The Southern Ocean contribution to the United Nations Decade of Ocean Science for Sustainable Development

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Information Paper submitted by SCAR, Belgium, IAATO, the Netherlands and WMO

**on behalf of the Southern Ocean Task Force (coordinated by SCAR, and including the SCAR Antarctic Biodiversity Portal, SOOS, ICED, SCOR, EPB, IODE, IAATO, WCRP, CLIVAR, SORP, NIOZ, PewTrusts, WWF, RBINS and BELSPO1)**

Background

In 2017, the United Nations proclaimed a [Decade of Ocean Science for Sustainable Development](http://www.oceandecade.org/) (hereafter referred to as the UN Ocean Decade) from 2021 until 2030 to support efforts to reverse the cycle of decline in ocean health. To achieve this ambitious goal, this initiative aims to gather ocean stakeholders worldwide behind a common framework that will ensure ocean science can fully support countries in creating improved conditions for sustainable development of the world’s oceans. The initiative strives to strengthen the international cooperation needed to develop the scientific research and innovative technologies that can connect ocean science with the needs of society at the global scale.

The need for a Southern Ocean Action Plan

In the Southern Ocean, human presence, and the combined effects of various forms of pollution, transport, infrastructure, and the use of living resources, together with accelerated climate change at high latitudes, are exerting increasing pressures on the environment. These changes have the potential to alter the role of the Antarctic and Southern Ocean in regulating global climate and other systems, as well as impacting a host of other important ecosystem services. Being well adapted to stable environmental conditions, with unique traits, Antarctic species are considered more vulnerable to environmental perturbations and pollutants, compared to species from more northerly latitudes.

Since the Southern Ocean community of stakeholders is globally unique in its operation within the Antarctic Treaty System, which is based entirely on scientific understanding and environmental protection, it is imperative to strengthen international collaborations to increase scientific understanding of the Antarctic region. Underlying the UN Ocean Decade is the need for data management to be aligned with the FAIR (Findable, Accessible, Interoperable, Reusable) principles to achieve the ambitious data objectives of the UN Ocean Decade.

The UN Ocean Decade Societal Outcomes align strongly with the remit of the Antarctic Treaty and its Committee for Environmental Protection. The Southern Ocean community therefore recognises the need to develop and implement a coordinated, international plan that builds on our existing understanding of how human interaction with the Southern Ocean can benefit people and societies in ways that will also contribute to the protection and conservation of the unique characteristics of these regions.

The Southern Ocean Action Plan will, as part of the UN Ocean Decade, deliver in achieving the UN Agenda 2030 and its Sustainable Development Goals (SDGs) in a polar context.

The Southern Ocean Action Plan process

Based on the recommendations in the Implementation Plan of the United Nations Decade of Ocean Science for Sustainable Development (Version 2.0, July 2021), the Southern Ocean community engaged in a stakeholder-oriented process to develop the [Southern Ocean Action Plan](https://www.sodecade.org/action-plan/southern-ocean-action-plan/). This process engaged a broad community, which includes the scientific research community, the business and industry sector, and national and international management bodies. This inclusive approach is a key pillar of the Southern Ocean contribution to the UN Ocean Decade and will be prioritised throughout its implementation.

As part of this global effort, the [Southern Ocean Task Force](https://www.sodecade.org/about/) (coordinated by SCAR, and including the SCAR Antarctic Biodiversity Portal, SOOS, ICED, SCOR, EPB, IODE, IAATO, CLIVAR, WCRP, SORP, NIOZ, PewTrusts, WWF, RBINS and BELSPO[[1]](#footnote-1)) identified the needs of the Southern Ocean community to address the challenges related to the unique environmental characteristics and governance structure of the Southern Ocean. Through this community-driven process, we identified synergies within the Southern Ocean community and beyond in order to elaborate an Action Plan that provides a framework for Southern Ocean stakeholders to formulate and develop tangible actions and deliverables that support the [UN Ocean Decade vision](https://www.oceandecade.org/about#top_of_page).

The Southern Ocean process sheds light on the cross-cutting nature of constraints affecting the management of, and activities within, the Southern Ocean, and the resulting mismatch between the needs of society and research interests and outputs. These include the need for (i) more and better-coordinated research facilities, (ii) increased access to data, infrastructure and resources, and (iii) improved efficiency of mechanisms for collaborations between different sectors (academia, government, industry, etc.)

The way forward

Through the publication of the Southern Ocean Action Plan in April 2022, the Southern Ocean Task Force aims to mobilise the Southern Ocean community and inspire all stakeholders to seek engagement and leverage opportunities to deliver innovative solutions that maintain and foster the unique conditions of the Southern Ocean. This framework provides an initial roadmap to strengthen links between science, industry and policy, as well as to encourage internationally collaborative activities in order to address existing gaps in our knowledge and data coverage.

The Southern Ocean Action Plan is available to download at: <https://www.sodecade.org/action-plan/southern-ocean-action-plan/>

1. SOOS – Southern Ocean Observing System; ICED – Integrating Climate and Ecosystem Dynamics in the Southern Ocean programme; SCOR – Scientific Committee on Oceanic Research; EPB – European Polar Board; IODE – International Oceanographic Data and Information Exchange; IAATO – International Association of Antarctica Tour Operators; WCRP – World Climate Research Programme; CLIVAR – Climate and Ocean -Variability, Predictability and Change; SORP – Southern Ocean Regional Panel; NIOZ – Royal Netherlands Institute for Sea Research; WWF – World Wide Fund for Nature; RBINS – Royal Belgian Institute of Natural Sciences; BELSPO – Belgian Federal Science Policy Office. [↑](#footnote-ref-1)