

## **Progress Report CF 2011-118**

# **North West Shelf Flatback Turtle Conservation Program**

**Marine Science**

### **Project Core Team**

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### **Project status as of Oct. 29, 2020, 11:23 a.m.**

Approved and active

### **Document endorsements and approvals as of Oct. 29, 2020, 11:23 a.m.**

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|-----------------------|---------|
| <b>Project Team</b>   | granted |
| <b>Program Leader</b> | granted |
| <b>Directorate</b>    | granted |

# North West Shelf Flatback Turtle Conservation Program

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## Context

The Northwest Shelf Flatback Turtle Conservation Program (NWSFTCP) is one of four environmental additional undertakings for the Gorgon Gas project at Barrow Island. The purpose of the program is to increase the conservation and protection of the Northwest Shelf flatback turtle population through: surveying, monitoring and research; reducing interference to key breeding and feeding locations; and establishing information and education programs. The Marine Science Program coordinates the planning and implementation of works required for the NWSFTCP in addition to coordinating general research and monitoring of marine turtles in Western Australia. The NWSFTCP has a range of governance arrangements that include an advisory committee and a scientific panel.

## Aims

- Implement the scientific management and communication strategies of the NWSFTCP Strategic Plan.

## Progress

- Studies on the foraging stage of flatback turtles continued at Roebuck Bay and included tracking turtles using satellite technology and using dive depth instruments and turtle mounted cameras.
- Foxes were culled for the second year at a major Pilbara flatback turtle rookery on Mundabullangana Station.
- National Light Pollution Guidelines were co-produced with the Department of Agriculture, Water and the Environment to help reduce light pollution impacts on marine turtles.
- Monitoring of nesting turtles was continued at two major rookeries and several intermediate sized rookeries.

## Management implications

- The identification of resident flatback turtles in Roebuck Bay is a world first discovery and further investigation has allowed us to define their seasonal distribution and population structure in terms of sex ratios and maturity structure. This has allowed joint managers (DBCA and Yawuru Aboriginal Corporation) to consider this information in terms overlap of flatback turtles with marine park and port management areas, and with stakeholder use such as pearling, shipping and recreational boating. Turtle-borne cameras and satellite tracking data have provided information on habitat use which has helped managers redefine requirements for habitat mapping.
- This program continues to cull foxes at Mundabullangana Station to assist in protecting flatback turtles.
- A broad-scale aerial survey of nesting beaches across the Pilbara has identified all nesting habitat and defined relative nesting abundance across these areas. Importantly, this information is currently being analysed to estimate the relative proportion of nesting that is potentially impacted by industrial developments and specifically, will assist the NWSFTCP to assess the potential impact from the Gorgon Gas Project to the North West Shelf flatback turtle genetic stock.
- Long term natural resource management benefits from community engagement through local partnerships. The inclusion of Indigenous groups (such as Yawuru Aboriginal Corporation and Ngarluma Aboriginal Corporation) as partners has enhanced the long-term benefits of the program by providing: a cultural perspective and relevance to the work; positive communication of the program throughout the communities; stability in governance and advice pathways; and additional conduits for information transfer to Joint Management bodies.

## Future directions

- Fill key knowledge gaps in flatback turtle biology focussing on: research on resident and foraging turtles that will identify key parameters to develop meaningful time series data; use of hydro-dynamic modelling to predict areas and habitats most likely to support the presence of post-hatchling and neonate turtles; ageing studies using innovative techniques such as stable isotope and genetics analyses.
- Continue to monitor key flatback nesting beaches including Delambre and Thevenard islands, Port Hedland, Eco Beach and Cape Domett.
- Quantify the impacts of artificial light, climate change and feral animals on flatback turtles through student projects.
- Conservation efforts to mitigate threats to turtles with a focus on light pollution mitigation using recent national guidelines, and increase efforts on fox control at a key mainland rookery.
- Build and maintain Indigenous partnerships, engagement and employment through local opportunities and training.