Dugong – Abundance and Distribution

Project background

Aboriginal rangers have said that there are dugongs in Napier Broome Bay. Scientists think that this area is one of the main places that dugong live in the Kimberley. Napier Broome Bay includes the traditional sea country of the Uunguu and Balanggarra people. Scientists have not done many aerial surveys (plane flights to look at dugongs) in the North Kimberley. Scientists don’t know much about how many dugongs are there, how dugong use the places that they live in and where they travel to. This project wants to find out the things that people don’t know about dugongs.

What we want to do:

- We will fly in planes to try and see where dugongs are and which type of country they mainly live in and write about this.
- We will count the dugong and try to work out how many there are.
- We want to write about how dugongs travel around and dive in the places where they live.

How we will carry out the research:

- We will do flights to look at dugong: one in the dry (August) and one in the wet (February).
- We will use a six-seater plane. Six people will fly in the plane: the pilot, the survey leader, and four observers.
- The plane will fly in straight lines at 150 m altitude (height) at a speed of 186 km/hr
- We will count all dugong we can see in a 200 metre strip on each side of the plane
- While we are flying we will record how clear the sea water is, how much cloud is over the sea and how bright it is.
- We will try to guess the total number of dugong in a group because not all dugong will have been counted because the weather may have made it hard to see them e.g. too much glare off the water or some dugong may have been underwater.
- We want to put satellite tags (that have dive recorders) on about 10 dugong.
- The satellite tags have a global positioning system (GPS) in them which track where the dugongs travel, when and where they dive and what they do in the places where they live. The scientists will be able to go on the internet to connect with the satellites and download the GPS information about dugongs.

When we will carry out the research: July 2013-June 2016

Where we will carry out the research: Napier Broome Bay

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* Abundance-how many dugong there are. Distribution-where dugongs are found.
WAMSI
Kimberley Marine Research Program

What we will achieve from the research:

- We will get more information of how many dugong there are in Napier-Broome Bay and what dugong use the places where they live.
- We will get information to help management of the Kimberley marine parks.
- Our work will add to the dugong work that the Bardi Jawi rangers did on the Dampier peninsula and that Department of Conservation (DEC) did in southern parts of Kimberley.
- Our dugong information will help the North Kimberley Saltwater Country Plan.
- Somebody could use this information to choose possible future Indigenous Protected Areas (IPA).
- This project will put together Aboriginal knowledge and scientific knowledge about where dugongs are found and where they travel.

Current Members of the Project

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<tr>
<th>Team Members</th>
<th>Experience</th>
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<tr>
<td>Chris Wilcox</td>
<td>Chris develops and applies mathematical models for fisheries management and marine biodiversity conservation. Chris leads research on the spatial management of marine resources and has an interest in developing ecologically-based policy tools to resolve inherent conflicts between human resource use and species persistence.</td>
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<tr>
<td>Richard Campbell</td>
<td>Richard’s research has focussed on sea lions for more than a decade and has expanded to include dugongs. Richard has worked closely with the Bardi Jawi mob catching dugongs and attaching satellite tags.</td>
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<tr>
<td>Amanda Hodgson</td>
<td>Amanda’s research has focussed on dugong behaviour and responses to human activities, particularly boat traffic. Now her interest is population assessments through aerial surveys, particularly for dugong and humpback whales.</td>
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