Satellite Tracking of Hawksbill Turtles on Groote Eylandt

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Groote Eylandt, located off eastern Arnhem Land in the Gulf of Carpentaria, is the third largest island in Australia, and the associated archipelago includes over 40 smaller islands. Groote Eylandt and its satellite islands have outstanding conservation values, including internationally and nationally significant sites for nesting marine turtles. The islands support the densest areas of marine turtle nesting in the Northern Territory, and are especially significant for green and hawksbill turtles. The islands within this site are part of the Anindilyakwa Indigenous Protected Area (IPA) and are managed through a series of management plans dating back to 2006. Indigenous rangers based at Alyangula, Umbakumba and Angurugu undertake a range of management activities including survey and removal of marine debris, protection of turtle nesting areas, collaborative biodiversity surveys with scientific staff from NT Government, NT Fisheries and Charles Darwin University. Anindilyakwa Rangers have conducted 30 sea patrols in the last 12 month period which incorporated retrieving ghost nets and marine debris from the nesting beaches on Groote Eylandt. These activities are fundamental to protecting important habitats for marine turtles, and resulted in the release of 17 mature turtles from ghost nets.

In 2009-10, 10 adult female hawksbill turtles nesting on Groote Eylandt were equipped with Fastloc GPS and Argos satellite transmitters to investigate habitat utilisation during the inter-nesting and foraging period, along with migratory behaviour. During the breeding season, females predominantly remained near their nesting site in a restricted area, although some individuals displayed broad movements (median distance = 0.5km). All adults migrated to foraging grounds located on the Australian continental shelf from northern Arnhem Land to the southern Gulf of Carpentaria, with post-nesting migrations ranging from 70.8 to 568.0km. The distribution of those foraging grounds demonstrates that the Gulf of Carpentaria supports critical developmental and feeding areas for hawksbill turtles.

Turtle monitoring is benefiting students and community by embedding knowledge, numeracy, literacy and scientific learning in real, practical activities that are relevant to engaging to the students and their local community. Four indigenous schools also attend classes on country from local experts, rangers and vocational educational trainers and school teachers. These opportunities allow students and community to build new relationships with and learn from role models from their communities. It also improves leadership and allows students to be mentored. Hawksbill monitoring was conducted in September 2013 at North East Island in conjunction with the ranger program, where children were provided training and the opportunity to assist rangers with tagging hawksbill turtles to facilitate greater understanding of migratory patterns. This highlights the important role that Indigenous people have through IPAs and other protected areas play in protecting migratory species as well as wildlife that are resident in IPAs.

Figure 1. Releasing a turtle from a net (Phillip Mamarika).

Figure 2. This is one of five hawksbill turtles caught on the same beach, on the same day and released alive (Jocelyn Yantarrnga).

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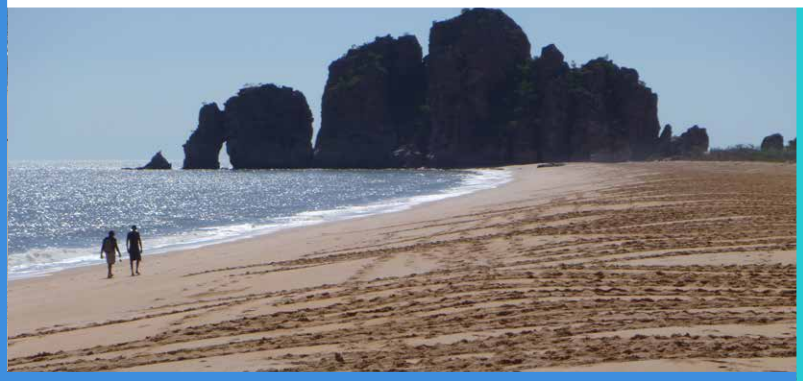

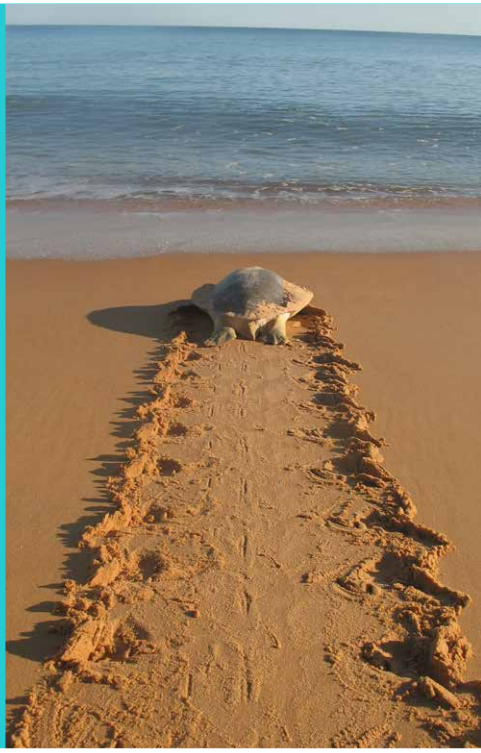

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