United Nations Under-Secretary-General for Legal Affairs and the United Nations Legal Counsel, DOALOS participated in a number of events organized at the conference including a side event organized by the Pacific Island Forum to discuss some of the pressures on the oceans and the role of UNCLOS in addressing them, and another event by the Chief Executives Board for Coordination, which will discuss oceans and sea. The Legal Counsel,

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<sup>27</sup>See para. 162 of the outcome document, “The future we want” at:  
<http://www.unccd2012.org/content/documents/727The%20Future%20We%20Want%2019%20June%201230pm.pdf>

<sup>28</sup> See  
[http://sustainabledevelopment.un.org/content/documents/4518SDGs\\_FINAL\\_Proposal%20of%20OWG\\_19%20July%20at%201320hrsver3.pdf](http://sustainabledevelopment.un.org/content/documents/4518SDGs_FINAL_Proposal%20of%20OWG_19%20July%20at%201320hrsver3.pdf).

as focal point for UN-Oceans, also delivered a keynote speech on behalf of UN-Oceans during the Multi-stakeholder's partnership dialogue on "Oceans, Seas and Biodiversity", which place on Wednesday 3 September

## **General Assembly processes**

### ***United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea***

160 In 2012, the thirteenth meeting of the Informal Consultative Process discussed the topic entitled: "Marine renewable energies".<sup>29</sup> The fourteenth meeting of the ICP, which took place in June 2013, discussed the "Impacts of ocean acidification on the marine environment".<sup>30</sup> In 2014, the fifteenth meeting focused its discussions on the "Role of seafood in global food security".<sup>31</sup> As in the past, the meetings were organized around panel presentations by experts representing developed and developing countries and reflecting various perspectives and disciplines, followed by interactive discussions.

### ***Ad hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects***

161 An updated timetable for the completion of the first World Ocean Assessment (WOA) was presented during the 2013 meeting of the Ad Hoc Working Group of the Whole. It established a new deadline for the submission of the final text of the first WOA in December 2014.<sup>32</sup> At its meeting in April 2014, the Ad Hoc Working Group of the Whole decided on guidance for the Group of Experts and the secretariat of the Regular Process (DOALOS) concerning the preparation of the first WOA.<sup>33</sup> It was decided that the report would be sent in two instalments, one in June 2014, and a final draft containing all chapters, by the end of August 2014.<sup>34</sup> Member States were given until the end of October 2014 to complete their review.<sup>35</sup> On 29 August 2014 the Bureau of the Working Group decided to postpone the circulation of the entire draft, including updated initial draft chapters, to a date to be determined by the Bureau upon consultation with the Group of Experts and the revised timeline will be presented for information to Member States during the informal consultations on the draft resolution on oceans and the law of the sea. The Group of Experts nominated by Member States is currently assisted by a pool of experts of about 600 individuals representing all five continents.<sup>36</sup> As part of the WOA report, which was prepared under the guidance of the Bureau of the Ad Hoc Working Group of the Whole, the Group of Experts also prepared a Summary which aims to highlight in particular the needs for capacity building and effective approaches to meeting such needs.<sup>37</sup> In this regard, the Group is also preparing a preliminary inventory of existing opportunities and arrangement for capacity-building for assessments.<sup>38</sup>

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<sup>29</sup> See Thirteenth Meeting document: Discussion Panel on Marine Renewable Energies, available at: [http://www.un.org/depts/los/consultative\\_process/consultative\\_process.htm](http://www.un.org/depts/los/consultative_process/consultative_process.htm).

<sup>30</sup> See Fourteenth Meeting document: Discussion Panel on the impacts of ocean acidification on the marine environment, document available at: [http://www.un.org/depts/los/consultative\\_process/consultative\\_process.htm](http://www.un.org/depts/los/consultative_process/consultative_process.htm)

<sup>31</sup> See Fifteenth Meeting document: Discussion Panel on the role of seafood in food security, available at: [http://www.un.org/depts/los/consultative\\_process/consultative\\_process.htm](http://www.un.org/depts/los/consultative_process/consultative_process.htm)

<sup>32</sup> See A/68/82 at annex 1, available at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N13/334/83/PDF/N1333483.pdf?OpenElement>.

<sup>33</sup> The outcome of the meeting is available at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N14/307/26/PDF/N1430726.pdf?OpenElement>

<sup>34</sup> Ibid. paragraph 8.

<sup>35</sup> Ibid.

<sup>36</sup> See Regular Process, appointments to the pool of experts, updated August 22<sup>nd</sup> 2014, document available at: [http://www.un.org/depts/los/global\\_reporting/chart\\_210814.pdf](http://www.un.org/depts/los/global_reporting/chart_210814.pdf).

<sup>37</sup> See "Report on the work of the Ad Hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects", available at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N14/307/26/PDF/N1430726.pdf?OpenElement>.

<sup>38</sup> See "Contribution to the preliminary inventory of existing opportunity and arrangements for capacity building for assessment", at:

### ***Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction***

162 In early May 2013, and pursuant to a request from the General Assembly, the Secretary-General convened two intersessional workshops aimed at improving the understanding of issues and clarifying key questions relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction as an input to the work of the Working Group: marine genetic resources; and conservation and management tools, including area-based management and environmental impact assessments.<sup>39</sup> In its resolution 68/70 of December 2013, the Assembly established a new process within the Working Group to prepare for the decision called for in paragraph 162 of the Future we want. In this regard, the Working Group was mandated to make recommendations on the scope, parameters and feasibility of an international instrument under UNCLOS. To that end, the Secretary-General was requested to convene three meetings of the Working Group, with the possibility of the General Assembly deciding that additional meetings would be held, if needed. The first two meetings of the Working Group took place respectively from 1 to 4 April and from 16 to 19 June 2014<sup>40</sup> and third meeting from 20 to 23 January 2015.

### **The 10th round of Informal Consultations of States Parties to the United Nations Fish Stocks Agreement**

163 It took place in New York on 7 April 2014. Pursuant to General Assembly resolution 68/71 of 9 December 2013, the meeting considered regional, sub-regional and global implementation of the Agreement and initial preparatory steps for the resumption of the Review Conference on the Agreement. At the meeting, delegations agreed that the Review Conference should be resumed in 2016, and that another round of Informal Consultations should be held in 2015, primarily as a preparatory meeting for the resumed Review Conference.

164 In accordance with past practice, delegations also agreed on a Timeline and Programme of Work of preparations for the resumption of the Review Conference, on the understanding that there are elements that would need to be decided by the General Assembly in its annual resolution on sustainable fisheries, to be adopted at its sixty-ninth session. One such element is a request to the Secretary-General to prepare a report in advance of the resumed Review Conference, in cooperation with the Food and Agriculture Organization of the United Nations, with input from States and relevant intergovernmental organizations.

165 In 2015 the General Assembly will conduct a further review of the actions taken by States and RFMOs in response to relevant resolutions to address the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep sea fish stocks. This follows the previous reviews conducted by the General Assembly in 2006, 2009 and 2011.

### **Celebrations and other events**

#### ***Anniversaries of UNCLOS***

166 2012 and 2014, respectively, marked two important milestones for UNCLOS, namely and respectively, the thirtieth anniversary of its signature, and the twentieth anniversary of its entry into force. These occasions provided the opportunity to emphasize the role of UNCLOS as the legal framework within which all activities in the oceans and seas must be carried out, reiterate the need for further accessions and or ratifications to reach the goal of universal participation and recall the need for effective implementation of UNCLOS and its Agreements to address the numerous challenges facing the oceans.

#### ***United Nations World Oceans Day celebrations***

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<sup>39</sup> See document A/A.C.276/6 at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N13/359/12/PDF/N1335912.pdf?OpenElement>.

<sup>40</sup> See A/69/82. All other outcomes at <http://www.un.org/Depts/los/biodiversityworkinggroup/biodiversityworkinggroup.htm>



167 Celebrated each year since 2008 on 8 June, the Division organized the celebration of World Oceans Day in 2012, on the theme “UNCLOS at 30” and in 2013 on the theme “Oceans & People”. The theme for World Oceans Day 2014 was “Together let’s ensure oceans can sustain us into the future”.<sup>41</sup> This last celebration coincided with the Meeting of States Parties to UNCLOS and the commemoration of the 20th anniversary of the entry into force of UNCLOS and provided an opportunity to remind the international community of the status of UNCLOS as the “constitution for the oceans”, and the broad reach of its provisions.

### ***2012 World Oceans Expo Yeosu***

168 In August 2012, at Yeosu, DOALOS organized an international conference “Commemorating the 30th Anniversary of the Opening for Signature of the United Nations Convention on the Law of the Sea”.

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<sup>41</sup> See <http://www.un.org/Depts/los/wod/index.html>.