



Intergovernmental
Oceanographic
Commission

**Statement on progress of
ocean observations**
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Bonn, Germany

The **Intergovernmental Oceanographic Commission (IOC) of UNESCO** is the only body in the UN System specializing in international cooperation and programmes in oceanographic research, ocean observations, services, capacity development and transfer of marine technology. We are a community of 148 Member States that have amongst our high-level objectives to increase resiliency to climate change and variability, through ocean observations and research that provide scientifically-founded services, adaptation, and mitigation strategies.

We lead the Global Ocean Observing System GOOS, which works closely with the Global Climate Observing System GCOS, which we cosponsor.

The ocean is an integral part of the climate system. 90% of excess heat in the climate is captured by the ocean, as is about half of the anthropogenic carbon emitted since the dawn of the industrial age. Oxygen in the ocean surface layer decreasing, sea water is becoming more acidic, and sea level is rising. We know this, and can make projections for the future, because of systematic ocean observations and science.

The Paris Agreement identifies the need for an effective and progressive response to the urgent threat of climate change on the basis research and systematic observations, and early warning systems informing climate services and supporting decision-making.

Attaining and sustaining global coverage remains the most significant challenge of the oceanic climate observing system. Substantial progress in implementation, and the common tracking of targets, has been achieved in recent years. The physical climate state of the upper half of the ocean is being routinely measured by autonomous and ship-based in situ platforms. Regional projects are developing new ocean observing capabilities, as well as stronger regional partnerships for sustaining these observations. However, additional effort is needed to ensure that fragile financial and organizational support for sustained ocean observations are reinforced, and that a growing set of Parties can participate in and benefit from GOOS and the oceanic component of GCOS.

Climate change, ocean acidification, and rising sea levels will directly impact our cities and coastal infrastructure, but also the ocean ecosystems upon which many vulnerable populations depend for food and livelihoods. We are now putting in place the systematic observations not only for physical ocean Essential Climate Variables, but also the biogeochemical and biological ECVs, such as live coral cover, that will allow us to track the impact of climate on the ocean, and inform policy processes that help us find adaptation solutions.

UNESCO-IOC stands ready to support Parties and its own Member States in improving ocean observations as a part of GCOS.