

## Contribution to GSDR 2015 – chapter 3

### UNOOSA Input

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The ocean is Earth's life support. It provides more oxygen than all of the world's rainforests combined, and constitutes the primary source of protein for more than a billion people. The ocean regulates our climate, absorbs carbon dioxide, holds 97% of Earth's water, and supports the greatest abundance of life on our planet. More than 60% of the world's population lives on or near the coast.

However, the oceans are catastrophically threatened by climate change, pollution, and over-fishing, and effective ecosystem management is needed to reverse the negative trends affecting the oceans. Such management required accurate and immediately available data on a global scale to be able to detect ongoing changes for understanding, predicting, and managing our ocean resources.

In this regard, space technology and applications can provide near-real time observations of physical, biological, and chemical parameters that overcome the issues caused by trans-boundary nature of the ocean. Most ocean observations can be obtained from space-based platform. Examples of such observations include ocean bottom character, contaminants, dissolved nutrients, dissolved oxygen, fish abundance, heat flux, ice distribution, ocean colour, ocean acidity, optical properties, carbon dioxide partial pressure, salinity, sea level, stream flow, surface currents, surface waves, temperature, wind speed and direction, and zooplankton abundance.

Space technology also enables a range of solutions that can be applied to the management of biodiversity and wildlife. A particular example is the tracking of wildlife using Global Navigation Satellite Systems (GNSS).

The UN Programme on Space Applications implemented by the UN Office for Outer Space Affairs is organizing a series of annual workshops, symposiums and other meetings to bring together space technology and application developers and potential users to address the oceans- biodiversity-poverty eradication nexus.