

## Opportunities for socio-economic research in Program 4: Species of conservation concern.

Marine Component

Program Leader: Helene Marsh JCU

## Projects

- Condition trends and projected futures of marine species of conservation concern
  - Project Leader: Mark Hamann JCU
- Sustainable use of marine species of conservation concern
  - Project Leader: Helene Marsh JCU

## Aims Project 1.4.1

1. Continue the historical series of aerial surveys of dugong populations along QLD coast and Torres Strait
2. Integrate results across surveys in a GIS as a basis to enable the management planning
3. To assess nesting success and impact of climate change on sea turtles in the northern GBR & Torres Strait

## Approach

To conduct the project in a manner which maximises the opportunity for Indigenous involvement and capacity building

## Key People

- Research Team
  - Mark Hamann and Helene Marsh JCU
  - Dr Scott Smithers JCU
  - EPA scientists and engineers
  - PhD students
  - Field assistants
- Stakeholder groups /end users
  - Indigenous groups and government managing agencies

## Project 1.4.1

### **Socio-economic elements**

#### Employ and train

- Indigenous observers and data analysts in aerial surveys
- Indigenous people in methods used to quantify nesting turtles & nest success
- Indigenous people in foraging area surveys for turtles
- Indigenous counterparts in extension activities including community GIS

## Project 1.4.1

### Tasks completed

1. Aerial surveys for dugong - (community feedback continuing)
2. Sea turtle nesting and hatching surveys in TS (Mer)
3. Quantify sand temperatures & beach profile
4. Information & introductory workshops at Mer

## Project Timeframes

- Aerial survey
  - fieldwork completed 2006
  - extension 2007
  - community GIS 2007-2008
- Sea turtle nesting and hatching surveys
  - fieldwork 2006-2009
  - extension ongoing

## Key Research Outcomes

- Status and trends of dugong stocks in the GBR and Torres Strait
- Sustainable anthropogenic mortality from all causes
- Nesting success of green turtles in the northern Great Barrier Reef and Torres Strait in the context of sand loss from Raine Island
- Recruitment rates of juvenile turtles into the population.
- Information to inform management actions, including co-management options, for green turtles and dugongs.

## Project 1.4.2 Economics of Indigenous marine hunting and its management

Project Leader  
Professor Jon Altman ANU

## Project 1.4.2 Aims

- 1) To apply the hybrid economy framework (customary [non-market] state and market sectors) to an investigation of the economics of the Indigenous harvest of turtles and dugongs in the Torres Strait and northern GBR.
- 2) To investigate the economic costs and benefits (including social and health benefits) of management options available within this framework including the possible role of payment for environmental services

## Key People

- Research Team
  - Professor Jon Altman, Dr Bill Arthur (ANU)
  - Research student
- Stakeholder groups /end users
  - Indigenous groups and management agencies in GBR and Torres Strait

## Methodology

- Literature search,
- Participant observation (fieldwork) with:
  - Torres Strait organisations
  - sample of communities actively engaged in marine turtle and dugong harvesting.
- Evaluation of the direct contribution of customary harvesting to livelihoods and to social life;
- Examination of indirect and induced benefits from payment for environmental services
- Examination of costs and benefits of strategies community management strategies

## Project Timeframes

- PhD student mid 2007- 2010

## Key Research Outcomes

- Understanding of the economic costs and benefits (including social and health benefits) of options to manage Indigenous hunting including the possible role of payment for environmental services
- PhD thesis