Threatened species of the Northern Territory

Hawksbill turtle

Eretmochelys imbricata

Conservation status

Australia: Vulnerable
Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable
Territory Parks and Wildlife Conservation Act 1976

Credit: R. Somaweera

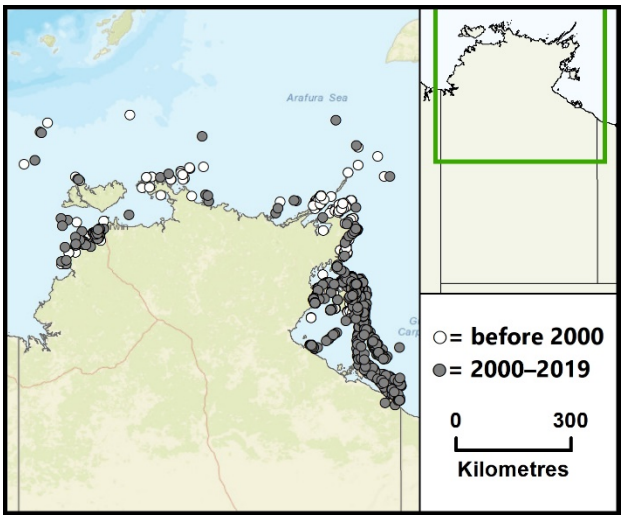
Description

The Hawksbill Turtle is a marine turtle with a high-domed heart-shaped carapace, which is olive-green to brown with black, brown or red-brown markings. The scutes of the carapace are overlapping, and there are four pairs of costal scutes (those between the centre and outer margin of the shell). The upper jaw juts forward to form a distinctive beak-shaped snout. Unlike the Green Turtle *Chelonia mydas*, there are two pairs of prefrontal scales above and in front of the eyes.

Like the Loggerhead Turtle *Caretta caretta* and Olive Ridley Turtle *Lepidochelys olivacea*, nesting Hawksbill Turtles move on land using one front flipper at a time, creating an asymmetrical track in the sand. Other species of marine turtle that nest in Australia create symmetrical tracks in the sand. Eggs are smaller (mean diameter of 3.9 cm) than most other marine turtles that breed in Australia.

Distribution

Hawksbill Turtles occur in tropical, subtropical and temperate waters of all oceans of the world. In Australia, there are two main genetically isolated subpopulations: one on the west coast and the other in the Top End and north-eastern Queensland.



Caption: Known localities of the Hawksbill Turtle in the NT (nrmaps.nt.gov.au)

In the Northern Territory (NT), most nesting occurs on islands rather than mainland beaches. Principal nesting sites are concentrated around north-eastern Arnhem Land and Groote Eylandt[1].

NT conservation reserves where reported: Casuarina Coastal Reserve, Garig Gunak Barlu National Park, Kakadu National Park and Nanydjaka Indigenous Protected Area.

Ecology and life-history

In the NT, Hawksbill Turtles nest mainly on narrow beaches where they frequently go under vegetation to nest[1]. Nesting usually occurs from late winter to early summer. Individuals disperse widely from nesting beaches to feeding areas in coastal and oceanic waters; though some individuals may be largely resident around preferred feeding areas.

Hawksbill Turtles are omnivorous, eating a wide variety of plants and animals including sponges, gastropods, seagrass and algae.

Threatening processes

The major cause of mortality of juvenile and adult Hawksbill Turtles in NT waters is entanglement in marine debris. The NT Marine WildWatch program collates stranding records of marine fauna and indicate less than 10 Hawksbill Turtles are killed annually, although this estimate is likely to be under-reported[2]. Other potential threats include by-catch in commercial fisheries[3], and predation of eggs and young by domestic and feral Dogs *Canis familiaris*, feral Pigs *Sus scrofa* and monitors *Varanus* spp.

The global population size of the Hawksbill Turtle has declined, evidently mostly as a result of harvesting for food. Hawksbill Turtles in NT waters are part of a larger subpopulation and heavy harvesting continues in neighbouring countries, such as Indonesia. There is some local Indigenous harvest of Hawksbill Turtles in NT waters but this is not considered to have a significant impact on the species.

Conservation objectives and management

A national recovery plan for this species, and other marine turtles, was implemented in 2017[5]. This plan included actions that: (i) aim to reduce mortality of turtles (principally through mitigating impacts of commercial fisheries, and maintaining sustainable harvests by Indigenous communities), (ii) develop and integrate monitoring programs; (iii) manage factors that affect reproductive success (in this case, largely outside the NT); (iv) identify and protect critical habitat (including sea grass beds); (v) enhance communication of information; and (vi) enhance international actions and cooperation.

References

[1] Chatto, R., 1998. A preliminary overview of the locations of marine turtle nesting in the Northern Territory, in: Kennett, R., Webb, A., Duff, G., Guinea, M., Hill, G. (Eds.). Marine turtle conservation and management in northern Australia. Northern Territory University, Darwin, pp. 33–40.

[2] Mackarous, K., Griffiths, A.D., 2018. Northern Territory Marine Megafauna Strandings: January 2017 – December 2017. Report by Department of Environment and Natural Resources, Darwin.

[3] Poiner, I.R., Harris, A.N.M., 1996. Incidental capture, direct mortality and delayed mortality of sea turtles in Australia's Northern Prawn Fishery. Mar. Biol. 125, 813–825.

[4] Kennett, R., Robinson, C.J., Kiessling, I., Yunupingu, D., Mununguritj, N., Yunupingu, D., 2004. Indigenous initiatives for co-management of Miyapunu/sea turtle. Ecol. Manag. Restor. 5, 159–166.

[5] Commonwealth of Australia, 2003. Recovery Plan for marine Turtles in Australia. Commonwealth of Australia, Canberra.