



THE NORTH-WEST MARINE BIOREGIONAL PLAN

BIOREGIONAL PROFILE

ABBREVIATIONS AND ACRONYMS

GLOSSARY

BACK COVER



A DESCRIPTION OF THE ECOSYSTEMS, CONSERVATION VALUES AND USES
OF THE NORTH-WEST MARINE REGION



Australian Government

Department of the Environment, Water, Heritage and the Arts

ABBREVIATIONS AND ACRONYMS

ABS	Australian Bureau of Statistics
ACAP	The Agreement on the Conservation of Albatross and Petrels
ACMA	Australian Communications and Media Authority
AFMA	Australian Fisheries Management Authority
AMSA	Australian Maritime Safety Authority
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZECC TFMPA	Australian and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas
APEC	Asia-Pacific Economic Cooperation
APPEA	Australian Petroleum Production and Exploration Association
ATO	Australian Taxation Office
AWSG	Australasian Wader Studies Group
BPA	Broome Port Authority
BPC	Border Protection Command
CALM	Department of Conservation and Land Management – Western Australia
CAMBA	<i>Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment 1986</i>
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on Migratory Species (also known as the <i>Convention on the Conservation of Migratory Species of Wild Animals</i> or the Bonn Convention)
COP	Conference of the Parties
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DEC	Department of Environment and Conservation – Western Australia
DEH	Department of the Environment and Heritage
DEW	Department of the Environment and Water Resources
DEWHA	Department of the Environment, Water, Heritage and the Arts

DIA	Department of Indigenous Affairs,
DoF	Department of Fisheries - Western Australia
DoIR	Department of Industry and Resources – Western Australia
DPA	Dampier Port Authority
DPI	Department of Planning and Infrastructure – Western Australia
DITR	Department of Industry, Tourism and Resources
EA	Environment Australia
EEZ	Exclusive Economic Zone
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FAO	United Nations Food and Agriculture Organisation
FPSO	Floating Production, Storage and Offloading vessel
FSO	Floating Storage and Offloading vessel
GA	Geoscience Australia
GBRMPA	Great Barrier Reef Marine Park Authority
GVP	Gross Value of Production
IMCRA	Integrated Marine and Coastal Regionalisation of Australia
IOSEA	Marine Turtle MoU Indian Ocean - South-East Asian Marine Turtle Memorandum of Understanding
IOTC	Indian Ocean Tuna Commission
IRC	International Risk Consultants Pty Ltd
IUCN	International Union for the Conservation of Nature and Natural Resources (World Conservation Union)
IWC	International Whaling Commission
JAMBA	<i>Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds in Danger of Extinction and their Environment 1974</i>
KLC	Kimberley Land Council
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MARPOL	<i>International Convention for the Prevention of Marine Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto</i>
MoU	Memorandum of Understanding

MPA	Marine Protected Area
Mtpa	Million tonnes per annum
NAILSMA	North Australian Indigenous Land and Sea Management Alliance
NWMR	North-west Marine Region
NWSV	North West Shelf Venture
NT	Northern Territory
ONT	Office of Native Title
PHPA	Port Hedland Port Authority
PPAA	Pearl Producers Association Australia
QPWS	Queensland Parks and Wildlife Service
QEPA	Queensland Environmental Protection Agency
Ramsar	<i>Convention on Wetlands of International Importance (Ramsar Convention 1971)</i>
ROKAMBA	<i>Agreement between the Government of Australia and the Government of the Republic of Korea- on the Protection of Migratory Birds, 2007</i>
SEA_ME_WE3	South East Asia, Middle East and Western Europe submarine cable 3.
TACC	Total Allowable Commercial Catch
Tcf	Trillion cubic feet
UNCLOS	United Nations Convention on the Law of the Sea
WA	Western Australia
WCS	Wildlife Conservation Society

GLOSSARY

abyssal plain

The flat, relatively featureless bottom of the deep ocean at a depth greater than 2000 m. The average depth of the abyssal floor is about 4000 m.

amphipod

A small crustacean belonging to the order Amphipoda.

anthropogenic

Of human origin or resulting from human activity.

ascidians

Members of the class Ascidiacea (sea squirts).

bathymetry

The measurement of ocean depths to determine the sea floor topography.

bêche-de-mer

See trepang/sea cucumber.

benthic/benthos

Refers to all marine organisms living on or within the seafloor.

biodiversity

The totality of genes, species, and ecosystems in a region or the world. The variability among living organisms from all sources (including terrestrial, marine and other ecosystems), which includes diversity within species and between species and diversity of ecosystems.

biofouling

Biofouling (biological fouling) is the accumulation of plants, animals and micro-organisms on submerged structures such as ships' hulls, wharves, oil rigs, and even on other organisms.

biogeographic

Relating to large regions with distinct fauna and flora.

biological or ecological productivity

The ability of an ecosystem to produce, grow or yield products such as food.

biomass

The quantity of organic matter within an ecosystem (usually expressed as dry weight for unit area or volume).

biome

Community type e.g. biomes of demersal fish species.

bioregion (see also province/provincial bioregion)

A large area of the ocean that is classified as having similar types of plants, animals and ocean conditions, compared to other similarly-sized areas. For the purpose of this document, 'bioregion' means provincial bioregion as defined in the Integrated Marine and Coastal Regionalisation of Australia (IMCRA) Version 4.0.

biota

All of the organisms at a particular locality.

bioturbation

The disturbance and mixing of sediment layers by biological activity (plants or animals).

by-catch

Species taken incidentally in a fishery where other species are the target.

bryozoans

Sessile, filter-feeding marine animals. The majority are encrusting, forming flat sheets that spread out over the substrate, but others grow upwards into the water column.

carbonate reefs/banks

Reefs or banks whose structure primarily consists of calcium carbonate.

cetaceans

Members of the mammalian group Cetacea, including whales, dolphins and porpoises.

Commonwealth waters

The Commonwealth marine area, which includes 'Commonwealth waters' is defined in the EPBC Act as any part of the sea, including the waters, seabed, and airspace, within Australia's Exclusive Economic Zone and/or over the continental shelf of Australia, excluding State and Northern Territory coastal waters. Generally, the Commonwealth marine area stretches from three nautical miles from the territorial sea baseline to the outer limit of the Exclusive Economic Zone, 200 nautical miles from the baseline. The territorial sea baseline is normally the low water mark along the coast.

connectivity corridors

Corridors connecting habitat patches that enable organisms to disperse. Connectivity corridors increase the amount of habitat that is available for species and effectively reverse habitat fragmentation. They are necessary because they maintain biodiversity, allow populations to interbreed, and provide access to larger habitats. In the Australian marine bioregional planning context, the size and shape of Marine Protected Area boundaries should be orientated to account for inclusion of connectivity corridors and biological dispersal patterns within and across MPAs.

conservation dependent (see also: threatened species)

The definition of a conservation dependent species in the EPBC Act (Section 179) is: "A native species is eligible to be included in the conservation dependent category at a particular time if, at that time:

- (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or
- (b) the following subparagraphs are satisfied:
 - (i) the species is a species of fish;
 - (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised;
 - (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory;
 - (iv) cessation of the plan of management would adversely affect the conservation status of the species."

conservation values (see marine conservation values)**continental rise**

The gently sloping surface located at the base of a continental slope.

continental slope

The region of the outer edge of a continent between the relatively shallow continental shelf and the deep ocean.

continental shelf

The section of the seabed from the shore to the edge of the continental slope.

convergence front

An interface or zone of transition between two dissimilar water masses.

copepod

Any small, aquatic crustacean belonging to the subclass Copepoda.

coralline algae

Coralline algae are red algae characterized by a body that is hard as a result of calcareous deposits contained within the cell walls. Many are typically encrusting and rock-like, found in tropical marine waters all over the world. They play an important role in the ecology of coral reefs. Sea urchins, parrot fish, limpets (molluscs) and chitons molluscs feed on coralline algae.

critically endangered (see also: threatened species)

The definition of a critically endangered species in the EPBC Act (Section 179) is:

"A native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria."

crustacea/crustaceans

A class of arthropods that have gills and bodies covered by a hard shell (e.g. crabs, lobsters, shrimps).

demersal

Living on or near the bottom of the sea.

deposit feeders

Animals such as worms, molluscs, echinoderms and crabs that feed on particles of living or dead organic matter found in or on the sediments.

detritivores

Animals or plants that consume decomposing organic matter and in doing so contribute to decomposition and recycling of nutrients.

detritus

Any loose, unconsolidated debris that is either finely divided rock or the finely divided remains of animal or plant tissue, or both.

East Asian-Australasian Flyway

A migratory pathway for wader and shorebirds stretching from Russia and Alaska in the northern

hemisphere to Australia and New Zealand in the southern hemisphere. The Flyway covers much of eastern Asia, including China, Japan, Korea, South-East Asia and the western Pacific. It is especially important for the millions of migratory waders or shorebirds that breed in northern Asia and Alaska and spend the non-breeding season in South-East Asia and Australasia. In total, the flyway passes through 22 countries with approximately 55 migratory species travelling along it, equating to about 5 million birds.

echinoderms/echinoids

Echinoderms include starfishes, sea cucumbers, sand dollars, brittle-stars, basket stars, sea lilies, feather stars, and sea urchins. Echinoids are a group (class) of echinoderms including sea urchins, heart urchins and sand dollars. They are spiny and globular to disc-like in shape.

eddies

Circular movements of water formed on the side of a main current.

elasmobranch

A cartilaginous fish of the subclass Elasmobranchii, which includes skates, rays and sharks.

El Niño Southern Oscillation (see also: La Niña)

The El Niño phenomenon is an unpredictable warming of surface ocean waters in the eastern tropical Pacific (off Peru) and cooling of western tropical Pacific waters that is caused by a sustained drop in air pressures over the south-eastern Pacific Ocean due to the Southern Oscillation: a pattern of reversing surface air pressure between the eastern and Asian Pacific regions. When the surface pressure is high in the eastern tropical Pacific it is low in the western tropical Pacific and vice versa. El Niño is often associated with drier than normal conditions in northern and eastern Australia.

endangered species (see also: threatened species)

The definition of an endangered species in the EPBC Act (Section 179) is:

“A native species is eligible to be included in the endangered category at a particular time if, at that time:

- (a) it is not critically endangered; and
- (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.”

endemic/endemism

Native to a particular area and found nowhere else. Uniqueness.

epibenthic

Living on top of the sea floor. Epibenthic organisms may be freely moving (motile) or permanently attached to a surface (sessile).

epifauna

Animals living attached to rocky reefs or on the seafloor. They include hydroids, sea-pens, small bryozoans and sponges. (Compare to infauna).

euphotic

The euphotic zone (also known as the photic zone or epipelagic zone) is the depth of the water in a lake or an ocean that is exposed to sufficient sunlight for photosynthesis to occur. It extends from the surface down to a depth where light intensity falls to one per cent of that at the surface (also called euphotic depth). The depth of the euphotic zone is greatly affected by turbidity; euphotic depths vary from only a few centimetres in highly turbid lakes and estuaries, to about 200 m in the open ocean.

eutrophic

Refers to any environment with high levels of nutrients, usually in the form of compounds containing nitrogen or phosphorus. This may lead to an increase in the ecosystem's primary productivity. (Compare to oligotrophic).

Exclusive Economic Zone

The sovereign waters of a nation, recognized internationally under the United Nations Convention on the Law of the Sea as extending out 200 nautical miles from shore.

fauna

The entire group of animals found in an area.

filter-feeder

Animals that feed by straining suspended particles from water (also known as suspension feeders). Some animals that use this method of feeding are corals, krill, sponges and whale sharks.

finning

The practice of removing the fins from shark species and discarding the bodies into the sea.

flagship species

Species that have a strong association with the Region and its habitats. The concept of flagship species is not legislative, and does not change the conservation status the species may have, nor does it change associated provisions under the EPBC Act. Identifying flagship species for a Region is useful for education purposes and to raise awareness about marine conservation among the public. Flagship species of the North-west Marine Region are the humpback whale (Western Australian population), whale shark, flatback turtle, olive sea snake, lesser frigatebird, manta ray and trochus shell.

flora

The entire group of plants found in an area.

Foraminifer/foram

Members of the order Foraminifera, a large group of mainly marine single-celled organisms with calcareous shells (called tests) perforated by small holes.

genus

The scientific grouping of plants and animals immediately above the species level; when combined with the species name this provides a unique identifier for a plant or animal in scientific nomenclature (plural: genera).

geomorphology

The study of landforms and the processes which shape them.

gobiid fish

Any species of fish from the family Gobiidae, one of the largest families of fish. Gobies are carnivorous, usually small in size, and found throughout the world.

gorgonians

A gorgonian, also known as sea whip or sea fan, is a marine invertebrate animal, belonging to the phylum Cnidaria. Gorgonians are found throughout the oceans of the world, especially in the tropics and subtropics, and form colonies that are normally erect, flattened, branching, and reminiscent of a fan. Others may be whiplike, bushy, or even encrusting. A colony can be several feet high and across but only a few inches thick.

Holocene

The geological period of time between the present and 10 000 years before the present.

hotspot

Biodiversity hotspots are areas that support an unusually diverse array of organisms.

hydrocarbon seep

The seeping of gaseous or liquid hydrocarbons (including oil and methane) to the surface of the seabed from fractures and fissures in the underlying rock.

Indonesian Throughflow

An oceanographic current that brings warm water of low salinity from the tropical western Pacific Ocean between the Indonesian islands to the Indo–Australian basin.

infauna

Animals that inhabit the sandy or muddy surface layers of the ocean bottom, i.e., those that live buried or dig into the substrate. (Compare to epifauna).

internal tides (also known as barotropic tides)

Internal tides occur at the delineation between water bodies with marked differences in density. They are large in scale, frequently occurring across an ocean basin and, in common with normal tides, forced by the gravitational pull of the moon and sun. The internal tide can rise and fall at a different rate to the surface tide, but they most commonly have a semi-diurnal (twice daily) frequency and may travel either towards the shore, or away from the shore across the shelf and out into deeper water

internal waves

Internal waves are dynamic, episodic events, which are strongly influenced by topography and generated by internal tides. For internal waves to form, the seafloor topography must have a significant change in water depth over a relatively short distance, such as over the continental slope or shelf break. Internal waves can be tens of kilometres long, with a crest of up to 75 m.

invertebrates

An animal without a backbone composed of vertebrae (e.g. insects, worms, snails, mussels, prawns and cuttlefish).

isobath

A mapping line connecting points of equal depth below the sea's surface.

key ecological features

Conservation values identified within Commonwealth waters to help inform decisions affecting the marine environment in each Marine Region. Key ecological features are not specifically protected under the EPBC Act, although the Commonwealth marine environment as a whole is a matter of national environmental significance under the Act.

krill

Shrimp-like marine euphausiid crustaceans, dense swarms of which occur in ocean waters. They feed on diatoms and themselves comprise the main food of filter-feeding whales. Krill are up to 5 cm in length and are found in both surface and bottom waters.

La Niña (see also: El Niño)

La Niña is the normal pattern of surface ocean water circulation in the tropical Pacific Ocean that occurs whenever El Niño is not taking place. During La Niña, the waters of the western tropical Pacific (off northern Australia and Papua New Guinea) are 3–8°C warmer than those of the eastern tropical Pacific. La Niña is often associated with above average rainfall in eastern Australia.

macro-algae

The algae are a major group of 'plants'; they are plants without a vascular or 'vein' system, living in fresh or marine waters. Macro-algae are the large, visible algae, such as kelps, as opposed to micro-algae, the microscopic algae that form phytoplankton.

macroplankton

The component of plankton that consists of large organisms (plant or animal) 2-20 cm in size.

macrophytes

Large water plants.

marine conservation values

Marine conservation values are defined for the purpose of marine bioregional planning as including:

(a) Protected species and communities, including: (i) species and communities listed as threatened under the EPBC Act; (ii) species listed as migratory under the EPBC Act; (iii) cetaceans (including all whales, dolphins and porpoises) under the EPBC Act; and (iv) species listed as marine species under the EPBC Act;

(b) Key ecological features of the marine environment, including: (i) species and communities considered to play an important ecological role in the Region; and (ii) habitats or areas considered to be ecologically important at a regional scale; and

(c) Protected places, including: (i) heritage places (including World Heritage, National Heritage and Commonwealth Heritage); (ii) historic shipwrecks; (iii) Commonwealth marine reserves; and (iv) listed critical habitats.

Marine Protected Area

Any area of intertidal or subtidal terrain, together with its overlying water and associated plants, animals, historical, or cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.

marine reserve

A marine protected area that is highly protected, and is effective as a complete sanctuary; no extractive uses are permitted, and very few (or no) other human uses (including scientific research) are permitted.

marine species (listed)

A marine species included in the list referred to in Section 248 of the EPBC Act.

The list contains the following:

- (a) all species in the family Hydrophiidae (sea-snakes);
- (b) all species in the family Laticaudidae (sea-snakes);
- (c) all species in the family Otariidae (eared seals);
- (d) all species in the family Phocidae ("true" seals);
- (e) all species in the genus *Crocodylus* (crocodiles);
- (f) all species in the genus *Dugong* (dugong);
- (g) all species in the family Cheloniidae (marine turtles);
- (h) the species *Dermochelys coriacea* (leatherback turtles);
- (i) all species in the family Syngnathidae (seahorses, sea-dragons and pipefish);
- (j) all species in the family Solenostomidae (ghost pipefish); and
- (k) all species in the class Aves (birds) that occur naturally in Commonwealth marine areas.

megabenthic/megabenthos

Large invertebrates living upon or in the bottom of the sea, such as clams, sea stars, sea cucumbers, crabs and lobsters.

meiofauna

Meiofauna are small benthic invertebrates that live in both marine and fresh water environments. The term Meiofauna loosely defines a group of organisms by their size, larger than microfauna but smaller than macrofauna, rather than a taxonomic grouping.

meso-scale

Of intermediate size (e.g. hundreds of kilometres).

micro-algae

Microscopic algae and diatoms which form the base of the ocean food chain; sometimes called microphytes.

micro-organism

A microscopic organism (animal or vegetable).

migratory species (listed)

A migratory species included in the list referred to in Section 209 of the EPBC Act. Under the Act, migratory species has the meaning given by Article 1 of the Bonn Convention: “the entire population, or any geographically separate part of the population, of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries”.

MoU Box

A Memorandum of Understanding (MoU) exists between Indonesia and Australia which provides for continued Indonesian traditional fishing activities in an area known as the MoU Box. The MoU Box is an area 50 000 km² within the Australian Exclusive Economic Zone (EEZ). Six coral reef systems exist within the MoU Box, including Ashmore and Cartier Reefs (in the north of the area) and the Scott and Seringapatam reefs.

myctophids

Lanternfish: large family of marine, mainly deep-water, fish, which have a slender and compressed body, a single dorsal and adipose fin, and a distinct anal fin. The mouth and eyes are large. Generally small fish, they are probably the most abundant deep-sea fish, occurring in schools at depths exceeding 500 m during the day, but sometimes found near the surface at night.

national environmental significance (matters of)

The matters of national environmental significance listed under the EPBC Act include: listed threatened species and communities; listed migratory species;

Ramsar wetlands of international importance; the Commonwealth marine environment; World Heritage properties, National Heritage places, and nuclear actions

nanoplankton

Planktonic organisms that are 2–20 micrometres in size.

oligotrophic

Refers to any environment that offers little to sustain life. This term is usually used to describe bodies of water or soils with very low nutrient levels (compare to eutrophic).

pelagic

Associated with the surface or middle depths of the water column, e.g. fish swimming freely in the open sea.

petroglyph

A carving or line drawing on rock, especially one made by prehistoric people.

phytoplankton

Small plants, mostly microscopic, which are suspended in water and free-drifting.

planktivores

Organisms that eat plankton. Large planktivores include whale sharks and manta rays.

plankton

Any small or microscopic drifting organism (plant or animal) that inhabits the water column of oceans, seas, and fresh water.

photic/photoc zone

See euphotic zone.

Pleistocene

The epoch forming the earlier half of the Quaternary Period, beginning about two million years ago and ending 10 000 years ago, characterized by widespread glacial ice and the advent of modern humans.

Pliocene

The geological epoch from 5.2–1.64 million years ago. The Pliocene was a period of gradual cooling leading up to the Pleistocene ice ages.

polychaetes

Members of the class Polychaetae, a group of mainly marine annelid worms, also known as bristle worms.

There are more than 10 000 known species in this class.

province

A large-scale biogeographic unit. See bioregion/provincial bioregion.

provincial bioregion (used interchangeably with bioregion; also refer to province)

There are eight provincial bioregions in the North-west Marine Region: Central Western Shelf Province, Central Western Shelf Transition, Central Western Transition, Northwest Province, Northwest Shelf Province, Northwest Shelf Transition, Northwest Transition, and the Timor Province.

prospective

Referring to the likelihood of finding commercial mineral deposits/petroleum products.

Ramsar-listed wetlands

The Convention on Wetlands of International Importance, known as the Ramsar Convention, was signed in 1971 in Ramsar, Iran, and is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

recruit/recruitment

The influx of new members into a population by reproduction or immigration.

scleractinian

Scleractinian corals are hard corals. Ashmore Reef is characterised as a scleractinian coral reef.

sedimentology

The study of sediments and the processes that deposit them.

sea mount

A mountain on the floor of the ocean.

sea cucumber (see also trepang and bêche-de-mer)

An echinoderm of the class Holothuroidea with an elongated body and leathery skin. Sea cucumbers are edible and have been harvested and traded in northern Australia and South-East Asia for hundreds of years. When processed for eating, the sea cucumber is known as bêche-de-mer or trepang.

seismic

Relating to earthquakes or other vibrations of the Earth and its crust. Also relates to geological surveying and mineral and petroleum exploration methods that involve artificially induced shock waves. A seismic source (such as dynamite or air guns) provides a pulse of energy that generates seismic waves, which travel through a medium such as water or layers of rocks. Some of the waves then reflect and refract off subsurface features to receivers, such as geophones or hydrophones, providing information on structures and stratigraphy. This information can be used to locate potential mineral deposits or petroleum sources.

semidiurnal

Half daily.

sessile

Sessile animals are fixed and immobile. They are usually permanently attached to a solid substrate of some kind, such as a rock or the hull of a ship in the case of barnacles. Other sessile animals such as corals lay down their own substrate. Sessile animals typically have a free-moving (motile) phase in their development.

shelf break

The area of the seabed where the continental shelf meets the steeper slope; commonly around depths of 200 m.

socio-economic

Of or relating to both social and economic considerations.

South Equatorial Current

A major ocean current that flows west across the Pacific and Indian oceans just south of the equator, forming part of the large-scale anti-clockwise movement of water in the oceans of the Southern Hemisphere.

spawning

The release of gametes (eggs and sperm) into water when marine organisms (e.g. corals and fish) reproduce.

spring/neap tide cycle

The spring/neap tide cycle has an approximately seven day interval between spring tides. During spring tides, high tides are higher than average and low tides are lower than average. At neap tides the tidal range is

at its minimum, with relatively high low tides, and relatively low high tides.

State/Territory waters

State or Territory waters are a belt of water that extends from the territorial sea baseline for three nautical miles seawards, and are under the jurisdiction of the adjacent Australian State or Territory. The normal territorial sea baseline is the low water mark measured along the coast.

stock

A group of individuals of a species, usually occupying a particular spatial range. Stocks are used as a unit for managing and assessing fisheries.

substrate

A surface on which organisms live.

sub-tropical

Relating to or occurring in a region intermediate between tropical and temperate.

supratidal

Pertaining to the shore area above the high-tide level.

temperate

The regions in which the climate undergoes seasonal changes in temperature and moisture. Temperate regions of the earth lie primarily between 30 and 60 degrees latitude in both hemispheres.

terrigenous

Sediments derived from the erosion of rocks on land; consisting of sand, mud, and silt carried out to sea by rivers. Deposition of these sediments is largely limited to the continental shelf.

threatened species

Threatened species are listed under the EPBC Act (Section 178) in six categories:

- (a) extinct;
- (b) extinct in the wild;
- (c) critically endangered;
- (d) endangered;
- (e) vulnerable; and
- (f) conservation dependent.

The definitions for these categories of listing are detailed in Section 179 of the EPBC Act.

thermocline

A steep temperature gradient in the ocean where the layer above is a different temperature from the layer below.

Timor Trough

A geomorphic feature located to the north of the Region.

trepang (see also sea cucumber, or bêche-de-mer)

The Indonesian word for sea cucumber or holothurian. Trepangers were originally Moluccan fishermen who visited the north coast of Australia to collect and process sea cucumbers for eating.

trophic level

The position an organism occupies in a food chain; levels include primary producers, herbivores, primary, secondary and tertiary carnivores, and decomposers.

turbidity

The cloudiness in water that is caused by particles, usually of fine sediment or microscopic particles of biological material.

upwelling

The phenomenon of deep ocean water rising to the surface, usually bringing nutrients that can increase biological productivity.

vulnerable species (see also: threatened species)

The definition of a vulnerable species in the EPBC Act (Section 179) is:

“A native species is eligible to be included in the vulnerable category at a particular time if, at that time:

- (a) it is not critically endangered or endangered; and
- (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.”

zooplankton

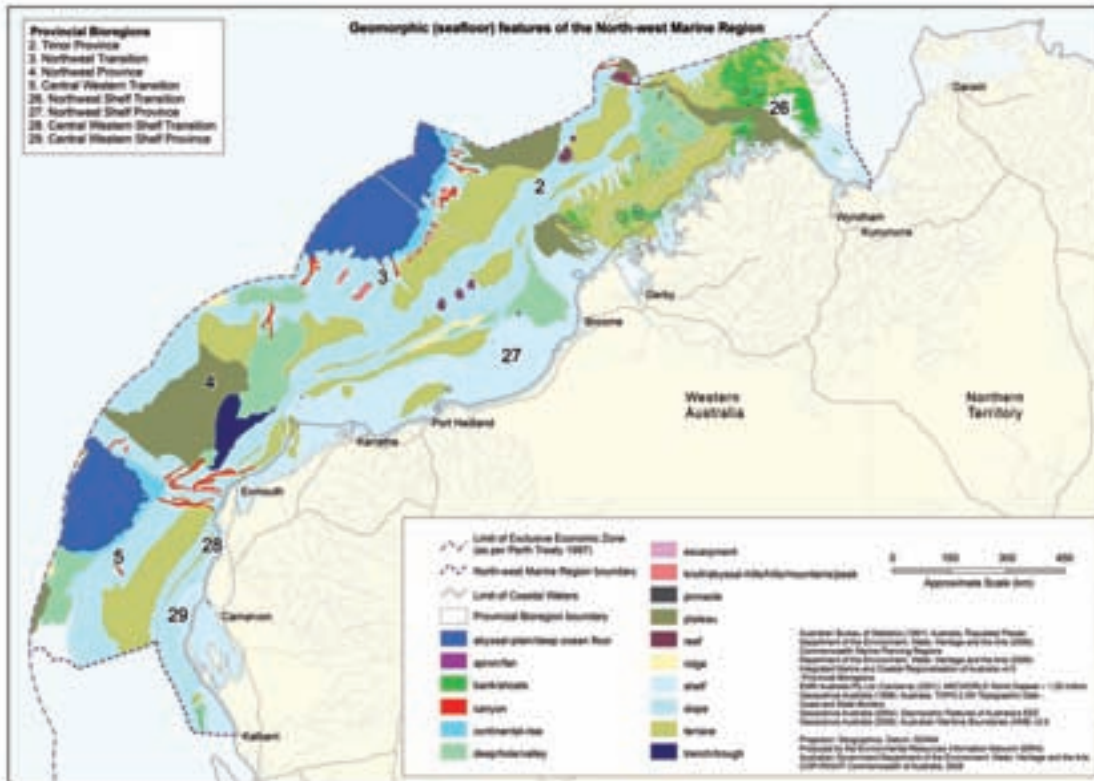
Animal component of the plankton community.

zooxanthellae

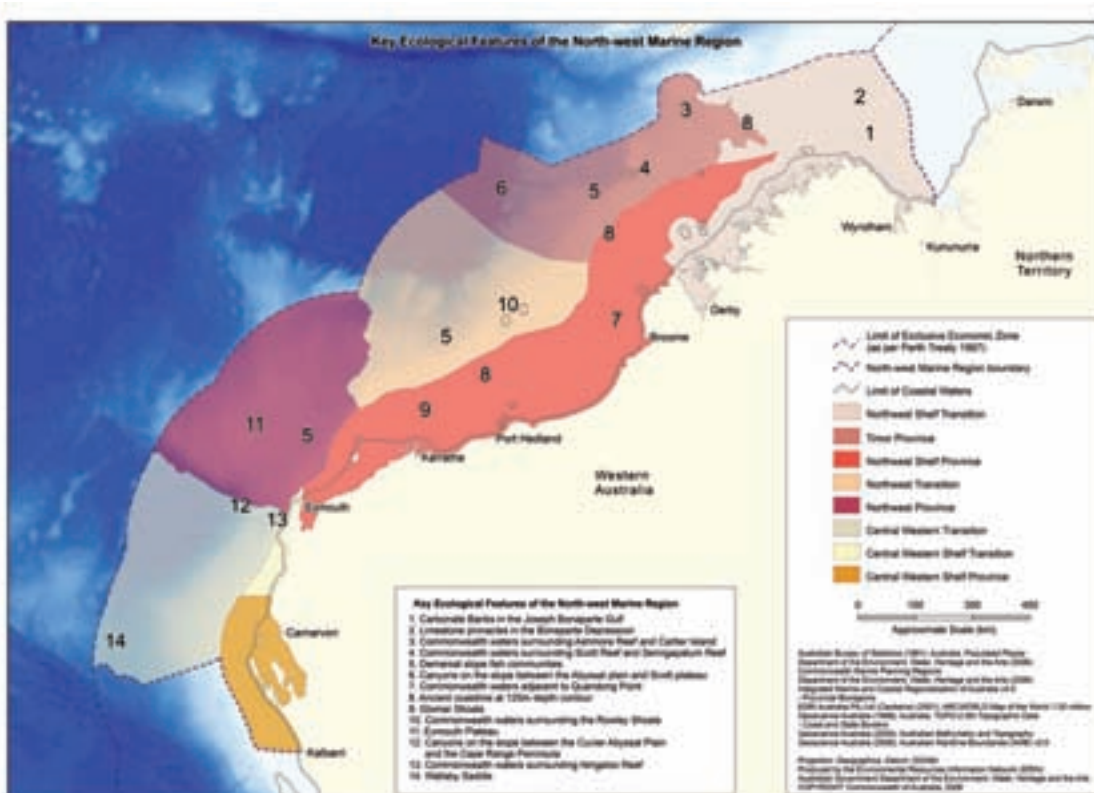
Single-celled yellow-brown algae that live symbiotically within the cells of reef-building corals and supply them with nutrients. When corals are subjected to high environmental stress the zooxanthellae can die, resulting in coral bleaching.

MAPS

Geomorphic (seafloor) features of the North-west Marine Region



Key ecological features of the North-west Marine Region





Australian Government

Department of the Environment, Water, Heritage and the Arts