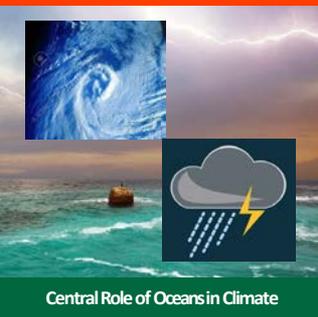




Advancing the Oceans and Climate Agenda for the Next Five Years

May 22-23, 2017, IOC of UNESCO, Paris



Central Role of Oceans in Climate



Mitigation



Adaptation and Blue Economy



Displacement



Financing



Capacity Development

Roadmap to Oceans and Climate Action (ROCA)



ROCA Partners





Authors of the Roadmap



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Lisa Levin, Natalya Gallo (Scripps Institution of Oceanography)
Christophe Lefebvre (Marine Protected Areas Agency, France)
Janot Mendler de Suarez (Red Cross Red Crescent Climate Centre)
Doug Woodring (Ocean Recovery, Hong Kong)
Philippe Vallette, Manual Cira (World Ocean Network)
Kateryna Wowk (Harte Institute, US)
Richard Bowers, Julie Steinberg, Meghan Rowe, Michelle Burt (University of Delaware)



The Importance of Oceans and Climate Action Agenda

**Julian Barbieri, Head, Marine Policy and Regional
Coordination Section, IOC of UNESCO**



Genesis, Vision, and Implementation of the Roadmap to Oceans and Climate Action 2016 to 2021: Achieving Action Results and Considering Aggregate Impacts

Biliana Cicin-Sain, Global Ocean Forum

Julian Barbieri, IOC

Tiago Pitta e Cunha, Oceano Azul Foundation, Portugal

Miko Maekawa, Ocean Policy Research Institute, Sasakawa Peace Foundation, Japan



Oceans and Climate: The Big Questions We Must Address and the IPCC Report on Oceans and Cryosphere

Hans-O. Poertner, Professor, Marine Biology/Ecological and Evolutionary Physiology, Alfred Wegener Institute, Germany, IPCC co-chair WGII (remote intervention)



Ocean and Climate: Policy Perspectives

The Vision of the European Commission on Oceans and Climate and the Blue Economy

**Andras Inotai, European Commission, Member of the
Cabinet of Commissioner Karmenu Vella**



Ocean and Climate: Policy Perspectives

Perspectives of the Bali World Ocean Summit on Oceans and Climate

**Charles Goddard, Editorial Director, Asia Pacific,
Economist Intelligence Unit, The Economist**



Ocean and Climate: Policy Perspectives

The UNFCCC Climate Change Action Agenda and Opportunities to Advance the Oceans and Climate Issues

**Danielle Magalhaes, UNFCCC Secretariat, Bonn,
Global Climate Action Team**



Ocean and Climate: Policy Perspectives

Some Initiatives to Advance the Oceans and Climate Action Agenda

Tarub Bahri, Food and Agriculture Organization of the United Nations



Ocean and Climate: Defining the Blue Economy *Vision of the Low Carbon Blue Economy for SIDS and Developing Countries, Responding to SDG 14.7*

**Tiago Pitta e Cunha, CEO, Oceano Azul Foundation,
Portugal**



Progress on Moving the Oceans and Climate Agenda

Marc Strauss, Ministry of Ecology, Sustainable Development and Energy, France

Francoise Gaill, CNRS

Ludovic Frere Escoffier, Climate and Ocean Platform



Lunch
13:00 to 14:00

**Bar de Conferences or in the
UNESCO Cafeteria (7th floor)**



Defining Priorities on the Six Themes Addressed by the Roadmap

Overall Moderators: Richard Delaney, Global Ocean Forum, and Safiya Sawney, Gov of Grenada



*Safeguarding Our Global Commons
and Integrated Approaches to Policy
and On-the-Ground Interventions:
Emerging Directions in the GEF-7*

**Chris Severin/Cyrille Barnerias/Leah Karrer,
GEF (remote intervention)**

The Six Themes

1. *The Central Role of Oceans in Climate*
2. *Mitigation*
3. *Adaptation and Blue Economy*
4. *Displacement*
5. *Financing*
6. *Capacity Development*



Defining Priorities on the Six Themes Addressed by the Roadmap

Part 1: Defining Priorities in Advancing Issues Related to the Central Role of Oceans in Climate, Mitigation, and Adaptation



1. The Central Role of Oceans in Climate

**Moderator: Salvatore Arico, Head, Ocean
Science Section, IOC**



1. The Central Role of Oceans in Climate

1.0 Recognize the central role of oceans in climate and the need to implement stringent reductions in greenhouse gas emissions to avoid disastrous consequences on coastal and island communities, marine ecosystems, and ocean chemistry.

Oceans and seas cycle over 28% of carbon dioxide emitted to the atmosphere from burning fossil fuels since 1750, and absorbed 30% of the heat added to the global system since the 1970s. Biogeochemical processes performed by the ocean are vast and priceless ecosystem services.



1. The Central Role of Oceans in Climate

As the concentration of greenhouse gasses increase, options to overcome or limit the risks on ocean ecosystems and on coastal and island populations will become fewer and less effective.

Further scientific work is needed to understand the extent of climate change impacts on ocean ecosystems and communities dependent on healthy oceans between mean global temperature increases of 1.5 and 2.0°C and thus help in decision-making.

An overall reduction in marine biodiversity is expected to occur. Coral reefs are among the most vulnerable; they provide food, income, and protection for about 500 million people.



1. The Central Role of Oceans in Climate

Sea level rise impacts on coastal communities

Fisheries and aquaculture and food security

Ocean acidification

Ocean deoxygenation



1. The Central Role of Oceans in Climate

Sea level rise impacts on coastal communities:

50-centimetre rise in sea level could displace 1.2 million people from low-lying islands in the Caribbean Sea and the Indian and Pacific oceans. Under RCP8.5 (business as usual), SLR could be 3 metres by 2100. The highest point on average in atoll countries is 3 to 4 metres.

In 2005, there were 136 large coastal cities with a population exceeding one million people and a collective population of 400 million people. In those coastal cities over the next 50 years, damages could rise from US\$6 billion/year to US\$52 billion/year solely due to increase in population, property and its value.



1. The Central Role of Oceans in Climate **Fisheries and aquaculture and food security:**

Provide food for over 4 billion people and at least 50% of animal protein to 400 million people in the poorest countries. Increased temperatures will affect fish physiological processes resulting in both positive and negative effects on fisheries and aquaculture systems. Coral reef systems, housing one out of four marine species, will be at increased risk of coral bleaching.

In a warmed world, aquatic ecosystem productivity is likely to be reduced in most tropical and subtropical oceans, seas, and lakes and increased in high latitudes.



1. The Central Role of Oceans in Climate

Ocean acidification:

Since the 1850s, mean surface seawater pH has decreased by 0.1 units, equivalent to a 26% increase in acidity. Ocean acidification will add to the stress already caused by increased ocean warming as well as other ocean stressors such as deoxygenation, pollution and overfishing, together increasing the risk to ecosystems and society.

As seawater pH decreases, carbonate ion (CO_3^{2-}) concentration decreases as well, making it harder to form minerals such as calcium carbonate (CaCO_3). Furthermore, if concentrations become low enough, it can cause these minerals to dissolve.



1. The Central Role of Oceans in Climate

Ocean deoxygenation:

The combination of lower solubility, reduced ventilation, and increased respiration act to cause ocean deoxygenation.

Deoxygenation reduces the quality and quantity of habitat that wild fisheries species use and that is available for aquaculture production. Chronic exposure to insufficient oxygen also increases disease susceptibility, interferes with reproduction, and reduces growth rates. Under a business-as-usual scenario, by 2050 relative to now, the maximum body size of fish communities is expected to decrease by 14-24%



1. *The Central Role of Oceans in Climate*

“To win this battle, we must deploy equally powerful forces in favor of change: the power of human ingenuity, the power of technology, and the power of leadership... The greatest risks of climate change arise when thresholds are crossed: what had been gradual becomes sudden; what had been inconvenient becomes intolerable. The greatest reductions in risk will be won in the same way. Gradual, incremental measures will not be enough: we must seek out non-linear, discontinuous, transformational change.”

Sir David King et al 2015



1. The Central Role of Oceans in Climate

Discussion Lead: Salvatore Arico, Head, Ocean Science Section, IOC

Interventions:

**Carol Turley, Plymouth Marine Laboratory, UK
(remote intervention)**

Kirsten Isensee, Project Specialist – Ocean Carbon Sources and Sinks, IOC



2. Mitigation

Moderator: Salvatore Arico



2. Mitigation

2.0 Further develop and apply mitigation measures using the oceans, including implementing “blue carbon” policies, reducing CO₂ emissions from ships, developing ocean-based renewable energy, and considering (long-term/no-harm) ocean-based carbon capture and storage. Encourage all nations to reduce CO₂ emissions so that the Paris Agreement to limit emissions to well below 2°C can be achieved.



2. Mitigation

2.1 Sustainably conserve and enhance coastal ecosystems as major carbon sinks and integrate the management of the coastal carbon eco-systems (“Blue Carbon”) into the policy and financing processes of the UNFCCC, and account for these ecosystems in the national reports to the UNFCCC, the NDCs.

Coastal carbon ecosystems need to be mapped, conserved and restored as globally significant carbon sinks.

Currently the management of marine ecosystems is not recognized as a climate mitigation option under the UNFCCC. Many countries have started to include coastal ecosystem management into their national climate change mitigation activities, including under REDD+, NAMAs and other mechanisms.



2. Mitigation

2.2. Further accelerate progress in addressing air emissions from ships.

Although international shipping is the most energy efficient mode of mass transportation, a global approach to further improve its energy efficiency and effective emission control is needed as projections forecast a growth in CO₂ emissions for international maritime transport of 50% to 250% in the period up to 2050

CO₂ emissions from international shipping cannot be attributed to any particular national economy due to its global activities and complex operation. Main avenue for change is through the IMO and the MARPOL convention.



2. Mitigation

2.2. Further accelerate progress in addressing air emissions from ships.

In addition to the energy efficiency requirements, two partnership projects to further technical co-operation and technology transfer: Global Maritime Energy Efficiency Partnerships Project (GloMEEP) and the establishment of regional Maritime Technology Cooperation Centres (MTCCs).

GloMEEP, an initiative of the GEF, UNDP, and IMO, will focus in particular on building capacity to implement technical and operational measures in developing countries, where shipping is increasingly concentrated. The aim is to promote a low-carbon maritime sector.



2. Mitigation

2.3 Sustainably develop marine renewable energy (MRE, such as offshore wind power, wave energy, tidal power, and aquatic biofuels); and accelerate efforts to implement these approaches through integrated marine planning and enhanced regulatory frameworks

Goals: resource-mapping exercises to understand the nature of MRE resources available to countries and regions, long-term revenue support to R&D and construction, integrated MSP, adaptive regulatory frameworks, test center establishment, and sharing of best practices through clearinghouse mechanism



2. Mitigation

2.4 Consider the potential for ocean-based carbon capture and storage (CCS), and, if appropriate, further develop regulatory systems for ocean-based sequestration and marine engineering

CCS, as well as other geoengineering methods, need to be conducted in a comprehensive regulatory framework, based on a risk assessment and management approach. So far, regulatory framework exists in the 2006 and 2009 amendments to the London Protocol. (“Risk Assessment and Management Framework for CO₂ Sequestration in Sub-Seabed Geological Structures” and “Specific Guidelines for Assessment of Carbon Dioxide Streams for Disposal into Sub-seabed Geological Formations”)



2. Mitigation

Discussion Lead: Salvatore Arico

Curbing Air Emissions from Ships

**Eric Banel, délégué général d'Amateurs de
France**



2. Mitigation

Blue Carbon

Salvatore Arico and Kirsten Isensee, IOC

**Dorothee Herr, IUCN, and Emily Pidgeon,
Conservation International (remote
intervention)**



2. Mitigation

Experiments in Carbon Capture and Storage

Vikki Gunn, Seascope Consultants, UK



3. Adaptation

Discussion Lead: Tarub Bahri, FAO



3. Adaptation

3.0. Implement ecosystem-based adaptation (EbA) strategies through integrated coastal and ocean management institutions at national, regional, and local levels to reduce vulnerability of coastal/ocean ecosystems and of human settlements, and build the management capacity, preparedness, resilience, and adaptive capacities of coastal and island communities.

Only in the 2000s did the international community fully realize that mitigation efforts would not be sufficient to avoid all significant consequences of climate change and that adaptation needed to be supported urgently.

3. Adaptation

Workstreams		Groups and Committees		
Loss and Damage	Nairobi Work Programme	Adaptation Committee	LDC Expert Group	Loss and Damage Executive Committee
National Adaptation Plans	National Adaptation Programmes of Action			

Table 3.1. Adaptation workstreams, groups and committees under the UNFCCC

(Source: <http://unfccc.int/adaptation/items/4159.php>)



3. Adaptation

3.1. Carry out adaptation measures through the integrated coastal and ocean management (ICM) institutions created at national and local levels in all regions of the world since the 1992 Earth Summit, in close cooperation with disaster risk agencies and affected sectors and communities

ICM and adaptation share similar principles: institutional coordination, public participation in decision-making, strong science-policy interfaces, etc. ICM and adaptation are defined as continuous, dynamic and adaptive processes of decision-making and implementation.



3. Adaptation

3.2. Apply ecosystem-based approaches to adaptation (EbA), especially regarding green infrastructure to provide natural system protection for defense against sea level rise, storms, and flooding

Goals: Develop national coastal risk maps, develop guidelines or best practices for restoration of coastal ecosystems, develop large scale commitments to conserve and restore degraded coastal ecosystems, account for coastal ecosystems in NAPs, identify finance options (McLeod 2015)



3. Adaptation

3.3 Establish and effectively manage networks of marine protected areas in national and international waters to protect marine biodiversity and to enhance resilience of marine ecosystems to climate change, achieving the CBD's Aichi Biodiversity Target of conserving at least 10% of marine and coastal areas by 2020

The priority for MPAs should be protecting Key Biodiversity Areas (KBAs) and supporting the resilience of biodiversity and ecosystem services, especially vulnerable marine habitats with high societal value such as coral reefs, mangroves, estuaries, and deep-sea habitats, such as canyons, and seamounts, which contribute to climate change mitigation.



3. Adaptation

3.4 Promote and apply Blue Economy approaches with emphasis on low-carbon solutions and economic benefits to developing countries and SIDS (following SDG target 14.7)

“A sustainable ocean economy emerges when economic activity is in balance with the long-term capacity of ocean ecosystems to support this activity and remain resilient and healthy” *Economist Intelligence Unit, 2015*

Blue Economies will take into account non-market goods and services, as well as externalities associated with ocean industries



3. Adaptation

3.4 Cont'd

FAO has defined the growth of a blue economy, or blue growth, as a coherent approach for the sustainable and integrated management of oceans and wetlands that is appropriate for the specific social context.

Key Points for intersection of adaptation and blue economy: account for ocean's natural capital, utilize MSP and ICM, and develop metrics to assess the transition to blue economy and the benefits to coastal and island communities



3. Adaptation

Discussion Lead: Tarub Bahri, FAO

Interventions:

Tamara Thomas, The Nature Conservancy (remote intervention)

Isabel Torres de Noronha, Future Ocean Alliance



Part 2: Defining Priorities in Advancing the Low Blue Carbon Economy

Moderator: Tiago Pitta e Cunha, Oceano Azul

Discussion:

**Low Carbon Blue Economy: What is the Niche/Angle?
Concepts, Principles, Experiences, Modes of
Innovation, On-the-ground Actions: Experiences to
Date, Work to be Done**



Standards/Monitoring/Assessment/Financing: What is Needed, How Can it be Realized?

Safiya Sawney, Government of Grenada and Blue Innovation Institute

Pawan Patil, World Bank

**John Virdin, Director, Ocean and Coastal Policy Program,
Duke University**

Frank Schweikert, German Ocean Foundation



Defining Priorities on the Six Themes Addressed by the Roadmap

Part 3: Defining Priorities in Advancing Issues Related to Displacement, Financing, and Capacity Development



4. Displacement

Moderator: Meredith Kurz, Global Ocean Forum



4. Displacement

4.0 Develop and support measures to address the issues associated with the displacement of coastal and island populations as a result of climate change, which will necessitate improvement of international law in terms of definitions, rights and procedures for climate-induced refugees and migrants, including the development and implementation of appropriate financing measures

4. Displacement

New York Times “Looming Floods, Threatened Cities”

If humans burn all fossil fuels available, the collapse of the Antarctic ice sheet will become inevitable and would cause a sea level rise of over 48 metres. Most vulnerable portion – West Antarctic ice sheet – would raise sea level by 3-6 metres over the next 100 years under BAU scenarios. In the best case IPCC emissions scenario, Antarctica could remain relatively stable

If it does not, these dramatic sea level changes threaten the existence of coastal cities with billions of people – Shanghai, London, New York, Guangzhou, Ho Chi Minh City, Mumbai, Zhanjing, Shenzen, Miami, New Orleans, Abidjan, Khulna...



4. Displacement

A refugee is “any person who is outside their country of origin and unable or unwilling to return there, on account of a well-founded fear of persecution for reasons of race, religion, nationality, membership of a group, or political opinion.” An environmental refugee is defined as “a person displaced owing to environmental causes, notably land loss and degradation, and natural disaster.”

Migrants are people who leave or flee their home to seek better or safer surroundings. Migration can be voluntary or forced, but generally a combination of choices and constraints are involved.

Climate-induced displacement falls within a “protection gap” between the definition of a migrant and a refugee.



4. Displacement

Bottom line going forward: as climate-induced displacement becomes more frequent and involves more and more people in all parts of the world, in order to develop appropriate criteria for determining rights and protections these definitional issues will have to be further discussed and agreed upon.

Walter Kalin: Five scenarios qualifying as climate-induced displacement arising from environmental issues: “sudden onset disaster, slow onset environmental degradation, sinking small island states, high risk zones designated by governments, and unrest that disturbs public order.”



4. Displacement

The IOM projects 200 million will be displaced by 2050 due to overall environmental changes.

In Vietnam, 1 million people could be displaced by 2050, and 60% of the Mekong delta could be flooded nearly year-round. In Bangladesh, 3 million people could be displaced by 2050.

At least 2 islands of Kiribati have already disappeared, and the Maldives could lose 77% of its land by 2100 under mid-range SLR

Paris Agreement: “1.5 to stay alive” a critical development



Opportunities and Pathways to Advance the Issue:

Utilize goals and guidelines set forth by non-binding Sendai Framework for Disaster Risk Reduction

Priority 1. Understanding disaster risk

Priority 2. Strengthening disaster risk governance to manage disaster risk

Priority 3. Investing in disaster risk reduction for resilience

Priority 4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction



Opportunities and Pathways to Advance the Issue:

Inclusion of displacement in UN Secretary-General's Anticipate, Absorb, and Reshape (A2R) climate resilience initiative

Awareness, action, advocacy, and analyses through the Red Cross Red Crescent Climate Centre

Formalize definition of climate-induced displacement through the UN Convention Relating to the Status of Refugees (1951)



Opportunities and Pathways to Advance the Issue:

Paris Agreement recognized loss and damage as a separate issue and makes permanent the Warsaw International Mechanism for Loss and Damage, which explores essential definitional questions about climate displacement

No binding action or financing exists regarding displacement or loss and damage under the UNFCCC



Opportunities and Pathways to Advance the Issue:

Tuvalu has proposed a UN resolution to create a legal framework for people displaced by the impacts of climate change

General Assembly adopted the New York Declaration for Refugees and Migrants in 2016 to define a collective, rights-based response to displacement – mentions climate-induced but does not define this or create specifics

Push among Pacific community to appoint a UN Special Representative on Climate and Security



Examples of recent action:

Development of aforementioned UNGA resolution by Tuvalu

The Displacement Solutions initiative on climate and displacement:

The Climate Displacement Law Project working to define a consolidated standard on climate displacement

Land Solutions for Climate Displacement – assesses land solutions for seven affected countries – Bangladesh, Kiribati, Maldives, PNG, Solomon Islands, Tuvalu, and Vanuatu – where will they go?



Examples of recent action:

5th Meeting of the Executive Committee of the Warsaw Mechanism for Loss and Damage in 21-24 March:

Outlined a compendium of risk management approaches; established task force to develop recommendations for integrated approaches to avert, minimize, and address displacement; addressed definitional issues of risk management, non-economic losses; resolved to develop concept note on financial instrument options to be ready for COP 23



Examples:

The Displacement Solutions initiative on climate and displacement:

The Climate Displacement Law Project working to define a consolidated standard on climate displacement

Land Solutions for Climate Displacement – assesses land solutions for seven affected countries – Bangladesh, Kiribati, Maldives, PNG, Solomon Islands, Tuvalu, and Vanuatu – where will they go?

4. Displacement

Key recommendations:

Solving definitional issues, through IOM and/or UNHCR and/or UNISDR and/or UNGA and/or UNFCCC (must be coherent communication between these relevant groups)

Formally address loss and damage under the UNFCCC (“the negative effects of climate variability and climate change that people have not been able to cope with or adapt to.”)

Explore appropriate finance options



Displacement Discussion

**Moderated by Meredith Kurz, Global Ocean
Forum**

*Priorities, Additional Opportunities to Advance
the Issue*



5. Financing

Moderator: John Virdin, Duke University



5. Financing

5.0 Adaptation and mitigation efforts in coastal and SIDS countries /communities should receive sufficient funding, through:

Adequate assessment of costs and needs; development of financial tracking mechanism of financial flows for climate change funds related to oceans, coasts; earmarked funds to support SIDS and coastal population adaptation efforts and a mechanism to track those funds; earmarked funds for coastal infrastructure and EbA



5. Financing

The Costs of Helping the Ocean Adapt to a Changing Climate (Ocean Warming and Acidification)

Types of investments needed: targeting increasing resilience of ecosystems, especially most vulnerable (corals) or economically important (fisheries); support for ICM and MSP; fisheries governance and enforcement; and reduction of land-sourced pollution

Estimated costs: \$200 billion to rebuild fisheries, \$579 billion capital investment and \$75 billion annually to support pollution reduction efforts (FAO and UNEP)



5. Financing

The Costs of Measures to help Coastal Populations Adapt to a Changing Ocean

Types of investments needed: retreat, accommodation, and protection

Cost estimates focusing on protection of coastlines via additional hard and soft structures and beach nourishment: \$12-31 billion per year under low carbon scenario, \$27-71 billion per year under high carbon scenario (UNEP)



5. Financing

Ocean Adaptation Costs in Comparison to Global Adaptation Costs

IPCC estimates overall adaptation costs at \$70 to 100 billion annually by 2050 (UNEP says likely far too low)



5. Financing

Financing Mechanisms for Ocean Adaptation, Three Types:

Development finance institutions (GEF LDC fund, African Development Bank climate change funds, Asian Development Bank climate change funds)

Governments

Climate Funds targeting adaptation (GEF trust fund, GEF Special Climate Change Fund, GCF adaptation funds, Adaptation Fund)



5. Financing

Financing Mechanisms for Ocean Adaptation

Each of the aforementioned development and climate change adaptation funds have available funds in the order of hundreds of millions, for a sum that barely reaches tens of billions

True costs likely to reach hundreds of billions by 2050



5. Financing

Some Options to Fill the Ocean Adaptation Finance Gap

Currently there is no global public financing mechanism for the ocean

GEF has International Waters program, World Bank has a portfolio of investments related to oceans

Creating an entirely new mechanism may be too labor intensive and politically difficult – more feasible to ensure dedicated ocean finance through GCF or other existing funds



Public and Private Sources of Financing: Financial Tracker Mechanism, Financing Options

John Virdin, Duke University

Charles Goddard, The Economist



6. Capacity Development

Moderated by Julian Barbieri, IOC



6. Capacity Development

6.0 Provide technical and financial assistance to SIDS, developing countries, and economies in transition to build capacity in the form of knowledge, tools, and scientific and political expertise to implement mitigation and adaptation measures, develop adaptive management capacity, early warning systems, and disaster risk reduction, and to develop knowledge management mechanisms to share knowledge among all countries within and outside the UNFCCC frameworks.



6. Capacity Development

6.1 Promote the further enhancement of marine policy centers in developing countries and SIDS to build capacity in management and policy related to oceans and climate

6.2 Strengthen the advancement of global marine observations, research, and related capacity development within the UNFCCC processes and beyond

6.3 Support the preparation of the IPCC report on Oceans—to integrate and update the assessment of AR5 using scientific findings on the central role of oceans and climate and likely scenarios and consequences



6. Capacity Development

6.4 Sustained ocean observation should be included as part of national commitments, particularly within the framework of the UNFCCC and Agenda 2030/ SDG 14 (target 14.a), in response to the call to increase knowledge to manage marine ecosystems sustainably, and understand the impacts of climate change and ocean acidification

6.5 Enhance technical capacity development of vulnerable countries through the establishment of regional oceanographic centers to increase cooperation among States on ocean-climate research and multi-disciplinary observation (in accordance with SAMOA Pathway decision 58.f)



6. Capacity Development

6.6 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels and the continued development of the Global Ocean Acidification Observing Network (SDG 14.3)

6.7 Expand public outreach and education efforts, following the Lima Declaration on Education and Awareness-raising (COP 20, 2014), to enhance individual capacity and public understanding of the ocean's role in planetary survival and in global and national well-being, of the risks posed to SIDS and coastal communities by climate change, and to catalyze public support for mitigation and adaptation responses.

6. Capacity Development

Current Status of the Issue

Capacity development is already widely recognized as a crucial pillar of policy action in the ocean community

Ongoing discussions on legally binding instrument under UNCLOS to manage and conserve BBNJ

Nairobi Work Programme to “facilitate and catalyse the development and dissemination of information and knowledge that would inform and support adaptation policies and practices.” (nothing ocean or coast specific)



6. Capacity Development

Current Status of the Issue

Partnership for Observation of the Global Oceans (POGO) – initiative of NGOs and oceanographic communities to bridge capacity gap

UNEP PROVIA initiative to investigate best practices in collaboration frameworks

Islands and Oceans Net (IO NET) at the Samoa SIDS Summit as a platform for information sharing



6. Capacity Development

Current Status of the Issue

UNFCCC has recognized capacity development as key element

2001 COP adopted two frameworks on capacity development and provided guidance to GEF on facilitating this

Durban Platform on Capacity Building to share ideas, experiences, lessons, good practices on implementation

Paris Committee on Capacity Building (PCCB) – one to watch as it grows – maintain up to date knowledge sharing



6. Capacity Development

Goals and Actions Going Forward

Strengthen overall visibility of capacity development issues and solutions specific to SIDS and coastal communities

Establish indicators within UNFCCC process to assess progress in capacity development, evaluate best practices

Utilize a framework of action for technology transfer under the UNFCCC (IOC Criteria and Guidelines on the Transfer of Marine Technology)



Capacity Development Discussion

Moderated by Julian Barbieri, IOC

Isabel Torres de Noronha, Future Ocean Alliance

Mish Hamid, Program Manager GEF IW: LEARN

Ivica Trumbic, Chief Technical Advisor, GEF LME:LEARN

Ronan Long, World Maritime University, Sweden (remote intervention)

Andre Abreu, Tara Expeditions



Discussion of ROCA Priorities Identified for 2017

Moderators:

Biliana Cicin-Sain, GOF

Miko Maekawa, OPRI



1. Production of an Annual Report *on Measuring Progress on Oceans and Climate Action*

Leads: GOF, Ocean and Climate Platform



2. Review of the Nationally Determined Contributions (NDCs) submitted by SIDS and other coastal nations to determine how they can be supported

Leads: GOF, Scripps



3. Development of a Financial Tracking Mechanism

Leads: Duke University



4. Development of a Knowledge Management/Clearinghouse Mechanism

Leads: IOC



4. Development of a Knowledge Management/Clearinghouse Mechanism

Leads: IOC



Lunch
13:00 – 14:00

**Bar de Conferences or UNESCO
Cafeteria**



Advancing the Oceans and Climate Agenda in the Next Phase

General Discussion



Advancing the Oceans and Climate Agenda in the Next Phase

**Ramon Van Barneveld, International Relations
Officer, European Commission, DG Maritime
Affairs and Fisheries**



Co-organization of the Oceans Day at COP 23 Bonn

Danielle Magalhaes, UNFCCC

Biliana Cicin-Sain, GOF

Romain Trouble, Tara Expeditions

Julian Barbieri, IOC/Vinicius Lindoso, IOC

Tina Farmer/Tarub Bahri, FAO

Miko Maekawa, OPRI, SPF

Jean Ronan Le Pen, Ocean and Climate Platform

Matthew Gianni, Gianni Consultants



Looking Ahead

Discussion and Final Remarks

