



National Coastal and Marine Spatial Biodiversity Plan

Securing South Africa's coastal and marine biodiversity to support development and sustainable resource use

South Africa's first national spatial biodiversity plan for the marine and coastal environment is an important milestone towards ensuring that the country's wealth of coastal and marine biodiversity assets and ecological infrastructure are effectively managed and conserved for the benefit of people and the economy. The spatial biodiversity plan is developed using systematic biodiversity planning, which uses a wide range of data about ecosystems, species and ecological processes, as well as socio-economic activities in different sectors, to identify a portfolio of areas that are important for biodiversity. The plan is designed to provide input into a range of policy, planning and implementation processes, such as multi-sectoral Marine Spatial Planning, integrated coastal management, environmental impact assessments, restoration initiatives and formal protection of the ocean.



**forestry, fisheries
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Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

SANBI

Biodiversity for Life

South African National Biodiversity Institute



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What is the National Coastal and Marine Spatial Biodiversity Plan?

The National Coastal and Marine Spatial Biodiversity Plan is a spatial plan for the natural environment, intended to inform planning and decision-making in support of sustainable development. It identifies a portfolio of biodiversity priority areas that are important for conserving a representative sample of all coastal and marine ecosystem types and species, and for maintaining ecological processes and ecological infrastructure.

The overall goal of the National Coastal and Marine Spatial Biodiversity Plan is to provide the best available science to support biodiversity conservation and sustainable development in South Africa's marine environment, for the benefit of current and future generations. The key objectives are:

- To promote evidence-based policy, planning and decision making for South Africa's marine biodiversity based on the best available data and methods.
- To identify areas in a spatially efficient design where biodiversity conservation or restoration need to be prioritised.
- To take into account the needs of a range of users of our oceans while supporting appropriate management of marine biodiversity across the seascape.

The National Coastal and Marine Spatial Biodiversity Plan has two main elements:

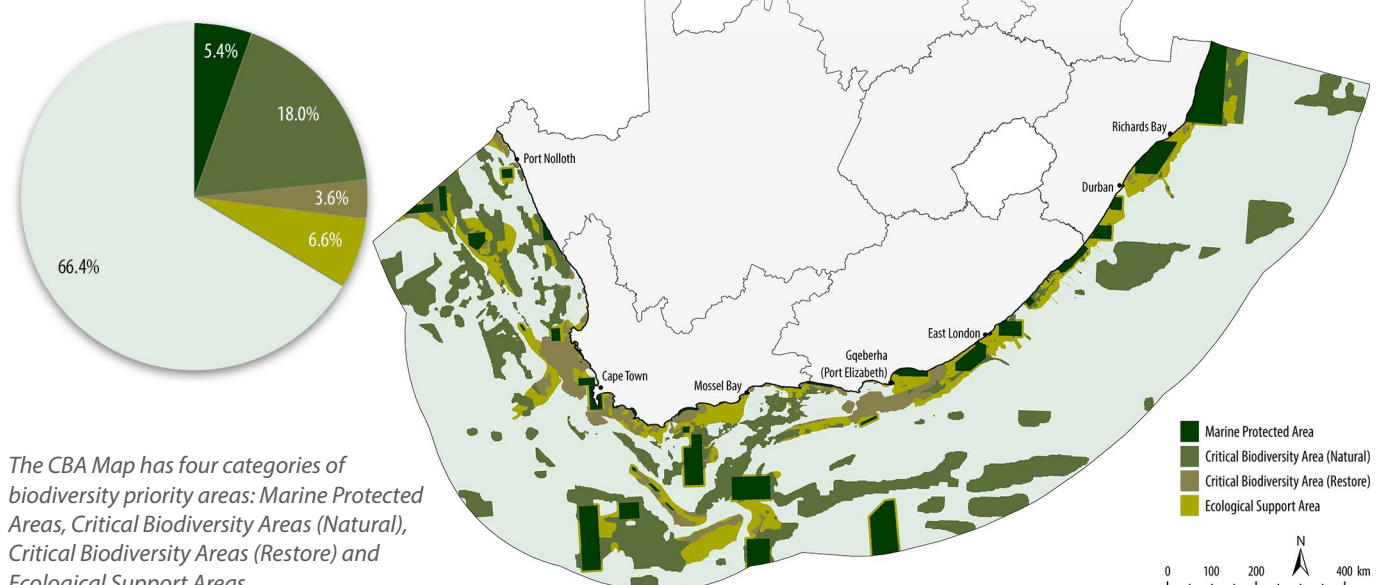
- A map of Critical Biodiversity Areas and Ecological Support Areas, called the **National Coastal and Marine CBA Map**.
- A set of **sea-use guidelines**, which give details about which sea-use activities are compatible with each category of the CBA Map.

How was the Coastal and Marine CBA Map developed?

The National Coastal and Marine CBA Map was developed using **systematic biodiversity planning** – an approach used for South Africa's land-based CBA Maps and in other countries to identify areas that are important for biodiversity. Systematic biodiversity planning uses the best available data to identify areas that meet targets for conserving different aspects of biodiversity, including a representative sample of all ecosystem types, viable populations of species, and the ecological and evolutionary processes that allow this biodiversity to persist over time. The Coastal and Marine CBA Map was developed using 976 spatial datasets for different biodiversity features, including detailed maps of ecosystem types, areas of importance for species and ecological processes, like nursery areas for fish.

Systematic biodiversity planning also ensures that, wherever possible, potential conflicts between conservation and other uses of the ocean are minimised. Spatial information on the activities of 19 marine economic sectors, such as fisheries, petroleum, mining, aquaculture and transport, were used to guide the selection of priorities towards areas of least intensive use by these sectors. There was also a focus on spatial efficiency, in other words ensuring that the portfolio of priority areas meets biodiversity targets in the smallest area possible, especially in parts of the ocean where there are many other users.

For many years, CBA Maps have been produced and widely used for South Africa's terrestrial and freshwater realms. With the addition of the Coastal and Marine CBA Map there is now wall-to-wall coverage of CBA Maps for South Africa's whole mainland territory and maritime domain.

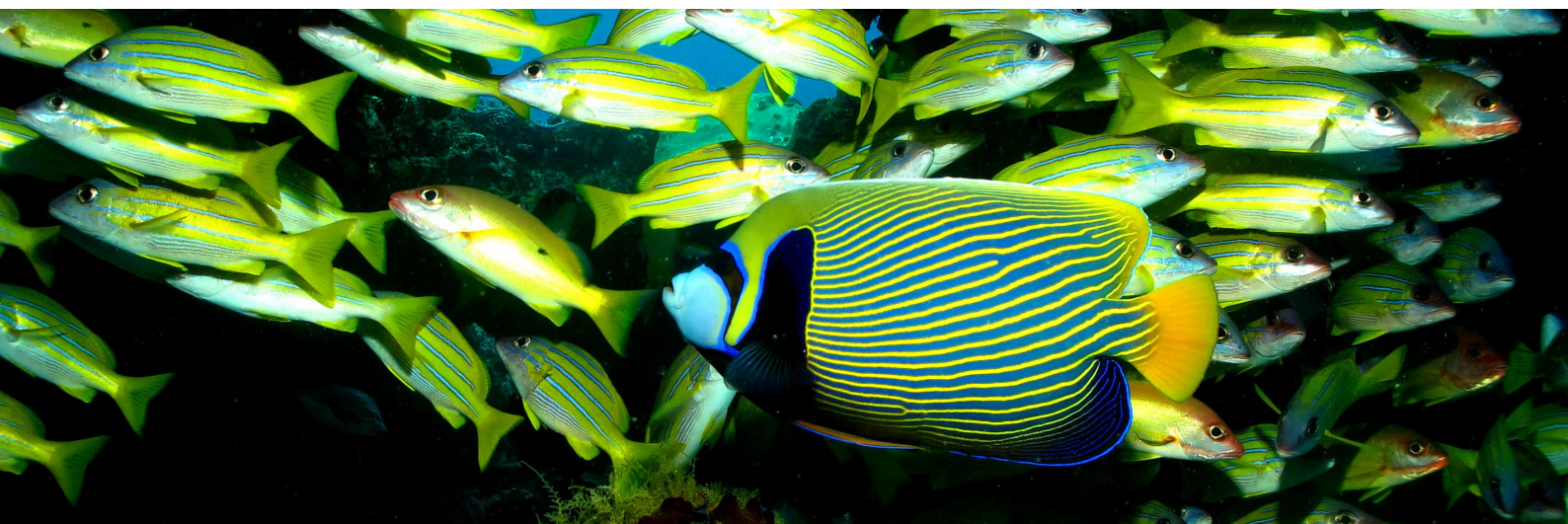


Sea-use guidelines inform planning and decision-making

The sea-use guidelines that accompany the CBA Map aim to provide decision-makers and ocean users with guidance on how to maintain the integrity of areas that are important for coastal and marine biodiversity. The sea-use guidelines can be used in Marine Spatial Planning (MSP), Integrated Coastal Management (ICM) and Environmental Impact Assessments (EIAs). They were developed by carefully assessing the potential impacts of various sea-use activities on different biodiversity features, in order to provide science-based guidance on the type of activities that can co-exist with biodiversity in each category of the CBA Map.

Each CBA Map category has an overall management objective related to its desired ecological condition. Sea-use activities were assessed as compatible, not compatible or as having restricted compatibility with the management objective of each CBA Map category. "Restricted compatibility" means that the activity can be compatible subject to certain restrictions or limitations on how it is undertaken. For example, longline fishing may be acceptable in a CBA Natural with some rules about the type of gear used so that bycatch of seabirds is reduced.

CBA Map category	Description	Management objective	Examples of compatible activities
Marine Protected Area	Areas that are formally protected in terms of the Protected Areas Act.	As per each Marine Protected Area's management plan.	Ecotourism, beach recreation, protection of sites of heritage importance and seascape value, fisheries resource protection.
Critical Biodiversity Area (Natural)	CBAs that are in a natural condition. Together with MPAs, CBAs are required to meet biodiversity targets so that a representative sample of coastal and marine biodiversity can persist into the future.	Maintain in natural or near natural ecological condition.	Ecotourism, beach recreation, protection of sites of heritage importance and seascape value, fisheries resource protection. Some fisheries and other non-destructive activities have restricted compatibility.
Critical Biodiversity Area (Restore)	CBAs that are no longer in a natural ecological condition and that should be restored. Together with MPAs, CBAs are required to meet biodiversity targets so that a representative sample of coastal and marine biodiversity can persist into the future.	Improve ecological condition, and, in the long-term, restore to a natural or near-natural condition or as close to that as possible. As a minimum, avoid further deterioration in ecological condition and maintain options for future restoration.	
Ecological Support Area	ESAs are areas important primarily for ecological processes and ecosystem services. ESAs are often highly used and may in some cases already be heavily impacted by sea-use activities, but nevertheless retain importance from a biodiversity perspective. They play a supporting role to CBAs and MPAs.	Avoid further deterioration in ecological condition.	All sea-use activities are either compatible (e.g. cultural and recreational activities, most fisheries) or have restricted compatibility (e.g. trawling, linefishing, mining)



976

spatial datasets
for biodiversity
features

Impacts from
31 pressures on
biodiversity
considered

Sea-use conflicts
minimised with
19 marine
economic
sectors

Biodiversity priority
areas make up
33% of the
EEZ

Some applications of the National Coastal and Marine Spatial Biodiversity Plan

Protected Area Expansion Strategy

The National Protected Area Expansion Strategy 2016 sets out South Africa's aim to increase the Marine Protected Area estate to 10% of the Exclusive Economic Zone. The National Coastal and Marine CBA Map provides a key input to the process of identifying areas for expanding the Marine Protected Area (MPA) network, although it is not intended to be used directly as a map of priorities for protected area expansion – such prioritisation would need to consider a range of other factors and requirements and would require additional stakeholder engagement.

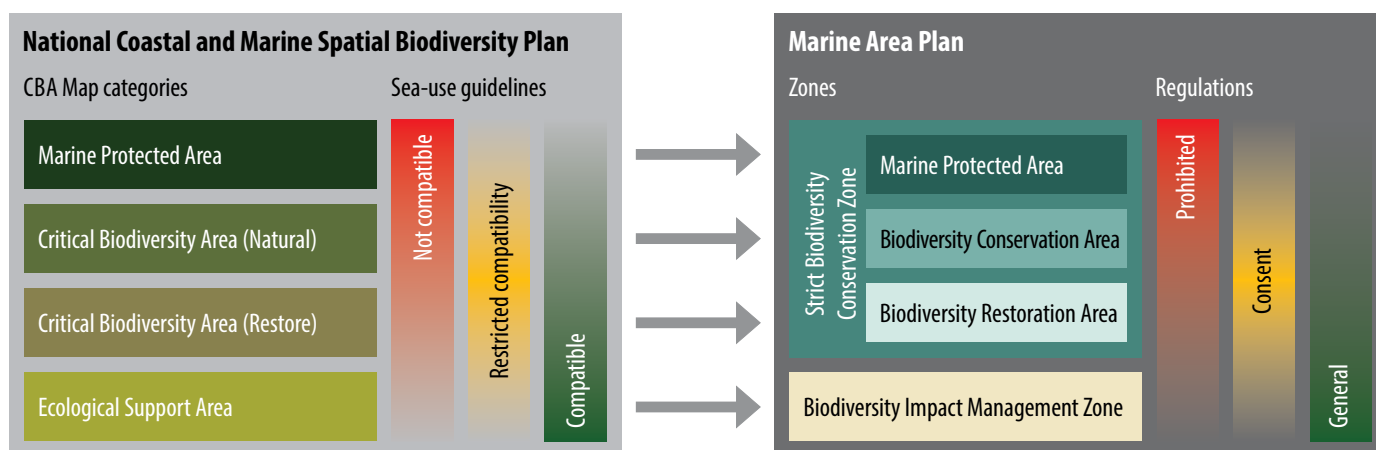
Environmental authorisations

The National Coastal and Marine CBA Map can be used to inform the environmental authorisation process under the National Environmental Management Act. For example, it can be used during Environmental Impact Assessments as

part of assessing the likely biodiversity impacts of a proposed development. Developments that may compromise the management objectives of the CBA Map categories can then be subject to mitigation measures, so that impacts are avoided, minimised, restored or offset.

Marine Spatial Planning

The National Coastal and Marine CBA Map and sea-use guidelines provide the basis for the biodiversity sector's input into the multi-sectoral Marine Spatial Planning (MSP) process that is undertaken according to the Marine Spatial Planning Act. The categories in the CBA Map inform the biodiversity-related zones in the Marine Area Plans developed through MSP, and the sea-use guidelines inform the management regulations for those zones. Marine Protected Areas are managed according to their gazetted regulations. The MSP process includes intensive stakeholder engagement and negotiations with all sea-use sectors.



For more information:

Harris, L.R., Holness, S.D., Kirkman, S.P., Sink, K.J., Majiedt, P. & Driver, A. 2022. A robust, systematic approach for developing the biodiversity sector's input for multi-sector Marine Spatial Planning. *Ocean and Coastal Management* 230, 106368. <https://doi.org/10.1016/j.ocecoaman.2022.106368>

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