

ACRONYMS AND ABBREVIATIONS

Use of acronyms and abbreviations has been kept to a minimum. All acronyms and abbreviations have been defined in the text, with the exception of the shortened forms for States and Territories, which are as follows:

NT Northern Territory

NSW New South Wales

Qld Queensland

SA South Australia

Tas. Tasmania

Vic. Victoria

WA Western Australia

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.

aggregating behaviour

The concentration of fish for unknown reasons or direct causes such as the concentration of food organisms, or for spawning.

anti-cyclonic

Rotation about a vertical axis that is clockwise in the Northern Hemisphere and counter-clockwise in the Southern Hemisphere.

assemblage

A collection of plants and/or animals characteristically associated with a particular environment, that can be used as an indicator of the health of that environment.

Australian margin

Refers to the Australian continental margin, the offshore zone, consisting of the continental shelf, slope, and rise, that separates the dry-land portion of a continent from the deep ocean floor.

ballast water

Water carried in tanks to maintain stability when a ship is lightly loaded. It is normally discharged to the sea when the ship is loaded with cargo.

bathymetry

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

benthic

Refers to all marine organisms living upon or in the bottom of the sea.

biodiversity

Variability among living organisms from all sources (including terrestrial, marine and other ecosystems and ecological complexes of which they are part), which includes diversity within species and between species and diversity of ecosystems.

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 – whether trees, fish or other organisms.

biomass

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

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* Version 4.0.

biota

All of the organisms at a particular locality.

bryozoans

Marine animals commonly known as moss animals, sea mats or (for some forms) lace coral. The majority of living bryozoans are encrusting, forming flat sheets that spread out over the substrate but others grow upwards into the water column.

carbonate organisms

Life-forms that incorporate calcium and carbon from sea-water into their skeletons or shells. They include a range of organisms such as algae, corals and bivalves, and can be microscopic.

cetaceans

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

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.

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.

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

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

decapods

Order of crustacea comprising lobsters, crabs and shrimps. Decapods have a fused cephalothorax covered by a chitinous carapace, and five pairs of legs.

demersal

Living on or near the bottom of the sea.

detritus

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

downwelling

A downward current of surface water in the ocean.

echinoderms

Exclusively marine coelomate animals distinguished from all others by an internal skeleton composed of calcite plates, and a water-vascular system to serve the needs of locomotion, respiration, nutrition, or perception. Includes starfishes, sea cucumbers, sand dollars, brittle-stars, basket stars, sea lilies, feather stars and sea urchins.

ecological community

The definition of an ecological community in the EPBC Act is: an assemblage of native species that: (a) inhabits a particular area in nature; and (b) meets the additional criteria specified in the regulations (if any) made for the purposes of this definition.

More broadly, an ecological community is a grouping of species that commonly occur together in a way that is recognisably different from other groupings.

Ecologically Sustainable Development

The principles of ecologically sustainable development are defined in the EPBC Act as:

(a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;

(b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;

(c) the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generation;

(d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;

(e) improved valuation, pricing and incentive mechanisms should be promoted.

ecosystem

A dynamic complex of plant, animal and micro-organism communities and their non-living environment that interacts as a functional unit.

ecosystem approach

An approach to managing human impacts on the environment that attempts to take into account the complex relationships between organisms and physical processes in a particular ecosystem.

ecosystem services

The role played by organisms and environmental processes in creating a healthy environment for human beings, from production of oxygen to soil formation and maintenance of water quality.

eddies

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

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

Native to a particular area and found nowhere else.

epifauna

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

Exclusive Economic Zone

The sovereign waters of a nation, recognised 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.

flora

The entire group of plants found in an area.

genera

The plural of genus, the scientific grouping of plants and animals immediately above the species level. When combined with species this provides a unique identifier of a type of plant or animal in scientific nomenclature.

geomorphology

The study of landforms and the processes which shape them.

geo-oceanographic

Concerning the nature of the earth beneath the oceans, topography, structure, and geological processes of the ocean floor.

hydroids

Small invertebrates whose colonies can take many growth forms including flower-like, tree-like or feathery. Hydroids are best represented in cool temperate southern Australian seas.

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).

invertebrates

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

isobath

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

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

Warming of the western equatorial Pacific warm pool, north of New Guinea, accompanied by cooling in the equatorial eastern Pacific Ocean. La Niña is often associated with above average rainfall in eastern Australia.

macro-algae

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

macrophytes

Large water plants.

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);
- (k) all species in the Class Aves (birds) that occur naturally in the Commonwealth marine area.

meso-scale

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

migratory species (listed)

A migratory species included in the list referred to in Section 209 of the EPBC Act. Under the EPBC 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".

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.

pelagic

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

phytoplankton

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

planktivorous

Organisms that eat plankton.

propagules

A dispersive structure, such as a seed, fruit, eggs or sperm, released from a parent organism for reproductive purposes.

proponent

In the context of the EPBC Act, this refers to the person who is proposing an action (as designated under Division 2 of Part 7 of the EPBC Act).

province

A large-scale biogeographic unit derived from evolutionary processes in which suites of endemic species co-exist.

prospective

Referring to the likelihood of finding commercial mineral deposits.

recruitment

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

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.

spawning

A reproductive strategy where eggs and sperm are released into water.

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.

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.

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.

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.