

A Press Release from the Reef and Rainforest Research Centre (RRRC)

## **Turtles at Risk from Erosion and Disease**

The green turtle population in the northern Great Barrier Reef (GBR) and Torres Strait region is the largest green turtle population in the world, with an estimated 50,000 females breeding there each year.

Recent research by Queensland's Environmental Protection Agency (QEPA) suggested this population may be in the early stages of decline. Indicators of this decline included a reduction in the average size of the breeding females, low nesting success and poor hatchling production of these Green turtle populations.

Dr Mark Hamann from JCU has been working under the Australian Government's Marine and Tropical Sciences Research Facility (MTSRF) in partnership with QEPA to investigate how widespread these indicators may be, and some potential causes for population decline.

"There are seven main rookeries in the northern GBR and Torres Strait used by the green turtle population but about 90% of nesting occurs on just two small sand cays; Raine Island and Moulter Cay. Essentially what occurs on these two islands will drive the short-term future of the population."

It is generally accepted that successful sea turtle populations require about 75% hatchling production to maintain the population. Dr Hamann's work indicates that while hatchling production from some of the Torres Strait rookeries ranges from 60-80%, juvenile recruitment appears to be low.

"Low hatchling production at Raine Island may be triggering low recruitment of juvenile turtles into the foraging populations", said Dr Hamann. "There is also evidence that juvenile turtles have high levels of fibropapilloma disease, a herpes viral disease affecting sea turtles worldwide".

Fibropapilloma disease causes cauliflower like tumors to occur on the turtles, often on the extremities, but occasionally these growths can occur on the lungs, kidneys, liver and intestines. Currently there is no treatment for these internal growths and while individual turtles can recover, the disease is often fatal. The disease, however, is not the only challenge facing our turtle population.

"Low recruitment into the adult population may also be because female turtles have struggled to establish nesting sites on Raine Island over the last decade; this is partially due to gradual sand loss caused by erosion. The erosion could be the result of the early impacts of global climate change and collaborative future work with QEPA will investigate this possibility"

Dr Hamann's work will continue to seek answers to the problems facing our turtle populations to help manage them for future sustainability. This Research is conducted in partnership with QEPA and with the support of funding from the Australian Government's Marine and Tropical Sciences Research Facility (MTSRF).

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