

Biodiversity, Key Pressures and Potential Conservation Measures in Areas Beyond National Jurisdiction of the Southeast Pacific

The ocean covers over 70% of the planet and is vital for all life. The ocean, including areas beyond national jurisdiction (ABNJ) regulates the global climate, hosts immense biodiversity, and provides essential resources and ecosystem services, supporting livelihoods and socio-economic activities.

ABNJ and coastal waters are ecologically connected through migratory and circulatory connectivity, whereby disturbances to marine biodiversity have effects far beyond the area of impact. This connectivity is essential to healthy marine ecosystems.

The environmental impacts of socio-economic activities in the ocean, including in ABNJ, are especially critical for a range of countries, where large parts of the population rely on marine resources for food security and their livelihoods. Connectivity must therefore be recognised in governance approaches and there is an urgent demand to rethink how to effectively conserve and sustainably manage the ocean as a whole.

Measures to support conservation efforts must address cumulative pressures on the ocean, including climate change, as well as connectivity to achieve biodiversity protection. Moreover, the complexity and dynamic nature of the ocean, including in ABNJ, requires that conservation efforts acknowledge uncertainty, include options to address it or adapt swiftly to new scientific information, and consider the three-dimensional space of the ocean. Integrated ocean management is increasingly important to advance the conservation and sustainable use of marine biodiversity in ABNJ.

There is considerable information available about the key components of biodiversity in the Southeast Pacific as well as pressures stemming from socio-economic activities. There exists a range of measures to support conservation efforts available for the region to achieve biodiversity protection.

Linking biodiversity components and key pressures in the Southeast Pacific to potential measures to support conservation efforts

Seabed habitats (benthic)



Hydrothermal vents located along the Galapagos Fault, Southeast Pacific Rise, Pacific-Antarctic Ridge and Chilean mountain range; **Seamounts** that are ubiquitous (8% of the world's seamounts*)

* FAO zone 87

Key Pressures:

- Physical disturbance and destruction of the seabed caused by human activities such as **fishing (bottom trawling for commercial fisheries, offshore prospecting and mining; introduction of non-native species; climate change affects the physical-chemical environment** of benthic habitats and native species.

Potential Measures to Support Conservation Efforts:

- Vulnerable Marine Ecosystems
- Climate change mitigation measures
- Restrictions on deep-sea mining or Areas of Particular Environmental Interest
- Marine Protected Areas (MPAs) (incl. networks)
- Fishery conservation measures
- IMO Convention on ballast water management

The Southeast Pacific comprises diverse oceanographic systems (**Eastern Equatorial Pacific, Transition zone of the Humboldt Current System, South Pacific Gyre, Eastern sub-Antarctic Pacific**) translate into food web structures, fish productivity and megafaunal habitats.

Key Pressures:

- Pollution stems from **maritime transport, offshore prospecting and mining activities, land-based activities and dumping of waste; introduction of non-native species affecting ecosystem functioning; and climate change** may change trophic webs in the sea, species and communities may shift to new areas (habitats and feeding grounds are affected).

Potential Measures to Support Conservation Efforts:

- Preventing discharges and pollution from vessels
- Regulations on chemical use
- Particularly Sensitive Sea Areas (PSSAs)
- Climate change mitigation measures
- Waste management from land-based sources
- Adaptive management approaches
- IMO convention on ballast water management
- MPAs (incl. networks)

Water column habitats (pelagic)



Fish



The main species targeted by fisheries in the Southeast Pacific are **tuna** and **Chilean jack mackerel**.

Key Pressures:

- **Commercial fishing** is the most significant activity in terms of volume of fish and other non-fish species extracted in ABNJ.
- **Spatial distribution, and possibly abundance of targeted species is expected to change due to impacts from climate change.**

Potential Measures to Support Conservation Efforts:

- Prevention of discharges and pollution from vessels
- Regulations on chemical use
- Climate change mitigation measures
- Waste management from land-based sources
- MPAs (incl. networks and other Area Based Management Tools (ABMTs))
- Fishery conservation measures such as bycatch mitigation, Total Allowable Catch or gear restrictions

The **Southeast Pacific** has approximately **30 species of cetaceans** (whales), **8 species of eared seals** (family Otariidae) (3 Least Concerned, 2 Endangered, 2 Near Threatened, and 1 Vulnerable)**, **2 species of true seals** (Phocidae) (both Least Concerned) and **5 species of sea turtles**.

** according to the categorizations of the International Union for the Conservation of Nature (IUCN)

Key Pressures:

- Threats in ABNJ are interaction with **commercial fisheries** (bycatch and entanglement, competition for food), **marine pollution, ship strikes, underwater noise.**
- **Spatial distribution, and possibly abundance of marine mammals and turtles is expected to change due to impacts from climate change.**

Potential Measures to Support Conservation Efforts:

- Fishery conservation measures (incl. bycatch mitigation and removal of ghost gear)
- PSSAs
- Regulation of navigation, e.g., routes, noise restrictions
- Climate change mitigation measures
- Regulations on chemical use
- Prevention of discharge and pollution from vessels
- MPAs (incl. networks)
- Waste management from land-based sources

Marine Mammals & Turtles



Seabirds



There are four major groups of seabird species throughout the Pacific Ocean: 23 species in the Antarctic (all with circumpolar distribution), 39 in the sub-Antarctic, 52 in the subtropics and 51 in the tropics. **Two places in the region should be mentioned in terms of seabirds moving to ABNJ: the Galapagos and Juan Fernandez archipelagos.**

Key Pressures:

- Threats are interaction with **commercial fisheries** (bycatch and entanglement), impacts of **climate change on large-scale ocean productivity and circulation patterns and disruption to migration systems or food availability** (depletion due to overfishing) and **ingestion of plastics.**

Potential Measures to Support Conservation Efforts:

- Bycatch mitigation measures
- Waste management from land-based sources
- Climate change mitigation measures
- MPAs (incl. networks and other ABMTs)

The **STRONG High Seas** project, coordinated by the Institute for Advanced Sustainability Studies (IASS) and implemented together with six partners based in Europe, South America, and Africa, and its regional partners the Secretariat of the Permanent Commission for the South Pacific (CPPS) and the Abidjan Convention Secretariat, is a five-year project that aims to strengthen regional ocean governance for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.

For more information visit: www.prog-ocean.org/our-work/strong-high-seas/

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