Final Task Report

Task Number: T1.10
Title: Developing Strategies for the Sustainable Management of the Green Turtles in Torres Strait
Start Date: End Date:

Task Contacts

Task Associate: Prescott, Jim
Task Associate: Yorkston, Peter
Task Leader: Marsh, Helene

Objectives

Need (from proposal)

Significance (from proposal)

Research Summary

This research project began in late 2004, and field work started in early 2005. Within the 2005/2006 year three research trips were conducted in Torres Strait with the Hammond Island and TRAWQ communities. On each trip a series of turtles were caught on the reefs around the inner islands to determine sex and size class ratios and species distribution. The final aim was to deploy 4 satellite transmitters on courting turtles and track them for their migration and breeding season. Overall, 175 turtles comprising two species were caught and most were in the juvenile size ranges. Sex ratios were not significantly different to 1:1. Of the 4 animals deployed with satellite trackers; 3 were female and 1 was a male. The 3 females all migrated to the northern Great Barrier Reef and remained there for 3 to 4 months before returning back to the Torres Strait. Each turtle was tracked back to within 5km of its initial, pre-migratory, capture site. Genetic samples were collected from each turtle to analyse population structure. This will be done in the future as funding is not yet available. A final project report on this project has been submitted to DEH

Task Associate Comment

No comment available.

Outcomes/Achievements against each Specific Objective

1: To obtain an understanding of the structure and dynamics of green turtle populations within areas hunted by Traditional Owner communities

163 turtles were caught on the reefs of the inner islands of Torres Strait during the study. Around 70% were laparoscope examined to determine sex and maturity. Green turtles were mostly in the juvenile size class and there was a sex ratio of 2F:1M. Hawksbill turtles were a mixture of size classes and the sex ratio was 1:1. Approximately 5% of the juvenile green turtles had fibropapilloma disease.

2: To develop the turtle research skills within Torres Strait Islander peoples to ensure project continuity

80% of the turtle hunters from Hammond island have been trained in measuring turtles and collecting
information such as skin samples for genetics. The Hammond Island Council Environmental Ranger has been taught how to score ovaries for evidence of breeding. More than 20 hunters have been taught how to tag turtles.

3: To begin the collection of a comprehensive database on the population structure of foraging green turtles within the Inner Islands and the NPA of Torres Strait

The compilation of a database that will hold comprehensive data on turtles in Torres Strait has been started.

4: To assist communities to gather preliminary information on regional turtle populations that will contribute to the development of sustainable turtle and dugong hunting management plans

We attached satellite transmitters to four turtles and tracked them on the internet as they migrated to their nesting beaches and then back to Torres Strait. Skin samples have been collected from all turtles caught in the study and these will be analysed to give more information on foraging area population structure.

5: To identify and address threats to turtle populations in Torres Strait

A workshop was held with the Hammond Island Community to identify what they felt were the important issues with regard to turtle management in Torres Strait. The main issues were the commercial take in PNG and Indonesia and the impact of illegal fishers that use nets to catch sharks.

Utilisation and Application of the Research, Commercialisation

1st July 2005 - 30th June 2006

The research project was only a year in duration and has only just been completed, hence it has not yet been used to assist management.

Publications

(Final Report)

Technical Reports:


Other Outputs


(Final Report)

Number of Other Public Presentations, eg Seminars and Conference Presentations:

**Postgraduate Students**

Jillian Grayson (PhD candidate) the project funded some indigenous participation in her project.

**Grants & Awards**

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<thead>
<tr>
<th>Researcher and Organisation</th>
<th>Title of Grant</th>
<th>Source</th>
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<td>Mark Hamann, Helene Marsh</td>
<td>Raising Indigenous awareness and promoting on-ground recovery activities for marine turtles and dugong in Torres Strait</td>
<td>DEH (NHT)</td>
<td>11-Jan-04</td>
<td>19-Jul-06</td>
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<td>Jillian Grayson, James Cook</td>
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