GLOBAL OCEAN FORUM

Oceans at Rio+20

RIO+20 United Nations Conference on Sustainable Development

How Well Are We Doing in Meeting the Commitments from the 1992 Earth Summit and the 2002 World Summit on Sustainable Development?

Summary for Decision Makers

GLOBAL ENVIRONMENT FACILITY 20 YEARS INVESTING IN OUR PLANET

UNDP Empowered lives. Resilient nations.

UNIVERSITY OF DELAWARE

Notes to Readers

This report should be cited as:

Biliana Cicin-Sain, Miriam Balgos, Joseph Appiott, Kateryna Wowk, and Gwénaëlle Hamon. 2011. Oceans at Rio+20: How Well Are We Doing in Meeting the Commitments from the 1992 Earth Summit and the 2002 World Summit on Sustainable Development? Summary for Decision Makers. Global Ocean Forum.

To obtain this publication, please contact

Joseph Appiott
Global Ocean Forum
Gerard J. Mangone Center for Marine Policy
University of Delaware,
Newark, Delaware 19716 USA,
telephone: 1-302-831-8086,
fax: 1-302-831-3668
email: jappiott@udel.edu

To download this document, please access:

http://www.globaloceans.org/sites/udel.edu.globaloceans/files/Rio20SummaryReport.pdf

Full Report may be downloaded at:

http://www.globaloceans.org/sites/udel.edu.globaloceans/files/Rio20AssessmentReport.pdf

Publication design by Kevin McLaughlin

Acknowledgements

We acknowledge, with sincere thanks, the financial and other support received from the Global Environment Facility and the United Nations Development Programme through the GEF-UNDP project on *GEF IW:LEARN Portfolio Learning in International Waters with a Focus on Oceans, Coasts, and Islands and Regional Asia/Pacific and Coral Triangle Learning Processes,* the University of Delaware which hosts the Global Ocean Forum, and from a wide number of intergovernmental and international organizations, governments, non-governmental organizations, research institutions, foundations, museums and aquaria, and experts (noted on pages 45-46). Without their support and dedication to advancing the global ocean agenda, this effort would not have been possible.

This Report relies, in large part, on the expert judgements of participants at the five global ocean conferences organized by the Global Ocean Forum who come from all sectors of the global ocean policy community (governments, international agencies, NGOs, industry, science groups). As well, the report relies on past policy analyses carried out by the Global Ocean Forum, especially a 2006 report that tracks progress in meeting the WSSD commitments on oceans, coasts, and islands, ten policy briefs prepared for the 2008 global oceans conference, and three policy briefs prepared for the 2010 global ocean conference (citations found at the end of the Summary).

Our sincere thanks go to the major co-organizers of the Global Ocean Conference 2008 (held in Hanoi, Vietnam) and of the Global Ocean Conference 2010 (held at UNESCO in Paris), and to the authors of the policy briefs for their contributions to this report.

France

Vietnam

FISHERIES AND OCEANS CANADA

Oceans at Rio+20

How Well Are We Doing in Meeting the Commitments from the 1992 Earth Summit and the 2002 World Summit on Sustainable Development?

Summary for Decision Makers

By Biliana Cicin-Sain, Miriam Balgos, Joseph Appiott, Kateryna Wowk, and Gwénaëlle Hamon

University of Delaware and Global Ocean Forum

With contributions from:

Salvatore Arico, Natural Sciences Sector UNESCO

Manuel Cira, World Ocean Network and NAUSICAA

Christopher Corbin, Caribbean Regional Coordinating Unit, United Nations Environment Programme

David Freestone, Sargasso Sea Alliance

Ania Grobiki, Global Water Partnership

Alan Hall, Global Water Partnership

Indumathie Hewawasam, Global Ocean Forum

Kristin Hicks, University of Delaware and Global Ocean Forum

Ove Hoegh-Guldberg, Global Change Institute, University of Queensland, Australia

Gunnar Kullenberg, Independent Consultant, and (formerly) Intergovernmental Oceanographic Commission (IOC-UNESCO)

Christophe Lefebvre, French Marine Protected Areas Agency

Christen Loper, US National Oceanic and Atmospheric Administration

Robin Mahon, University of the West Indies

Janot-Reine Mendler de Suarez, Independent Consultant

Steve Murawski, (formerly) US National Oceanic and Atmospheric Administration

Rolph Payet, University of Seychelles

Michael Phillips, Swansea Metropolitan University, UK

Ann Powers, Pace University School of Law

Kenneth Sherman, US National Oceanic and Atmospheric Administration

Vincent Sweeney, GEF Integrating Watershed and Coastal Areas Management in Caribbean SIDS

Hiroshi Terashima, Ocean Policy Research Foundation, Japan

Carol Turley, Plymouth Marine Laboratory, UK

Jorge Luis Valdés, Intergovernmental Oceanographic Commission (IOC-UNESCO)

Philippe Vallette, World Ocean Network and NAUSICAA

Marisa Van Hoeven, University of Delaware and Global Ocean Forum

Marjo Vierros, United Nations University-Institute of Advanced Studies

Cherdsak Virapat, International Ocean Institute

John Virdin, World Bank Group

LaVerne Walker, Ministry of Physical Development, Environment and Housing, St. Lucia

Sue Wells, Independent Consultant

(Note: Errors or omissions in this report are the responsibility of the authors in their individual capacities)

Global Ocean Forum
October 2011

Foreword

Focusing on a Results Agenda for Coasts, Oceans, and Island States

When we look at a map of our tiny planet, we cannot avoid noticing that the oceans dominate over the land. Our "Blue Planet" is blessed with vast oceans and intricate coastlines that support our global economy. Maritime transport, international trade in fisheries, food security for coastal communities, the economic engine of coastal tourism, and even inland rainfall patterns depend on the sea.

It is unfortunate that news continues to be bad on the ecological status of our coasts and oceans. Every day, another story appears on the increasing degradation and depletion of the oceans. Coastal habitats, the "blue forests" are disappearing at rates even more rapid than inland forests. Ninety percent of top predatory fish in the oceans have been reported to be fished-out and loss of biological diversity continues. "Dead Zones" of oxygen depletion from pollution and harmful algal blooms increase every year. Yet, we must realize that the situation would be even worse if the original Rio Summit twenty years ago and the Johannesburg Summit ten years ago had not set out a course for action.

But how is the world community doing in meeting goals and targets related to coasts, oceans, and island states? Are governments and international organizations responding with appropriate interventions? There is just no simple answer because the big challenges of our time are interlinked with the global economy and in turn most of them are at the heart of the protection of coasts and oceans. This is why global action on oceans must be redoubled…to address the challenges posed by the global economy.

This publication measures the progress made toward the broad goals, targets, and timetables established by the international community. The analysis can only be qualitative, but it tells us that the issue of sustainability is complex, the challenges great, and the progress mixed. Nonetheless, the information that has been included is critical for global policymakers to absorb. We have to do better in moving from words to action, by joining forces in partnership, and in measuring the results. Yes, there are successes, especially a number of them supported by the Global Environment Facility (GEF) and its agencies such as UNDP. These successes depend on harnessing the power of participation by stakeholders across sectors, which is of critical importance in the case of the business community with its potential to influence the global economy with "greener" policies and practices.

For our part at the GEF, developing countries have placed a high priority on coastal and marine ecosystems for projects in our International Waters focal area. We have supported ecosystem-based approaches to improved management of 20 of the Earth's 64 Large Marine Ecosystems. In these GEF projects, 110 GEF recipient countries are collaborating with 20 non-recipient countries on their shared coastal and marine resources. Moreover, GEF assistance to these coastal countries has been accompanied by over $4 Billion in investments from other sources. Results take time, but it is good news that developing countries are taking collective action and are asking for assistance to protect coasts and oceans. In turn, GEF has responded with programs that cover one-third of the coastal oceans of our planet.

Measuring results is critical. We all know that and we know that it is difficult to report results on a global scale. This report provides important information for all of us on coasts, oceans, and islands. It illustrates that we must all work harder if our global economy and our coastal communities are to be sustained for our children and their children. Nothing less than a renewed commitment to action will do!

Monique Barbut

Chief Executive Officer and Chairperson
Global Environment Facility

List of Acronyms

ABNJ	Marine Areas beyond National Jurisdiction
AOSIS	Alliance of Small Island States
BPoA	Barbados Programme of Action on the Sustainable Development of Small Island Developing States
CBD	Convention on Biological Diversity
CoML	Census of Marine Life
COP	Conference of the Parties
CReW	Caribbean Regional Fund for Wastewater Management
CSD	United Nations Commission on Sustainable Development
CTI	Coral Triangle Initiative
EBM	Ecosystem-Based Management
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ENB	Earth Negotiations Bulletin
ESSP	Earth System Science Partnership
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMP	Fishery Management Plan
GEC	Global Environmental Change
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographical Information System
GMA	Global Marine Assessment
GOF	Global Ocean Forum
GOOS	Global Ocean Observing System
GPA	UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
GRAMED	Global and Regional Marine Assessment Database
GWP	Global Water Partnership
HELCOM	Helsinki Commission
IAS	University-Institute of Advanced Studies
ICAM	Integrated Coastal Area Management
ICM	Integrated Coastal Management
ICP	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
ICSU	International Council for Science
ICZM	Integrated Coastal Zone Management
IGBP	International Geosphere-Biosphere Programme
IGO	Inter-Governmental Organization
IGR	Intergovernmental Review Meetings
IHDP	International Human Dimensions Programme
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
IPBES	Intergovernmental Platform for Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPOA	International Plan of Action
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported, and Unregulated Fishing
IWRM	Integrated Water Resources Management
JPOI	Johannesburg Plan of Implementation
LBS	Land-based activities affecting the marine environment
LME	Large Marine Ecosystem
MCS	Monitoring, Control, and Surveillance
MDG	Millennium Development Goal
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NGO	Non Governmental Organization
NOAA	National Oceanic and Atmospheric Administration
NPA	National Programmes of Action
NPOA	National Plan of Action
OBIS	Ocean Biogeographic Information System
OSPAR	Oslo and Paris Conventions for the Protection of the Marine Environment of the North-East Atlantic
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PIPA	Phoenix Islands Protected Area
POPs	Persistent Organic Pollutants
PrepCom	Preparatory Committee Meeting
RFMO	Regional Fisheries Management Organization
ROPME	Regional Organization for the Protection of the Marine Environment
SCOR	Scientific Committee on Oceanic Research
SEA	Strategic Environmental Assessment
SIDS	Small Island Developing States
SLR	Sea Level Rise

SMART	Specific, Measurable, Attainable, Relevant, Realistic and Timely
SOFIA	State of World Fisheries and Aquaculture
SPRFMO	South Pacific Regional Fisheries Management Organization
UN	United Nations
UN BBNJ	UN Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNCSD	United Nations Conference on Sustainable Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNDOALOS	United Nations Division of Ocean Affairs and Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNICPOLOS	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
UNU	United Nations University
VMS	Vessel Monitoring System
WCRP	World Climate Research Programme
WMO	World Maritime Organization
WON	World Ocean Network
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
YSLME	Yellow Sea Large Marine Ecosystem

Summary for Decision Makers

"By protecting the threatened seas now, man will be able to enter a new era: that of sustainable shared development, for humanity as a whole. For populations that live along its shores and those far away, we have to find a common answer for all of us and for generations to come."

--H.S.H. Prince Albert II of Monaco,
Oceans Day at Copenhagen during
UNFCCC COP 15, December 14, 2009

The purpose of this report, *Oceans at Rio+20: How Well Are We Doing in Meeting Global Commitments on Oceans, Coasts, and Islands from the 1992 Earth Summit and the 2002 World Summit on Sustainable Development?* is to contribute to discussions and preparations related to the UN Conference on Sustainable Development (Rio+20) to be held in Rio de Janeiro, Brazil, June 4-6, 2012, and to support governments in the development of a significant ocean outcome at Rio+20. The new vision on sustainable development embodied in the 1992 Earth Summit (UN Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992) represented a major paradigm shift that changed the world and many people around the world. In 2002, the World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa, took the paradigm shift further by committing to very specific targets and timetables to achieve some of the overarching commitments made at the Earth Summit, through the Johannesburg Plan of Implementation (JPoI). Twenty years after the Earth Summit, we must take advantage of Rio+20 to assess what we have achieved (and not achieved) and craft the way to a new future—a future where we can all live and prosper in a low-carbon global economy in health and harmony with nature.

This report addresses the question of "How well are we doing?" in the implementation of the UNCED and WSSD goals and targets related to oceans, coasts, and islands. This report has been prepared by researchers at the Global Ocean Forum housed at the University of Delaware, with contributions from many experts around the world.

OCEANS—THE QUINTESSENTIAL SUSTAINABLE DEVELOPMENT ISSUE

Oceans are the quintessential sustainable development issue, essential to all three pillars of sustainable development—economic development, social development, and environmental protection. Oceans perform vital life-sustaining functions for the planet—oceans generate half of the oxygen on Earth, are a vital source of sustenance and livelihood, absorb carbon dioxide, and regulate climate and temperature. Just as one cannot do without a healthy heart, the world cannot do without a healthy ocean.

Oceans directly support the livelihoods of hundreds of millions around the globe, employing more people worldwide than traditional agriculture (FAO 2010). Ninety percent of global trade is carried by ship, and billions of people in coastal nations are dependent on ocean resources for their income (such as subsistence fishing or marine-based tourism). The UN Food and Agriculture Organization (FAO) estimates that fish provide more than 4.2 billion people with over 15% of their animal protein intake, with some type of fishing activity occurring in every region of the ocean (FAO 2007). Coastal waters, in particular, account for only 7% of the total area of the global ocean, yet these areas form the basis of the world's primary fishing grounds, supplying an estimated 50% of the world's fisheries, including vital nutrition for close to 3 billion people, as well as 50% of animal protein and minerals to 400 million people of the least developed countries in the world (Nelleman et al. 2009). In addition to food resources, marine and coastal biodiversity provides many valuable services and products to people, including climate regulation, cancer-curing medicines, genetic resources, nutrient cycling, carbon storage, cultural value, and sustainable livelihoods, among others. Healthy oceans are inextricably linked to the long-term management, development, and well-being of coastal populations.

However, the impacts of a number of key drivers, including overfishing, pollution, population rise, and climate change are compromising the ability of the ocean to continue providing essential resources and critically important services. These drivers are often negatively synergistic, exacerbating many of the existing challenges to sustainable oceans management, and endangering the welfare of 183 coastal countries, including 52 small island developing State (SIDS), and the over 50% of the global population that lives in coastal areas, in addition to having significant implications for the global community as a whole. Ultimately, the major threats to the long-term well-being of ocean ecosystems threaten the very health of the planet.

Moreover, the magnitude of the cumulative impacts on the ocean is greater than previously understood. The combined impacts of various stressors are drastically compromising the health and resilience of marine ecosystems, making them less able to cope with growing stressors and environmental change. Marine species are facing increasing threats of extinction and we are already witnessing the impacts of ecosystem collapse in many areas, especially coastal and island communities (Rogers and Laffoley 2011).

The timeline for action is shrinking. As we continue to delay the urgent and critical action needed to address these negative trends, environmental conditions continue to deteriorate, coastal communities continue to suffer, and the action needed to mitigate these impacts becomes more costly and difficult. Urgent and direct intervention can no longer be delayed if we hope to provide a sustainable ocean for current and future generations. Human interactions with the ocean must change with the rapid adoption of an integrated and cross-cutting approach to sustainable management of all activities. This new approach must be complemented by a wider re-evaluation of society's relationship with the natural world and the resources that we all rely upon (Rogers and Laffoley 2011).

THE UNCED AND WSSD GOALS RELATED TO OCEANS, COASTS, AND ISLANDS

UNCED, convened in Rio de Janeiro on June 3-14, 1992, brought together virtually all nations of the world (178 countries) and 114 heads of state, as well as 9,000 individuals from the media and representatives of 1,400 nongovernmental organizations, to reach final agreement on the outcomes of the Earth Summit: 1) the Rio Declaration of Principles, 2) The Framework Convention on Climate Change, 3) The Convention on Biological Diversity, 4) Agenda 21—a 40-chapter action plan to serve as a roadmap for sustainable development, and 5) a set of forest principles.

Chapter 17 of Agenda 21, *Protection of the Oceans, All Kinds of Seas, including Enclosed and Semi-Enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of their Living Resources,* was the longest chapter of Agenda 21 and one of the most complex. The introduction to Chapter 17 (Para 17.1) stresses both the importance of oceans and coasts in the global life support system and the positive opportunities for sustainable development that ocean and coastal areas represent. In contrast to other areas where the marrying of environment and development will require mostly regulatory measures to protect already degraded environments, ocean and coastal areas present excellent opportunities for development which, if carried out properly, can yield significant economic and social benefits for coastal populations while protecting environmental integrity. The chapter underscores the need for new approaches that "are integrated in content and anticipatory in ambit." Seven major program areas are included in Chapter 17: 1) integrated management and sustainable development of coastal areas, including Exclusive Economic Zones (EEZs); 2) marine environmental protection; 3) sustainable use and conservation of living marine resources of the high seas; 4) sustainable use and conservation of living marine resources under national jurisdiction; 5) the addressing of critical uncertainties in management of the marine environment and climate change; 6) the strengthening of international, including regional, cooperation and coordination; and 7) sustainable development of small islands (Cicin-Sain and Knecht 1998).

Ten years later, the governments of the world met once again, this time to refine the vision of the Earth Summit and to craft a detailed plan of implementation. Convened in Johannesburg, South Africa on August 26 to September 4, 2002, the WSSD featured a ten-year review of the 1992 UNCED to reinvigorate global commitment to sustainable development. The WSSD brought together 21,340 participants from 191 governments, intergovernmental and non-governmental organizations, the private sector, civil society, academia and the scientific community. The major outcome of the WSSD was the Johannesburg Plan of Implementation (JPoI), designed as a framework for action to implement the commitments originally agreed to at UNCED. The JPOI includes provisions for poverty eradication; consumption and production; the natural resource base; health; small island developing States (SIDS); Africa; other regional initiatives; means of implementation; and institutional framework (ENB 2002). Regarding ocean and coastal issues, the JPoI emphasizes issues related to the ecosystem approach and integrated management; protection of the marine environment from land-based activities; integrated water resource management; biodiversity and marine protected areas, SIDS; fisheries and aquaculture; global marine assessment; coordination of UN activities on oceans; oceans financing; and capacity development.

The Millennium Development Goals (MDGs), adopted by world leaders in 2000, further expand upon sustainable development efforts, and represent a promise to free people around the globe from extreme poverty and deprivation. Coastal and ocean ecosystems, and the services they provide, directly relate to the MDGs. Estimated to be worth over US $25,000 bil-

[1] To see the UNDESA List of Small Island Developing States visit: http://www.un.org/special-rep/ohrlls/sid/list.htm

Table 1. Goals from the UN Conference on Environment and Development (1992) and the World Summit on Sustainable Development (2002) Addressed in this Report

Agenda 21 (1992)

Ecosystem Approach and Integrated Management

- Provide for a cross-sectoral integrated policy and decision-making process, including national ICM guidelines, based in the precautionary approach, and systematic observation of the marine environment.
- Establish, or where necessary strengthen, appropriate coordinating mechanisms and legal and regulatory frameworks for integrated management
- Support the role of international cooperation and coordination on a bilateral, regional, or global basis in supporting and supplementing national efforts to promote integrated management and sustainable development of coastal and marine areas.

Protection of the Marine Environment

- Consider updating, strengthening and extending the Montreal Guidelines the Protection of the Marine Environment from Land-Based Sources
- Assess the effectiveness of existing regional agreements and action plans to prevent, reduce and control marine degradation caused by land-based activities, and consider strengthening or developing of new mechanisms, where appropriate.
- Convene an intergovernmental meeting on protection of the marine environment from land-based activities
- Establish or improve regulatory and monitoring programmes to control effluent discharges and emissions, including from non-point sources of pollution.
- Assess the need for additional measures to address degradation of the marine environment from impacts from shipping, dumping, offshore oil and gas, and port.
- Intensify international cooperation to strengthen or establish, where necessary, regional oil/chemical-spill response centres.

INTEGRATED WATER RESOURCE MANAGEMENT

- Put in place strategies for the environmentally sound management of freshwaters and related coastal ecosystems.
- Establish biological, physical and chemical water-quality criteria for agricultural water-users and for marine and riverine ecosystems and minimize soil run-off and sedimentation.
- Apply necessary measures to mitigate saline intrusion into coastal aquifers as a consequence of sea-level rise or overexploitation.

BIODIVERSITY AND MARINE PROTECTED AREAS

- Undertake measures to maintain biological diversity and productivity of marine species and habitats under national jurisdiction, including through surveys of marine biodiversity, inventories of endangered species and critical coastal and marine habitats; establishment and management of protected areas; and support of scientific research.
- Identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas and designate these ecosystems as protected areas, where appropriate
- Complete or update marine biodiversity, marine living resource and critical habitat profiles of exclusive economic zones and other areas under national jurisdiction.

SMALL ISLAND DEVELOPING STATES

- Adopt and implement programmes in SIDS to support the sustainable utilization of marine and coastal resources to maintain biodiversity and improve quality of life, including plans that emphasize multiple use of resources, integrate environmental considerations into economic and sectoral planning and policies, define measures for maintaining cultural and biological diversity and conserve endangered species and critical marine habitats.
- Adopt measures to enable SIDS to cope effectively and sustainably with environmental change, including through the design of response strategies to address the environmental, social and economic impacts of climate change and sea-level rise.
- Adapt coastal area management techniques, such as planning, siting and environmental impact assessments, using Geographical Information Systems (GIS), suitable to the special characteristics of small islands, taking into account the traditional and cultural knowledge.

SUSTAINABLE FISHERIES AND AQUACULTURE

- Promote enhanced collection and exchange of data on fish stocks, as well as the development of analytic tools and bioeconomic models
- Ensure cooperation and coordination between states and through global and regional intergovernmental fisheries bodies to ensure sustainable utilization of fisheries
- Develop and promote the use of environmentally sound technology fishing practices
- Convene an intergovernmental conference under United Nations auspices with a view to promoting effective implementation of the provisions of the United Nations Convention on the Law of the Sea on straddling fish stocks and highly migratory fish stocks
- States should take effective action to ensure that fishing vessels flying their flags on the high seas comply with applicable conservation and management rules of global and regional fisheries bodies
- Implement strategies for sustainable use of marine living resources, including through legal and regulatory frameworks—including for small-scale artisanal fisheries
- Undertake capacity building for developing countries to conduct sustainable fisheries and aquaculture through training, transfer of technology, and multidisciplinary training and research.
- Establish sustainable aquaculture development strategies
- Provide support to local fishing communities, in particular those that rely on fishing for subsistence, indigenous people and women

GLOBAL MARINE ASSESSMENT / ADDRESSING CRITICAL UNCERTAINTIES FOR THE MANAGEMENT OF THE MARINE ENVIRONMENT

- Promote and integrate scientific research, systematic observation of the marine environment, and information sharing to support sound decision making, modelling, and forecasting for the safety of coastal inhabitants and marine operations.

- Coordinate national and regional observation programmes for coastal and near-shore phenomena related to climate change and for research parameters essential for marine and coastal management in all regions
- Cooperate with a view to adopting special measures to adapt to the potential impacts of climate change and sea-level rise, including through the development of consistent methodologies for coastal vulnerability assessment, modelling and response strategies.

COORDINATION OF UN ACTIVITIES ON OCEANS

- Promote within the United Nations system, regular intergovernmental review and consideration of environment and development issues with respect to oceans and coasts and integration of relevant sectoral activities addressing marine and coastal issues.
- Strengthen coordination among the relevant United Nations organizations with major marine and coastal responsibilities, including their subregional and regional components and links with relevant international development bodies.

OCEANS FINANCING

- Develop policy guidance for relevant global funding mechanisms for the prevention, reduction and control of degradation of the marine environment from land-based activities.
- Provide adequate financial and technical resources to assist developing countries in preventing and solving problems associated with activities that threaten the marine environment.
- Develop appropriate financing the implementation of activities related to integrated management and sustainable development of coastal areas, marine environmental protection, sustainable use and conservation of marine living resources of the high seas and under national jurisdiction, critical uncertainties for the management of the marine environment and climate change, international cooperation and coordination, and the sustainable development of small islands.

CAPACITY DEVELOPMENT

- Provide access to relevant information and opportunities for consultation and participation in planning and decision-making related to integrated management and sustainable development of coastal areas.
- Provide national planning and coordinating bodies with the capacity and authority to review all land-based activities and sources of pollution for their impacts on the marine environment and to propose appropriate control measures.
- Adapt infrastructure, alternative employment, human resource development and training as part of coordinating mechanisms for integrated management and sustainable development of coastal areas.
- Implement public education, awareness and information programmes.
- Cooperate to improve the capacity of SIDS and developing countries to efficiently meet the needs for sustainable development and integrated management; and strengthening of the full range of human resources to implement sustainable development plans.
- Cooperate to develop or upgrade systems and institutional structures for monitoring, control and surveillance, as well as the research capacity for assessment of marine living resources.
- Provide support to enhance the capacities of developing countries in the areas of data and information, scientific and technological means, and human resource development to participate effectively in the conservation and sustainable utilization of marine living resources.
- Include capacity-building in bilateral and multilateral development cooperation.

Johannesburg Plan of Implementation (2002)

ECOSYSTEM APPROACH AND INTEGRATED MANAGEMENT

- Encourage the application of the ecosystem approach by 2010 for the sustainable development of the oceans, particularly the management of fisheries and conservation of biodiversity
- Promote integrated coastal and ocean management at the national level and encourage and assist countries in developing ocean policies and mechanisms on integrated coastal management
- Assist developing countries in coordinating policies and programmes at the regional and sub-regional levels aimed at conservation and sustainable management of fishery resources and implement integrated coastal area management plans, including through the development of infrastructure

PROTECTION OF THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES

- Advance implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and the Montreal Declaration on the Protection of the Marine Environment from Land-based Activities, with particular emphasis in the period 2002-2006 on municipal wastewater, the physical alteration and destruction of habitats, and nutrients, by actions at all levels

INTEGRATED WATER RESOURCE MANAGEMENT

- Develop integrated water resource management (IWRM) plans by 2005.

BIODIVERSITY AND MARINE PROTECTED AREAS

- To achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth
- Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012

SMALL ISLAND DEVELOPING STATES

- Undertake a comprehensive review of the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States in 2004

FISHERIES

- Implement the FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing (IUU) by 2004
- Implement the FAO International Plan of Action for the Management of Fishing Capacity by 2005
- Implement the relevant UN and, where appropriate, associated regional fisheries agreements, noting in particular the UN Fish Stocks Agreement, the FAO Compliance Agreement, and the 1995 Code of Conduct for Responsible Fisheries

- Eliminate subsidies that contribute to illegal, unreported, and unregulated fishing and to overcapacity
- Maintain or restore depleted fish stocks to levels that can produce their maximum sustainable yield on an urgent basis and where possible no later than 2015
- Support the sustainable development of aquaculture, including small-scale aquaculture, given its growing importance for food security and economic development

GLOBAL MARINE ASSESSMENT

- Establish a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socioeconomic aspects, by 2004.

COORDINATION OF UN ACTIVITIES ON OCEANS

- Establish an effective, transparent and regular inter-agency coordination mechanism on ocean and coastal issues within the United Nations system

OCEANS FINANCING

- Mobilize financial resources, particularly in developing countries, to implement the work programme arising from the Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity of the Convention on Biological Diversity
- Strengthen donor coordination and partnerships between international financial institutions, bilateral agencies and other relevant stakeholders to enable developing countries, in particular the least developed countries and SIDS and countries with economies in transition, to develop their national, regional and subregional capacities for infrastructure and integrated management and the sustainable use of fisheries.

CAPACITY DEVELOPMENT

- Facilitate partnerships, scientific research and diffusion of technical knowledge; mobilize domestic, regional and international resources; and promote human and institutional capacity-building, particularly for developing countries.
- Strengthen the capacity of developing countries in the development of their national and regional programmes and mechanisms to mainstream the objectives of the Global Programme of Action (GPA) and to manage the risks and impacts of ocean pollution.
- Assist developing countries in coordinating policies and programmes at the regional and subregional levels aimed at the conservation and sustainable management of fishery resources and integrated coastal area management, including through the promotion of sustainable coastal and small-scale fishing activities and the development of related infrastructure
- Assist SIDS in mobilizing adequate resources and partnerships for their adaptation needs relating to the adverse effects of climate change, sea level rise and climate variability.
- Provide capacity-building for the development and further implementation of SIDS-specific components within programmes of work on marine and coastal biological diversity.
- Encourage the dissemination and use of traditional and indigenous knowledge to mitigate the impact of disasters and promote community-based disaster management planning by local authorities, including through training activities and raising public awareness.

"Following the World Summit on Sustainable Development, a decision was taken to find sustainable ways of dealing with issues relating to oceans, coasts, and islands…

It is encouraging to note that in the last decade, coastal nations have undertaken concerted efforts to articulate an integrated vision for the governance of ocean areas under their jurisdiction to harmonize existing uses and laws, to foster sustainable development of ocean areas, to protect biodiversity and vulnerable resources and ecosystems, and to coordinate the actions of the many government agencies that are typically involved in ocean affairs….

I must state that a lot has been achieved in the management of our marine resources, but a lot still has to be done. Individually we can achieve less, but if we work together as regions and as global partners we can achieve more."

--Hon. Rejoice Mabudafhasi, Deputy Minister of Environmental Affairs and Tourism, South Africa, 3rd Global Ocean Conference, UNESCO, Paris, January 2006

Millennium Development Goals

Goal 1. Eradicate extreme poverty and hunger

Goal 2. Achieve universal primary education

Goal 3. Promote gender equality and empower women

Goal 4. Reduce child mortality

Goal 5. Improve maternal health

Goal 6. Combat HIV/AIDS, malaria and other diseases

Goal 7. Ensure environmental sustainability

Goal 8. Develop a global partnership for development

Table 2. Millennium Development Goals and Targets addressed in this report.

Goal 1: Eradicate extreme poverty and hunger

- Target 1: Reduce by half the proportion of people living on less than a dollar a day by 2015
- Target 2: Reduce by half the proportion of people who suffer from hunger by 2015

Goal 7: Ensure environmental sustainability

- Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the losses of environmental resources.
- Target 10: Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation.

Goal 8: Develop a global partnership for development

- Target 14: Address the special needs of landlocked countries and small island developing states (through the Program of Action for the Sustainable Develop-ment of Small Island Developing States and 22nd General Assembly provisions).

Added in 2005 through UNGA Resolution 60/1

- Improve cooperation and coordination at all levels in order to address issues related to oceans and seas in an integrated manner and promote integrated management and sustainable development of the oceans and seas.

lion annually, the services provided by coastal ecosystems rank among the most economically valuable of all ecosystems in the world (Nellemann et al. 2009). The achievement of these goals therefore necessarily depends on the sustainable management and development of oceans and coasts. Because coastal populations around the globe are so wholly and directly dependent on ocean and coastal areas and the sustained resources of the ocean, we cannot achieve global poverty reduction goals without strengthening and bolstering the ability of coastal communities to live and prosper sustainably using the marine resources on which they have come to depend.

Ultimately, the prolonged health of the global ocean speaks directly to the very survival of the planet on the whole. There is no degree of separation between the well-being of communities around the world and the well-being of oceans, coasts and SIDS—for 50% of the world's population, which is ever-expanding, healthy coastal and ocean habitats are an imperative.

Table 1 summarizes the major commitments made by political leaders at Rio and at Johannesburg in relation to oceans, coasts, and islands. Table 2 provides the related MDGs adopted by the world's leaders in 2000.

ABOUT THE GLOBAL OCEAN FORUM

In 2001, during the lead up to the 2002 WSSD, as nations around the world were preparing to consider progress achieved on sustainable development since the 1992 Earth Summit, it became clear that the issues surrounding oceans (comprising 72% of the world), coasts (where 50% of the world's population lives) and islands (52 countries are small island developing States) were not on the agenda of the world's governments.

Together with leaders from the Alliance of Small Island States (AOSIS) and the Intergovernmental Oceanographic Commission of UNESCO, ocean policy experts at the University of Delaware organized a broad coalition of ocean experts—from governments, UN agencies, nongovernmental organizations, science groups, and the private sector—to help the governments put ocean issues on the agenda of the WSSD. This effort was successful and important global ocean goals and targets were adopted by governments at the WSSD.

Since 2001, the Global Ocean Forum has worked with leaders from 110 countries (70% of which are developing countries and SIDS) to:

--track progress in WSSD implementation by issuing report cards on how well we are doing;

-- feature progress (or lack thereof) in global ocean conferences, so far held five times, in 2001, 2003, 2006, 2008, and 2010; and

-- anticipate emerging ocean policy issues that need to be addressed and facilitate the building of consensus on unresolved ocean issues.

Information on these activities is found at the end of this report as well as in the Global Ocean Forum Report of Activities 2010 (www.globaloceans.org).

DIFFICULTIES IN MEASURING PROGRESS ON UNCED AND WSSD TARGETS

The major WSSD and MDG targets and timetables related to oceans, coasts, and SIDS, noted in Tables 1 and 2, represent an important advance because they enshrine many of the goals previously posited by expert groups and specialized agencies as global imperatives embraced by the world's political leaders. Global consensus was reached at the highest political levels on the urgent need to take specific actions to achieve sustainability of oceans, coasts, and SIDS.

The UNCED and WSSD targets and timetables, however, were not "self-implementing." Instead, governments around the world have required significant support and collaboration from all parts of the oceans, coasts, and islands community to operationalize what needs to be done, to mobilize the requisite knowledge and financial resources, and to maintain the

high-level political support essential to achieve the sorely needed "on-the-ground" improvements in the health and condition of marine ecosystems and in the well-being of coastal communities around the globe.

It is difficult, as well, to assess progress in the implementation of UNCED and WSSD targets related to oceans, coasts, and SIDS for a variety of reasons:

- No evaluation frameworks, including indicators, have been developed to assess progress at the global scale, although there are evaluation frameworks being used at the local or regional levels.
- No single institution has been charged with collecting, on a periodic basis, national and global data on the entire range of issues related to oceans, especially regarding cross-cutting goals (e.g., achieving ecosystem management and integrated ocean and coastal management). Periodic data collection does take place in the case of biodiversity conservation (through the Conservation on Biological Diversity), fisheries issues (FAO), and issues related to land-based sources of marine pollution (through the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)).
- As well, agencies sometimes change the format of their reporting requirements on the submission of national reports, hence, the same variables may not be included in different reporting years, making the determination of trends over time impossible to achieve.
- In some instances, as well, many national and international efforts are underway to create the enabling conditions for implementation of the goals, but tangible outcomes are not yet evident.
- There is no regular collection and assessment of information on the social and economic well-being of coastal communities, making it very difficult to ascertain progress on Millennium Development Goals in the context of oceans, coasts, and SIDS.
- Some of the goals are strongly linked and dependent on other UNCED/WSSD goals. It can be difficult to determine progress on one UNCED/WSSD goal without understanding its relationship to other UNCED/WSSD/goals and to the broader context.

APPROACH AND STRUCTURE OF THE REPORT

The Report provides a synthesis of information available from various sources on the implementation of the UNCED/WSSD goals and targets on oceans, coasts, and islands, emphasizing the evolution over time for each issue and incorporating both quantitative and qualitative information as available. The data contained in the report are generally partial and incomplete, due to the absence of appropriate information. The report relies, in large part, on the expert judgments of participants at the five global ocean conferences organized by the Global Ocean Forum who come from all sectors of the global ocean policy community (governments, international agencies, NGOs, industry, science groups). As well, the report relies on past policy analyses carried out by the Global Ocean Forum, especially a 2006 report that tracks progress in meeting the WSSD commitments on oceans, coasts, and islands (Cicin-Sain et al. 2006), ten policy briefs prepared for the 2008 global oceans conference, and three policy briefs prepared for the 2010 global ocean conference (see list of publications found at the end of this Summary).

STATUS OF OCEAN ECOSYSTEMS AND COASTAL COMMUNITIES IN THE FACE OF CLIMATE CHANGE

The first part of the Report, *Status of Ocean Ecosystems and Coastal Communities in the Face of Climate Change*, discusses the importance of oceans for sustainable development and highlights the major threats to ocean ecosystems and coastal communities, and then centrally addresses the implications of climate change, including impacts from changes in ocean circulation, ocean warming, polar ice cap melting, sea level rise, increased storm activity, shifting effects on species, and ocean acidification.

Our planet's fragile oceans and coasts are too economically and socially valuable to allow resource depletion to continue and threats to sustainability to rise. Many coastal communities and nations are simply living on borrowed time before the $60 billion dollar annual international trade in fisheries collapses, depleted groundwater supplies for coastal cities run dry, changing climate swamps coastal communities, and burgeoning coastal urban populations overwhelm their degraded and polluted natural resource base. Action is needed yesterday, not tomorrow.

--Dr. Alfred M. Duda, Senior Advisor, International Waters, Global Environment Facility, 3rd Global Ocean Conference, UNESCO, Paris, January 2006

"We cannot ignore or downplay the importance of the marine environment. ... It's time to pay attention to the signals of the living planet. We need to embrace the future of a healthy living planet and manage it in a constructive and proactive way. The GBO-3 [Third Global Biodiversity Outlook] has an important message: It is time, long overdue, to take action. Action taken over the next decade will determine whether the ecosystem services on which human civilization has depended for the past 10,000 years will continue beyond this century."

--Dr. Thomas Lovejoy, Biodiversity Chair, Heinz Center for Science, Economics, and the Environment, Oceans Day at Nagoya, CBD COP-10, October 23, 2010, Nagoya, Japan

A growing number of scientific studies have noted the deteriorating condition of oceans and coastal areas over the past twenty years. The combined impacts of overfishing and destructive fishing practices, unsustainable coastal development, climate change, ocean acidification, the introduction of invasive species, and pollution, among other contributing factors, are having drastic impacts on the marine environment. Most of these stressors are continuing to grow, and are having negatively synergistic impacts on oceans and coasts to an unprecedented degree. Ocean and coastal ecosystems are facing growing threats and are already beginning to collapse in many areas, with significant socioeconomic implications for the global community. Coastal and island populations are already facing these negative impacts, namely through the earliest impacts of climate change and the inability to maintain sustainable livelihoods as marine biodiversity continues to be depleted and coastal ecosystems are destroyed.

Climate Change

There is no doubt that climate change is the defining issue of our time. Oceans play a central role in climate—oceans generate oxygen, absorb carbon dioxide and regulate climate and temperature.

Unfortunately, many of the impacts of climate change are near or exceeding the worst-case scenario predictions by the Intergovernmental Panel on Climate Change (IPCC)--many of these negative trends are happening faster than anticipated and are still accelerating, and many of the predicted consequences of these changes are already evident, including through melting of Arctic sea ice (Stroeve et al. 2007), the Greenland Ice Sheet, and the Antarctic Ice Sheet (Velicogna 2009), and rising sea level (Nicholls et al. 2011).

These trends are compounding other predicted changes, including changes in the distribution and abundance of marine species (Johnson et al. 2011), changes in primary production (Behrenfeld et al. 2006), changes in the distribution of harmful algal blooms (Bauman et al. 2010), and destabilization of marine food webs (Worm and Myers 2003).

Coastal populations in 183 coastal countries and island states will suffer disproportionately from these impacts. Many life-sustaining ecosystems in coastal and island areas, such as coral reefs, are highly sensitive to climate change and may already be suffering irreversible damage with severe socioeconomic implications in developing coastal countries and SIDS.

Despite the threats to these key resources, however, oceans and coasts have not figured on the agenda of the UN Framework Convention on Climate Change (UNFCCC) until very recently. Through a series of policy dialogues on climate and ocean issues -- including those held at the Global Ocean Conference in Hanoi, Vietnam in 2008; the World Ocean Conference in Manado, Indonesia in 2009; the Copenhagen climate negotiations in 2009; the Cancun climate negotiations in 2010; and the Global Ocean Conference in Paris

in 2010--the global ocean community has articulated the need for an integrated strategy for oceans and coasts within and beyond the UNFCCC to address the various interconnected elements associated with oceans and climate. Such a program should include provisions for:

Mitigation:

1) Adopt stringent reductions in greenhouse gas emissions, within a short timeframe, to avoid disastrous consequences on oceans and coastal communities around the world and to ensure the continuing functioning of the oceans in sustaining life on Earth;

2) Support additional research on quantifying the amounts of carbon stored and released by various marine and coastal ecosystems and taking measures to protect and restore marine ecosystems as major carbon sinks. Examine the potential for the trading of "Blue Carbon" in a way similar to green carbon (such as rainforests) and how this could be incorporated into emissions reduction and climate mitigation protocols;

3) Sustainably develop ocean-based renewable energy (such as offshore wind power, wave energy, tidal power, etc.) and accelerate efforts to implement these approaches through marine spatial planning.

4) Accelerate efforts to reduce CO_2 emissions from ships;

5) Consider and, if appropriate, develop regulatory systems for possible carbon capture and storage via injection in deep seabed geological formations;

6) Strongly discourage application of other geo-engineering approaches, such as iron fertilization, CO_2 injection in the water column.

Adaptation:

1) Implement ecosystem-based adaptation strategies, including marine protected areas, through integrated coastal and ocean management institutions at national, regional, and local levels to build the preparedness, resilience, and adaptive capacities of coastal communities;

2) Provide sufficient funding, supported by improved estimates of adaptation costs in coastal areas and small island States, to support adaptation for coastal and island communities that are at the frontline of climate change, including the possible creation of a special Coastal Adaptation Fund; and

3) Develop and support measures to address the issues associated with the displacement of coastal populations as a result of climate change.

Capacity development, scientific monitoring, public education:

1) Provide technical assistance to SIDS and developing countries to build institutional capacity to implement adaptation measures, early warning systems, and disaster risk reduction;

2) Improve awareness of understanding among policymakers of the importance of oceans and climate issues and the need to take bold policy measures to avoid disastrous impacts on the world's coastal and island communities;

3) Establish the scientific capacity in all countries for marine environment assessment, monitoring, and prediction;

4) Expand public outreach and education efforts to improve awareness of the risks posed to coastal communities and to catalyze support for mitigation and adaptation responses.

ASSESSMENT OF PROGRESS ACHIEVED (AND NOT ACHIEVED) ON THE UNCED/WSSD GOALS

The second part of the Report reviews progress achieved (or lack thereof) on each of the nine major UNCED/WSSD goals related to oceans, coasts, and islands: 1) The ecosystem approach and integrated ocean and coastal management; 2) protection of the marine environment from land-based activities and integrated water resource management; 3) marine biodiversity and marine protected areas; 4) small island developing states and oceans; 5) sustainable development of fisheries and aquaculture; 6) addressing critical uncertainties for the management of the marine environment and climate change; 7) coordination of UN activities; 8) regular process of global marine assessment; and 9) capacity development and public outreach.

For each topic, we provide an overview of the issue area as it has evolved, presenting empirical and anecdotal data as available. At the end of each section, we provide a rating of progress achieved on the major UNCED/WSSD goals in the form of a report card. The report cards assess three major variables: 1) ***Extent of effort***s (low, medium, high, data unavailable); 2) *Extent of progress* ((low, medium, high, data unavailable), and 3) ***Timing—Goals reached*** (on time, some delay, significant delay). The report card also provides an explanation for the grades that are given, discusses major obstacles to implementation, points to "bright spots" or successful cases, if appropriate, and presents a set of recommendations for the consideration of decision makers.

The report cards and accompanying explanations contained in this volume have been peer reviewed by the international network of experts (from governments, international agencies, NGOs, industry, and science groups) involved in the Global Ocean Forum Working Groups.

At the end of this Summary, the report cards for each major goal/target are brought together to provide the reader with a summary of major findings emanating from the detailed assessments found in the Report.

THE BOTTOM LINE

Notwithstanding the commendable efforts by the oceans community, involving numerous partners and stakeholders in all sectors around the world, the conditions of oceans and coasts have continued to deteriorate—marine ecosystems are significantly degraded by a wide range of anthropogenic stressors, exposed to adverse impacts of pollution, overfishing, unsustainable coastal development, impacts from oil, gas, and minerals extraction. These anthropogenic stressors on marine ecosystems have been widely demonstrated to result in loss of biodiversity, decreased abundance of key species, structural damage to habitats, loss of ecological functions and, as a result, reduced resilience to additional stresses. All of these impacts are detrimental to the livelihoods

of millions around the globe that depend on marine ecosystems and resources, and, as degradation continues and escalates due to negative feedback mechanisms and compounding effects, the very health of the planet is imperiled.

Certainly, the long-standing and tireless efforts of many institutions, countries and regions have alleviated some of the stressors plaguing marine ecosystems and coastal communities. However, these efforts must be scaled-up, strengthened, and secured with sustainable financing and underpinned by effective institutional frameworks to facilitate viable management and sustainable development over the coming decades. Never was this call more urgent than it is today. Not only is the global community lagging in the achievement of the UNCED and WSSD goals on oceans, coasts and SIDS, but we now face the urgent and immediate threat of climate change.

Climate change poses a serious threat to marine ecosystems and resources today and into the future. Unhealthy and degraded marine ecosystems and resources are much less resilient to external factors, including the effects of climate change. The ability of the ocean to maintain life-sustaining processes, threatened in many ways by both the direct effects of increased CO_2 levels and the indirect effects of a changing climate, directly affects the well-being of numerous ecosystems and coastal communities. Marine ecosystems are also considered much more sensitive to climate change than terrestrial ecosystems, and due to geophysical time lags many of the impacts of increased levels of CO_2, including warming and ocean acidification, are likely to persist in the oceans for millennia (IPCC 2007).

We are facing a "tipping point" situation that, if exceeded, the oceans may never recover from; oceans may never rebound to the bountiful, life-sustaining environments they have for so many generations embodied. Eliminating and/or alleviating anthropogenic stressors on marine ecosystems can improve their resilience and better secure the continued provision of environmental goods and life-supporting services on which coastal communities, and the global population, have come to depend—we cannot achieve sustainable development without healthy oceans and coasts. This link must be further recognized and enhanced. We must strengthen and underpin efforts already being taken on the ground that have laid the foundations for prolonged success—but with stronger measures, more decisive actions, and most importantly, enhanced global and national institutions that can adapt to changing conditions and potential tipping point scenarios in an effective, decisive, and reliable manner. These efforts should build on successful experiences and institutional frameworks, and rely on lessons-learned to pursue the most effective approach forward.

As noted, the report cards found at the end of this Summary provide detailed recommendations for next steps in each area (UNCED/WSSD goal) covered. A second report, in preparation by the Global Ocean Forum, will present perspectives on how to attain the green economy in the context of oceans, improve the institutional governance framework, and craft an overall vision that should guide the management of oceans, coasts, and SIDS in the next phase.

Summary of Findings

Reflecting on the detailed recommendations found in the report cards, we provide a brief summary addressing the UNCED/WSSD goals in five major categories:

1) Prescriptions on improving the status of ocean resources and coastal communities: a) Achieving ecosystem-based integrated ocean and coastal management (EBM/ICM); b) Advancing management of land-based sources of marine pollution (Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)), and of freshwater resources (Integrated Water Resources Management (IWRM));c) Improving fisheries and aquaculture; and d) Halting marine biodiversity loss;

2) Addressing the special problems of SIDS and oceans;

3) Enhancing UN action on oceans (coordination of UN activities);

4) Establishing consistent frameworks for measuring the conditions of oceans and coastal populations and the results of management actions (a) Regular Process of Global Marine Assessment, b) Addressing critical uncertainties; c) Measuring Millennium Development Goals); and

5) Capacity development.

1) ***Prescriptions on improving the status of ocean resources and coastal communities*** a) Achieving ecosystem-based management and integrated coastal and ocean management (EBM/ICM); b) Advancing the GPA and integrated water resource management; c) Improving fisheries and aquaculture; d) Halting marine biodiversity loss.

Regarding ***EBM/ICM at national and regional levels,*** we have come to realize that oceans can no longer be managed solely on a sector-by-sector, use-by-use basis. Instead, as Agenda 21 put it, approaches that are "integrated in content, and precautionary and anticipatory in ambit" must be adopted. There have been some important successes in establishing institutional frameworks for enhancing oceans governance through an ecosystem and integrated approach, albeit often at a small pilot scale. Given the added challenges that will be faced in ocean and coastal areas and in small island States as a result of climate change, it is imperative that:

- ***EBM/ICM efforts be scaled up and collective investments significantly increased at the national and regional levels,*** supported by sufficient and sustained financing and by capacity development that enables a transition toward the blue economy; and
- ***EBM/ICM principles and approaches must be applied, on an urgent basis, to the last global commons, the 64% of the ocean that lies beyond national jurisdiction,*** to address multiple-use conflicts, manage new uses, and protect vulnerable ecosystems and marine biodiversity.

Regarding ***protection of the marine environment from land-based sources of pollution (GPA),*** we know that some 80% of marine pollution stems from land-based activities. Globally, sewage continues to be the most significant contaminant by volume, but wastewater and nutrient runoff from agriculture also largely impact marine ecosystems and resources. Together, excessive nutrients from sewage outfalls and agricultural runoff have contributed to a rise in the number of dead zones (hypoxic or anoxic areas) in the marine environment from 149 in 2003 to over 200 in 2006, resulting in the collapse of some ecosystems (Nellemann, Hain and Alder 2008). Further, plastics and other debris entering the ocean have recently been recognized as an issue of great concern, causing a wide range of impacts to ocean resources, such as lethal and sub-lethal effects on biodiversity, entanglement, chemical contamination, and the alteration of community structures.

Good progress has been reported regarding the control of three categories of land-based pollutants, namely persistent organic pollutants, radioactive substances, and hydrocarbons; there were mixed results regarding the control of heavy metals and sediment transport, and worsening conditions have been reported for sewage, nutrients, marine litter and the physical alteration and destruction of habitats. Because of the "soft-law" basis of GPA and generally weak implementation, forging and adopting a global legally-binding instrument on land-based marine pollution needs to be considered.

Land-based sources of marine pollution could be more effectively addressed with additional initiatives, including efforts to:

- Manage chemical pollution through a comprehensive convention;
- Adopt global/regional agreements on heavy metals;
- Strengthen coordinated efforts to address sewage, nutrients, marine litter and the physical alteration and destruction of habitats; and
- Adopt a global agreement on greenhouse gas emission controls and reductions.

Achieving ***integrated water resources management (IWRM)*** is a crosscutting issue that affects environmental, social, economic, cultural, and political aspects in every country and region. Freshwater runoff has a major impact on the health of important coastal and ocean ecosystems, ocean productivity, ocean circulation patterns, and hydrological balances. The natural connectivity of rivers and oceans should be considered in coastal and watershed planning, especially in areas where this connectivity is highly sensitive and/or vulnerable (e.g., deltas/estuaries, low-lying coastal wetlands, small islands, glacier fjords, coral reefs). Under this consideration, achieving IWRM is a major task, since most countries have separate management approaches for oceans and freshwater. These separate approaches include differ-

"Appropriate management and conservation of oceans and coastal areas are of equal importance for the three pillars of the sustainable development. It is of the utmost importance to preserve the future of mankind, in particular for Small Island Developing States and for coastal communities."

--H.E. Ambassador D. Juan Pablo de Laiglesia, Permanent Representative of Spain to the United Nations, Workshop on Oceans at Rio+20, New York, September 12, 2011

ent and/or overlapping policies, authorities, national/local priorities, and decision making power, which, in most cases, hinder any attempt at an integrated planning scope. Many countries have developed IWRM and water efficiency plans. However, many countries still have a long way to go in achieving this target, and face considerable challenges in implementation, including ensuring that improved water management through IWRM successfully contributes to the achievement of the Millennium Development Goals, especially eradicating extreme poverty and cutting in half the number of people without access to clean water and basic sanitation. Aspects of this linkage—such as human health and water safety issues, livelihoods of coastal communities, and potential impacts from water-cycle changes and sea-level rise due to climate change impacts—have not been directly addressed within the context of land-based impacts on the marine environment, and thus on coastal communities.

Management of freshwater and marine coastal ecosystems must be closely interlinked since they are part of a common global water system, through efforts to:

- Take coordinated action at all levels (including local, national and international);
- Communicate the importance of integration among decision makers and main stakeholders;
- Promote demonstration projects and implementation of best management practices; and
- Prioritize increased funding and capacity building.

Regarding ***fisheries and aquaculture,*** the world is not on track to meet the WSSD goal of maintaining or restoring depleted fish stocks by 2015. Despite efforts to establish national legal and regulatory frameworks, and reduce fishing capacity in some areas, among other efforts, marine fish stocks are continuing to be depleted and face growing pressures. The proportion of marine fish stocks that are overexploited, depleted, or recovering from depletion increased from 24% in 2004 to 32% in 2008. The proportion of fully exploited marine fish stocks increased from 52% in 2004 to 53% in 2008. Taking these values together, one can conclude that the proportion of marine fish stocks that cannot withstand further fishing pressure increased from 76% in 2004 to 85% in 2008 (FAO 2004; FAO 2010).

Population growth and rising seafood demand is putting increased pressure on dwindling stocks. Unsustainable aquaculture still persists in many areas of the world. These issues are exacerbated by inadequate enforcement and perverse subsidies. When faced with the dilemma of the heavy dependence of rising global populations for food and livelihoods on dwindling resources, it appears that we may be at a cross-road in global fisheries and aquaculture. A central question is whether the further implementation of the complex set of measures that are already in place will make the difference, or are more drastic and innovative solutions needed. Among some of the central recommendations to address these issues is the need to:

- Develop regional partnerships between regional fishery management organizations (RFMOs) and other regional and global bodies; review and modernize, where appropriate, the mandates of RFMOs and implement options for RFMO performance review;
- Phase out subsidies and perverse incentives that enhance fishing effort; and
- Accelerate efforts to enhance ocean use agreements in the EEZs of developing countries, and improve their design and implementation to ensure local benefits, social equity, resource conservation, and public transparency.

Regarding ***marine biodiversity and Marine Protected Areas (MPAs),*** the 2010 target to reduce the rate of marine biodiversity loss has not been achieved and the 2012 goal to establish global representative networks of MPAs will likely not be achieved. Indicators show a continued decline in the overall abundance, diversity and distribution of key marine species and existing MPA networks are not truly representative of marine ecosystems and offer inconsistent protection.

In spite of these negative trends, there are some positive trends that can be identified. There is a growing recognition of the value and importance of conserving marine biodiversity by both the public and policy-makers, evidenced, for example, by growing efforts to establish MPAs. New approaches are being developed to improve understanding of the socioeconomic value of marine ecosystems, and regional initiatives are making valuable progress in facilitating multilateral cooperation to achieve conservation and sustainable use goals. However, negative drivers, such as population growth, climate change, new and emerging uses of the ocean, and the lack of standardized data present notable obstacles to achieving biodiversity goals. Actions to reduce the rate of marine biodiversity loss include:

- Accelerate the creation of representative, resilient and well-managed networks of MPAs in the context of the ecosystem

approach, based on scientific information and/or traditional knowledge, including through national agencies dedicated to the creation and management of MPAs and through culturally-appropriate community-based initiatives;

- Incorporate the ecological and socio-economic value of marine biodiversity and ecosystem services, including through the application of available harmonized economic and non-economic valuation methodologies, into development planning and sectoral management frameworks;
- Address cumulative impacts on the marine environment through the use of environmental impact assessment (EIA) and strategic environmental assessment (SEA); and
- Support outreach and education programs to improve public awareness and encourage people to reflect on sustainable modes of living and to take concrete actions that promote the conservation of biodiversity and the maintenance of related ecosystem services.

2) ***Addressing the special problems of SIDS and oceans***

Despite the fact that SIDS typically have large ocean areas rich in resources (fisheries, oil and gas, minerals, renewable energy), many island States are often unable to benefit from the resources within their EEZs as a result of lack of funding support, externally-based exploitation, and, in some cases, insufficient technical and management capacity. Climate change further threatens the very survival and economic and social well-being of SIDS, bringing the drastic possibility, in some cases, of loss of country and widespread population displacement. At the same time, due to their small size, SIDS could provide effective proving grounds for pilot initiatives in the transition towards a "blue" green economy, setting the way for other nations to follow. Among other initiatives, there is a need to:

- Secure significant investments to fund adaptation costs and enhance ocean and coastal management, which are essential to build the capacity of SIDS to manage their ocean and coastal resources and to adapt to climate change;
- Provide international follow-up to the Mauritius Strategy;
- Enhance EEZ and high seas marine resources management, including marine biodiversity, for SIDS;
- Strengthen capacity development in SIDS; and
- Secure UN and international support of SIDS.

3) ***Enhancing UN action on oceans*** (coordination of UN activities)

We are now in a new era in which climate change effects and other impacts ineradicably pose a situation of higher risk and of possible tipping points. Prominent opportunities for disaster are posed by changes to oceans, effects on coastal communities, and widespread displacement of coastal communities. At the same time, as we chart the way to the new low-carbon economy and society, great opportunities for ambitious innovation are also prominent on the horizon. At this key juncture in time, we need enhanced and decisive United Nations mechanisms for dealing with the new level of risk and to realize the opportunities that lie ahead. We cannot count solely on the incremental actions of a myriad of specialized agencies, each with different missions and governing bodies. Just as many countries have done at the

national level, we must embrace the vision of the whole, and institute integrated oceans governance at the United Nations, including through actions to:

- Elevate oceans to the highest levels of the UN system to enable a cross-cutting approach and appropriate and timely response to major threats and opportunities—for oceans, focused attention at the highest political levels (i.e., the UN Secretary-General) is needed;
- Establish a UN Secretary-General or other high-level oversight mechanism on Oceans; and
- Develop a UN Secretary-General "Ocean Budget" report that would adress financing needs for oceans and coasts and provide an assessment of previous and current expenditures in these areas.

4)***Establishing consistent frameworks for measuring conditions and results*** (Regular Process of Global Marine Assessment, Addressing critical uncertainties; Measuring Millennium Development Goals)

Coordinated Scientific Research and Systematic Observation of the Marine Environment Observations should underpin all ocean science and management decisions. The development of robust, simple, and globally applicable indicators of health of marine ecosystems and coastal communities is a priority— multi-sectoral

and multi-dimensional approaches to the effective protection of the marine environment and the sustainable use of its resources are needed. The goal of establishing the Regular Process of Global Marine Assessment, which was supposed to have been completed in 2004, was completed in 2010. The first cycle of the Regular Process will focus on establishing a baseline with subsequent cycles focusing on evaluating trends. By the time that the first cycle of the Regular Process produces a report, 10 years will have elapsed since the 2004 deadline (and 12 years since WSSD). In the meantime, because ocean ecosystems continue to deteriorate with negative impacts to coastal populations, it is imperative that other assessments or other forms of reporting on the state of the marine environment be used to inform decision-making in a more timely manner. The following are key considerations to ensure a successful Regular Process:

- Provide additional funding resources to fully support the carrying out of the Regular Process;
- Agree on the issue areas to be addressed, accept that some cannot be investigated in detail in the first cycle, and provide for capacity development;
- Involve and capitalize on the resources of other key actors in the ocean community, especially the NGOs and the business sector;
- Ensure transparency of the Regular Process to all its audiences;
- Fully engage governments in the conduct of the Regular Process effectively utilizing the wealth of knowledge and expertise in marine research in various regions, including traditional knowledge; and
- Provide for cooperation between the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES) and the Regular Process.

In addressing the ***critical uncertainties for the management of the marine environment and climate change,*** some progress has been achieved, most prominently, through the establishment of the Global Ocean Observing System, which is at a 63% level of implementation. However, knowledge is far from complete, and new unexpected challenges and threats have emerged since the Earth Summit. Better sampling systems, more complete monitoring networks, a deeper knowledge of some ecosystem processes, are all needed.

Recommendations to address these issues include:

- Increase institutional capacity and funding for scientific monitoring and ensure adequate coverage of sampling sites;
- Support countries (transfer of technology, capacity building) to enable them to respond and deliver good scientific data to the reporting processes coordinated by UN agencies and organizations: State of the World Fisheries, IPCC, Regular Process for Marine Assessment and IPBES;
- Promote and support research that explores the impacts of climate change and ocean acidification on marine ecosystems;
- Support research on marine biodiversity and ecosystem functioning to create solid foundations for an ecosystem-based management;
- Promote and support monitoring networks at different geographic scales through a variety of habitats and climatic regions; and
- Enable new research on the emerging issues that threaten the sustainability of oceans, coastal areas and ecosystems.

In terms of achieving Millennium Development Goals in the context of oceans and coasts, as we have noted earlier in this Summary, there is no regular collection and assessment of information on the social and economic well-being of coastal communities, making it very difficult to ascertain progress on Millennium Development Identification of and agreement on the appropriate process and outcome indicators that could be used for this purpose are sorely needed in the next phase.

5) ***Capacity development***

Capacity development on ecosystem-based integrated coastal and ocean management is essential to achieve sustainable development of oceans and coasts and the development of suitable responses to address climate change, preserve biodiversity and resources, provide for sustainable livelihoods from oceans and coasts, as well as respond to new and emerging challenges. However, the ambitious agenda on capacity development laid out by the UNCED and WSSD processes has not yet been realized. The total level of funds expended on capacity development has been very small, and there is little collaboration and coordination of efforts among the wide array of actors—educational institutions, UN agencies, multilateral and bilateral donors, and NGOs, that assist in capacity development.

Capacity development remains an issue of central importance to developing states and SIDS. With the threats of climate change, the importance of capacity development of country leaders, current and future professionals in the field, local communities, and the public, becomes even more important and urgent. Likewise, the strengthening of national institutions

dealing with oceans and coasts to respond to the challenges of climate change adaptation and mitigation, represents an essential imperative.

There needs to be greater collaboration and coordination among countries, donors, UN agencies, providers of capacity training and education, others, to provide an accurate assessment of needed financial investments, and to develop a strategic approach to capacity development at the global level and in various regions.

A strategic approach would encompass training in both the overall vision related to oceans/climate/biodiversity (the integrated approach) and training in specific sectors. Different levels would also need to be addressed:

- Enhance the leadership capacity of national decision makers charged with managing oceans and coasts and of parliamentarians in developing and enacting ocean and coastal legislation.
- Enhance the capacity of professionals in the field;
- Strengthen or create university programs to educate the next generation of leaders;
- Strengthen marine science laboratories in marine science observations, monitoring, and applications;
- Enhance the capacity of local decision makers;
- Educate and empower the general public for ocean stewardship;
- Secure long-term financial support from a wide range of public and private donors;
- Develop a clearinghouse of information on capacity development activities, courses, training materials, etc.;
- Develop a regional approach to fostering a national enabling environment for integrated ocean and coastal governance, including through regional centers of excellence;
- Strengthen inter-agency coordination and collaboration among organizations involved in capacity development in ocean and coastal governance, including sharing of training materials and curricula, and lessons learned in capacity development;
- Provide for organizational development of organizations involved in ocean and coastal governance, including elaboration of management structures, processes and procedures; and
- Carry out periodic assessment and tracking of the overall efforts and expenditures in capacity development; aggregate impacts; the extent to which current and emerging needs are being met; and efficiency, effectiveness, and competitiveness factors.

Moving Forward to Rio+20 With A Sense of Urgency

We now live in a changed context, facing unprecedented challenges to planetary survival and possible tipping points. The ecological and economic imperatives are that we must move toward a low-carbon green "blue" economy but we don't yet know what this means precisely and how we do it.

What must we do?

At ***national and local levels,*** we must bolster our collective capacity for addressing the intertwined issues of oceans, climate, and biodiversity in an effective and decisive manner. In doing so, we must build on the experiences and partial successes we

have had since the Earth Summit and the Johannesburg summit. This means:

-- We must provide adequate financing to support the capacity development and public education that is so much needed for integrated oceans governance and associated climate change and biodiversity issues.

-- We must provide sufficient financing for developing countries and SIDS to cope with the effects of climate change. Current financing estimates for coastal adaptation are woefully inadequate and need to be revised. A minimum of half of the adaptation funds should be devoted to coastal and island communities, home to one half of the world's population.

-- We must address and overcome the poverty conditions that continue in many coastal and island areas around the world. We must find better means by which coastal and island nations can better benefit from the ocean resources found under their jurisdiction and ensure local benefits, social equity, resource conservation, and public transparency.

On the subject of ***international governance for sustainable development,*** we should be careful not to address this subject solely in an incremental way with minor tinkering of the existing system.

As we have stressed in this Summary, climate change effects ineradicably pose a situation of higher risk--changes to oceans, effects on coastal communities, widespread displacement of coastal communities, all pose prominent opportunities for disaster. We are in a struggle for survival. At the same time, as we develop a vision and a roadmap to the new low-carbon economy and society, we have great opportunities for transformative change on the horizon.

-- We need enhanced and decisive United Nations mechanisms for dealing with the new level of risk and to realize the opportunities that lie ahead. We must embrace the vision of the whole, and institute integrated oceans governance at the United Nations.

-- We must also carefully consider what we need to do to enhance the international governance system. Some major examples include:

Marine areas beyond national jurisdiction (ABNJ)

We must move toward ecosystem-based management of areas beyond national jurisdiction. We must consider the designation of an international entity(ies)/ mechanisms to play a stewardship role in this area, our last global commons, and to carry out needed actions such as using Environmental Impact Assessment and designation of Marine Protected Areas.

Coherence among ocean negotiations

We must link the actions of the major global negotiating fora related to oceans (the Law of the Sea processes, the UN Framework Convention on Climate Change, the Convention on Biological Diversity, etc.) to achieve coherent and decisive outcomes for ocean policy.

Bring the Rio spirit to the Law of the Sea

We must enhance transparency and civil society participation in the Law of the Sea and ocean affairs processes, to ensure greater accountability and effectiveness.

New uses

We must establish frameworks for new and emerging ocean uses, as needed. Prime candidates here include regulation of geo-engineering approaches (such as iron fertilization, carbon capture and storage), and control of marine debris.

Oceans and the climate regime

Oceans must become a prominent aspect of the UNFCCC outcomes, given the central role of oceans in the climate system and the profound climate change impacts that coastal and island communities will face.

Provide science support

Support the implementation of the Regular Process for Global Reporting and Assessment of the State of Oceans, and the Intergovernmental Platform on Biodiversity and Ecosystem Services, and support linkages among these initiatives.

As we join together for Rio+20, we must conduct our work with a great sense of urgency. A changing climate and continuing loss of biodiversity, represent for land, water, and oceans a powerfully negative combination that threatens our human well-being and planetary survival. The need to create and act upon a new vision of a low-carbon economy and a new "blue society" where people act as stewards of our oceans and coasts, is a compelling imperative. The time to act is now, not tomorrow.

Report Cards on the UNCED/WSSD Commitments on Oceans, Coasts, and Island States

Ecosystem-Based Integrated Ocean and Coastal Management (EBM/ICM)

Protection of the Marine Environment from Land-Based Activities

Integrated Water Resources Management (IWRM)

Biodiversity and Marine Protected Areas

Small Island Developing States

Sustainable Fisheries and Aquaculture

Addressing Critical Uncertainties for the Management of the Marine Environment and Climate Change

Coordination of UN Activities on Oceans

A Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects

Capacity Development

Report Card: Ecosystem-Based Integrated Ocean and Coastal Management (EBM/ICM)

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓					✓			✓	

EXPLANATION:

The genius of Chapter 17 of Agenda 21 was the realization that the oceans can no longer be managed as they have been traditionally, sector-by-sector, use-by-use. Instead, as Agenda 21 put it, approaches that are "integrated in content, and precautionary and anticipatory in ambit" must be adopted. Since 1992, the paradigm of ecosystem-based integrated coastal and ocean management including through the Large Marine Ecosystem Approach,has been widely accepted and put into place in a growing number of countries.

In fact, since 1992, the infrastructure for integrated ecosystem-based governance has been built. Like a house, we have built the foundations and the frame, and now we have to fill it in further, expanding the scope.

Although there is data available on the LME approach, in general, the information in this area is unfortunately more anecdotal than systematic and empirical partly because no UN agency has clear responsibility for monitoring this important cross cutting area.

Nevertheless:

-- Ecosystem-Based Management/Integrated Ocean and Coastal Management (EBM/ICM) are well known, and they are closely interrelated.

-- There have been many new applications of EBM/ICM in the last decade, expanding efforts initially focused on coastal zones to the 200-mile Exclusive Economic Zones (EEZs), and to adjoining regional areas.

-- A major challenge in the next phase is to further enhance the implementation of integrated oceans policy, including its institutional aspects, at both national and regional levels, consider appropriate applications in areas beyond national jurisdiction, and consider how integrated governance could, as well, be applied to the United Nations system to achieve greater effectiveness and coherence.

-- In meeting the governance challenge, the LME approach has developed LME Commissions for the recovery, assessment, management and sustainability of LME goods and services, e.g. the Benguela Current Commission, the Interim Guinea Current LME Commission, and the planned YSLME Commission.

MAJOR OBSTACLES:

General Obstacles include:

- Insufficient data and information on marine ecosystem structure, function, and processes as well as lack of national capacity to develop a more comprehensive and technical EBM and ICM.
- Institutional and sectoral resistance and inertia and lack of appropriate decision frameworks to manage the complexity, uncertainty, and trade-offs inherent in EBM/ICM; sectoral institutions still dominate in national governments and in the UN system.
- The economic and social values of coastal areas and oceans are often not sufficiently documented and disseminated. The result of this is often a lack of political will at the national level as the benefits that would accrue to marine industries need to be demonstrated
- Limited funding for ecosystem science and management institutions is often the greatest challenge and appears to be a universal issue, particularly in light of the existing world economic situation.
- Lack of widespread adoption of integrated ecosystem assessments as a framework for implementing EBM/ICM. It is widely recognized that an integrated approach to the governance, ecosystem science and decision making is required to undertake complex management requirements of EBM/ICM.

At the National level, institutional inertia and competing bureaucratic competences are often the key obstacles as well as lack of resources within developing countries in particular. Support from the multilateral development agencies has been a key driver in many developing countries.

At the Regional level, there are also problems relating to allocation of political and legal competence to relevant institutions. Among the Regional Seas organisations, ICM/EBM has been slow to develop, although progress is being made.

At the international level, current controversies among the governments over appropriate responses to challenges to ABNJ are also an obstacle to the development of a comprehensive global response."

SOME BRIGHT SPOTS:

- Over 100 countries have established ICM programs (some of these need to be scaled up to encompass a nation's entire coastal zone)
- About 40 countries are developing or are implementing integrated national ocean policies covering their 200-mile EEZs; prominent examples include Australia, Brazil, Canada, China, France, India, Jamaica, Japan, Mexico, New Zealand, Norway, the Philippines, Portugal, Russian Federation, UK, US, and Vietnam;
- EBM/ICM has been applied in regional areas as well—especially in: the 20 Large Marine Ecosystem Programmes supported by the Global Environment Facility and implemented by 110 countries around the world, in the 18 Regional Seas Programmes, and in various regional groupings: The European Union, with its pioneering work on the European Integrated Maritime Policy; the East Asian Seas region through the work of PEMSEA (Partnerships in Environmental Management for the Seas of East Asia), the South Pacific Islands region through the Pacific Islands Regional Ocean Policy.

- Powerful lessons have also been learned about the importance of creating and strengthening institutional arrangements for ICM/EBM, involving inter-agency coordination and oversight, preferably from the highest levels of government such as a Prime Minister's office, in making ICM/EBM a reality.

RECOMMENDATIONS:

I. Enhance Integrated, Ecosystem-based Ocean and Coastal Governance at National and Regional Levels

Scale up the practice of integrated oceans governance to all countries and regions around the world. Given the nature of the added challenges that will need to be faced in ocean and coastal areas and in Small Island States as a result of climate change, it is imperative that EBM/ICM efforts be scaled up collective investments significantly increased.

National Level

Scale up national programs to include larger portions of the coastal zone and ocean under national jurisdiction.

Further develop and implement (with funding) integrated coastal and ocean laws, e.g., through Ocean Parliamentarians.

Further strengthen integrated institutions and decision processes for the coast and ocean

Incorporate and apply Marine Spatial Planning, aiming to achieve, in national waters and regional areas, the Convention on Biological Diversity's Aichi target of protecting at least 10 per cent of marine and coastal areas.

Address persistent poverty and inequality in large parts of the coastal areas of the developing world.

Bring mitigation and adaptation to climate change in coastal areas under the framework of existing ICM/EBM institutions. Extensive capacity development of national and local/regional officials will need to take place to develop and apply climate mitigation and adaptation strategies.

Mitigate climate change and sustain coastal resources through protection and restoration of coastal carbon sinks ("Blue Carbon").

Facilitate the development of renewable sources of energy (e.g. offshore wind, wave, and tidal energy).

Promote sustainable ocean and coastal livelihoods, "blue" green job creation, public private partnerships, and local level and community-based management.

Address the issues (legal, humanitarian, economic, ecological) of possible displacement of millions of coastal and island peoples.

Regional Level

Encourage and assist the key role played by the Large Marine Ecosystem Programs (LMEs) and the Regional Seas Programmes in harmonizing actions of governments in transboundary contexts.

Encourage the development and implementation of ICM/EBM protocols in regional seas programmes and their implementation at the national level, following the Mediterranean example.

Encourage application of EBM/ICM approaches by the full range of bodies responsible for management of resources at the regional level, such as Regional Fishery Management Organizations, and other regional resource management arrangements.

Financing

Provide sufficient financing for developing countries and SIDS to cope with the effects of climate change. Current financing estimates for coastal adaptation are woefully inadequate and need to be revised. A minimum of half of the adaptation funds should be devoted to coastal and island communities, home to ½ of the world population.

Provide adequate financing to support the capacity development and public education that is so much needed for integrated oceans governance and associated climate change and biodiversity issues.

Capacity Development

Build capacity for ocean and coastal management in a transformative era, toward the Blue Economy and Blue Society

Provide long-term capacity development in ICM/EBM including climate change issues and biodiversity issues, incorporating leadership training:

-- Enhance capacity for exercising leadership for high-level national decision makers and Ocean Parliamentarians

-- Strengthen or create university programs to educate the next generation of leaders

-- Enhance the capacity of local decision makers

Share best practices and experience on ICM/EBM, networking and other measures. A network of National Ocean Officials should be promoted.

Certify good practice in ICM/EBM, following the PEMSEA (Partnerships for Environmental Management of East Asian Seas) model.

II. Improve the International Regime for Integrated Ocean Governance

Extend EBM/Principles and Approaches to Marine Areas Beyond National Jurisdiction

Established EBM/ICM principles and approaches must be applied to the 64% of the ocean that lies beyond national jurisdiction (ABNJ) to address multiple use conflicts, manage new uses, and protect vulnerable ecosystems and marine biodiversity. While there has been growing consensus on the use of useful approaches such as Environmental Impact Assessments and establishment of networks of marine protected areas, more attention needs to be focused on institutional aspects—who will implement EIAs, manage marine protected areas, address conflicts, etc.? As in EBM/ICM decision processes under national jurisdiction, authority needs to be vested in existing or new institutions and a process for multiple use decisionmaking needs to be established.

Integrated Oceans Governance at the UN

Elevate oceans to the highest levels of the UN system to enable a cross-cutting approach and appropriate and timely response to major threats and opportunities. For oceans, focused attention at the highest political levels—the UN Secretary-General is needed. Coordination and cross-cutting action at a high political level is essential, not only at the technical staff level.

Report Card: Protection of the Marine Environment from Land-Based Activities

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓				✓				✓	

EXPLANATION:

Extent of Efforts

- The main international initiative to address pollution of the marine environment from land-based activities is the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), a non-binding soft-law approach, which was adopted in 1995 by 108 countries and the European Commission through the Washington Declaration. The Washington Declaration was the outcome of the Conference on the Protection of the Marine Environment from Land-based Sources of Marine Pollution convened by UNEP on 23 October -3 November 1995 in Washington, DC in response to recommendations made in Chapter 17 of Agenda 21 regarding the protection of the marine environment from land-based activities. UNEP serves as the Secretariat of the GPA; the UNEP-GPA Coordination Office promotes and facilitates national implementation and catalyzes action at the international level.
- The GPA seeks to guide States on how to address land-based activities affecting the marine environment (LBS) at the national, regional, and global levels. Guidance on GPA implementation was developed, and includes: 1) a guide for national action, which describes key management approaches and principles, steps and tasks to be followed in national planning processes, and background references and documents; 2) guidance on implementation of the GPA for 2007-2011, which suggests, among other advice, various approaches that governments may wish to follow, including the ecosystem approach and integrated waters resources management; and 3) the 2006 Beijing Declaration, which provides strategic direction for national and local-level action through sustainable financial mechanisms, economic valuation of goods and services provided by oceans, coasts and watersheds, local participation and integrated approaches in particular linking freshwater and coastal management.
- National Programmes of Action for the Protection of the Marine Environment from Land-based Activities (NPAs), which are iterative processes that call for the phased implementation of priorities identified through a cross-sectoral, participatory approach, provide a framework for countries in fulfilling their duty to preserve and protect the marine environment from the major GPA pollution categories. Over 70 countries are implementing the GPA either through national programmes of action or related initiatives, including national development policies and frameworks and integrated coastal management programs. Through a partnership approach forged between the Coordination Office and UNEP regional seas programme secretariats, development of national programmes of action has been advanced in the South-East Pacific, the Wider Caribbean, the Caspian, the South Pacific and South Asia. A partnership with the U.S. NOAA's International Program Office has established a GPA node to support GPA implementation in Central American and Caribbean countries. The GEF has also supported the development of national programmes of action through various projects in the Western Indian Ocean and in the Guinea Current LME.
- Within the framework the UNEP Regional Seas Programme, the following are examples of regional activities undertaken to implement the GPA:
  - Seven technical workshops of government-designated experts were convened by UNEP, during the period 1996 - 1998, to identify regional priorities and to develop regional programmes of action to address LBS.
  - Seven regions have developed protocols to specifically address LBS (Black Sea, Mediterranean Sea, Red Sea and Gulf of Aden, ROPME Sea Area, South-East Pacific, the Wider Caribbean, and Eastern Africa), of which four have entered into force; two regions have annexes dealing with LBS (Baltic and Northeast Atlantic); and two regions are developing LBS protocols (Caspian Sea and West and Central Africa).
  - A recently established Caribbean Regional Fund for Wastewater Management (CReW) funded by the GEF will pilot revolving financing mechanisms and their related wastewater management reforms in the context of the Wider Caribbean LBS protocol. The GEF Integrating Watershed and Coastal Areas Management in Caribbean SIDS (GEF-IWCAM) Project has recently published a Toolkit for use in amending and/or drafting appropriate legislation in support of the core objectives of the Wider Caribbean LBS Protocol.
  - In other regions: a Northwest Pacific Action Plan guidelines for harmful algal blooms has been released; in the APC countries, especially at the local level, capacity has been built to manage wastewater; and in East Africa there is now increased capacity to manage solid wastes.
- Various efforts to better address nutrient over-enrichment of coastal and marine waters have been initiated: 1) the Global Partnership on Nutrient Management (GPA Coordination Office, Government of the Netherlands, and UNEP); 2) the GEF International Waters focal area has included reduction of nutrients as one of its strategic programme areas for 2007-2010 through LME projects.

- Intergovernmental Review Meetings (IGR) have been conducted at which governments and other stakeholders met to review the status of the implementation of the GPA and decided on action to be taken to strengthen the implementation of the GPA: 1. First Intergovernmental Review Meeting (IGR-1), 26-30 November 2001, Montreal, Canada; 2. Second Intergovernmental Review Meeting (IGR-2), 16-20 October 2006, Beijing, China. The Third Intergovernmental Review Meeting (IGR-3) is scheduled for 23-27 January 2012, Manila, Philippines.
- At IGR-2, governments decided that the period 2007 – 2011 would focus on mainstreaming implementation of the GPA in national development planning and budgetary mechanisms through integration of the GPA across sectors and ministries and also integration into domestic and international aid budgets, development plans, strategies and actions (see Guidelines and Checklist for the Mainstreaming of Marine and Coastal Issues into National Planning and Budgetary Processes); organized a series of regional workshops to promote this approach; and provides support in the development of NPAs focused specifically on promoting mainstreaming.

Extent of Progress

The GPA addresses the following pollutant source categories: sewage, persistent organic pollutants (POPs), radioactive substances, heavy metals, oils (hydrocarbons), nutrients, sediment mobilization, litter, and physical alteration and destruction of habitat. Based on a report prepared for the IGR-2, The State of the Marine Environment: Trends and Processes, good progress was reported for three categories of land-based pollutants, namely POPs, radioactive substances and hydrocarbons. There were mixed results regarding the control of heavy metals and sediment transport.

The GPA has not been able to substantially curb four of the most serious sources of marine degradation. Worsening conditions have been reported for sewage, nutrients, marine litter and physical alteration and destruction of habitats. Consequently, the GPA has focused its efforts for 2007-2011 on those pollutant source categories.

Timing

Although there has been considerable effort expended at all levels to advance implementation of the GPA and the Montreal Declaration, the goal of achieving substantial progress in protecting the marine environment, particularly from municipal wastewater, the physical alteration and destruction of habitats, and nutrients by 2006, has not been achieved.

MAJOR OBSTACLES

- Challenges constraining effective protection of the marine environment from land-based pollution and activities include: lack of public education and awareness, limited individual and political will to address the situation adequately, societal factors such as poverty and over-consumption, limited financial and human resources, fragmented legal and institutional arrangements, and lack of effective compliance and enforcement.
- Key stumbling blocks to GPA implementation at national and international levels include: limited national participation and implementation, limited national reporting, limited coverage of pollutant source categories, limited financing and human resources, lack of political priority and will to effectively address land-based sources of pollution, and the inherent limits of a non-legally binding approach and of international environmental governance, e.g., limited development and ratification of LBS protocols.

SOME BRIGHT SPOTS

- Good progress was reported for three categories of marine pollutants: POPs, radioactive substances and hydrocarbons

o The overall situation has improved considerably since international controls on production and use of a small number of POPs were put in place over 20 years ago. Atmospheric concentrations of controlled substances have decreased in remote areas of the northern hemisphere. The situation in the Arctic is expected to improve now that regulation is in place. The Global Programme of Action on International Chemicals Management, adopted during the UNEP Governing Council (GCSS/GMEF IX 2006) may contribute to limiting chemical releases.

o The situation concerning radioactive substances in the marine environment is stable and controls on routine discharges are generally stringent.

o The general situation concerning anthropogenic inputs of oil into the marine environment has improved significantly since 1985. The greatest success has been achieved in curbing inputs from marine transportation of oil, the associated discharge from tankers and oil spills. Improvements in technology (design and operation of tankers) and legislation and regulation, particularly at the international level, are the main factors in improvement.

RECOMMENDATIONS

- The ratification of LBS-related protocols and their implementation should be encouraged since ratification provides to donors an indication of political commitment at the regional level.
- Although seven regions have developed LBS protocols and two more are under development, the soft-law basis of GPA and the resulting weak implementation suggest that forging and adopting a global legally-binding instrument on land-based marine pollution needs to be considered.
- Land-based sources of marine pollution could be more effectively addressed with additional initiatives, including: managing chemical pollution through a comprehensive convention; adopting global/regional agreements on heavy metals; and adopting a global agreement on greenhouse gas emission controls and reductions.
- The recommendations emanating from IGR-2 for the further implementation of the GPA at the global, regional and national levels are still relevant at this time, including:

o Continue the development and implementation of NPAs as a tool for the sustainable management of oceans, coasts and islands and their associated watersheds;

o Prioritize mainstreaming the GPA into national development planning and budgets;

o Promote economic valuation of the goods and services that coasts and oceans provide in order to mobilize action at the global, regional and national level;

o Develop innovative financing mechanisms to further promote the implementation of the GPA

o Establish linkages between freshwater and coastal management and develop local level partnerships including with the private sector to assist in the further implementation of the GPA.

- Based on regional and national experiences in GPA implementation, there is a need to:

o Take a more integrated approach to pollution prevention activities through more effective engagement of industry and private sector;

o Link pollution prevention projects with biodiversity protection as part of a broader ecosystem management approach;

o Exert greater effort to changing behavior, attitudes and practices through targeted awareness efforts since pollution is for the most part preventable; and

o Encourage dealing with LBS through implementation of pilot or demo projects in Hot Spot Areas – areas either at high risk from pollution; highly polluted; or important from a socio-economic standpoint – which are often defined within the framework of NPAs.

Report Card: Integrated Water Resources Management (IWRM)

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓				✓				✓	

EXPLANATION

Extent of Efforts

A 2008 UN-Water *Status Report on Integrated Water Resources Management and Water Efficiency Plans,* which was based on a survey covering 104 countries of which 77 are developing or countries in transition and 27 are developed, provided information on the progress achieved on meeting the 2002 WSSD target to "Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries, through actions at all levels." This report card is mainly based on that report.

Developed countries had advanced on almost all major issues although there was still much room for improvement.

- Of the 27 countries that responded to the UN-Water Survey, only 6 claim to have fully implemented national IWRM plans; 10 of those countries claim to have plans in place and partially implemented.
- The report indicates that developed countries need to improve on public awareness campaigns and on gender mainstreaming.

For developing countries, there was recent improvement in the IWRM planning process at national level but much more needs to be done to implement the plans.

- Of the 53 countries for which comparison was made between the Global Water Partnership (GWP) in 2006 and UN-Water in 2007 conducted approximately 18 months apart), the percentage of countries having plans completed or under implementation has risen from 21% to 38%, with the Americas showing the most improvement - from 7% to 43%; similar changes for Africa were from 25% to 38% and for Asia from 27% to 33%. This, however, may be attributed to differences in the questionnaires.
- Africa lags behind Asia and the Americas on most issues, but is more advanced on stakeholder participation and on subsidies and microcredit programs.
- Asia is more advanced on institutional reform but lags behind in institutional coordination.
- SIDS countries in the Pacific and Caribbean have taken a more holistic approach in developing IWRM plans by including coastal management and sanitation issues with support from GEF projects.

The 2008 UNCSD meeting called on UN-Water to develop a status report, which the Task Force is currently preparing for presentation at Rio+20 Conference. The status report will focus on implementation.

In the Caribbean, there was an effort to link water efficiency plans to water safety plans facilitated by the Pan American Health Organization and the World Health Organization.

Regarding water efficiency plans, the report indicated that much more effort needs to be made to explicitly incorporate water efficiency measures within the framework of IWRM.

Much effort was made in the development of a set of SMART (specific, measurable, attainable, relevant, realistic and timely) indicators but more work is required. A UN-Water and GWP initiative, *Roadmapping for Advancing Integrated Water Resources Management Processes,* aims to help countries prepare roadmaps, which identify specific milestones to be taken towards better water management within a timeframe. At the regional and global levels, the roadmaps could serve as benchmark for monitoring progress in improving water resources management. It is expected that better assessment of the needs to advance the implementation of IWRM can be achieved through the use of indicators and monitoring.

Extent of Progress

Many countries have developed integrated water resources management and water efficiency plans. However, many countries still have a long way to go in achieving the target, and most countries face considerable challenges in implementation, including ensuring that improved water management through IWRM successfully contribute to the achievement of the MDGs.

Timing

The development of IWRM and water efficiency plans, which should have been completed by 2005, has not been fully attained although there has been substantial progress.

MAJOR OBSTACLES

- Problems encountered by developing countries in both planning and implementation of IWRM approaches include: lack of political will to seriously engage in water policy change, financing and national resource allocation for water-related development, failure to mainstream IWRM plans into national development plans, lack of awareness of water issues, weaknesses related to human and institutional capacity, and discontinued support programs.

SOME BRIGHT SPOTS

- Developed countries have advanced on nearly all the major issues.
- Developing countries have made strides in the IWRM planning process on the national level, although implementation remains an issue.
- There is greater attention being paid to water through efforts at addressing land degradation under the UNCCD as well as efforts addressing climate change and variability.
- There are many case studies that illustrate the tangible benefits of implementing IWRM plans at the national and international levels. Examples at the community and provincial levels were noted for their demonstration of many societal gains that can be made through such plans.

RECOMMENDATIONS

- The 2008 UN-Water report made recommendation emphasizing the following areas:
  - o Countries, particularly those that are lagging behind, need to prioritize the development of IWRM and water efficiency measures, with the help of supporting agencies;
  - o Countries need to prioritize the implementation of policies and plans once they have been developed;
  - o Countries should establish roadmaps and financing strategies for the implementation of their plans with External Support Agencies (including the UN, donors and NGOs) providing support to countries, based on demand;
  - o Experiences in implementing IWRM should be evaluated, monitored and shared through global coordination mechanisms. This will require more work on indicators and follow-up processes that do not add an undue reporting burden on countries.
  - o The UN World Water Assessment Programme and its associated World Water Development Reports should continue to provide an up-to-date global overview of progress on implementing the IWRM approach.

Report Card: Biodiversity and Marine Protected Areas

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓				✓					✓

EXPLANATION:

When assessing progress made in the reduction in the rate of marine biodiversity loss and the establishment of representative networks of MPAs, the immediate observation is that the world's governments failed to achieve the 2010 biodiversity target and will likely not achieve the 2012 MPA target. The Marine Living Planet Index, which tracks population trends of representative marine species, shows a continued decline overall in the abundance, diversity and distribution of marine species and existing MPA networks are not truly representative of marine ecosystems and offer inconsistent protection. While this is a failure of the global community, the time frame to achieve the 2010 and 2012 targets may have been too short, given the many powerful drivers of biodiversity loss and complex factors underlying processes to create such MPA networks. And, in fact, the failure to achieve the targets may have served to renew political attention on the importance of this issue.

In spite of the inability to achieve these targets, there are a number of important developments and positive trends that paint a hopeful picture for the future. There is a growing recognition of the value and importance of conserving marine biodiversity by both the public and policymakers, evidenced perhaps by the number of initiatives in recent years on MPAs. This growing understanding and appreciation is greatly facilitated by new approaches and methodologies to improve our understanding of the socio-economic value of marine ecosystems, including the ability to quantify this value in economic terms. There are notable developments at the national level to establish MPA networks and to begin to mainstream biodiversity considerations into other areas. Regional frameworks and initiatives, including through the Regional Seas Programme and the Large Marine Ecosystem (LME) programs, are making valuable progress in facilitating multilateral cooperation through a broader ecosystem-based approach to ocean governance. Developments at the global level, including through the CBD (e.g. 2010 Aichi Targets, Nagoya Protocol on Access and Benefit-Sharing) and the global negotiations on marine biodiversity beyond national jurisdiction, are laying the groundwork for progress in the next phase.

At the same time, when faced with powerful drivers of biodiversity loss compromising the critical services provided by marine ecosystems to billions of people around the world, it is clear than much more effort is needed. In addition to more concerted efforts to establish MPA networks, efforts should be taken to improve the effectiveness of MPAs, ensuring that protected areas have tangible on-the-ground impacts, and that area-based approaches are embedded within a broader framework of ecosystem-based management, complemented by other tools and measures. While political attention is improving, the significant efforts needed to reverse the negative trends of biodiversity loss require much more concerted engagement, outlining the need for a new global political mandate to focus future efforts to conserve and sustainably use marine biodiversity.

MAJOR OBSTACLES:

-- Population growth, leading to growing demands on the resources and services provided by marine ecosystems and increasing impacts from unsustainable development

-- Climate change, leading to potentially severe impacts on ecosystem dynamics, species distribution, and the biology and physiology of marine species

-- New and emerging uses of the oceans carrying a number of unknown and potentially adverse impacts on marine biodiversity and ecosystems

-- General lack of standardized data on the status of marine ecosystems and on measures taken at the national level to ensure the protection and sustainable use of marine biodiversity

-- Relative lack of understanding of biodiversity and ecosystem services by policy-makers and the general public, although there are notable efforts and approaches beginning to address this issue

SOME BRIGHT SPOTS:

While the picture remains grim, there are also some bright spots and notable examples of progress:

-- Net loss of mangroves, while still very high, may have slowed down, possibly due to massive replanting campaigns following the 2004 tsunami.

-- Coral reefs in the Indian Ocean and Western Pacific have shown significant recovery since the devastating 1998 bleaching events.

-- Almost all coastal countries now have one or more MPA and many have established networks of MPAs.

-- Establishment of large MPAs, such as the Phoenix Islands Protected Area in Kiribati and the Papahānaumokuākea Marine National Monument in Hawaii, have greatly increased protected area coverage.

-- Regional progress through Regional Seas Programmes and Large Marine Ecosystems (LME), including the efforts of the OSPAR Commission to develop a regional MPA network, and creation of regional initiatives, such as the Micronesia Challenge, the Coral Triangle Initiative, and the Pacific Oceanscape initiative, demonstrate a positive trend in regional approaches.

-- Increasing use of marine spatial planning and large-scale bioregional classification, as well as the integration of MPA networks and area-based approaches as part of comprehensive management regimes in a broader ecosystem approach context.

-- Development and refinement of methodologies for improving the understanding of the value, including the economic value, of biodiversity and ecosystem services.

RECOMMENDATIONS:

Establishing Marine Protected Areas

-- Accelerate the creation of representative, resilient and well-managed networks of MPAs in the context of the ecosystem approach, based on scientific information and/or traditional knowledge, including through national agencies dedicated to the creation and management of MPAs and through culturally-appropriate community-based initiatives.

-- Promote the application of customary law and other complementary approaches to formal law for the sustainable management of marine biodiversity in the context of MPA networks.

-- Further develop the application of innovative tools to planning such as marine spatial planning.

-- Promote and undertake the establishment of MPAs in the broader context of integrated marine and coastal area management (IMCAM) at various levels.

Mainstreaming Biodiversity Concerns into Economic and Development Frameworks

-- At the sub-regional, regional and global levels: Ensure that marine biodiversity is reflected in the outline of the first assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), with specific reference to the Platform's work on economic and non-economic valuation of marine biodiversity and ecosystem services.

-- At the national level: Incorporate the ecological and socio-economic value of marine biodiversity and ecosystem services, including through the application of available harmonized economic and non-economic valuation methodologies, into development planning and sectoral management frameworks.

-- Address cumulative impacts of human activities on the marine environment through the application of environmental impact assessment (EIA) and strategic environmental assessment (SEA) in the context of socio-economic scenarios in support of National Biodiversity Strategies and Action Plans.

-- Develop and implement innovative solutions to biodiversity loss that (i) address the expanding human footprint and demand for natural resources; (ii) provide for sustainable use, stewardship and address, through locally-driven solutions, the linkages between restoration of biodiversity in populated and urban areas; and (iii) environmental conservation, poverty alleviation and community resilience.

Climate Change and Marine Biodiversity

-- Develop and implement priority actions within and among sectors that enhance the resilience of marine biodiversity to the impacts of climate change, and maintain and restore the capacity of oceans and coasts to store carbon, including by using MPAs to protect key components of the carbon cycle.

Marine Biodiversity Beyond National Jurisdiction

-- Facilitate the creation of a sustainable governance framework for marine areas beyond the limits of national jurisdiction that will comprehensively address conservation and sustainable use of biodiversity and resources, as well as equity concerns related to marine genetic resources, including through application of modern conservation principles and tools such as the ecosystem approach, precautionary approach, MPAs and EIA/SEA.

Improving Global Political Engagement to Achieve Biodiversity and MPA Goals

-- Provide further elaboration for the provisions of the UN system-wide Strategic Plan for Biodiversity (2011-2020) by tailoring its relevant Goals and Aichi Biodiversity Targets to current pressures and emerging threats related to marine biodiversity and by identifying and selecting appropriate responses among existing tools and practices available.

Public Outreach and Education

-- Take full stock of the United Nations Decade on Biodiversity (2011-2020) to develop and support outreach and education programs to improve public awareness of the importance of, and major threats to, marine biodiversity and ecosystems; and to raise awareness to redirect funding for education towards programs aimed at encouraging society to reflect on sustainable modes of living and to take concrete actions that promote the conservation of biodiversity and the maintenance of related ecosystem services.

Report Card: Small Island Developing States

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓				✓				✓	

EXPLANATION:

The natural capital of SIDS is their ocean. After experiencing a slow start in implementing the ocean and coastal prescriptions of the UNCED and the WSSD, in more recent years, SIDS have been investing in the protection of their natural capital. This has been achieved through the designation of marine protected areas, in some cases covering very large areas of the ocean, and through the adoption and implementation of integrated ecosystem-based approaches to ocean governance at both the national and regional levels. Climate change, however, threatens the very survival and economic and social well-being of SIDS, bringing the drastic possibility, in some cases, of loss of country and widespread population displacement. At the same time, due to their small size, SIDS could provide effective proving grounds for pilot initiatives in the transition towards a "blue" green economy, setting the way for other nations to follow.

As called for in UNCED, the Barbados Global Conference on Sustainable Development of Small Island Developing States was held in 1994, crafting the Barbados Programme of Action, and was followed up, with a mandate from the WSSD, by the 2005 Mauritius International Meeting, crafting the Mauritius International Strategy. Through these global processes, as well as through the climate negotiations of the UN Framework Convention on Climate Change, a much greater international understanding of the special circumstances and issues affecting SIDS has developed. In addition, the international attention to the special needs of SIDS has provided a valuable platform for the cohesive action among the 44 small island developing States comprising the Alliance of Small Island States. Implementation of both the BPoA and the Mauritius Strategy, however, has lagged. Official Development Assistance for SIDS fell by 50% in the period 1994-2004, but has increased since that time.

As a result of their relative vulnerability, SIDS have played the role of a global conscience in articulating the impacts of climate change and calling for reducing greenhouse emissions to a level of 350 ppm to ensure the survival of island states and the health of ocean resources on which they depend. But these efforts have not been translated into global agreements on cutting greenhouse gas emissions nor into an appropriate level of financial resources to support the extensive adaptation needs of island states.

MAJOR OBSTACLES:

Despite the fact that SIDS typically have large ocean areas rich in resources (fisheries, oil and gas, minerals, renewable energy), many island States are often unable to benefit from the resources within their EEZs as a result of lack of funding support, externally-based exploitation, and, in some cases, insufficient technical and management capacity.

Surveillance and enforcement within the EEZs of SIDS present significant difficulties due to logistical and financial constraints, as well as the expansive nature of the areas involved. Fisheries enforcement within EEZs is of primary concern and difficulty.

Pressures on the governments of SIDS will escalate as the impacts of climate change manifest on the ground in island nations through increased sea level rise, increased frequency and intensity of storms, and ocean acidification, among other effects. SIDS governments will need extensive international financing for climate adaptation and mitigation efforts, and increased knowledge and capacity to address climate change effects.

There has been insufficient institutional support for systematic follow-up of the Mauritius Strategy. There is an absence of a formalized integration, coordination, and monitoring mechanism to assess implementation of the Mauritius Strategy at national and regional levels.

There is a lack of capacity (human, technical, financial) in some SIDS countries to address the interrelated issues of oceans/coasts, climate, and biodiversity.

SOME BRIGHT SPOTS:

SIDS nations have a high level of ratification of major international conventions, as called for in the BPoA, most prominently, the Framework Convention on Climate Change, the Convention on Biological Diversity, and the Law of the Sea Convention.

While initially slow in adopting the ocean and coastal management prescriptions of UNCED, SIDS have, since 2006, considerably accelerated their national efforts in this area.

SIDS in all regions have mobilized, since 2006, extensive efforts to create large-scale MPAs. For example, Kiribati, with partners, created in 2006 the Phoenix Islands Protected Area (PIPA), which represents the largest protected area in the Pacific Ocean at a size of 408,250 km2.

RECOMMENDATIONS:

Climate, Oceans, and SIDS

- Current adaptation cost estimates for coastal areas and small island States are woefully inadequate, as are the adaptation resources available. In 2007, the UNFCCC estimated the cost of adaptation in coastal zones at about $11 billion/year, using lower sea level rise predictions and not including potential impacts of increased storm intensity. With over half of the world's population living in coastal regions and likely to experience the most pronounced effects of climate change, at least half of the funds made available for adaptation should target coastal and island populations.

-- Provide financial support for the protection of coastal and ocean ecosystems in SIDS to secure the important role of these ecosystems in the global carbon cycle, in addition to the continued provisioning of valuable ecosystem services, products, and livelihoods.

-- Develop measures to address the social, economic, environmental, legal, and humanitarian issues related to the displacement of coastal populations as a result of climate change, identifying, as well, the international law questions that must be addressed regarding this issue.

-- Enhance governance structures at national and local levels, infrastructure, and capacity on climate change adaptation and mitigation, including exchanges of information and access to best practices, and regional centers to coordinate action on common challenges.

International follow-up to the Mauritius Strategy

- Integrate the Mauritius Strategy into the work programs of relevant UN organizations; UN agencies should designate focal points within their agencies to be responsible for SIDS issues and for the implementation of the Mauritius Strategy, and indicators for progress for the strategy should be established. At the national level, SIDS should establish indicators and monitoring of their specific plans of implementation of the Mauritius Strategy.

Enhance EEZ and high seas marine resources management

-- Further develop and implement frameworks for sustainable ocean policy and law at national and regional levels to ensure sustainable management of fisheries resources, responsible shipping traffic and movements, precautionary seabed resources exploitation including oil/gas extraction and mining, networks of representative and resilient protected areas, environmentally sound aquaculture/mariculture development, integrated coastal management, and access and benefit sharing regimes for bioprospecting.

--Enhance the ability of SIDS and the international community to address issues of piracy and maritime security, which severely limit the ability of small island States to depend on their large ocean resources.

-- Enhance ocean use agreements in the EEZs of SIDS countries by improving their design and implementation to ensure benefits to the nation and its public, social equity, resource conservation, and public transparency.

Marine biodiversity

-- Intensify efforts to protect marine biodiversity including the establishment and use of representative and resilient networks of MPAs, consistent with international law and based on the best available science. Efforts to protect marine biodiversity should include priority actions that enhance the resiliency and contributions of marine and coastal ecosystems to climate change mitigation, adaptation and impacts, including ocean acidification.

Capacity development

--Address issues of technology and knowledge transfer enhancing the ability of SIDS to utilize their large ocean resources for marine renewable energy, including through pilot projects.

-- Enhance capacity development on the interrelated issues of ocean and coastal management/climate change/biodiversity, especially: 1) among high-level leaders, 2) building the next generation of leaders through investment in university programs, especially through the SIDS Consortium of Universities, and 3) among leaders and stakeholders in local communities.

UN and International Support of SIDS

The following outcomes of the PrepCom processes identify issues for enhanced attention in international fora:

- -For SIDS, a green economy is a blue economy, so oceans and fishery issues must be given prominence. Rio+20 should provide support for sustainable ocean development and protection of resources. Measures could include actions to reduce fishing overcapacity, to establish MPAs, and to desist from using oceans as a dumping ground.

-- SIDS are dependent on the blue ocean economy, therefore conservation of ocean resources should be a key challenge taken up at UNCSD. With respect to the BPoA and the Mauritius Strategy, countries should fulfill their responsibilities and commitments related to technology transfer and financing for development. A focused and sober assessment should be taken of where our failures lie and how we can best address them. There is an urgent need for baselines and benchmarks for progress. Targets and goals should be focused on key priorities. Improved data flows are needed in order better to monitor sustainable development of SIDS.

-- There is a need for enhanced financial and technical support to accelerate implementation; the importance of ensuring synergy with the MDG targets and maintaining focus on poverty alleviation; a need for a stronger science-policy interface; the value of north-south and south-south cooperation for building capacity and promoting best practice; a need to pay attention to concerns of least developed countries and to the special needs of SIDS; and a need to strengthen partnerships as a mechanism to advance implementation of the sustainable development agenda, through renewed engagement with the private sector and civil society organizations.

Strengthening of AOSIS

-- Promote further evolution, institutionalization, and strengthening of the Alliance of Small Island States, which has championed the cause of SIDS in all relevant intergovernmental fora to ensure the implementation of the Mauritius Strategy and of other international commitments related to SIDS.

Report Card: Sustainable Fisheries and Aquaculture

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓				✓					✓

EXPLANATION:

There have been some positive efforts undertaken to work towards sustainable fisheries and aquaculture at the national, regional, and global levels, including the establishment of legal frameworks, identification

of harmful drivers, UN General Assembly resolutions on sustainable fisheries, and widespread ratification and implementation of the UN Fish Stocks Agreement. Despite these efforts, however, global fish stocks are still being depleted and face notable threats from overfishing and harmful practices, among other drivers, and unsustainable aquaculture still persists in many areas of the world. In fact, the proportion of marine fish stocks that are overexploited, depleted, or recovering from depletion increased from 24% in 2004 to 32% in 2008. The proportion of fully exploited marine fish stocks increased from 52% in 2004 to 53% in 2008. Taking these values together, one can conclude that the proportion of marine fish stocks that cannot withstand further fishing pressure increased from 76% in 2004 to 85% in 2008 (FAO 2004; FAO 2010). This continued decline in fish stocks is primarily due to the fact that this sector faces a large number of powerful and synergistic drivers, including inappropriate behavior that results in overharvesting of fish and environmental degradation in aquaculture operations, population growth and concomitant demand for food products, habitat degradation, and climate change. The most fundamental factors contributing to the slow progress towards meeting fisheries-related goals, however, are overcapacity, lack of incentives-based management and unwillingness of policy makers to take short-term losses for long-term sustainability. While the groundwork for positive change may be in place, in some respects, much more needs to be done to both ensure that measures are effectively implemented and that these harmful drivers are addressed.

With regards to the major goals and commitments, the following progress can be reported

National Legal and Regulatory Framework

-- More than 90% of FAO Member States that responded to a recent survey* have developed and implemented fishery management plans (FMPs), reversing a six-year trend in notable absence of FMPs.

UN Fish Stocks Agreement

-- As of 3 June 2011, 78 nations had ratified the UN Fish Stocks Agreement. Many of these states have taken notable steps to implement the provisions of the Agreement.

IUU Fishing

-- 80% of FAO Member States that responded to a recent survey* have identified IUU fishing as a central obstacle to sustainable fisheries and have taken steps to develop and implement a national plan of action to address IUU fishing (NPOA-IUU). Many states have also developed improved MCS (monitoring, control, and surveillance) capabilities to prevent IUU fishing.

Fishing Capacity

-- Some states have taken steps to implement the International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity), including developing a national plan of action to address fishing capacity (NPOA-Capacity) or incorporating capacity considerations into day-to-day management systems. More than 60% of FAO Member States that responded to a recent survey* have undertaken a preliminary assessment of fishing capacity.

Fishing Subsidies

-- There has been somewhat less progress at the national level in identifying and eliminating perverse subsidies, as this is an inherently complex issue.

Destructive Fishing Practices

-- Many states have developed national legislation prohibiting destructive practices, but enforcement is largely inadequate.

-- Education programs have been implemented to encourage small-scale fishing communities to use environmentally friendly practices.

-- UNGA resolutions aimed at mitigating impacts of bottom-trawl fishing on vulnerable marine ecosystems in the high seas have been adopted.

Sustainable Aquaculture

-- Many FAO Member States have developed legal frameworks for sustainable aquaculture, although governance remains an issue in many areas.

-- Market-driven approach in some areas has led to rapid development, but environmental degradation as well.

MAJOR OBSTACLES:

-- Population growth, leading to increased food demand and overharvesting of wild fish stocks.

-- Lax enforcement of flag and port state responsibilities, leading to non-compliance with sustainable fisheries regulations.

-- Harmful subsidies that contribute to overexploitation and the expansion of fishing capacity and the utilization of unsustainable aquaculture practices.

-- Uncertainty about the effects and implications of climate change on fish stocks and fishing communities.

*69 FAO Member States responded to the 2011 questionnaire, representing 36% of all FAO Members.

-- Incentives to use unsustainable fishing and aquaculture practices, including the low cost of destructive practices.

-- Inconsistencies in RFMO effectiveness, leading to poor regulation of high seas fisheries in some cases.

SOME BRIGHT SPOTS:

There are, however, some encouraging trends that represent positive efforts toward sustainable fisheries and aquaculture.

-- Development and implementation of national strategies and action plans, many of which are supported by legal and regulatory frameworks.

-- Increased ratification and implementation of global instruments, including the UN Fish Stocks Agreement, International Plans of Action (IPOAs), the FAO Code of Conduct for Fisheries, the FAO Compliance Agreement, and the FAO Port State Measures Agreement.

-- Progress toward the establishment of regional fisheries bodies in the South Pacific (SPRFMO) and the Southern Indian Ocean (South Indian Ocean Fisheries Agreement).

-- The adoption of UN General Assembly resolutions (Resolution 59/25, 61/105, and 64/72) aimed at ensuring sustainable exploitation of deep-sea fish stocks and mitigating impacts of fishing on vulnerable marine ecosystems in the high seas.

RECOMMENDATIONS:

Data and Reporting

-- Provide timely assessments of the state of fish stocks and take measures to address underreporting or misreporting of catches.

-- Promote compliance with, and the strengthening of, MCS measures, including increased information-sharing, vessel monitoring systems (VMS) and observer programmes, and increase participation in the International MCS Network.

-- Develop mandatory reporting requirements for bycatch and discards.

-- Assess the adverse impacts on ecosystems caused by various types of fishing gear and techniques.

-- Implement mechanisms to facilitate public disclosure of key fisheries sector information, such as fishing rights and public revenues generated (e.g. licenses and fees collected), as well as vessel/license registries and corresponding catch and effort.

-- Register all fishing vessels in each country in a publicly available register, as a first step to controlling access.

Climate Change

-- Integrate climate change considerations into fisheries and aquaculture strategies at national and regional levels.

-- Support research that explores the impacts of climate change on fisheries, including the development of models for impacts on fish stocks and local fishing communities.

RFMOs

-- Develop regional partnerships between RFMOs and other regional and global bodies, such as Regional Fishery Body Secretariats Network (RSN), Regional Seas Programmes and Large Marine Ecosystems (LMEs), including through joint meetings and coordinated management approaches.

-- Review and modernize, where appropriate, the mandates of RFMOs, undertake RFMO performance review, and implement recommendations of RFMO performance reviews in a transparent manner.

Market-Based and Industry Approaches

-- Phase out subsidies and perverse incentives that enhance fishing effort, and redirect public support toward strengthening fisheries management capacity.

-- Support efforts to implement certification schemes, which would require fisheries products to bear a certificate verifying that the fish was caught legally and through the use of sustainable practices.

-- Involve the fishing industry in the development of market-based measures.

-- Review and improve industry standards for fishing gear and practices to ensure they reflect sustainable approaches.

-- Support technological innovation to minimize adverse environmental and ecological impacts of aquaculture.

Enhance Ocean Use Agreements in the Exclusive Economic Zones (EEZs) of Developing Countries

-- Accelerate efforts to enhance ocean use agreements in the EEZs of developing countries, improving their design and implementation, to ensure local benefits, social equity, resource conservation, and public transparency.

Capacity-Building

-- Undertake capacity-building and technology transfer to improve the capacity of developing states to achieve sustainable fisheries and aquaculture and to effectively participate in RFMOs.

-- Contribute to the Part VII Trust Fund of the UN Fish Stocks Agreement to improve capacity in developing countries.

Address Adverse Environmental/Ecological Impacts

-- States and RFMOs should undertake efforts to identify and adopt management measures for ecologically significant and vulnerable marine areas, including representative networks of marine protected areas, and fishery closures for vulnerable marine ecosystems, especially in areas beyond national jurisdiction.

-- Develop regulatory frameworks that facilitate the internalization of the costs of environmental impacts by aquaculture companies/operators.

Report Card: Addressing Critical Uncertainties for the Management of the Marine Environment and Climate Change

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
		✓				✓				✓

EXPLANATION:

The Earth Summit in Rio de Janeiro recognized that the high degree of uncertainty surrounding the available information on the marine environment severely jeopardizes our ability to effectively evaluate ocean health and forecast environmental change and, therefore, to conserve and manage sustainable use of ocean and coastal areas and marine resources. Considerable (but incomplete) progress has been made towards these targets and goals, particularly in the global scientific community, development of legal and policy frameworks, institutions and cooperation mechanisms. The full implementation of many of these goals and targets will require further efforts by States, intergovernmental organizations and the international community.

The scientific community, working together with the lead international scientific organizations such as ICSU, SCOR, IOC-UNESCO, WMO and UNEP have done an extraordinary effort to adapt scientific priorities to the pressing environmental changes and address the uncertainties for management of the marine environment and climate change. For example, most of the Global Environmental Change (GEC) programs were initiated in the early 1990s (after UNCED) and will be ending shortly after Rio+20 (most of them in 2013). These programs (e.g. IGBP, WCRP, DIVERSITAS, IHDP and ESSP) and projects together with others such as Census of Marine Life (CoML) have provided very valuable results for the management of ecosystems and climate change.

The extent of progress is substantial as we have now better sampling systems, more complete networks of monitoring sites, a deeper knowledge of some ecosystem processes, etc; however, our knowledge is far from being intellectually complete or global in coverage, and new unexpected challenges and threats has emerged since Rio, which require of urgent attention.

Despite notable progress and achievements, we must recognize that we are behind the deadlines and targets. The Global Ocean Observing System (GOOS) is still only at a 63% level of implementation and the approval of the regular process took longer than expected.

MAJOR OBSTACLES:

Actions to address the impacts of human activities on the marine environment, including climate change, present difficulties in applying a multi-sectoral and multi-dimensional approach to the effective protection of the marine environment and the sustainable use of its resources. Other impediments include:

- Conflicting priorities and policies, particularly at a national level.
- Lack of monitoring and coordinated reporting of implementation actions and outcomes at any level;
- Lack of systematic environmental data exchange across nations and the international community;
- Capacity gap between many developed and developing countries (capacity building, technology transfer);
- Limited educational, training and technical capacity and financial resources;
- Ineffective enforcement of obligations at the national level;

Ecosystem based, integrated ocean and coastal management has been supported by many institutions at global, regional and national levels since the 1990s. Concepts have been broadly agreed; although implementation is hampered by lacks on incomplete science (in many regions), institutional capacity (almost at global scale), market implications (global scale), and lack of financing and ineffective political enforcement (almost at global scale).

In addition, a number of emerging issues continue to threaten or slow progress towards the sustainable development of the worlds ocean and coastal areas, such as:

- Nutrient over-enrichment and eutrophication has increased, contributing to pollution, hypoxia and habitat degradation;
- Continuing loss of biodiversity from marine bioinvasions facilitated by ships' hull fouling, ballast water, and other vectors;
- Lack of utilization of renewable energy despite proven technological advances, largely due to lack of proper pricing of fossil fuel energy/carbon;
- Continuing threats to coral reefs, including from ocean acidification, warming, deoxygenation, pollution, habitat loss, and invasive species;
- Marine debris (e.g. plastics) and flow on effects to human health, shipping and biodiversity;

SOME BRIGHT SPOTS:

Good, and universally agreed, science is vital to implementation of agreements and achievement of sustainable development outcomes for ocean and coastal areas. It is noteworthy that the international scientific community has largely addressed the commitments made in Rio, at least in terms of creating the required programs of work and reporting on them.

-- Most of the Global Environmental Change (GEC) programs were initiated in the early 1990's (after Rio) and will have their sunset very soon after Rio+20 (most of them in 2013). The lead international scientific organizations such as ICSU, UNESCO, WMO and UNEP have initiated processes to move forward on Earth System Research for Global Sustainability.

-- The implementation of a global sampling programme such as GOOS, even if the overall level of implementation is 63%, is very promising and allows the scientific community to offer new services in terms of climate and knowledge. This is being accelerated by the development of new information technologies.

-- The implementation of the Ecosystem based management approach is far to be fully understood and implemented but it is encouraging that many countries from different regions in the world have adopted the ICAM and MSP guidelines (IOC-UNESCO) as a standard to follow.

-- Both ecosystem based management and climate research rely on data exchange and availability. The sustaining trend in oceanographic data stored in IODE since 1992 is indicative of the good response of the oceanographic community to the recommendations of UNCED and the WSSD. Also the recent incorporation of OBIS (Ocean Biogeographic Information System) in International Ocean and Data Information Exchange (IODE) is a good signal of the interest of the scientist in preserve and sharing their data.

-- Two new reporting processes were recently approved by the United Nations General Assembly: (i) The UN Regular Process of reviewing the state of the marine environment, including socio-economic aspects, and (ii) the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), which will require data on biodiversity at various geographic scales through a variety of habitats and climatic regions. These, together with the State of the World Fisheries and the IPCC assessment report, will keep the world's ocean and seas under continuous review by integrating existing information from various disciplines, and will help to improve the responses from national governments and the international community to the unprecedented environmental changes now occurring.

RECOMMENDATIONS:

While some progress has been achieved, the development and implementation of integrated ocean management and ecosystem approaches, as well as the understanding of climate change still present challenges - at a national, regional and international level. Recommendations to address these issues are as follows

-- Increase institutional capacity and funding for scientific monitoring and ensure adequate coverage of sampling sites.

-- Support countries (transfer of technology, capacity building) to enable them to respond and deliver good scientific data to the reporting processes coordinated by UN agencies and organizations: State of the World Fisheries, IPCC, Regular Process and IPBES.

-- Promote and support research that explores the impacts of climate change and ocean acidification on marine ecosystems.

-- Promote and support research on marine biodiversity and ecosystem functioning to create solid foundations for an ecosystem based management.

-- Promote and support monitoring networks at different geographic scales through a variety of habitats and climatic regions.

-- Promote new research on the emerging issues threaten the sustainability of ocean, coastal areas and ecosystems.

Report Card: Coordination of UN Activities on Oceans

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
✓				✓				✓		

EXPLANATION:

This WSSD goal was achieved in a timely fashion, in 2005.

The question is to what extent has the effort been *effective, transparent, and regular.*

As is well known, oceans involve prominent economic, environmental, and social issues, typically cross-cutting among many sectoral missions of different agencies/ministries. It is useful to reflect on and draw lesssons from efforts at integrated governance at the national level and to draw possible parallels to the UN context. Interagency coordination efforts in the ocean area at national levels have been made in countries around the world to overcome the fragmentation and conflicts typically encountered in having many sectoral agencies (dealing with one major use or issue) managing interconnected marine ecosystems and human populations. The intent is multipurpose: to provide a common vision, enhance the joint capacity to address difficult issues (such as climate change), enable the making of cross-sectoral and trade-off decisions among different sectors, develop integrated and coordinated solutions to interrelated problems, enable joint action with appropriate funding support and staff follow-through.

Comparative studies of the effectiveness of national-level efforts in interagency coordination on oceans suggest the following effectiveness factors:

1) *location of the interagency effort*—most effective appears to be locating the effort at the highest level of government (e.g. Prime Minister's office) to enable cross-sectoral decisionmaking; alternatively, a major ocean agency can be named the lead for integrated policy but for this alternative to be effective there needs to be sufficient vesting of authority and funding;

2) *involvement of high-level officials* from the sectoral agencies with the authority to make decisions, commit resources, and follow-through on joint actions;

3) *a coordination office and staff* to manage the interagency effort, to carry out activities, to anticipate emerging issues and problems, develop and oversee the implementation of integrated ocean policies, prepare periodic reports on the state of the oceans and accompanying ocean budgets;

4) *involvement of stakeholders and the public* to insure that the full range of perspectives on oceans are appropriately considered in the formation and implementation of national ocean policy.

The situation at the UN level is not dissimilar to the situation at the national level—existing UN agencies related to oceans have largely sectoral mandates, addressing different aspects of sustainable development of the oceans, such as fisheries and aquaculture, marine science, marine navigation and safety, marine pollution control, marine environmental protection and conservation, ecosystem dynamics, meteorology and climate change, global ocean observing systems, data and information management, coastal area management, disaster management, marine radioactivity, seabed, ocean floor and subsoil, and marine and coastal biodiversity.

Considering the efforts made so far under UN-Oceans, the intent of the WSSD mandate was to "establish an effective, transparent and regular inter-agency coordination mechanism on ocean and coastal issues within the UN system.

The mechanism was, in fact, created in 2005 and has been operating on a regular basis, meeting at least once a year, and carrying out work through task forces--the task forces are "time-bound" and some have been disbanded.

Regarding transparency, the UN-Oceans makes its discussions and decisions publicly available through the Internet (although it should be noted that the UN-Oceans website is difficult to find since it is a subset of the UN-Atlas website). Regarding participation of NGOs in UN-Oceans work, this appears to be, from a review of the minutes, very limited.

The first step in every inter-agency collaboration effort is having a regular forum where the agencies come together on a periodic basis and share information on their programs and efforts and discuss common problems. This step has clearly been involved with UN Oceans, since regular meetings now take place..

Generally, UN-Oceans has engaged in limited activity, most prominently in cross-agency task forces with "time-bound" timeframes. Participation in UN-Oceans has generally involved senior technical expert staff from the various agencies, not the heads of the agencies (except for the Intergovernmental Oceanographic Commission of UNESCO). The interagency secretariat functions are performed on a volunteer basis without special staff or funding support.

Concerning the question of effectiveness, it would appear that the UN-Oceans effort has primarily been effective in providing a forum for communication among the agencies. Increased communication and information sharing among the agencies may well set the stage for enhanced joint action in the future.

To enhance the interagency effort so that it can truly perform its function of promoting the coherence of the UN system and integrated management of the ocean at the international level, it would be useful to consider: locating the mechanism at a higher level in the UN system, involving the highest level leaders within each agency, designating staff and budget support for joint activities, involving stakeholders and the public in this work.

MAJOR OBSTACLES:

Structure of the interagency mechanism

An interagency mechanism with no clearly designated lead authority or location at a higher bureaucratic level, will generally produce results mainly in terms of enhanced communications, not joint action and development and implementation.

Funding issues

There is no specific funding for Secretariat activities to ensure the continuing interagency cooperation and oversee joint activities.

There is very limited funding set aside for joint activities within each of the agencies planning and budgeting cycles.

The UN agencies all have different governing bodies/processes on different timelines and with different budgets, making funding for joint activities (outside of the regular budgeting process) difficult to achieve.

SOME BRIGHT SPOTS:

The first step in inter-agency collaboration has been taken—having a regular forum where the agencies come together on a periodic basis and share information on their programs and efforts and discuss common problems. As well, some joint action in the form of the task forces has been taken.

RECOMMENDATIONS:

In 2011, we are now in a new era in which climate change effects pose a situation of higher risk and of possible tipping points. Changes to oceans, effects on coastal communities, widespread displacement of coastal communities, all pose prominent opportunities for disaster. At the same time, as we chart the way to the new low-carbon economy and society, great opportunities for ambitious innovation are also prominent on the horizon.

At this key juncture in time, we need enhanced and decisive United Nations mechanisms for dealing with the new level of risk and to realize the opportunities that lie ahead. We cannot count solely on the incremental actions of a myriad of specialized agencies, each with different missions and governing bodies.

Just as many countries have done at the national level, we must embrace the vision of the whole, and institute integrated oceans governance at the United Nations.

Integrated oceans governance at the UN

Elevate oceans to the highest levels of the UN system to enable a cross-cutting approach and appropriate and timely response to major threats and opportunities. For oceans, focused attention at the highest political levels—the UN Secretary-General is needed. Coordination and cross-cutting action at a high political level is essential, not only at the expert staff level.

Establish a UN Secretary-General or other high-level coordination mechanism on Oceans.

Develop a UN Secretary-General "Ocean Budget" report that would address financing needs for oceans and coasts and provide an assessment previous and current expenditures in these areas..

Report Card: A Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓					✓				✓

EXPLANATION:

Extent of Efforts

The establishment of the Regular Process has been a complicated process that involved the UN General Assembly, UN Member States, relevant organizations and agencies and programmes of the United Nations system, especially the United Nations Environment Programme, the Intergovernmental Oceanographic Commission of UNESCO, the Food and Agriculture Organization of the United Nations, the International Maritime Organization, the World Meteorological Organization, other competent intergovernmental organizations and relevant nongovernmental organizations. The process entailed the creation of ad hoc bodies, including three Groups of Experts, a Steering Group, and an Ad Hoc Working Group of the Whole to oversee and undertake the process.

The process also included the conduct of two international Global Marine Assessment (GMA) workshops, one ICP meeting (ICP 5), an Assessment of Assessments, which was a major undertaking in order to develop the framework for the Regular Process, the development of a marine environment database (GRAMED), four meetings of the Ad Hoc Working Group of the Whole, and several UNGA deliberations. The Assessment of Assessments involved the examination of at least 1,000 individual assessments, 21 regional assessments, and seven supra-regional and global assessments.

The complex task of establishing the Regular Process was undertaken within the bounds of time, funding and capacity made available for the process. The quality of the work that was done leading to the development of a framework for the Regular Process depended heavily on the expertise, time allotted and other resources made available to the various experts engaged in the process, particularly in the Assessment of Assessments. One unfortunate and prevailing problem was that the participation of experts from developing countries in the international workshops and meetings of the Ad Hoc Working Group of the Whole was limited by the level of funding available for these activities, which could potentially compromise the effectiveness of the Regular Process. The engagement of expert working groups (although the groups' range of expertise and perspectives may not have been fully adequate) and the review process for each activity in the establishment of the Regular Process, especially the peer review of the Assessment of Assessments, provided measures of quality control. Methods were developed and used to address uncertainty and lack of consensus among experts, data availability and accessibility, and stakeholder engagement.

Ultimately, the accuracy of the information that came out of the Assessment of Assessments relied on the adequacy of information provided by each of the assessments that were examined. The Group of Experts that carried out the Assessment of Assessments, however, observed that standards for data quality and analytical methods are widely accepted by the research community and assumed to be generally adhered to in the individual assessments included in the Assessment of Assessments. They also noted that economic and social assessment is generally quite poor, and that assessment of areas outside national jurisdiction is weak.

Extent of Progress

The goal of establishing the Regular Process has been accomplished. In 2004, the Regular Process was established under the United Nations as an intergovernmental process guided by international law, including the United Nations Convention on the Law of the Sea and other applicable international instruments, and in 2010, after the start-up phase, decisions were taken on the longer-term machinery. Accountable to the General Assembly, the Regular Process will be overseen and guided by an Ad Hoc Working Group of the Whole of the General Assembly composed of Member States, with UN DOALOS as its secretariat. The operationalization of the Regular Process is now in progress, with the first five-year cycle expected to be completed by 2014, in time for the CSD review of the oceans.

Timing

Implementing the Regular Process, which should have started in 2004, has started in earnest only in 2011.

MAJOR OBSTACLES

- Inadequate funding, which, among other things, limited the assessments that could be covered by the Assessment of Assessments and the involvement of experts from developing countries and their representation in important meetings.
- Opposition by certain States to the inclusion of living marine resources in the Regular Process.
- The scope and scale of the task constrained the accomplishment of this goal as planned (by 2004). It took a major effort in the Assessment of Assessments to review and analyze the large amount of information available from existing assessments and to develop a proposed framework for the Regular Process.

- Under-provision of resources for the Regular Process reduced the capacity to carry out the start-up phase, and is restricting the work of full implementation.
- The wish of States to manage the Regular Process has resulted in a failure to involve and capitalize on the resources of other key actors in the ocean community, especially the international NGOs.

SOME BRIGHT SPOTS

- The establishment of the Regular Process itself was a significant accomplishment involving the completion of demanding work led by UNEP and IOC-UNESCO and the Group of Experts.
- The products of the Assessment of Assessments included recommendations for the objective and scope of the Regular Process, a set of principles, a set of best practices, design features for an influential assessment and proposals for the organization of the first cycle of assessment.
- The establishment of the Regular Process has relied heavily on the groups of experts, both the Assessment of Assessments Group of Experts and the current Group of Experts of the Regular Process. with These experts aim to establish a community of practice with membership from the global, regional, national and sub-national levels. As assessment capacity continues to be developed at all levels in the conduct of the first cycle of the Regular Process through targeted capacity development programs and through individual [and institutional] involvement in the assessment process, it is expected that communities of practice focusing on different components of the Regular Process will be established. Each community of practice could potentially evolve into a shared practice as members engage in a collective process of learning by being involved in assessments and contributing to the conduct of the Regular Process, and eventually to the improvement of ocean governance.
- Although the Assessment of Assessments reported that integrated assessments were rare, some noteworthy examples of progress toward integrated marine assessment were provided, including: a) the ecosystem approach to fisheries assessment adopted by the Convention on the Conservation of Antarctic Marine Living Resources, b) the ecosystem approach to assessment of benefits from systematic bio-geographic classification of marine areas, e.g., the Global Open Oceans and Deep Seabed, and c) the transboundary diagnostic analyses undertaken in the context of GEF International Waters Large Marine Ecosystem projects and in European regional seas, e.g., OSPAR and Helsinki commissions.

RECOMMENDATIONS

The first cycle of the Regular Process will focus on establishing a baseline with subsequent cycles focusing on evaluating trends. By the time that the first cycle of the Regular Process produces a report, 10 years will have elapsed since the 2004 deadline (and 12 years since WSSD). In the meantime, since oceans are deteriorating and coastal populations are suffering, it is imperative that other assessments or other forms of reporting on the state of the marine environment be used to inform decision-making in a more timely way.

It is essential that additional funding resources be found to fully support the carrying out of the Regular Process.

Because of the scope and scale of the task, it is important that the Ad Hoc Working Group of the Whole ensure that the working method of choice for the first cycle be efficient and effective. Agreement on the issue areas to be addressed, acceptance that some cannot be investigated in detail in the first cycle, and capacity development are essential approaches to ensure an efficient and effective first cycle.

The Regular Process should involve and capitalize on the resources of other key actors in the ocean community, especially the NGOs and the business sector (they have research departments that could provide assistance) at all levels; the scope and urgency of oceans issues requires the involvement of relevant entities from all sectors in the Process.

It is essential that the Regular Process be transparent to all its audiences, namely: a) the Governments of UN Member States; b) Relevant UN specialized agencies and programmes, and other relevant global IGOs; c) Regional IGOs concerned with marine issues; d) NGOs; e) Relevant scientific institutions and major groups; f) Experts in the relevant environmental, economic and social sciences; and g) Civil society at national and local levels, and the general public.

Engaging the full involvement of governments is essential in the conduct of the Regular Process and the provision of expertise to support the process. There is a wealth of knowledge and expertise arising from many years of marine research in various regions which should be channeled into the Regular Process effectively.

Interactions between the scientific community and governments need to be reinforced through mechanisms such as the coordination with the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES), which aims to promote exchange between scientists and policy-makers, similar to the Intergovernmental Panel on Climate Change (IPCC) for climate change, with appropriate coordination with the Regular Process. Additionally, interactions among governments, the scientific community, and local communities should be strengthened, order to incorporate local and traditional knowledge on the marine environment in the Regular Process and in the decision-making process.

Report Card: Capacity Development

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
✓			✓	✓						✓

EXPLANATION:

Capacity development for ecosystem-based integrated coastal and ocean management is essential to achieve sustainable development of oceans and coasts and the development of suitable responses to address climate change, preserve biodiversity and resources, provide for sustainable ocean and coastal livelihoods, as well as respond to new and emerging challenges.

Capacity development received great emphasis in Chapter 17 of Agenda 21 with many detailed prescriptions on improving capacity for integrated ocean and coastal management, as well as for specific sectors (such as fisheries, land-based pollution), small island developing States (SIDS), marine science and monitoring, climate change adaptation. Emphasis was placed as well on the development of education infrastructure (such as regional centers of excellence); research facilities for systematic observation of the marine environment and disaster response; strengthening of institutions for integrated management, marine science monitoring and assessment; public participation and education. The WSSD Johannesburg Plan of Implementation also emphasized capacity development needs, but in much less detail and with no timetables, including capacity for integrated coastal area management, small scale fisheries, land-based sources of pollution, biodiversity, and SIDS needs regarding biodiversity and climate change, traditional knowledge. Taken together, the UNCED and WSSD prescriptions put forward a rightly ambitious agenda on capacity development, highlighting its central role in achieving sustainable development.

Capacity development remains an issue of central importance to developing states and SIDS, which have continued to reiterate this priority in various fora, such as the 2010 meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (11th Consultative Process), which focused on capacity development in ocean affairs and the law of the sea, including marine science. With the threats of climate change, the importance of capacity development of country leaders, current and future professionals in the field, local communities, and the public becomes even more important and urgent. Likewise, the strengthening of national institutions dealing with oceans and coasts to respond to the challenges of climate change adaptation and mitigation, represents an essential imperative.

Capacity development in oceans and coasts entails fostering country-based and regional knowledge and skills to respond to problems and issues. This is in contrast to the practice in previous decades, e.g., "technical assistance" in the 1960s and 1970s, and "capacity building" as "transfer of knowledge" in the 1980s and 1990s.

There have been a myriad efforts mobilized, since 1992, to respond to the capacity development needs expressed at UNCED and at the WSSD on the part of many entities: educational institutions, UN agencies, multilateral and bilateral donors, NGOs. But, unfortunately, no entity is tracking overall effort and expenditures, aggregate impact, factors of effectiveness, and the extent to which current and emerging needs are being met.

Given the dearth of information on this central issue, "extent of effort" has been marked both "data unavailable" and "low." Our observations are based on available information, which is generally anecdotal and partial, that the level of effort has been "low," that the level of progress has been "low," and that there are "significant delays" in implementation. The ambitious agenda on capacity development laid out by the UNCED and WSSD processes has not yet been realized.

MAJOR OBSTACLES:

Factors often cited as obstacles on the basis of anecdotal and incomplete information:

- UNCED and WSSD emphasized a range of areas where capacity needs to be developed, but the absence of strategies or guidance on addressing the problem combined with a lack of indicators or timelines resulted in too little attention to the subject by donors and governments
- The total level of funds expended on capacity development has been very small and UN agencies typically have very low budgets devoted specifically to capacity development
- Difficulty in tracking the funding for capacity development. The percentage of funding for capacity development in large donor programs in fisheries, ports development or marine parks conservation is often not captured.
- Capacity development is done by a wide array of actors—educational institutions, UN agencies, multilateral and bilateral donors, NGOs, but there is little communication/coordination among these efforts
- Much of the training that is carried out, although not all, is focused on relatively narrow sectoral issues
- There is a lack of long-term funding and commitment to institutionalize capacity in ocean and coastal management. There is an abundance of short-term courses on EBM/ICM and related subjects in which individuals from developing nations frequently participate, but there are very few targeted educational degree programs in EBM/ICM in developing nations. Consequently, many developing

nation individuals end up having participated in a string of courses on or related to ICM, but have no overall education or professional credentials to work in the field.

- There is no strategic targeting of the diverse needs of various audiences, e.g.: national ocean leaders, current professionals in the field, training of future professionals in the field, local decision makers, the general public
- The education of the general public in ocean stewardship is given inadequate attention
- The prevailing problem of 'brain-drain' and the need to retain capacity in developing countries

SOME BRIGHT SPOTS:

Notwithstanding the problems noted above, one can also observe a range of examples of progress in capacity development:

- The new paradigm of ecosystem-based integrated ocean and coastal governance has been widely adopted and disseminated in educational institutions around the world.
- Some global assessments (e.g., in the 11th Consultative Process) and regional assessments (e.g., by regional entities, Global Ocean Forum) have been carried out, showing specific needs in marine science, planning, and management in particular regions.
- Important initiatives have been taken by SIDS countries, such as the creation of the University Consortium of Small Island States.
- Teaching of integrated ocean governance to mid-level professionals, carried out by the International Ocean Institute (and its network of 25 teaching centers) has reached 600 professionals from 90 countries.
- UN agencies, although with limited funding, have carried out specific training in marine science leadership (IOC), law of the sea matters (UNDOALOS), ecosystem-based management and land-based sources of pollution (UNEP), maritime transportation issues (IMO), fisheries and aquaculture (FAO).
- Private foundations have made significant investments in training in the field (e.g., The United Nations - The Nippon Foundation of Japan Fellowship Programme), and in public education efforts (e.g., Lighthouse Foundation, Germany).
- A network of practitioners has been trained in practical aspects of local integrated coastal and ocean management by the Partnerships in Environmental Management for the Seas of East Asia, with financial support from UNDP and GEF, and in regional trans-boundary marine analyses and management has been developed through the GEF LME programs.
- The world's museums and aquaria, organized in the World Ocean Network, have developed extensive public education and outreach efforts, to teach the general public about ocean stewardship.

RECOMMENDATIONS:

- There needs to be greater collaboration and coordination among countries, donors, UN agencies, providers of capacity training and education, others, to provide an accurate assessment of needed financial investments, and to develop a strategic approach to capacity development at the global and regional level.
- Development and/or strengthening mechanisms for sharing of training materials and curricula, and lessons learned in capacity development among organizations involved in capacity development in ocean and coastal governance, including the development of a clearinghouse of information on capacity development activities, courses, training materials
- A strategic approach, supported by long-term financial support from a wide range of public and private donors, would encompass training in both the overall vision related to oceans/climate/biodiversity (the integrated approach) and training in specific sectors. Different levels would also need to be addressed, e.g.:
  - o Enhancing the leadership capacity of national decision makers charged with managing oceans and coasts and of parliamentarians in developing and enacting ocean and coastal legislation;
  - o Enhancing the capacity of professionals in the field;
  - o Strengthening or creating university programs to educate the next generation of leaders;
  - o Strengthening marine science laboratories in marine science observations, monitoring, and applications
  - o Enhancing the capacity of local decision makers
  - o Educating and empowering the general public for ocean stewardship
- Development of a regional approach to fostering a national enabling environment, including capacity building, for integrated ocean and coastal governance through, for example, regional centers of excellence
- Development and/or further implementation of capacity building efforts in specific areas as identified at the regional, national, and subnational levels
- Organizational development of institutions involved in ocean and coastal governance, including reinforcement of management structures, processes and procedures
- Policy development in capacity building in ocean and coastal governance to enable organizations and institutions at all levels to enhance their capacities
- Periodic assessment and tracking of the overall efforts and expenditures in capacity development, aggregate impact, the extent to which current and emerging needs are being met, and efficiency and effectiveness factors.

References

Bauman, A.G., Burt, J.A., Feary, D.A., Marquis,E.,Usseglio, P. 2010 Tropical harmful algal blooms: An emerging threat to coral reef communities? Marine Pollution Bulletin 60: 2117--2122

Cicin-Sain B., Vandeweerd V., Bernal P., Williams L., and Balgos M. 2006. Meeting the Commitments on Oceans, Coasts, and Small Island Developing States Made at the 2002 World Summit on Sustainable Development: How Well Are We Doing? Co-Chairs' Report—Volume 1, Third Global Conference on Oceans, Coasts and Islands. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/WSSDReport_100406d.pdf

Cicin-Sain, Biliana, and Robert W. Knecht. 1998. Integrated Coastal and Ocean Management: Concepts and Practices. Washington DC: Island Press.

Cid G., Lewsey C., Jønch Clausen T. 2008. Policy Brief on Linking the Management of Freshwater, Oceans, and Coasts, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Freshwater-to-Oceans-PB-April3.pdf

Cira M. and Vallette P. 2008. Policy Brief on Developing a Strategy for Public Education/Outreach/Media, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Public-Education-PB-April2.pdf

Earth Negotiations Bulletin, International Institute for Sustainable Development. 2002. Summary of the World Summit on Sustainable Development. Available at: http://www.iisd.ca/download/pdf/enb2251e.pdf

Food and Agriculture Organization. 2007. The World's Aquatic Genetic Resources: Status and Needs, background document CGRFA-11/07/15.2 for the Eleventh Regular Session of the Commission on Genetic Resources for Food and Agriculture,http://www.fao.org/ag//CGRFA/cgrfa11.htm://ftp.fao.org/ag/cgrfa/cgrfa11/r11w152e.pdf

Food and Agriculture Organization. 2010.The State of World Fisheries and Aquaculture: 2010. FAO Fisheries and Aquaculture Department, Rome. Available at: http://www.fao.org/docrep/013/i1820e/i1820e00.htm

Food and Agriculture Organization. 2004. State of the World Fisheries and Aquaculture (SOFIA): 2004. FAO Fisheries and Aquaculture Department, Rome. Available: ftp://ftp.fao.org/docrep/fao/007/y5600e/y5600e00pdf.

Freestone D., Cicin-Sain B., Hewawasam I., and Hamon G. 2010. Policy Brief on Improving Governance: Achieving Integrated Ecosystem-Based Ocean and Coastal Management, 5th Global Conference on Oceans, Coasts and, Islands, Paris, France. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/PolicyBrief-EBM-ICM.pdf

Hewawasam I. 2008.Policy Brief on Strategic Interventions for Developing Capacity to Improve Governance of Oceans, Coasts, and Small Island Developing States Over the Period 2008 to 2018, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Capacity- Building-PB-April2.pdf

Kullenberg G., Mendler de Suarez J-R., Wowk K., McCole K., and Cicin-Sain B. 2008. Policy Brief on Climate, Oceans, and Security, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Climate-and-Oceans-PB-April2.pdf

IPCC, 2007: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 976pp.

Johnson, C.R., Banks, S.C., Barrett, N.S., Cazassus, F., Dunstan, P.K., Edgar, G.J., Frusher, S.D., Gardner, C., Haddon, M., Helidoniotis, F., Hill, K.L., Holbrook, N.J., Hosie, G.W., Last, P.R., Ling, S.D., Melbourne-Thomas, J., Miller, K., Pecl,G.T., Richardson, A.J., Ridgway, K.R., Rintoul, S.R., Ritz, D.A.,Ross, D.J., Sanderson, J.C., Shepherd, S.A., Slotwinski, A., Swadling, K.M., Taw N. 2011. Climate change cascades: shifts in oceanography, species' ranges and subtidal marine community dynamicsin eastern Tasmania. Journal of Experimental Marine Biology and Ecology 400: 17--32

Lent R., English E., Wulff R., Pulvenis de Séligny, J-F., Mahon R., Cox A., Balton D., Tompkins C., Tinkham S., Metzner R., Terry J., McGoodwin J.R., Mellano G., Bexten A., and Moore K. 2008. Policy Brief on Fisheries and Aquaculture – Sustainability and Governance, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Fisheries-and-Aquaculture-PB-April2.pdf

Mangone G.J. 2008. Policy Brief on Maritime Tansportation, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Maritime-Transportation-PB-June18.pdf

Mendler de Suarez J., Cicin-Sain B., Wowk K., Payet R., Hoegh Guldberg O. 2010. Policy Brief on Ensuring Survival: Oceans, Climate and Security, 5th Global Conference on Oceans, Coasts and, Islands, Paris, France. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/PolicyBrief-Climate-Oceans.pdf

Murawski S., Cyr N., Davidson M., Hart Z., Balgos M., Wowk K., Cicin-Sain B. 2008. Policy Brief on Ecosystem-based Management and Integrated Coastal and Ocean Management and Indicators for Progress, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam.
Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/EBM-ICM-PB-April4.pdf

Nellemann, C., Corcoran, E., Duarte, C. M., Valdés, L., De Young, C., Fonseca, L., Grimsditch, G. (Eds). 2009. Blue Carbon. A Rapid Response Assessment. United Nations Environment Programme, GRID-Arendal.

Nellemann, C., Hain, S. and Alder, J. (Eds). 2008. In Dead Water – Merging of climate change with pollution, over-harvest, and infestations in the world's fishing grounds. United Nations Environment Programme, GRID-Arendal,Norway. Available: http://www.grida.no/files/publications/InDeadWater_LR.pdf

Nicholls R.J., Marinova, N., Lowe, J.A., Brown, S., Vellinga, P., De Gusmão, D., Jochen Hinkel, J., Tol,R.S.J. 2011 Sea-Level Rise And Its Possible Impacts Given A "Beyond 4°C World" In The Twenty First Century. Philosophical Transactions of the Royal Society A 369: 161--181

Payet R. 2008. Policy Brief on Small Island Developing States (SIDS) and Implementation of the Mauritius Strategy, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/SIDS-and-Mauritius-Strategy-PB-April2.pdf
Rogers, A.D. and Laffoley, D.d'a. 2011. International Earth system expert workshop on ocean stresses and impacts. Summary report. IPSO Oxford, 18pp.

Sherman K., Sklarew D., Belkin I., Oliver J., Aquarone M-C., and Seitzinger, S. 2008. Policy Brief on Large Marine Ecosystems, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/LME-PB-June18.pdf

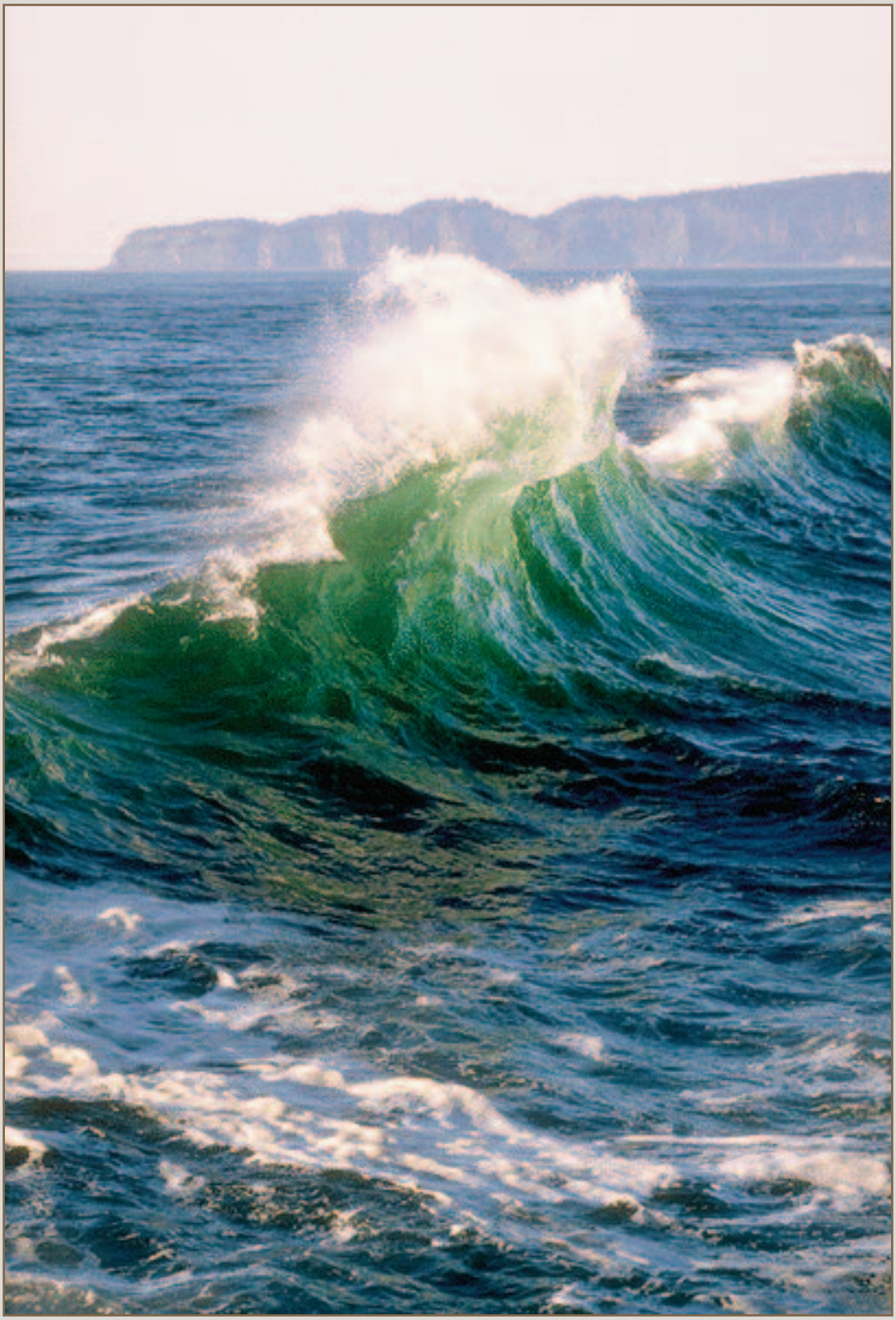
Stroeve, J., Holland, M.M., Meier, W., Scambos, T., Serreze, M. 2007. Arctic sea ice decline: faster than forecast. Geophysical Research Letters 34: L09501, doi: 10.1029/2007GL029703

Velicogna, I. 2009 Increasing rates of ice mass loss from the Greenland and Antarctic Ice sheetsrevealed by GRACE. Geophysical Research Letters 36: L19503, doi:10.1029/2009GL040222

Vierros M., Cicin-Sain B., Arico S., and Lefebvre C. 2010. Policy Brief on Marine Biodiversity and Networks of Marine Protected Areas, 5th Global Conference on Oceans, Coasts and, Islands, Paris, France. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/BiodiversityPB_4web.pdf

Wells S. with contributions from the Working Group Leaders and the Global Forum Secretariat. 2008. Policy Brief on Marine Biodiversity and Networks of Marine Protected Areas, 4th Global Conference on Oceans, Coasts and, Islands, Hanoi, Vietnam. Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Biodiveristyand-MPAs-PB-May15.pdf

Worm, B., Barbier, E.B., Beaumont, N., Duffy J.E., Folke, C., Halpern, B.S., Jackson, J.B.C., Lotze, H.K., Micheli, F., Palumbi, S.R., Sala, E., Selkoe, K.A., Stachowicz, J.J., Watson, R. 2006 Impacts of biodiversity loss onocean ecosystem services. Science 314: 787--790



The Global Ocean Forum At-a-Glance

Background

The Global Forum was first mobilized in 2001 to help the world's governments place issues related to oceans, coasts, and small island developing States (SIDS) on the agenda of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, and was later formalized at the 2002 World Summit.

Since 2001, the Global Forum has brought together ocean leaders from governments, non-governmental organizations, international and intergovernmental organizations, the private sector, and scientific associations from over 110 countries. The Global Forum responds to perceived needs for fostering cross-sectoral dialogue on ocean issues among governments, NGOs, international organizations, and the private and scientific sectors; constant advocacy for oceans at the highest political levels; and the imperative of taking an ecosystem-based and integrated approach to oceans governance at national, regional, and global levels.

Objectives

The major goals of the Global Forum are to:

- Advance the global oceans agenda by:
  1) promoting the implementation of international agreements related to oceans, coasts, and SIDS, especially the goals emanating from the 2002 WSSD;
  2) analyzing emerging issues such as addressing climate change effects and improving the governance regime for ocean areas beyond national jurisdiction; and
  3) promoting international consensus-building on unresolved ocean issues;
- Work as a catalyst to mobilize knowledge, resources, and organizational action to advance the global oceans agenda and to promote integrated oceans management;
- Foster a mutually-supportive global network of ocean policy leaders with the capacity to implement integrated oceans management;
- Raise the international profile of oceans, coasts, and SIDS in relevant global, regional, and sub-regional fora;
- Mobilize public awareness on global issues related to oceans, coasts, and islands, and promote information sharing and dissemination.

For a full list of Global Ocean Forum activities, please see the 2010 Report of Activities at: www.globaloceans.org

Global Oceans Conferences

Since 2001, the Global Forum has regularly organized Global Ocean Conferences as a means to gather experts and high-level representatives from all sectors to highlight the major issues facing the oceans, facilitate multi-stakeholder dialogue, examine various approaches and best practices for addressing oceans issues, and raise the profile of oceans among high-level decision makers and the public.

Global Conference on Oceans and Coasts at Rio+10:

Toward the 2002 World Summit on Sustainable Development, Johannesburg

December 3-7, 2001, UNESCO, Paris

Convened nearly ten years after the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, the Global Conference assessed the status of oceans and coasts and progress achieved over the previous decade, identifying continuing and new challenges, and laying the groundwork for the inclusion of an oceans agenda at the 2002 World Summit on Sustainable Development (WSSD). The 2001 conference is perceived as having been catalytic in placing ocean, coastal, and island issues on the WSSD agenda, which resulted in the adoption of an extensive set of global targets and timetables related to oceans, coasts, and small island states.

Second Global Conference on Oceans, Coasts, and Islands:

Mobilizing for Implementation of the Commitments Made at the 2002 World Summit on Sustainable Development on Oceans, Coasts, and Small Island Developing States

December 10-14, 2003, UNESCO, Paris, France

Following the WSSD, the Global Forum organized the second Global Oceans Conference to spur rapid initial implementation of the WSSD oceans commitments. The conference reviewed what had been done to date in implementing the WSSD commitments and to catalyze action on WSSD implementation through collaboration among governments, international organizations, non-governmental organizations, and the private sector.

Third Global Conference on Oceans, Coasts, and Islands:

Moving the Global Oceans Agenda Forward

January 23-28, 2006, UNESCO, Paris, France

The third Global Oceans Conference and the ensuing report, *Meeting Global Commitments on Oceans, Coasts, Freshwater, and Small Island States: How Well Are We Doing?* reviewed the available information and provided a bottom line of progress achieved so far—a "report card"— on each of the WSSD and MDG ocean-related goals.

Generally, participants at the third Global Conference agreed that progress toward implementation of the global oceans targets had been slow, but that there were many promising developments.

Fourth Global Conference on Oceans, Coasts, and Islands

Advancing Ecosystem Management and Integrated Coastal and Ocean Management by 2010 in the Context of Climate Change

April 7-11, 2008, Hanoi, Vietnam

The fourth Global Conference focused especially on assessing the progress that has been achieved (or lack thereof) on the global oceans targets established by the world's political leaders at the 2002 WSSD, especially: Achieving ecosystem-based and integrated ocean and coastal management by 2010, reducing marine biodiversity loss by 2010, establishing networks of marine protected areas by 2012, and restoring fishery stocks by 2015. The 2008 global oceans conference focused, in particular, on the central role of oceans in climate and the challenges posed by climate change in coastal areas and island nations, effectively putting this issue squarely on the agenda of the global oceans community. As well, conference discussions underscored the imperative of bringing the ocean issues to the global climate negotiations under the UN Framework Convention on Climate Change (UNFCCC).

Fifth Global Conference on Oceans, Coasts, and Islands:

Ensuring Survival, Preserving Life, Improving Governance-- Oceans, Climate, Biodiversity: From Copenhagen 2009 to Nagoya 2010

May 3–7, 2010, UNESCO, Paris, France

The fifth Global Conference was organized around three major themes:

-- Ensuring Survival: Oceans, Climate and Security and Major Issues in Mitigation, Adaptation, and Financing in the Post-Copenhagen Climate Regime.

-- Preserving Life: Marine Biodiversity (2010 global goal), Networks of Marine Protected Areas (2012 global goal), and Celebrating the 2010 International Year of Biodiversity Toward Nagoya 2010-- Convention on Biological Diversity Conference of the Parties COP-10.

-- Improving Governance: Achieving Integrated, Ecosystem-Based Ocean and Coastal Management (2010 global goal) at National and Regional Levels and in Areas Beyond National Jurisdiction.

The conference also celebrated the 50th Anniversary of the Intergovernmental Oceanographic Commission and the International Year of Biodiversity 2010.

Multi-Stakeholder Policy Dialogues

The Global Forum serves as a valuable forum for open and informal multi-stakeholder policy dialogue on the most pressing and conflictual issues facing the oceans. These dialogues have been beneficial in sharing best-practices, examining the various approaches to integrated ecosystem-based ocean governance, and developing and refining policy options for new and emerging areas. The Global Forum has organized the following multi-stakeholder policy dialogues:

-- The Ocean Policy Summit, October 10-14, 2005, Lisbon, Portugal

-- Strategic Planning Workshop on Global Ocean Issues in Marine Areas Beyond National Jurisdiction in the Context of Climate Change, January 2008, France

-- Policy Analyses and Workshop on Governance of Areas Beyond National Jurisdiction: Management Issues and Policy Options, November 2008, Singapore.

-- Global Ocean Policy Day, World Ocean Conference, May 2009, Manado, Indonesia

Participation in the United Nations

The Secretariat of the Global Forum on Oceans, Coasts, and Islands, which is accredited as a non-governmental organization to the UN Economic and Social Council, is an active player in a variety of United Nations fora, contributing policy analyses and hosting various types of multi-stakeholder events. The Global Forum has been active in the following UN fora:

-- UN Informal Consultative Process on the Oceans and the Law of the Sea (ICP)

-- Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC)

-- Conference of the Parties to the Convention on Biological Diversity (CBD)

-- UN Ad hoc working group to study issues related to biodiversity in marine areas beyond national jurisdiction

The Global Ocean Forum at Rio+20

The UN Conference on Sustainable Development (Rio+20), being held on June 4-6, 2012, represents an important opportunity to take stock in progress made in the achievement of major goals and targets for oceans and coasts and to outline a new, operational vision towards strengthening the three pillars of sustainable development for the world's oceans and coasts. The Global Ocean Forum is mobilizing various partners to work towards a significant ocean outcome at Rio+20, including through a set of critical policy assessments on the implementation of 1992 UNCED and 2002 WSSD targets on oceans and coasts (see Draft Plan of Rio+20 Assessments at: http://www.globaloceans.org/content/rio20) and the launching of the "Rio+20 Friends of the Ocean" and an accompanying blog (see blog at: http://globaloceanforum.org/). The "Rio+20 Friends of the Ocean", launched on June 8, 2011, World Oceans Day, is an alliance of organizations and individuals designed to support governments participating in the Rio+20 process to achieve a significant ocean outcome and to provide a "rallying point" and unified voice for oceans and coasts in the Rio+20 process.

Participation and Outreach

The Global Forum has organized ocean events especially aimed at decision makers and is collaborating with the World Ocean Network in the creation and dissemination of information on global oceans issues to the public.

The Global Forum recognizes the importance of increasing public awareness of the global agenda on oceans, coasts, and island to advance the global oceans agenda. Since 2002, the Global Forum has enjoyed a close collaboration with NAUSICAA (Centre National de la Mer, France), also the co-organizer of World Ocean Network (WON) (the network of 450 museums, aquaria, and ocean learning centers around the world). The Global Forum and WON have prepared and disseminated a package of public information materials highlighting global oceans issues and demonstrating how individual citizens can make a difference in achieving sustainable development of oceans. The WON and NAUSICAA have developed a long-range plan (to 2015) with a framework for public information activities in support of Global Forum goals and objectives.

Financial or In-Kind Contributors to the Global Forum

Global Forum activities have been supported by the Global Environment Facility and a wide number of intergovernmental and international organizations, governments, non-governmental organizations, research institutions, foundations, and museums and aquaria.

Intergovernmental Organizations

-- Asian Development Bank

-- Convention on Biological Diversity Secretariat

-- Food and Agriculture Organization (FAO)

-- Global Environment Facility

-- GEF International Waters Learning Exchange and Resource Network

-- United Nations Educational, Scientific, and Cultural Organization (Intergovernmental Oceanographic Commission; Division of Ecological Sciences; Division of Water Sciences; Environment and Development in Coastal Regions and in Small Islands)

-- United Nations Development Programme

-- United Nations Environment Programme (Global Programme of Action for the Protection of the Marine Environment from Land-based Activities)

-- United Nations University

-- UN-Oceans

-- World Bank

-- World Bank Institute

Governments

-- Government of Canada (Department of Fisheries and Oceans)

-- Government of France (Directorate for Water and Biodiversity, Ministry of Ecology, Energy, Sustainable Development and the Sea; Ministry of Foreign and European Affairs; and French Marine Protected Areas Agency)

-- Government of Grenada

-- Government of Indonesia, Ministry of Marine Affairs and Fisheries

-- Government of Japan (Ministry of Environment, and Secretariat of the Headquarters for Ocean Policy)

-- Government of Mozambique

-- Government of Portugal (Intersectoral Oceanographic Commission, Ministry of Science, Technology and Higher Education; Strategic Commission on the Oceans; Secretary of State for Maritime Affairs, Ministry of Foreign Affairs)

-- Government of Republic of Korea

-- Government of Seychelles

-- Government of Singapore (Ministry of Foreign Affairs; National Parks Board)

-- Government of Spain, Ministry of Science and Innovation

-- Government of the United States of America (NOAA: National Ocean Service (Coastal Services Center, International Program Office), National Marine Fisheries Service; Department of State; USAID)

-- Government of United Kingdom, Department for Environment, Food and Rural Affairs

-- Government of Vietnam (Ministry of Agriculture and Rural Development; Ministry of Foreign Affairs; Ministry of Natural Resources and Environment, Vietnam Administration for Seas and Islands)

-- European Commission – DG-MARE, DG-Environment

-- Principality of Monaco

International Organizations

-- Commission Peripherique des Regions Maritimes, Europe

-- Land-Ocean Interactions in the Coastal Zone

-- New Partnership for Africa's Development

-- Pacific Islands Applied Geoscience Commission

-- Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)

-- South Pacific Regional Environment Programme

-- Western Indian Ocean Marine Science Association (WIOMSA)

-- European Environment Agency

-- Community of Portuguese-speaking Countries (CPLP)

-- Global Legislators Organization for a Balanced Environment (GLOBE)

-- International Coral Reef Initiative (ICRI)

-- Global Ocean Biodiversity Initiative (GOBI)

Nongovernmental Organizations

-- International Ocean Institute

-- International Union for the Conservation of Nature (IUCN)

-- Oceana

-- The Nature Conservancy

-- World Wildlife Fund

-- Worldfish Center

Foundations

-- Gulbenkian Foundation, Portugal

-- Lighthouse Foundation, Germany

-- Luso-American Development Foundation (FLAD), Portugal

-- Nippon Foundation, Japan

-- Ocean Policy Research Foundation (OPRF), Japan

-- Sea Level Rise Foundation, Seychelles

Research Institutions

-- Center for Oceans Solutions, Monterey

-- Centro de Ecologia, Pesquerias y Oceanografia del Golfo de Mexico (EPOMEX), Universidad Autonoma de Campeche, Mexico

-- Dalhousie University, Marine and Environmental Law Institute

-- InterAcademy Panel on International Issues (IAP)

-- Institute for Sustainable Development and International Relations (IDDRI), France

-- Korea Ocean Research and Development Institute (KORDI)

-- Plymouth Marine Laboratory/Partnership for the Observation of the Global Oceans

-- Pusan National University, Republic of Korea

-- Scripps Institution of Oceanography, University of California, San Diego

-- University of Delaware, Gerard J. Mangone Center for Marine Policy

-- University of Rhode Island Coastal Resources Center

-- Global Change Institute, University of Queensland

Aquaria and Museums

-- Centre de Decouverte du Monde Marin, Nice, France

-- NAUSICAA (Centre National de la Mer), France

-- Oceanario de Lisboa

-- World Ocean Observatory

-- World Ocean Network

-- Partnership for Climate, Fisheries, and Aquaculture (comprising twenty inter-governmental organizations, nongovernmental organizations, and civil society organizations)

Global Forum Publications

1. Integrated National and Regional Ocean Policies: Comparative Practices and Future Prospects, UNU Press (forthcoming).
2. 5th Global Conference on Oceans, Coasts, and Islands: IISD Summary Report (2010). Available at: http://www.iisd.ca/download/pdf/sd/ymbvol68num5e.pdf
3. Draft Policy Brief on Halting Marine Biodiversity Loss and Establishing Networks of Marine Protected Areas (2010). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/PolicyBrief.pdf
4. Draft Policy Brief on Ensuring Survival: Oceans, Climate and Security (2010). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/PolicyBrief-Climate-Oceans.pdf
5. Draft Policy Brief on Improving Governance: Achieving Integrated Ecosystem-Based Ocean and Coastal Management (2010). Available at: http://www.globaloceans.org/sites/ude

l.edu.globaloceans/files/PolicyBrief-EBM-ICM.pdf

6. Oceans and Climate Change: Issues and Recommendations for Policymakers and for the Climate Negotiations (2009). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Policy-Briefs-WOC2009.pdf
7. Executive Summary: Workshop on Governance of Marine Areas Beyond National Jurisdiction: Management Issues and Policy Options, November 3-5, 2008, Singapore. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/Singapore-Workshop-ExecutiveSummary.pdf
8. Report to the Ninth Meeting of the Conference of the Parties of the Convention on Biological Diversity (CBD COP-9), 19-30 May 2008, Bonn, Germany (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Biodiveristy-and-MPAs-PB-May15.pdf
9. Submission to the 2nd meeting of the UN 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 (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/GlobalForumSubmission-2ndAdHocWGMeeting-April2008-red.pdf
10. Report from the Strategic Planning Workshop on Global Ocean Issues in Marine Areas Beyond National Jurisdiction in the Context of Climate Change (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/High-Seas-PB-April9.pdf
11. 4th Global Conference on Oceans, Coasts, and Islands: IISD Summary Report (2008). Available at: http://www.iisd.ca/ymb/sdoh4/
12. Policy Brief: Climate, Oceans, and Security (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Climate-and-Oceans-PB-April2.pdf
13. Policy Brief: Ecosystem-based Management and Integrated Coastal and Ocean Management and Indicators for Progress (2008). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/EBM-ICM-PB-April4.pdf
14. Policy Brief: Large Marine Ecosystems (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/LME-PB-June18.pdf
15. Policy Brief: Marine Biodiversity and Networks of Marine Protected Areas (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Biodiveristy-and-MPAs-PB-May15.pdf
16. Policy Brief: Fisheries and Aquaculture – Sustainability and Governance (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Fisheries-and-Aquaculture-PB-April2.pdf
17. Policy Brief on SIDS and Implementation of the Mauritius Strategy (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/SIDS-and-Mauritius-Strategy-PB-April2.pdf
18. Policy Brief on Linking the Management of Freshwater, Oceans, and Coasts (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Freshwater-to-Oceans-PB-April3.pdf
19. Policy Brief: Strategic Interventions for Developing Capacity to Improve Governance of Oceans, Coasts, and Small Island Developing States Over the Period 2008 to 2018 (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Capacity-Building-PB-April2.pdf
20. Policy Brief: Compliance and Enforcement (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Compliance-and-Enforcement-PB-June18.pdf

21. Policy Brief: Developing a Strategy for Public Education/ Outreach/Media (2008). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/Public-Education-PB-April2.pdf

22. Meeting the Commitments on Oceans, Coasts, and Small Island Developing States Made at the 2002 World Summit on Sustainable Development: How Well Are We Doing? Co-Chairs' Report (Volume 1) of the Third Global Conference on Oceans, Coasts, and Islands, UNESCO, Paris, January 23-28, 2006. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/1WSSDReport_100406d.pdf

23. Reports from the Third Global Conference on Oceans, Coasts, and Islands: Moving the Global Oceans Agenda Forward Co-Chairs' Report (Volume 2) of the Third Global Conference on Oceans, Coasts, and Islands, UNESCO, Paris, January 23-28, 2006. Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/pdfs/2ParisConferenceReportsFINAL.pdf

24. Capacity Building Assessments in Small Island Developing States in the Pacific, Caribbean, Indian Ocean, the Atlantic, and the Community of Portuguese-Speaking Countries (2006). Available: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/PreConferenceSIDSAssessments.pdf

25. Small Islands, Large Ocean States: A Review of Ocean and Coastal Management in Small Island Developing States since the 1994 Barbados Programme of Action for the Sustainable Development of Small Island Developing States (SIDS) (2005). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/SmallIslandsLargeOceanStates_0.pdf

26. Island Bellwether: Climate Change and Energy Policy Strategy for Small Island Developing States (2005). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/IslandBellwether_0.pdf

27. Global Multilateral Environmental Agreements and Small Island Developing States (2004). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/GMEA-and-SIDS.pdf

28. Mobilizing for Implementation of the Commitments Made at the 2002 World Summit on Sustainable Development on Oceans, Coasts, and Small Island Developing States (2003). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/Pre-ConferenceProceedingsVolume.pdf

29. Voluntary Partnership Initiatives from the 2002 World Summit on Sustainable Development and Small Island Developing States (2003). Available at: http://www.globaloceans.org/sites/udel.edu.globaloceans/files/VoluntaryPartnershipInitiatives.pdf

30. A Guide to Oceans, Coasts and Islands at the World Summit on Sustainable Development: Integrated Management from Hilltops to Oceans (2002)

31. Ensuring the Sustainable Development of Oceans and Coasts: A Call to Action. Co-Chairs' Report, the Global Conference on Oceans and Coasts at Rio+10, Paris, UNESCO, December 3-7, 2001 (2001). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/imagecache/2001rep1.pdf

32. Ministerial Perspectives on Oceans and Coasts at Rio+10 (2001). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/imagecache/2001 rep3.pdf

33. Reports of the Conference Working Groups, The Global Conference on Oceans and Coasts at Rio+10, Paris, UNESCO, December 3-7, 2001 (2001). Available at: http://www.globaloceans.org/globaloceans/sites/udel.edu.globaloceans/files/imagecache/2001rep4.pdf

34. Internet services: The Global Forum provides a variety of information services on global, regional, and national developments related to oceans, coasts, and islands, including an electronic newsletter published periodically (available on www.globaloceans.org).

Contact

For additional information, please contact
Dr. Miriam C. Balgos,
Program Coordinator,
Global Ocean Forum
Telephone: +1-302-831-8086,
Email: mbalgos@udel.edu