

Australian Threatened Species

Green Turtle *Chelonia mydas*

Conservation Status

Commonwealth: Vulnerable
(*Environment Protection and Biodiversity Conservation Act 1999*)

Western Australia: Vulnerable
(*Wildlife Conservation Act 1950*)

Queensland: Vulnerable
(*Nature Conservation Act 1992*)

New South Wales: Vulnerable
(*Threatened Species Conservation Act 1995*)

Common green turtle.
Photo © WWF-Canon/Jurgen Freund

What does it look like?

The green turtle gets its name not from the colour of its shell but from the green fat deposits around its internal organs. The carapace or shell can be yellowish or olive-green but it can also be brown to brownish-black. The scutes (the plates on the shell) are also usually beautifully variegated with streaks of brown, reddish-brown or black. Green turtles can grow up to 1.5 metres long and reach 200 kilograms, although individuals from different populations vary widely in size.

The hatchlings are a shiny black with white edges to their flippers, and white underparts. A newly hatched green turtle is usually less than 5 centimetres long and weighs less than 25 grams. That means it could increase its weight 8000 times at adulthood!

Where does it live?

Green turtles nest on islands and coastal beaches all around the north of Australia, from Ningaloo Reef in Western Australia to southern Queensland. They can be found foraging right down into the subtropical waters of southern New South Wales. They are also a truly international species, and can be found in places as diverse as the Caribbean, the South Pacific, along the coasts of Africa and South America, and even the Mediterranean.

Did you know...

- Green turtles are among the world's great travellers. Female green turtles have been known to travel more than 2600 kilometres in their migrations between feeding grounds and nesting beaches, although the average migration around eastern Australian waters is about 400 kilometres.
- Marine turtles are great survivors, having been present in the oceans for more than 100 million years – since the time of the dinosaurs.
- The green turtle is one of seven species of marine turtles, six of which are found in Australian waters.
- All seven species of marine turtles are now threatened by loss of their nesting beaches to coastal development, accidental capture by longline fishing and nets, predation of the eggs by feral animals, often unsustainable harvesting of adult turtles and eggs, and entanglement or ingestion of marine debris.



Rising temperatures and sea levels: major threats

Why are rising temperatures and sea levels a major threat to green turtles?

Globally, the 1990s were the warmest decade for at least 1000 years, and 2005 has been listed as one of the hottest years on record. Increases in temperature will impact on a range of ocean species from plankton, which forms the basis of marine food chains, to corals, fish, seabirds, penguins, seals and sea-lions, as well as turtles.

The average global temperature is predicted to increase by anywhere between 1 and 6°C by the year 2070. The actual air and water temperatures in any given region may vary in their rate of increase. Green and other marine turtles come ashore to lay their eggs on special nesting beaches called rookeries, where they dig a hole and bury their eggs in the sand. The sex of turtle hatchlings is determined by the temperature at which the eggs are incubated—a warmer nest creates more female hatchlings than males. If temperatures at nesting sites rise too much, there is a risk that all turtles will hatch out as females, eventually leading to their extinction.

If, as scientists have predicted, sea levels rise by up to 88 centimetres by the end of the century, rookery beaches are not just at risk of becoming too hot but also of being flooded with seawater or washed away entirely. Marine turtles are known to faithfully return again and again to certain beaches, and while it is possible that female turtles may adapt and start nesting earlier in the season or on different beaches, whether they can adapt as fast as the climate is changing is yet unknown. It may also be difficult for turtles to find suitable new nesting beaches, as human development reduces the number of beaches available to them.

What is being done?

To build green turtles' resilience to the effects of climate change and give them the best possible chance of survival into the future, we need to protect their known habitat and also give them the chance to migrate into cooler regions as the world heats up. We also need to reduce all other threats to their survival.

The protection of turtle nesting beaches and feeding grounds in Marine Protected Areas and Indigenous Protected Areas is vital to the survival of green and other marine turtles.

Some sections of the Great Barrier Reef Marine Park have been designed specifically with turtle protection in mind, however there are large gaps in the level of protection for key turtle habitat in northern and north-western Australian waters.

A range of scientific and/or volunteer-led programs around northern Australia are monitoring key populations of marine turtles and the threats to their survival, and are educating the community about these species.

Efforts are also being made to reduce other pressures on marine turtles such as accidental capture on lines or nets. The use of Turtle Exclusion Devices on trawl nets is mandatory within the Great Barrier Reef Marine Park and for northern Australian prawn trawlers. Ocean Watch Australia's SeaNet Program recently used a Threatened Species Network grant to train Australian longline fishers in the use of de-hooking and line-cutting devices to ensure that turtles that do accidentally get caught are given the best possible chance of survival on release.

How you can help

- Make sure no nets, equipment or rubbish is lost or thrown overboard when fishing or boating.
- Don't drive on known nesting beaches. If you are on or near a nesting beach at night, be aware of sources of light pollution and where possible cover lights.
- Don't disturb nesting turtles especially as they are coming up the beach, as this may prevent them from laying their eggs.
- Walk, cycle or use public transport.
- Save on heating and cooling costs by insulating, draught-sealing and shading, while setting thermostats appropriately. For more information see the 'Heating and Cooling' fact sheet of the *Your Home Technical Manual*: www.greenhouse.gov.au/yourhome/
- Switch off lights, appliances and equipment when they're not needed and install energy-efficient fluorescent lamps such as compact fluorescent lights.
- Minimise waste of packaging and materials—refuse, reduce, re-use, recycle.
- For other tips on saving energy around the home, go to the Australian Greenhouse Office web site: www.greenhouse.gov.au/gwci/index.html

Contacts and references

Katherine Howard
Program Officer
Threatened Species Network

T (02) 9281 5515

E tsn@wwf.org.au

Visit: wwf.org.au/tsn

You can also find out more information about Australia's threatened species by visiting www.deh.gov.au/biodiversity/threatened or contacting the Department of the Environment and Heritage Community Information Unit, email ciu@deh.gov.au, or freecall 1800 803 772.

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