THE OCEAN CONFERENCE
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Factsheet: Biodiversity

Biosphere

- The world's oceans contain somewhere between 500,000 and 10 million marine species.
- Marine phytoplankton (the plant components of the plankton community) produces 50 per cent of oxygen on Earth.
- Oceans have absorbed as much as half of all anthropogenic carbon emissions over the past two centuries. “Blue carbon” ecosystems such as mangroves, seagrass beds, tidal marshes and other marine and coastal vegetated ecosystems are among the most intense carbon sinks on the planet.
- The species diversity in the oceans ranges from 0.7 to 1.0 million species, with millions more bacteria, other microbes and viruses. Much of the biodiversity in the ocean, particularly in the deep sea and in the microbial ocean, is unknown, and up to 2,000 new species are described per year.

Loss of Biodiversity

- Coral reefs (both tropical and cold water) are very sensitive to ocean acidification, with 60 per cent of reefs currently threatened by a combination of ocean warming, acidification and other anthropogenic impacts, a number that will rise to 90 per cent by 2030 and about 100 per cent by 2050.
- About 20 per cent of the world’s coral reefs have been destroyed and show no immediate prospects for recovery; about 16 per cent of them were seriously damaged by coral bleaching in 1998, but of these about 40 per cent have either recovered or are recovering well.
- 1998 was declared the first major coral bleaching event. The second major global bleaching event was triggered by the El Niño of 2010. The third major global coral bleaching event was declared in 2015, and it has become the longest, most widespread and most damaging event recorded, impacting some reefs in consecutive years and it is continuing in 2017.
- The Great Barrier Reef of Australia, for example, has experienced its worst coral bleaching event in 2016, and bleaching has already begun again in 2017. The leading causes of coral bleaching are the above-average sea water temperatures caused by climate change.
- An estimated 20 per cent of global mangroves have been lost since 1980.
- Projected increasing temperatures in oceans will likely result in changes in distribution of marine species and can significantly influence the reproductive cycles of fish.
- Pressures on coastal and marine biodiversity continue to increase, as an estimated 40 per cent of the world’s population lives within 100km of the coast, putting unsustainable strain on coastal resources. Human population is projected to increase to more than 9 billion people by 2050, bringing increasing pressure marine and coastal resources.