Communications guidance on the ocean and the 5-9 June 2017 Ocean Conference

The ocean is critically important for the WMO focus areas of weather, climate and water. The various WMO ocean activities should not be treated as silos: the WMO contribution to ocean issues is best captured as the observation to research to services value chain. All of WMO’s work on the ocean is based on partnerships, so communications and advocacy for increased coordination and investment is also best achieved through these partnerships. Key WMO messages are:

1. Because the ocean moves massive amounts of heat and nutrients around the planet and strongly influences the water and carbon cycles, it is a major driver of the world’s weather and climate. Knowledge based on expanded, coordinated and sustained ocean observations and research is therefore vital for protecting life and property from meteorological hazards and building greater climate resilience.

2. The ocean and coastal areas are major drivers of the global economy. More than 90 per cent of world trade is carried by sea and 40 per cent of humanity lives within 100 km of the coast. High-quality weather and climate marine services are therefore essential to support safety at sea, sustainable coastal development and adaptation to climate change.

3. The Arctic Sea and the Southern Ocean that surrounds Antarctica are greatly affected by global climate change. Melting sea-ice is facilitating the development of economic activities and the increase in maritime transport in the Arctic. WMO and its partners are launching the Year of Polar Prediction (2017-2019) to promote the observations and research needed to understand how the poles are changing and how to provide climate services for climate-sensitive activities and vulnerable communities.

4. The absorption of CO₂ is causing sea-water to acidify (become less alkaline). Together with sea-level rise and warming sea-water temperatures, acidification is damaging fisheries, coral reefs and coastal ecosystems. This threatens food security in a world with a growing demand for protein. Observations and research are essential to evaluating how these impacts affect coastal communities and marine ecosystems and how these impacts could be mitigated.

5. Chemical pollutants and sand and dust blow off the continents into the atmosphere and travel down rivers to be deposited in the ocean, affecting the chemistry of sea-water and causing significant harm to marine ecosystems. Increased monitoring and analysis is needed to mitigate this problem.
6. Small island developing states and territories are particularly vulnerable to sea-level rise, cyclones and other ocean-related hazards. Weather and climate services can help governments and communities to protect themselves.

7. WMO is supporting SDG 14 (Conserve and sustainably use oceans, seas and marine resources for sustainable development) by promoting observations, research, climate services and technology transfer.