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Proposed South Coast Marine Park



PLAN FOR OUR PARKS



Blue devil. Photo – Peter Nicholas

# Ecological, cultural, social and economic values of the south coast

The marine environment of Western Australia’s south coast is unique and includes outstanding natural values. The region supports diverse marine habitats, plants and animals, and is home to the Great Southern Reef – a system of temperate reefs dominated by kelp forests spanning more than 8000km from Kalbarri in Western Australia’s Midwest, across Australia’s southern coastline, and north as far as the subtropical waters of northern New South Wales. Australia’s south-west marine environment is a global biodiversity hotspot, and the natural and cultural values found here provide a range of social and economic benefits, including generating employment and revenue for the region.



Above Fishing off Wharton Beach. Photo – Tourism WA





## Ecological values

### Seagrasses

Seagrass meadows are one of the most productive of all marine ecosystems. They are critically important because they absorb carbon dioxide emissions and oxygenate the oceans, provide habitat and nursery areas for recreationally and commercially important species, are a source of food and shelter for many marine organisms, stabilise sediments and recycle nutrients.

There are about 70 species of seagrass worldwide, of which at least 30 are found in Australia. The south-west region has some of the highest seagrass diversity globally and approximately half of the species found here occur nowhere else in the world. At least 17 species have been recorded throughout the Recherche Archipelago, including the *Posidonia australis* complex seagrass meadows, which are listed as a priority ecological community on the south coast. The clear coastal waters off places like Esperance Bay allow seagrasses to grow to depths of more than 40 metres in some areas.

### Macroalgae (seaweeds)

Macroalgae, along with seagrasses, form the basis of complex food webs and play an important role in the ecology of marine ecosystems on the south coast. As well as being a major food source for a range of animals, they provide habitat and refuge for marine organisms, absorb carbon dioxide emissions, oxygenate the oceans, and help to consolidate reefs and substrate.

The south-west region supports some of the highest diversity of macroalgae globally, with many of the species found here occurring nowhere else in the world. Extensive macroalgal communities, such as kelp beds, occur throughout the Recherche Archipelago and at least 240 species have been recorded in the area.

### Cetaceans (whales and dolphins)

Australia's waters are home to more than half the world's 86 species of cetaceans. Some of these species are permanent residents while others are occasional visitors, migrating from their summer feeding grounds in Antarctic waters to the warmer waters off the Australian coast during winter.

Threatened species such as the southern right whale form large aggregations in coastal embayments along the Western Australian south coast, including Doubtful Island Bay, east of Albany, and Israelite Bay, east of Esperance. During the 'over-wintering months' (May to November) breeding, calving and rearing of young takes place in these areas.

The Bremer Canyon provides an important feeding area for cetaceans. Between January and April each year the area is a hotspot for the largest known congregation of killer whales (orcas) in the Southern Hemisphere, as they migrate to hunt for prey such as fish, squid, seabirds and other marine mammals.

### Pinnipeds (seals and sea lions)

There are 33 species of pinnipeds worldwide and 10 occur in Australian waters. Of these 10, only the Australian sea lion, Australian fur seal and New Zealand fur seal are found on the Australian mainland. The Australian sea lion is endemic to southern Australia and listed as threatened, mainly due to the slow recovery of populations following commercial sealing in the 19th century.

Islands and rocky outcrops along the Western Australian south coast provide important breeding and haul-out areas for the Australian sea lion and New Zealand fur seal. The islands of the Recherche Archipelago support the largest breeding colonies in Western Australia for both species.

### Seabirds and shorebirds

The islands off the Western Australian south coast support some of the most significant and diverse seabird breeding populations in Australia. Of the 110 seabird species found nationally, at least 81 occur in the south-west region. The Recherche Archipelago has been identified by Birdlife International as an Important Bird Area for seabirds and resident waterbirds. Several threatened species use the area while foraging including the wandering, grey-headed and black-browed albatross and the giant petrel. The Archipelago also provides important nesting habitat for breeding populations of seabirds and waterbirds, including threatened species such as the Recherche Cape Barren goose, and supports the only breeding population of great-winged petrels in Australia.

Beaches along Western Australia's south coast provide important nesting habitat for shorebird species, such as the fairy tern and hooded plover. The west coast subspecies of hooded plover is listed as a priority species under the *Biodiversity Conservation Act 2016*.

### Fish, including sharks and rays

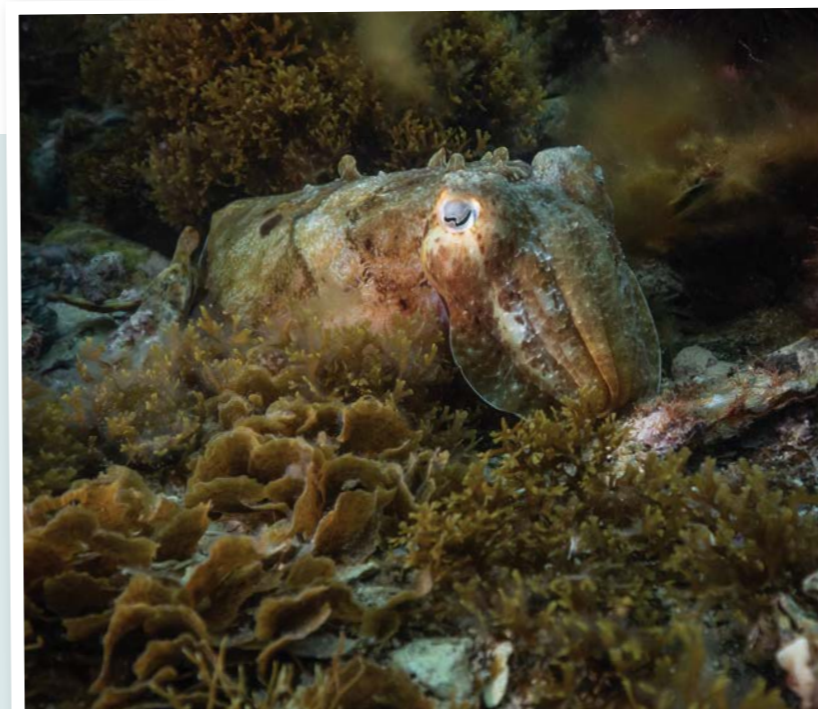
Unique and diverse fish communities are found along the Western Australian south coast, including many species important to commercial and recreational fishers such as Western Australian salmon, Australian herring, Western Australian pilchards, snapper, Bight redfish, harlequin fish and King George whiting. The region supports a high proportion of endemic species, such as the iconic western blue groper and weedy seadragon. More than 200 species have been recorded in the south-west region.

### Marine invertebrates

Several species of marine invertebrates important to commercial and recreational fishers occur along the Western Australian south coast, such as rock lobster, abalone and deep-water crabs.

Underwater vertical rock walls found in the region support rich and colourful invertebrate communities, popular with divers.

The Recherche Archipelago supports a high diversity of marine invertebrates. Sponge gardens found throughout the Archipelago are made up of diverse communities of sponges, soft corals, ascidians, sea stars, bryozoans, hydroids and sea anemones. The sponge fauna of the Archipelago represents about 20% of the described species in Australia.



Previous page Golden kelp. Photo – Ocean Imaging

Above Fairy tern. Photo – DBCA

Left Cuttlefish. Photo – Ocean Imaging





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## Cultural and heritage values

Aboriginal people have had connection in the Western Australian south coast for tens of thousands of years. Native title or traditional ownership has been recognised for several Aboriginal groups throughout the region, including the Wagyl Kaip and Southern Noongar Traditional Owners, and the Esperance Nyungar, Ngadju People and Mirning People native title holders. The many registered Aboriginal heritage sites along the south coast and continued connection to these places confirm the importance of the coastal and marine environment to Aboriginal people.

There are a range of heritage sites throughout the region associated with 17th century European exploration, sealing and whaling industries, shipping, pastoralism and settlement of the area, and even piracy! The region's Aboriginal cultural heritage values and past European exploration, industry and settlement contribute to the diverse history of the area.

## Social and economic values

### Fishing

Recreational fishing is a popular activity carried out along the Western Australian south coast. It is of significant economic value to local communities. Some of the most common methods include beach and rock fishing, boat fishing, spearfishing, crayfishing and abalone fishing.

Charter fishing is another popular activity catering for recreational fishers and tourists alike, which generates income for local communities.

Commercial fishing on the south coast is an essential local industry on which many people depend. The major commercial fisheries in the region include the south coast crustacean fishery, the greenlip and brownlip abalone fishery, the south coast estuarine fishery, the south coast salmon fishery, the south coast purse seine fishery, the southern demersal gillnet and longline fishery, and fisheries for scalefish and squid. Other commercial fisheries that operate on the south coast include the

octopus, specimen shell, marine aquarium and south coast trawl fisheries. Shellfish, including oysters, mussels and abalone are also key species for aquaculture development on the south coast.

### Recreational activities and tourism

Recreation and tourism in the marine environment are extremely important to regional and local economies on the Western Australian south coast.

Diving and snorkelling, surfing, four-wheel driving, camping, wildlife watching, beachcombing, swimming, kayaking and boating are some of the most popular recreational activities carried out along the coast.

Marine ecotourism activities, including dive charters and whale and dolphin watching, are increasingly popular and enable visitors to better appreciate and understand the region's natural values.



Above Diving. Photo – Peter Nicholas

## More information

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**Header photos:** Leafy seadragon. Photo – Peter Nicholas. Southern right whales. Photo – Peter Nicholas/DBCA. Fishing on the south coast. Photo – Tourism WA. Information current at September 2021. This publication is available in alternative formats on request.