

Eighty Mile Beach Turtle Monitoring Program: Past, Present and Future

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Eighty Mile Beach is a 220km uninterrupted stretch of remote coast located in the Kimberley Region of Western Australia. Eighty Mile Beach was proclaimed a Marine Park in 2013, jointly managed by the Department of Parks and Wildlife together with the Traditional Owners to afford a higher level of protection to the key ecological, cultural and social values of the area. Aside from being an important flatback turtle rookery with adjacent foraging grounds, Eighty Mile Beach is also a RAMSAR listed wetland due to the vast intertidal mudflats (up to 4km in width) which are of international significance for migratory shorebirds.

The Eighty Mile Beach flatback nesting population is part of the North West Shelf Summer Breeding Management Unit which extends from Exmouth to Dampier Peninsula around the Broome area.

Since 2005, turtle monitoring has been occurring at various sites along Eighty Mile Beach, albeit inconsistently. The following conditions require consideration prior to delivering a robust and consistent monitoring program at Eighty Mile Beach:

- Scale – 220km length
- Remote location with restricted access e.g. OHS risks
- Environmental factors e.g. windy, fine sand, marshy areas, large tides
- Undeveloped – good reference beach for comparison with adjacent turtle nesting beaches with large-scale extractive industries
- Marine Park – staff and resources for a long-term monitoring program

The current turtle monitoring program was introduced in 2012 and involves:

- Two survey types at the Eighty Mile Beach Caravan Park Site to investigate nesting success and evidence of predators
 - Once a week surveys for 12 weeks throughout the turtle season
 - Two-week daily survey during peak nesting
- Remote camera surveillance to determine levels of predation
- Excavation of nests to determine hatching and emergence success
- Alternating annually between broad-scale drives and aerial surveys for an indication of the distribution of turtle activity along Eighty Mile Beach
- Opportunistic track counts by Australasian Waders Study Group

This season we will also be conducting additional monitoring at the Anna Plains site on Shared Country to be monitored by Karajarri and Nyangumarta, deploying satellite trackers and moving into electronic collection of data (cybertrackers).

Threats to the Eighty Mile Beach turtle nesting population include both natural and introduced pressures with management options referred to below:

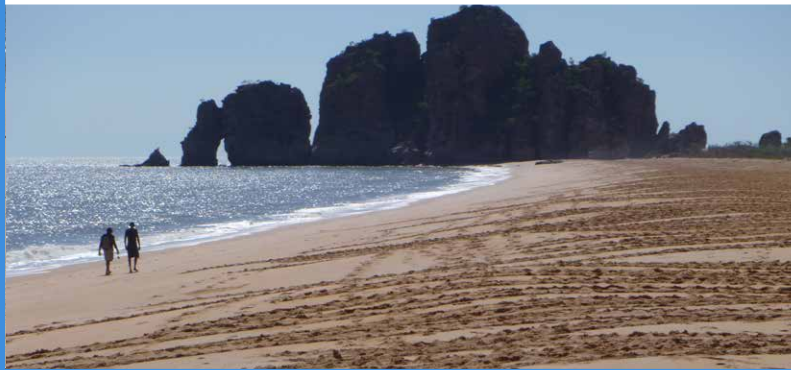
- 4Wdriving on the beach – restricted access at night +/- seasonal closures
- Cyclones
- Erosion – monitor, dune revegetation
- Predators – native and introduced – monitoring program
- Cattle – cattle exclusion fence (200km long)

Turtle monitoring is conducted in collaboration with two of the Native Title Holders of the Eighty Mile Beach area – Nyangumarta and Karajarri. It provides opportunities for Traditional Owners (TOs) to work on country, employment, training and capacity building. We also gain valuable traditional ecological knowledge from the TOs.

The program is jointly funded by the Department of Parks and Wildlife as well as the BHP Billiton Iron Ore Eighty Mile Beach and Walyarta Conservation Program - an

investment made under the BHP Billiton Iron Ore Community Development Program. The program funds are directed towards projects that meet the long term objectives for conservation in the area and in this case funding facilitated aerial surveys, implementation of a second monitoring site, deployment of satellite trackers, predator surveillance with the use of remote cameras and Traditional Owner Engagement.

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