

Expert Group meeting on Oceans, Seas and Sustainable Development: Implementation and follow-up to Rio+20 (18 & 19 April 2013) - Summary

The *Expert Group Meeting on Oceans, Seas and Sustainable Development: Implementation and follow-up to Rio+20* was organized by the United Nations Department of Economic and Social Affairs (UNDESA) in New York on 18-19 April 2013. It aimed to provide an opportunity for different stakeholders to engage in discussions on how to enhance the conservation and sustainable use of oceans, seas and their resources and on how to implement and follow-up Rio+20 decisions. The meeting was attended by 40 ocean experts, including representatives of Member States, UN and international organizations, civil society and academia. Thirty presentations were heard and discussed covering the following areas¹:

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The following represents a summary of the excellent presentations and fruitful discussions held. For more detailed information, all presentations and related reports can be found on United Nations Sustainable Development Knowledge Platform: <http://sustainabledevelopment.un.org/>.

¹ Kindly note that the views expressed are those of the participants and do not necessarily reflect the views of the United Nations Secretariat.

I. Introductory overview: Oceans and sustainable development

1. UNCLOS and recent developments

[MR. VLADIMIR JARES, DEPUTY DIRECTOR IN CHARGE OF DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA (UN-DOALOS), OFFICE OF LEGAL AFFAIRS (OLA)]

- **1982 United Nations Convention on the Law of the Sea (UNCLOS):** At Rio+20 reaffirmation of role and continued relevance of UNCLOS to advancing sustainable development and as global legal framework for all activities in oceans and seas and essential document for maintaining peace and security on oceans and seas in accordance with the rule of law
- **Working Group on marine biodiversity beyond areas of national jurisdiction:** to date, has discussed a number of issues, in particular: (1) governance, (2) conservation and management tools, (3) marine genetic resources, (4) capacity-building and transfer of marine technology; two workshops to be held on “Marine genetic resources” (2-3 May 2013) and on “Conservation and management tools” (6-7 May 2013); next meeting 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 from 19-23 August 2013; 2014-2015 (before the end of the 69th session of the General Assembly): decision on multilateral agreement under UNCLOS
- **Ad-Hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects:** to oversee and guide the Regular Process assisted by a Bureau; Group of Experts as an integral part of the Regular Process to prepare the first global marine assessment with the support of a pool of experts; Workshops in regions as key mechanism for capacity development and identifying capacity building needs; voluntary Trust Fund and scholarship fund open to all stakeholders to support operations of the Regular Process; Technical and scientific support by UNEP, UNESCO-IOC, IMO and FAO etc. in addition to secretariat services provided by DOALOS as Secretariat of the Regular Process; 2014 critical year: first world oceans assessment to be completed

2. Small Island Developing States and Oceans

[AMBASSADOR RONALD JUMEAU, AMBASSADOR FOR CLIMATE CHANGE AND SIDS ISSUES, PERMANENT MISSION OF THE REPUBLIC OF SEYCHELLES TO THE UNITED NATIONS]

- Oceans central to sustainable development, poverty reduction and to achieving MDGs
- High dependence of SIDS on oceans: central to survival and part of culture
- Sea level rise most serious long-term threat to SIDS (melting of ice in the Arctic will affect SIDS) together with coastal erosion and loss of shoreline protection due to collapse of coral reefs – SIDS threatened to disappear
- Marine-based tourism and fisheries important but threatened (e.g. by marine pollution, ocean acidification)
- Areas beyond national jurisdiction matter of concern, in particular with regard to bottom trawling, illegal fishing, sea bed mining and extraction of mineral resources
- SIDS countries have limited land space. However in many cases their marine territories/EEZs are rather large.

Way forward:

- Implement Rio+20: (1) political will of SIDS to implement, but capacity-building, technology transfer and financial support required; (2) define strategies by 2014 to help developing countries, especially least developed and SIDS, to develop their national capacities to conserve, sustainably manage and realize benefits of sustainable fisheries, including through improved market access for fish products; (3) implement and reinforce existing international instruments; (4) Create new marine protected areas due to their economic, social and environmental benefits

- Concern about increase in number of partnerships on oceans- have to be coordinated
- Areas beyond national jurisdiction: need for international instrument under UNCLOS
- Innovative financing: debt-for-climate change adaptation swaps (e.g. creation of MPAs)
- Use of marine renewable energy: SIDS Dock Initiative (<http://sidsdock.org/>) - challenge: sufficient wind and sun, but lack of land - technologies required must be made accessible, affordable and adaptable to needs and particular circumstances of SIDS

3. Small Island Developing States and Climate Change

[MS. ELIZABETH THOMPSON, FORMER MINISTER FOR ENERGY AND ENVIRONMENT OF BARBADOS AND EXECUTIVE COORDINATOR FOR THE RIO+20 CONFERENCE, EXECUTIVE OFFICE OF THE UNITED NATIONS SECRETARY-GENERAL]

- Climate change is one of biggest challenges for SIDS - increasing natural disasters thus destroying livelihoods and infrastructure
- Climate change has impacts on all three pillars of sustainable development
- Consequences of climate change are among others rising sea levels and coastal degradation which reduce land mass as well as destruction of marine environment

Way forward:

- Reduction of global carbon footprint - marine territories of SIDS exceed territorial space, but forests attract greater funding for carbon offsetting although oceans are carbon sinks (30% of global emissions absorbed) – this has to be changed
- Disaster risk reduction, adaptation and planning to be scaled up
- Involvement of private sector in SIDS to make changes
- Need for means of implementation, in particular financing (e.g. for technology transfer)
- Need to create an action agenda or framework that can deliver at SIDS Conference 2014

4. Preparatory process for SIDS Conference 2014

[MS. HIROKO MORITA-LOU, CHIEF, SIDS UNIT, DIVISION FOR SUSTAINABLE DEVELOPMENT, UNDESA]

- Preparatory process for SIDS conference 2014 well underway

Way forward:

- Current timeline includes three regional meetings in the Caribbean region, the AIMS region, the Pacific region in July 2013 (building on national meetings currently held) and one inter-regional meeting in Barbados in September 2013 – outcome of these meetings will feed into main SIDS Conference (to take place in 2nd half of 2014)

Open discussion:

One participant highlighted that the focus of the SIDS Conference 2014 should be on implementation and that the oceans community was to engage with SIDS countries. Another participant noted that non-climate related risks should also be exploited at the Conference.

5. Challenges and opportunities in the implementation of the Rio+20 ocean outcome

[DR. BILIANA CICIN-SAIN, PRESIDENT, GLOBAL OCEANS FORUM AND DIRECTOR, GERARD J. MANGONE CENTER FOR MARINE POLICY, UNIVERSITY OF DELAWARE]

- Renewed political commitment for oceans excellent at Rio+20 - reinforced existing goals and defined some new goals and actions on oceans
- Ongoing post Rio+20 processes: vitally important that oceans are not marginalized from new development agenda

- Green economy in context of sustainable development and poverty eradication– no concrete targets, no road map at Rio+20 – term of “blue economy” brought up by some Member States
- Oceans Day at Rio+20 (375 participants from 46 countries) came up with recommendations (see presentation for more information)

Way forward:

- Important to maintain political momentum with regards to oceans in post-Rio+20 processes
- Oceans span all major thematic areas and should not be seen as just another sector
- Global level tracking of progress and national level implementation of Rio+20 important
- Important to revive Rio+20 NGO Oceans Cluster
- 9 registered voluntary commitments made at Rio+20 related to oceans, coasts and SIDS (listed on Sustainable Development Knowledge Platform under “SD in Action”) – follow up required

Open discussion

A number of participants stressed the importance that oceans were to be included in post-Rio+20 processes and be part of the Sustainable Development Goals in one way or the other while different options were raised (alone standing goal, cross-cutting goal, part of environmental goal). Regarding the green economy, one participant emphasized that a lot of work was already done, that it was important to involve ministries of finance and development and that the integration of green economy in SIDS projects was possible. Another participant noted that it was crucial to take into account the particular circumstances of SIDS, that Barbados had the first green economy policy in place and that it was important for SIDS to integrate the green economy framework. Finally, a participant highlighted that a more detailed plan was required to implement green economy and sustainable development.

II. Oceans-related issues and challenges

1. Climate change impacts on oceans and related ecosystems

[DR. MICHIEL SCHAEFFER, DIRECTOR, CLIMATE ANALYTICS AND SENIOR SCIENTIST, ENVIRONMENTAL SYSTEM ANALYSIS, WAGENINGEN UNIVERSITY AND RESEARCH CENTRE (WUR)]

- Climate change: poses a risk to ocean-based or ocean-dependent systems through warming, sea-level rise and acidification; current emission trends, observations and inadequacy of proposed emission reductions lead to projected high risks
- Global warming: projections approach 4°C above preindustrial by 2100 if business as usual; at least 3°C for internationally proposed emission reductions, slow reduction of warming over time; stronger emissions reductions to achieve 1.5-2°C by 2100 feasible; Ice-free Arctic by 2030 or 2050 (different scenarios)
- Sea level rise: previous IPCC models predict slower sea level rise than scientific evidence; sea level rise driven by oceans and ice sheets –influence of ice melting not completely understood yet; for high estimates in literature limiting sea level rise below 1 meter only possible on edge of technical feasibility at 1.5 degree (not 2 degree); low lying countries affected
- Ocean acidification: affecting species – highest impact on calcifying mechanisms (e.g. coral reefs); impact on fish unclear

Way forward:

- UNEP emissions gap report 2012: reduction proposals of countries linked to scenarios

Open discussion:

One participant noted that the mitigation section of the fifth IPCC report was currently out for peer review and that the topic of oceans was not largely represented. He therefore recommended that mitigation peer review members should be informed about the importance of including oceans in this chapter. The chapter on adaptation on the other hand contained the topic of oceans. Regarding the prediction of future severe storms it was stated that while there would be less cyclones in future, an increase in high-intensity storms was foreseen which would cause most damage. This was seen as particularly problematic given the fact that in future migration to and urbanization in coastal areas might increase thus putting people at risk.

2. Marine pollution and Alien Invasive Species

[MS. JACQUELINE ALDER, UN-OCEANS DEPUTY COORDINATOR AND HEAD, MARINE AND COASTAL ECOSYSTEMS BRANCH, DIVISION OF ENVIRONMENT POLICY IMPLEMENTATION, UNEP]

Marine pollution:

- Main issues and challenges: (1) diffuse sources still problematic, (2) financing of adequate infrastructure limited/expensive (e.g. wastewater treatment), (3) lack of understanding of land-ocean connection, (4) multiple agencies and initiatives – coordination can be challenging, (5) knowledge of interaction of climate change and pollutants, (6) new pollutants emerging (micro-plastics, endocrine disrupters etc.), (7) accumulation (e.g. micro-plastics)
- International Conference on Prevention and Management of Marine Litter in European Seas, Berlin, Germany (10-12 April 2013)

Way forward:

- Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): (1) Action on nutrients, (2) Action on wastewater sewage, (3) Action on marine litter: launch of Global Partnership on Marine Litter – to set reduction targets (based on Rio+20 outcome para 163) and reduce litter influx to coastal areas
- Strengthen partnerships, especially for capacity-building and knowledge sharing
- Financial incentives for tackling pollution issues (e.g. waste water treatment) required
- Agreed targets/objectives, methods and baseline(s) required

Alien invasive species:

- Main issues and challenges: (1) Multiple pathways for introduction of marine alien invasive species (MAIS); (2) Climate change and aquaculture are emerging challenges

Way forward:

- Agreed method/protocol for assessing MAIS needed along with assessments (incl. risks)
- Strengthening of enforcement of legislation and application of best practices
- Development and implementation of risk management strategies

3. Ocean acidification

[MR. DAVID OSBORN, DIRECTOR, ENVIRONMENT LABORATORIES, INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)]

- Ocean acidification is predicted to have major impact on key marine ecosystems, including on biodiversity, safety and security of seafood resources and ecosystems services, especially in fragile ecosystems such as tropical coral reefs and polar regions
- If CO₂ emissions continue at current rate, acidity will increase by 150% by 2100 (highest acidity experienced by marine ecosystems since at least 800 000 years)

- Current rate of pH change is unprecedented for 300 million years

Way forward:

- Governments attending Rio+20 reiterated “need to work collectively to prevent further ocean acidification, as well as enhance resilience of marine ecosystems and of communities whose livelihoods depend on them, and to support marine scientific research, monitoring and observation of ocean acidification and particularly vulnerable ecosystems, including through enhanced international cooperation in this regard.”
- Several policy briefs, including Monaco Declaration signed by 155 scientists (2008), have highlighted need for scientists and economists to work together on ocean acidification to make sure to consider issues important for society

4. State of the world’s marine fisheries

[MR. RICHARD GRAINGER, CHIEF, INFORMATION AND STATISTICS, FISHERIES AND AQUACULTURE DEPARTMENT, FOOD AND AGRICULTURE ORGANIZATION (FAO)]

- Fisheries and aquaculture are critical for food security therefore healthy oceans are indispensable
- Aquaculture production points to further expansion and, if done responsibly, can boost food and nutrition security
- Number of fishers and fish farmers has grown faster than world’s population during last three decades
- Between 660 and 820 million people (at least 1 in ten people) depend on fisheries for their well-being and livelihoods - women make up half of those employed when secondary sector such as handling and processing is counted in
- Fisheries sector faces major threats and challenges: from degradation of coastal habitats to increased pressure on global fish stocks to heightened impacts from climate change and human development (e.g. growing demand for fish with world population increase)

Way forward:

- Need to use fewer natural resources through improved management and efficiencies throughout food value chain
- Improved governance and effective fisheries management important
- Many international instruments, standards, guidelines already exist (e.g. FAO Code of Conduct)- new sustainable small scale fisheries guidelines currently prepared by FAO. Focus now should be on their implementation.
- Growing need for international cooperation to improve global fisheries management and governance
- Global initiatives can help bring attention to oceans

Open discussion:

The topic of areas beyond national jurisdiction and the fact that ocean governance got more attention were seen as important outcomes of Rio+20 together with the fact that the benefits of fisheries and aquaculture for food security and poverty eradication were reiterated. Overcapacity was seen as a remaining serious problem and a major challenge for small scale fisheries, but concern was expressed that it was mostly tackled in developed countries. One participant noted that the Indian Ocean tuna fishing threshold was already reached and several participants observed that there was already a clash between countries regarding fish stocks. Another participant reaffirmed the need for sustainable fisheries and highlighted that while it was correct that many fish stocks were overexploited, there was a lot of non-reporting and that the situation was worse than presented due to a lack of governance at all levels. Political will was required to change current

practice and usage (e.g. large percentage of catch used to feed animals instead to help with food security, although the proportion of animal feed derived from fish offal (waste) rather than whole fish has been increasing). The disconnect between science and policy-making was reiterated. Another participant emphasized that fisheries subsidies were one of the major threats to effective fisheries management and distorting markets and while they should be eliminated as part of good governance, they were in reality still used. In addition, no recent studies existed in this area. One participant noted that the role of artisanal fisheries might be higher than the FAO estimates. The difficulty to gather good and detailed statistics would differ from country to country. In particular small scale fisheries were not always covered by the available data. Furthermore, while a lot of capacity-building projects in the area of data collection were undertaken, these could be costly to maintain after the projects ended and required political commitment.

5. Coral reefs and other vulnerable ecosystems

[MS. LAURETTA BURKE, SENIOR ASSOCIATE AND CO-AUTHOR OF “REEFS AT RISK REVISITED” REPORT, WORLD RESOURCES INSTITUTE (WRI)]

- Coral reefs are valuable, but extremely threatened - 90% of coral reefs will be threatened in 2030 according to business as usual scenarios and if no improvement of management
- 275 million people are highly dependent on coral reefs - many coastal communities will suffer due to coral degradation and loss caused by local threats and global threats
- “Reefs at risk revisited” report (2011): 108 countries and territories evaluated regarding: (1) reef threats, (2) social and economic reef dependence, (3) social and economic vulnerability to reef degradation and (4) adaptive capacity; only 27% of coral reefs in MPAs (less without Australia)
- Current coastal management efforts are insufficient

Way forward:

- Reduce local pressures - enforce existing regulations
- Manage climate change / tackle GHG emission
- Rio+20 outcome para 176: go beyond voluntary information sharing – use existing mechanisms and conventions; work at regional level/form regional response; more/persuasive information needed to influence decisions
- Invest in economic valuations of coastal capital/annual economic contribution (fisheries, tourism, shoreline protection) focused on specific policy questions
- Invest in assessment of coastal management (management scorecards can highlight progress)

6. Regional fisheries management organizations (RFMOs) – West African Region

[MR. CAMILLE JEAN PIERRE MANEL, FISHERIES AND AQUACULTURE ENGINEER AND DIRECTOR OF MARITIME FISHERIES IN SENEGAL AT THE MINISTRY OF FISHERIES AND THE MARITIME AFFAIRS]

- West African region: 70% of population living near the coast
- RFMOs/ governance aspects: different bodies in West Africa dealing with these issues: (1) Sub regional Fisheries Commission (SRFC): goal is to strengthen cooperation and coordination of Member States’ policies; (2) Atlantic Regional Convention for Fisheries Cooperation: goal is to promote and strengthen regional cooperation on fisheries development; (3) West African Economic and Monetary Union (WAEMU): Fisheries and aquaculture concerted common management plan with 13 programs (e.g. harmonization of legislation on marine fisheries, assessment of fish stocks)
- Major challenges: (1) mandate of management, (2) lack of synergy, (3) fear of loss of part of sovereignty, (4) lack of knowledge about fisheries resources, (5) fight against IUU fishing, (6)

weakness of monitoring socio-economic sector, (7) usage conflicts in exploitation of fisheries resources, (8) underfunding etc.

Way forward:

- Goal: sustainable benefits for population through effective management while ensuring involvement of local communities in process to take into account their concerns

Open discussion

A number of participants stressed that for RFMOs the surveillance of sometimes large areas was very expensive and difficult and therefore an important area for regional cooperation (e.g. common roster of coastal guards/observers) as could be seen in West Africa or the Indian Ocean. Other issues of concern raised were those of IUU fishing and piracy (in some countries a quarter of prisoners were pirates) and the difficulty to get assistance for these issues. The importance of implementing the Rio+20 outcome on RFMOs at the national level was highlighted.

7. Sustainable maritime transport

[MR. EDWARD KLEVERLAAN, HEAD, OFFICE FOR THE LONDON CONVENTION/PROTOCOL AND OCEAN AFFAIRS AND/OR MR. JESPER LOLDRUP, HEAD, POLICY AND PLANNING UNIT, OFFICE OF THE SG, INTERNATIONAL MARITIME ORGANIZATION (IMO)]

- Necessary to facilitate world trade and underpinning global economy - more than 90 per cent of global trade carried by sea
- Shipping most effective way of transporting large quantities of goods globally
- Shipping employs around 1.5 million seafarers, and provides employment opportunities in ancillary services (e.g. ports, terminals)
- Developing countries play pivotal role (e.g. as Flag States)

Way forward:

- To ensure sustainable maritime transport: necessary to look beyond shipping sector -cooperation to be established with associated industries (e.g. infrastructure developers, equipment and service providers, cargo owners) -will require initiatives at global, regional and national levels
- IMO developed eight pillars for sustainable maritime development under which key sustainable development goals will be targeted, which include instilling safety culture and environmental stewardship (e.g. development of new mandatory Polar Code with emphasis on protecting Arctic and Antarctic Oceans; working with industry to improve energy efficiency of ships thereby reducing GHG emissions)
- IMO will encourage using new technology and innovations and enforcing and improving global standards (e.g. entry into force of BWM, Ship Recycling, Wreck Removal Conventions and HNS Protocol, and Implementation of Goal-based Standards for new ship construction)
- Central will be maritime education and training (e.g. new mechanism for provision of onboard training capacity and implementation of technical co-operation activities and other major projects related to marine environment protection)

Open discussion

One participant stressed that the ban of use of heavy fuel in Polar Regions was foreseen as environmental part of the new Polar Code.

8. Sustainable marine tourism

[MR. LUIGI CABRINI, DIRECTOR-ADVISOR TO THE SECRETARY-GENERAL ON SUSTAINABILITY, WORLD TOURISM ORGANISATION (UNWTO)]

- Approximately half of tourists visit a coastal area - tourists are demanding more sustainable tourism products
- Governments are increasingly aware of importance of protecting coastal areas - integrated coastal zone management recognized by many tourism operators and decision-makers
- Tourism vulnerable to climate change and other threats, particularly in SIDS countries: (1) warmer summers/winters, (2) increase in extreme events, (3) sea level rise, (4) coastal erosion, (5) travel cost increase from mitigation policy, (6) land/marine biodiversity loss, (7) increase in disease outbreaks, (8) political destabilization, (9) water scarcity
- Global Sustainable Tourism Criteria and Council: 40 criteria in four pillars, namely (1) sustainability management, (2) social and economic, (3) cultural and (4) environmental
- UNWTO publications: (1) Challenges and Opportunities for Tourism Development in Small Island Developing States, (2) Tourism in the Green Economy (2012), (3) UNWTO - Ramsar publication: "Destination wetlands: Supporting sustainable tourism" (2012)
- Global Partnership for Sustainable Tourism (GPST); Project on Sustainable Development of Coastal Tourism in Africa (COAST); Monitoring Centre for Sustainable Tourism Observatories in Greece (2013)

Way forward:

- Ensure sustainable tourism– required: (1) green economy innovation, (2) private sector leadership, support and incentives, (3) enabling conditions, (4) consumer demands
- Follow up tourism chapter in Rio+20 outcome document (paras 130, 131)
- Integrate tourism in post Rio+20 processes
- Tourism sector should help develop coastal zones in a sustainable way
- Conference on Tourism Development in islands, La Reunion (11-13 September 2013)

Open discussion

It was noted that on the path to sustainable development, the major challenge for bigger hotels were the investment costs and for small/middle hotels the lack of access to information, although easy steps were always possible with a return on investment in two to three years. No conflict was seen by one participant between the implementation of MPAs and tourism as the protection of the marine environment would in return attract more tourists (coral reefs, fish etc.). A number of participants stressed that tourism in SIDS countries should be limited and that education and awareness raising was required. One participant emphasized the need for a financed project for SIDS countries to study carrying capacity for tourism on their islands in order to find out how long tourism would be sustainable. Finally the importance of fully integrating tourism in the contexts of green economy and poverty eradication was highlighted together with the use of a destination/local level approach which takes into account different national/local realities.

9. Jobs in the maritime sector

[MR. KEVIN CASSIDY, SENIOR COMMUNICATIONS AND EXTERNAL RELATIONS MANAGER, ILO OFFICE FOR THE UNITED NATIONS, INTERNATIONAL LABOUR ORGANISATION (ILO)]

- Need to achieve sustainable development in its three dimensions - social pillar of development often not very prominent although people are at centre of sustainable development

- 2 million seafarers, 38 million fishers (marine and inland)- over 1.5 billion working people impacted by climate change - main challenges: marine environment, health and safety (big issues), isolation, globalization, piracy
- Maritime Labour Convention (2006): consolidation of existing maritime labour instruments, set of rights and protection at work (seafarers), ensure fair competition (shipowners), flexibility on implementation (governments)
- Work in Fishing Convention, 2007: applies to all fishers and all fishing vessels engaged in commercial fishing operations
- ILO Green Jobs Programme: Green jobs and promotion of green economy pivotal for achieving an economic and social development that is also environmentally sustainable

Way forward:

- Implement Rio+20 outcome: promote full and productive employment, decent work for all (productive, fair income, fully integrated in society) and social protection
- Global Dialogue Forum for the Promotion of the Work in Fishing Convention, 2007 (15-17 May 2013), Geneva, Switzerland

Open discussion

One participant noted that there was a disconnect between the recognition of Conventions versus resolutions and emphasized that in order to improve work conditions, Member States needed to understand the importance. Another agreed that safety at sea was an important issue which was very difficult to enforce and did only apply to larger vessels.

III. Protection and conservation of oceans, seas and marine resources

1. Conservation and sustainable use of marine biodiversity

[DR. JAKE RICE, CHIEF SCIENTIST, FISHERIES AND OCEANS CANADA (DFO) AND CONTRIBUTING CO-AUTHOR IPCC FIFTH ASSESSMENT REPORT]

- Marine biodiversity is: (1) essential to healthy functioning of our global ecosystems, (2) provides ecological function on which Earth depends, (3) contributes to human well-being, including food security, health and safety, poverty alleviation, livelihoods and meaningful work, and cultural and aesthetic values - as acknowledged in Rio+20 outcome document
- Marine biodiversity faces threats from a large number of anthropogenic activities, individually and as cumulative impacts, many of which are itemized in Rio+20 outcome document
- Large number of policy and management tools already available to promote conservation of marine biodiversity and to ensure use is sustainable

Way forward:

- Effective ocean governance essential to ensure policies and tools are used effectively to address threats, and to deliver outcomes envisioned in Rio+20 outcome document
- “Effective governance” does not necessarily mean more governance, however. The range of agencies and interest groups participating in this meeting alone, combined with the wide range of policy instruments and management tools already available, suggests that we have a rich supply of building blocks.
- “Effective governance” might possibly be characterized best as providing the right institutional incentives and removing the institutional barriers to the existing players being able to work together cooperatively to apply the available instruments and tools for common outcomes.

2. The Polar Regions: Climate change and environmental management

[MR. JAN-GUNNAR WINTHER, DIRECTOR, NORWEGIAN POLAR INSTITUTE AND LEAD AUTHOR IPCC FIFTH ASSESSMENT REPORT]

- Polar regions are undergoing rapid climate change, especially in the Arctic
- Impact of climate change has only a regional character, but also global signature
- Increased accessibility due to retreating sea ice in the Arctic opens up for business opportunities such as oil and gas extraction, fisheries, shipping and tourism which will have significant impacts on marine environment

Way forward:

- Environmental management of a dynamic system (due to climate change) is complex and calls for an integrated and long-term approach
- Cumulative effects must be accounted for to achieve holistic environmental management
- Input from science (e.g. Scientific Committee on Antarctic Research – SCAR) critical to develop sustainable environmental management regimes

3. Environmental conservation in the Polar Regions

[MR. AQQALUK LYNGE, CHAIR, INUIT CIRCUMPOLAR COUNCIL (ICC)]

- Total population in circumpolar Arctic as defined by Arctic Council is around 4 million
- Since 2009, Greenland is a self governing territory of Denmark with a population of 56.000 with full control over use of all resources
- Fishing is a major income source. Inuit are traditionally maritime people, depending on living resources of the sea; with thousands of years of experience in harsh conditions of cold climate
- Inuit are dependent on sustainable use of the sea and the winter ice has provided them with safe transportation – rapidly warming of the Arctic Ocean has changed this "highway" with devastation of the subsistence use of the sea
- Infrastructure of the enormous landmass of the Arctic is underdeveloped
- The unpredictability of weather patterns has an overall influence on the daily life of the Inuit
- Arctic marine shipping has increased
- Climate change – Inuit observations:
 - Glaciers melting – faster
 - Permafrost thawing
 - Sea ice thinning, arriving late and breaking up early
 - Warm periods in winter
 - Droughts and heavy rains in summer
 - Unpredictable weather
 - Loss of traditional knowledge
- North-West passage only ice-free for certain days
- Marine, atmospheric and terrestrial ecosystems in Arctic interdependent - different protected areas defined, including cold water coral reef protection areas
- IMO polar guidelines important (e.g. for ships operating in Arctic ice-covered waters or guidelines aimed at mitigating additional risk imposed on shipping due to harsh environmental and climatic conditions existing in polar waters)

Way forward:

- Ensure protection and preservation of fragile marine environment of the Arctic Ocean

- Strengthen existing measures and develop new measures to improve safety of maritime navigation and prevent or reduce risk of ship-based pollution in the Arctic Ocean
- Indigenous Peoples of the Arctic have a role to play as protectors of the environment and their traditional knowledge needs to be included in the implementation process of Rio+20

4. Marine protected areas and their contributions to economic, social and environmental objectives

[MS. IMEN MELIANE, DIRECTOR, INTERNATIONAL MARINE POLICY, THE NATURE CONSERVANCY]

- Study in Pacific region on “How Marine Protected Areas contribute to poverty reduction” (2009):
 - Results: MPAs contribute to poverty reduction through: (1) increased fish catches, (2) new jobs, (3) benefits to health, (4) benefits to women - primary drivers of poverty reduction: (1) fish spilling over from no-take zone, (2) new jobs, particularly in tourism
 - Ancillary findings: (1) small marine protected areas had greater per capita contributions to poverty reduction, (2) modest levels of investment (US\$12k) in a community marine protected area resulted in a doubling of incomes for 600 people within 5 years, (3) most alternative income generating activities failed to be sustainable because of changes in the market.
- Currently only 2.3 % of oceans in MPAs, but rapid acceleration in MPA establishment (e.g. in New Caledonia, Australia, Cook Islands) - doubling of MPAs compared to survey done two years ago
- Main challenges: (1) Most MPAs only prohibit fishing, not taking into account future threats (e.g. new energy sources and desalination capacity growth), (2) most MPAs are far from people, (3) most MPAs are far from threat areas (only 25% of coral reefs in MPAs)
- Aichi Target 11 is a game changer: 10% target kept, but now also ecosystem services, equitable management, other effective area-based conservation measures and integration into wider landscapes and seascapes taken into account

Way forward:

- identify areas that best safeguard ecosystem services and improve link to deliver social, cultural and economic benefits to communities
- Benchmarks for “effectively and equitably managed” MPAs need to be taken into account in the design, implementation and reporting on achievement of Aichi Target 11
- Definition required on what should be counted in the 10% and on what constitutes “effective area-based conservation measures” in the marine environment, in particular for fisheries management areas
- Approaches for integrated planning required together with documentation of progress

5. How to build the global marine protected areas network

[MR. CHRISTOPHE LEFEBVRE, DIRECTOR, INTERNATIONAL AFFAIRS, FRENCH MARINE PROTECTED AREAS AGENCY AND IUCN OCEAN COUNCILOR]

- Some countries late in implementing the Aichi targets - reasons:
 - Knowledge gaps and lack of information/data
 - Lack of political commitment at all levels
 - Legal, policy and institutional weaknesses and poor sectoral coordination
 - Insufficient human resources and capacity for implementation
 - Low awareness and communication about importance of MPAs
 - Limited involvement of Indigenous and local communities, stakeholders and private sector
 - Lack of economic and other incentives
 - Limited financial resources and weakness of financial mechanism

Way forward:

- Principles of action: Inform, involve, influence and cooperate: (1) Fill information/data gaps and increase knowledge; (2) Awareness raising and communication about importance of MPAs; (3) Build political commitment at all levels; (4) Strengthen legal, policy and institutional and sectoral coordination; (5) Human resources and capacity development for implementation; (6) Mobilizing Indigenous and local communities, and stakeholders (e.g. consider their rights and needs with regard to food security etc.); (7) Blue Growth and other economic incentives for MPAs (e.g. marine incentives for private sector)
- Third international marine protected areas Congress (IMPAC3) organized by IUCN and French marine protected areas Agency (21-25 October 2013) and High Level Policy meeting, Marseille, France and second Summit of the MPAs Agency Partnership (26-29 October 2013), Corsica, France

Open discussion

One participant highlighted examples of MPAs which were established while being financed through multi-stakeholder trust funds. The need to check globally which areas could be protected was emphasized together with the fact that there was still a gap on how to factor in local communities/ social aspects.

6. Rio+20 and sustainable fisheries: How to convert commitments to action

[SUSAN LIEBERMAN, DIRECTOR, INTERNATIONAL POLICY, PEW ENVIRONMENT GROUP]

- Rio+20 outcome document - Member States agreed to:
 - Urgently take measures to maintain or restore fish stocks to at least MSY (2015 target)
 - Implement science-based management plans
 - Enhance management of by-catch, discards and other adverse ecosystem impacts from fisheries
 - Protect vulnerable marine ecosystems, including through effective use of impact assessments
 - Eliminate illegal, unregulated and unreported (IUU) fishing
 - Implement measures to strengthen monitoring, control, surveillance and enforcement
 - Increase transparency and accountability of RFMOs
- Currently 17 RFMOs in overlapping geographic areas - cover 91% of the world's ocean
 - Main challenges – many RFMOs: (1) Historically have not prevented overfishing; (2) Do not cover all species or all ocean areas; (3) Ignore scientific recommendations; (4) Have failed to adopt ecosystem-based fisheries management despite mandates to do so

Way forward:

- RFMOs key to implementing Rio+20 commitments, but need to be improved
 - Priority areas identified in order to meet these commitments are: tuna, sharks, forage fish, IUU fishing and transparency (see presentation for detailed, specific recommendations on each area)
 - should be held accountable to General Assembly
- Fish stocks goals can be reached if there is political will
- Fully implement UNFSA, FAO Code of Conduct for Responsible Fisheries and FAO international plans of action and technical guidelines

IV. Implementation

1. Marine scientific research and oceans observations

[MS. WENDY WATSON-WRIGHT, ASSISTANT DIRECTOR-GENERAL, UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION(UNESCO) AND EXECUTIVE SECRETARY, INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC)]

- Scientific community has essential role in producing and sharing reliable information on our changing ocean, to support formulation of sustainable policies, planning of economic activities, and development of new technologies, leading to integrated ocean and coastal management
- Marine scientific research has progressed considerably in last 20 years providing an understanding of: (1) ocean physics through models describing patterns of change in the ocean (ocean temperature, ocean currents), (2) ocean chemistry particularly related to ocean carbon cycle, and related acidification processes, as well deoxygenation, (3) ecosystem functioning, including climate change impacts/ multi-stress impacts on marine biota
- Scientific advancement made possible thanks to number of Environmental Change core programmes established after Rio 1992 [World Climate Research Program (WCRP), International Geosphere-Biosphere Program (IGBP), DIVERSITAS, and Earth System Science Partnership (ESSP)] - several projects launched and financed since then, investigating anthropogenic influences on Earth system

Way forward:

- Following Rio+20, new generation of programmes will be established through Future Earth on Research for Global Sustainability
- Sustained ocean observations necessary to enable state of ocean to be described, its changing conditions to be forecasted, and its effects on climate change to be predicted, and to facilitate sustainable development by ocean users and managers - reason for Global Ocean Observing System (GOOS) establishment in 1993 (IOC, WMO, UNEP and ICSU) to respond to needs of nations by building one integrated system that responds to many different requirements - whilst commitment to GOOS reaffirmed at WSSD (JpOI), system at 62% of its implementation and further investment from nations required
- GOOS and other international programmes will be important in informing ocean priorities that have been identified in Rio+20 outcome document, as most if not all require a strong scientific underpinning (ocean acidification, ABNJ, climate change, WOA, etc) - will require having effective and coordinated science – policy interfaces at both national and international level such as IPCC, SOFIA, IPBES

2. Addressing climate change and disaster risk reduction: A Pacific Islands approach

[MR. SEFANAIA NAWADRA, DIRECTOR, ENVIRONMENTAL MONITORING AND GOVERNANCE, SECRETARIAT OF THE PACIFIC REGIONAL ENVIRONMENT PROGRAMME (SPREP), SAMOA]

- In Pacific climate change no longer seen as environmental issue but as sustainable development issue because of its cross sector impacts
- Climate change roundtables and adaptation programmes exist

Way forward:

- Joint approach to climate change (CC) and disaster risk reduction (DRR) through Joint National Action Plans on CC/DRR (JNAPs): new regional platform for CC/DRR to be established in July 2013; integrate fully into post Rio+20 processes and post-2015 development agenda
- New initiative on Ecosystem based Adaptation (EbA)
- New work on regional environment indicators

3. Capacity-building by the United Nations University – Fisheries Training Programme

[MR. THOR ASGEIRSSON, DEPUTY DIRECTOR, FISHERIES TRAINING PROGRAMME, UNITED NATIONS UNIVERSITY (UNU) ICELAND]

- Capacity-building important for developing countries - education has increased (UNEP HDI 2013), but knowledge not sufficient
- Gender issues important for sustainable development (new programme on gender equity)
- UNU Fisheries training programme:
 - institutional capacity building programme - link capacity enhancement and education with applied sustainable solutions in fisheries development - bring local and international experts together to create suitable and realistic means for partner country
 - Annual six months training for experienced professionals (263 fellows to date -majority from Africa) plus over 30 short course (5-10 days), site visits, workshops and meetings
 - long-term commitment and ownership of outcome/course material for partners
 - uses UNESCO's 5-pillar paradigm for Education for Sustainable Development
- Goal: link education with solutions and develop action competency

4. Capacity-building needs of developing countries: Preliminary results from an IOC survey

[DR. VENUGOPALAN ITTEKKOT, PROFESSOR, UNIVERSITY OF BREMEN AND FORMER DIRECTOR, LEIBNIZ CENTRE FOR TROPICAL MARINE ECOLOGY]

- Oceans and seas emerging theme in many developing countries - practice of ocean science just beginning; current capability of experts and infrastructure to make best use of Transfer of Marine Technology under IOC Criteria and Guidelines inadequate
- More active role in regular processes and assessments wanted; new efforts under way to develop national plans/strategies for conservation and sustainable use of oceans and seas. Require advice, assistance and training on national and regional policy
- Unique opportunity to align capacity development (CD) interventions with national priorities for development
- CD in SIDS countries requires special attention, because of their large ocean space and their unique and emerging ocean and coastal problems
- Identified capacity-building needs in IOC survey call for CD interventions in: (1) Scientific research and technology; (2) Marine/Ocean policy development and implementation; (3) Education and technical training; (4) Outreach activities

Way forward:

- Four areas identified in IOC survey could form four components of revised CD strategy to be developed in cooperation with Member States and other compatible UN agencies as well as governmental, non-governmental organizations and private sector
- Systematically involve universities and technical institutions in developing countries in CD interventions and strengthen their capabilities in human resources and infrastructure
- Programs related to the impact of climate change and hazards management remain important, but great need for CD and technology transfer for: (1) management, monitoring and mapping of ocean and coastal space; (2) areas related to MDGs in some countries, especially in the Caribbean region
- Design new initiatives to systematically recruit pool of national experts employed outside of country for national CD actions (turn yesterday's "brain drain" to tomorrow's "brain gain") and to retain trained national experts- in many countries national programs already in place. Explore new mechanisms for "talent sharing" among developed and developing countries.

- CD actions need to take a long term perspective; explore possibilities of establishing training centers in regions, and opportunities of systematically and regularly conducting sea-based training programs in cooperation with Member States with ship capabilities
- Engage with SIDS countries individually, rather than as one region, and explore possibility of establishing a Centre of Excellence especially in the Pacific region
- Implement measures to enhance awareness among broader community of government officials, members of academia as well as other related stakeholders of full potential of IOC programs and actions as well as broad range of opportunities they offer for CD

5. Capacity-building in MEBM: Sea-enclosing and land-reclamation in developing countries

[PROF. SU JILAN, PROFESSOR, SECOND INSTITUTE OF OCEANOGRAPHY, STATE OCEANIC ADMINISTRATION (SOA), CHINA]

- Rapid development of coastal/ocean economy: degradation of coastal and ocean ecosystems in parts of world alarming due to insufficient science-based planning and inadequate governance
- Facing foreseeable unprecedented rapid global economic and social development, urgent action/preparation needed to preserve capacity and resilience of coastal and marine ecosystems, in particular critical habitats and biodiversity
- Need to balance resource exploitation and ecosystem protection, especially in developing countries
- No single Marine Spatial Planning (MSP) approach can fit all - its application in implementing MEBM can lead to widely different results

Way forward:

- Sufficient knowledge on coastal/ocean ecosystems and wise/insightful decision making vital in implementation of Marine Ecosystem-Based Management (MEBM)
- Call on United Nations to prepare developing countries to face impending rapid expansion of their coastal economy by building up knowledge on value and fragility of their coastal and marine ecosystems - at same time, technology transfer of tools for MSP such as highly structured databases like GIS and others are important

General open discussion (First part of session IV)

Participants discussed disconnect between science and policy-making, the importance of taking social and cultural issues into account and the difficulty of achieving cultural change. Suggestions made where among others: (1) to make scientific evidence more effective by being honest about transition costs and linking it to a strategy that will specifically deal with the people who will be impacted by the transition, (2) to closely collaborate with ocean leaders in a more comprehensive approach, (3) to employ awareness raising, information sharing and education of the population, in particular the youth, (4) to build capacities in countries to enable them to implement decisions made at policy level and to establish capacity-building institutions

6. Catalysing ocean finance: Transforming markets to restore and protect the global ocean

[MR. ANDREW HUDSON, UN-OCEANS COORDINATOR AND HEAD, WATER AND OCEAN GOVERNANCE PROGRAMME, BUREAU FOR DEVELOPMENT POLICY, UNDP]

- Value of 'blue' ocean to 'green' economy: food security, tourism, transport, energy, ecosystem services and poverty reduction (GDP contribution ocean sectors as high as 20% in some developing countries)
- High market value of ocean goods and services, but at serious risk (e.g. due to overfishing)
- Significant global costs of poor ocean management on socioeconomic development
- Market and policy failures drive ocean degradation

- Four Step planning approach to Catalysing Ocean Finance: (1) Prioritize ocean issues based on sound scientific and economic analysis; (2) Identify barriers creating market failures that drive ocean degradation; (3) Implement policy instruments, catalyse public and private financial flows; (4) Determine approximate mix of policy instruments to remove barriers
- Three Ocean Planning Instruments proven effective at creating enabling policy environment that leverages sizeable financial flows for ocean restoration and protection: (1) Transboundary Diagnostic Analysis/Strategic Action Programme (TDA/SAP); (2) Integrated Coastal Management/Framework for Sustainable Development of Coastal Areas (ICM/SDCA) ; (3) Building on Regional and Global Ocean Legal Frameworks
- Case studies (6) from UNDP/GEF International Waters portfolio documenting how modest sums of (GEF) public finance were leveraged 100 to 1000-fold to deliver investments and other financial flows for reducing pollution (esp. hypoxia), overfishing, and risk from aquatic invasive species
- Catalysing Ocean Finance presents a road map for transforming management of global ocean resources towards truly sustainable practices through a proven mix of planning methodologies, policy instruments and catalysed public and private finance

Way forward:

- Ocean sustainability can be a legacy of today's generation of decision makers - Reversing ocean degradation is not an intractable problem
- Scale up proven ocean planning methodologies and policy instruments to address key ocean challenges globally
- Modest additional public investment of around \$5 billion over 10-20 years could be sufficient to catalyse hundreds of billions, transform ocean markets and sustain trillions of dollars in ocean goods and services into perpetuity
- Ocean planning processes and catalysis of action and investment take time –need to take action immediately to prevent continued ocean decline and possible ‘tipping points’

Open discussion

One participant commented that in the context of catalyzing ocean finance, fisheries are at a disadvantage as they have not really been economically analyzed. In addition, a socio-economic analysis was to be conducted. It was clarified that the focus of Catalysing Ocean Finance was strictly on a basic financial analysis, not economic, to identify opportunities for leveraging significant new financial resources for ocean protection from existing and emerging public resource flows.

7. Global Partnership for oceans (GPO)

[MR. PETER J. KRISTENSEN, TEAM LEADER FOR OCEANS, BIODIVERSITY AND POLLUTION, ENVIRONMENT DEPARTMENT, THE WORLD BANK]

- Need for urgent action on oceans at global scale – no single organization can do it alone
- Global Partnership for oceans (GPO) - launched at Rio+20:
 - people-centred approach, focusing on food security, jobs, healthier oceans and growth
 - new approach to restoring ocean health
 - mobilizes finance and knowledge to activate proven solutions at an unprecedented scale for the benefit of communities, countries, and global well-being
 - Three main areas: (1) Fisheries: Enable the world's overfished stocks to be rebuilt (increase of annual net benefits by \$20 billion); (2) Habitat: Halve the current rate of natural habitat loss; (3) Pollution: Reduce pollution to levels not detrimental to ecosystem function and biodiversity
- Global Ocean Action Summit (Sept 9-13, 2013), The Hague, The Netherlands

8. Secretary-General's Oceans Compact

[MS. JACQUELINE ALDER, UN-OCEANS DEPUTY COORDINATOR AND HEAD, MARINE AND COASTAL ECOSYSTEMS BRANCH, DIVISION OF ENVIRONMENT POLICY IMPLEMENTATION, UNEP]

- Oceans Compact to focus resources and expertise of UN system to deliver its ocean mandates more coherently and efficiently
- One goal: ‘Healthy oceanic for prosperity’ - three objectives: (1) Protecting people and improving health of oceans, (2) Protecting, recovering and sustaining oceans environment and natural resources and restoring their full food production and livelihoods services, (3) Strengthening ocean knowledge and management of oceans

Way forward:

- action plan for UN system to be developed to outline short, medium and long-term strategies for cross-sectoral coordination and cooperation
- Resource Mobilization Strategy to be implemented
- Multi-stakeholder Advisory Group to be established: time bound, 20-30 experts (including government representatives, private sector, scientists, ocean experts, NGOs) – call for nominations sent out in March 2013

Open discussion

It was noted that NGOs and other stakeholders will be able to comment on draft action agenda and that while regular briefings were held with Member States, the Oceans compact was not part of an intergovernmental process. Possible synergies could be created with the GPO and the World Bank would take part in the review of the action plan.

The participants expressed their appreciation to the organizer for the effective organization of the meeting and to the Permanent Mission of Monaco for generously hosting a dinner for the participants of the Expert Group Meeting on Oceans, Seas and Sustainable Development: Implementation and follow-up to Rio+20.