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UN-Oceans statement[1]

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In its annual resolutions on oceans and the law of the sea, the United Nations General Assembly has continued to emphasize the urgency of addressing the current and projected effects of climate change and ocean acidification on the marine environment and on marine biodiversity and recommended a number of actions. Among these, the importance of raising awareness of the adverse impact of climate change on the marine environment and marine biodiversity.

The General Assembly has also encouraged States to enhance scientific activity and support marine scientific research to better understand the impacts of climate change on oceans and seas as well as ocean acidification, and develop ways and means of adaptation taking into account, as appropriate the precautionary approach and ecosystem approach. It has further called for enhanced international cooperation and capacity-building to support research activities.

The need for systematic collection of data to inform and apply integrated management approaches responding to predicted effects of climate change on marine living resources, the marine environment and dependent human communities and societies was already highlighted in Agenda 21. Similarly was

[1] UN-Oceans is an inter-agency mechanism on oceans and coastal issues that seeks to enhance the coordination, coherence and effectiveness of competent organizations of the United Nations system and the International Seabed Authority, in conformity with the United Nations Convention on the Law of the Sea. Currently there are twenty-two participating organizations in UN-Oceans.

the need to restructure and reinforce mechanisms to synthesize and disseminate information for related policy implementation.

Last year, the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) substantially updated our understanding of the effects of climate change on the oceans, reconfirming the essential role of the oceans in absorbing the excess of heat from the excessive warming of the planet due to greenhouse gas emissions, in the carbon cycle, and highlighting, once again, the threats associated with the "other CO_2 problem" - ocean acidification. It also provided a thorough assessment of impacts, adaptation gaps and vulnerability.

The report notes that ocean warming dominates the increase in energy stored in the climate system, and its impacts include sea-level rise, coastal erosion, changing currents, marine species redistribution and ecosystem degradation. These impacts hinder the development and, in some cases, the survival of human communities, in particular in developing countries including small island developing States, which have limited capacity to adapt.

Additionally, the IPCC indicated that the oceans absorb approximately 30 per cent of the emitted anthropogenic carbon dioxide, causing ocean acidification. Ocean acidification not only generates additional impacts on marine ecosystems and species, with substantial risks to fisheries and livelihoods, it also reduces the capacity of the oceans to absorb greenhouse gases.

Cognizant of the above challenges, members of UN-Oceans carry out a variety of activities aimed at increasing scientific understanding and international cooperation in relation to the impacts of climate change on oceans and ocean acidification.

As a follow-up to the decision of the General Assembly to establish the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects (the "Regular Process"), the first

global integrated assessment of the marine environment, prepared by experts, will be considered by the General Assembly this year. This first World Ocean Assessment aims to provide a baseline on the state of the marine environment, including socio-economic aspects, in order to enhance the scientific basis for policymaking. It draws on existing assessments, including the work of the IPCC. The Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations supports as secretariat the Regular Process, with technical and scientific support provided, in particular, by the United Nations Environment Programme (UNEP), Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO), as well as other UN-Oceans members.

The IOC-UNESCO has been at the forefront of the scientific debate that has expanded in scope from supporting ocean observations and detecting impacts to discussing potential mechanisms that may be used to mitigate and adapt to this new reality. IOC-UNESCO coordinates observation networks, such as the Global Sea Level Observing System and the Global Ocean Observing System. It is also involved in the International Ocean Carbon Coordination Project as well as in the World Climate Research Programme, coordinated by the World Meteorological Organization (WMO).

WMO coordinates other climate and ocean observation networks, for example the Global Climate Observing System, as well as research on atmosphere-ocean-land-ice interactions, with particular regard to the climate system.

With regard to ocean acidification, the International Atomic Energy Agency (IAEA) launched the Ocean Acidification International Coordination Centre in 2012, to advance the related science, build national capacity and communicate information on the impacts of ocean acidification and the contribution of the oceans to mitigating climate change. Targeted research aims to provide information on issues, such as the transport of carbon to the deep sea, the impact of climate change on the uptake of heavy metals and other pollutants, and changes in species calcification under different

climate scenarios. In addition, IAEA and the Food and Agriculture Organization of the United Nations (FAO) are undertaking a global assessment of the implications of ocean acidification on fisheries and aquaculture.

Pursuant to decision XI/18 of the Conference of the Parties to the Convention on Biological Diversity (CBD), the CBD Secretariat prepared, in collaboration with CBD Parties and an international group of scientists, a systematic review document on the impacts of ocean acidification on marine biodiversity and ecosystem functions.

UN-Oceans members are also involved in a number activities aimed at assisting and building the capacity of States to adapt to the impacts of climate change on the oceans and ocean acidification, as well as to achieve mitigation goals in the context of ocean activities.

For example, WMO, through its Members, provides key operational warnings of marine storms, including tropical cyclones, aimed at protecting people on the ocean and those living near the ocean.

IAEA has conducted capacity-building programmes on ocean acidification in multiple regions.

FAO is assisting States to increase the knowledge base on climate change implications for fisheries and aquaculture, and adaptation options relevant to the sector, including through workshops and projects. The FAO and other members of UN-Oceans also participate in the Global Partnership on Climate, Fisheries and Aquaculture (PaCFA). The FAO is also assisting the fisheries sector understand its own climate footprint and supports the sector in the transition towards energy efficiency and blue carbon potentials.

In relation to the impacts and adaptation needs of seaports and other coastal transport infrastructure, UNCTAD has been working on the implications of climate change for maritime transportation, since 2008. UNCTAD's research and analytical

work has significantly helped to raise awareness and advance the international debate.

With financial support from the Global Environment Facility (GEF), the United Nations Development Programme (UNDP) and the International Maritime Organization (IMO) are cooperating in a global effort to transition the shipping industry towards a lower carbon future, through the GloMEEP project which supports implementation of the mandatory regulations on global energy efficiency standards for the shipping sector under the International Convention for the Prevention of Pollution from Ships (MARPOL). These regulations were adopted by IMO to address greenhouse gas emissions in the international shipping sector, as reported to the SBSTA under the relevant agenda item.

IMO has also supported the work of the Contracting Parties to the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter in the regulation of carbon capture and sequestration in sub-sea geological formations and marine geoengineering activities.

UNEP and IOC-UNESCO are collaborating with international and local partners to develop ecosystem–based solutions to mitigate and adapt to impacts of climate change. Enhancing sequestration by and reducing emissions of “blue carbon” from carbon-rich coastal ecosystems provide opportunities for addressing mitigation challenges. Ecosystem-based adaptation and disaster risk reduction activities are developed for long-term climate change resilience and adaptive capacity of ecosystems and humans. Many of these activities are undertaken under the auspices of the Regional Seas Programme and in collaboration with other members of UN-Oceans and organizations.

Other capacity-building activities which increase the resilience of marine and coastal ecosystems to the effects of climate change and ocean acidification include the CBD Secretariat Sustainable Ocean Initiative and its regional workshops aimed at facilitating the implementation of the Strategic Plan for

Biodiversity 2011-2020 and achievement of Aichi Biodiversity Targets in marine and coastal areas.

These are, but a few, of the relevant activities that UN-Oceans members are undertaking to promote better knowledge of the oceans and to mitigate the causes and adapt to the impacts of climate change and ocean acidification. It can be noted that the broader activities of UN-Oceans members aimed at assisting States in the conservation and sustainable use of living marine resources and in the protection and preservation of the marine environment, while only partially presented here, are also essential tools to achieve adaptation and mitigation goals. Also to be noted are the activities of UN-Oceans members aimed at addressing wider impacts of climate change. For example, the United Nations High Commissioner for Refugees (UNHCR) is supporting a state-led consultative process that aims to formulate a protection agenda for cross-border displacement in the context of disasters and climate change.

Climate change, including its impacts on oceans, is one of the great challenges facing our world today. The need to reduce global greenhouse gas emissions is widely recognized, as is the need for enhanced adaptive measures in order to counteract the climatic consequences of greenhouse gas emissions, including on the oceans, and thereby ensure the well-being and safety of populations in coastal regions, and the maintenance of marine and coastal ecosystem services, trade and goods.

In conclusion, UN-Oceans members stand ready to further support international efforts to increase our common understanding of the ocean/atmosphere interface, the impacts of climate change on the oceans as well as of ocean acidification, including with a view to assisting States in the development and implementation of adaptation and mitigation efforts.