



# Impacts and Achievements of the MTSRF

Copy of abstract and presentation given at the  
2010 Annual Conference of the  
Marine and Tropical Sciences Research Facility (MTSRF)  
[http://www.rrrc.org.au/news/2010\\_conference.html](http://www.rrrc.org.au/news/2010_conference.html)

Showcasing the Australian Government's investment  
in the MTSRF for improved sustainability of the  
North Queensland region, and Australia

18-20 May 2010  
Pullman Reef Hotel & Casino  
Cairns, North Queensland



## Abstract

### [MTSRF Program 8](#)

#### Sustainable use of Great Barrier Reef resources

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The Great Barrier Reef (GBR) is a unique resource and one that generates substantial economic and societal benefits. Ensuring the sustainability of the resources within the GBR will provide for these benefits to accrue over the long-term. MTSRF Program 8 researchers have been working towards improving the sustainable use of a range of GBR resources through biological, ecological, social and economic studies. This research has not only enhanced the ability of resource managers to improve their stewardship of the GBR region, but has also fostered substantial research capacity within North Queensland. Outcomes of Program 8 research will be presented to highlight the impact that it has had on the sustainable use of GBR resources.



**Australian Government**  
 Department of the Environment, Water, Heritage and the Arts



Marine and Tropical Sciences Research Facility

# Program 8. Sustainable use and management of marine resources of the Great Barrier Reef

Colin Simpfendorfer  
 Program Leader





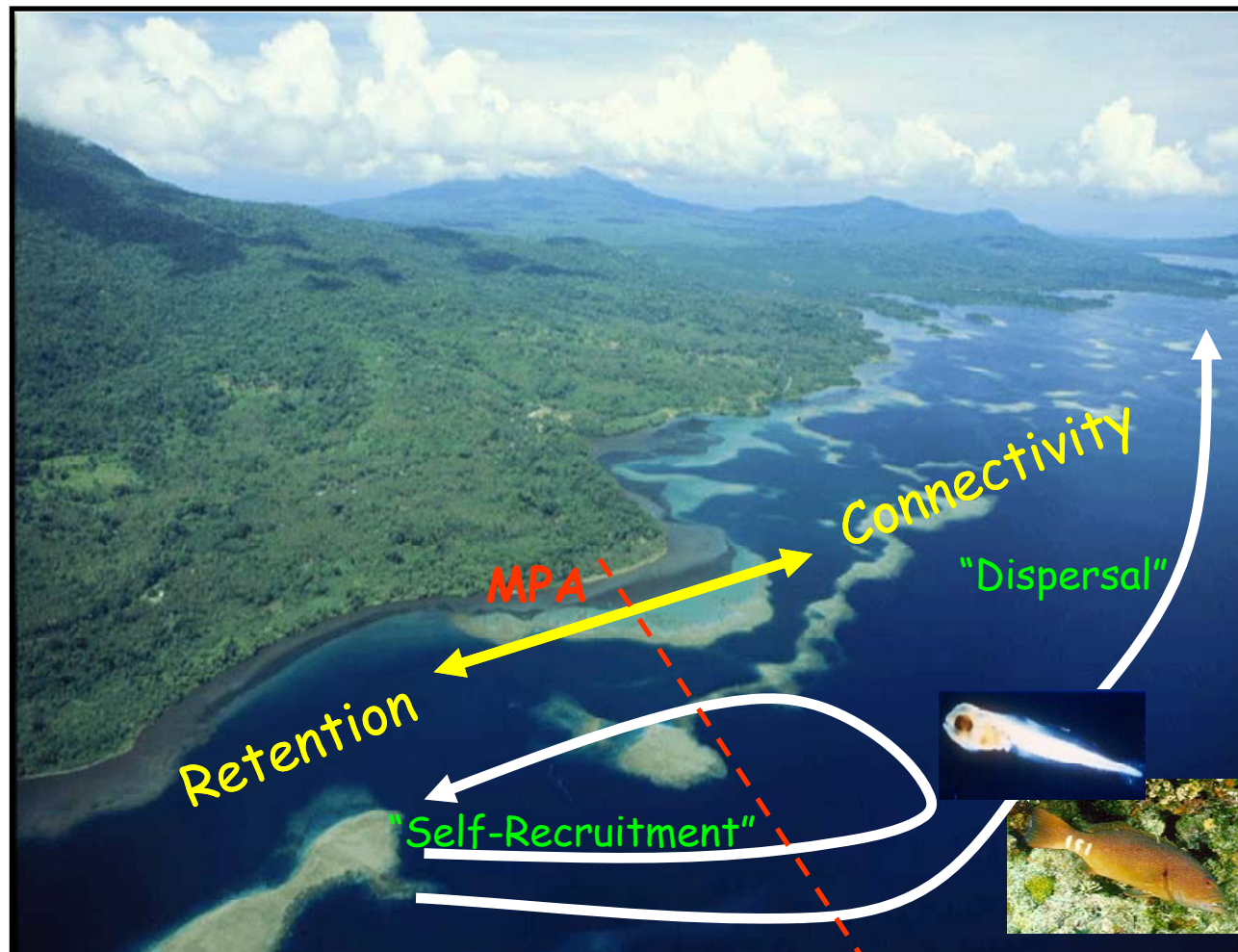
## Projects

- 4.8.1 Resilience and connectivity (Professor Terry Hughes)
- 4.8.2 Influence of zoning on habitats and biodiversity (Dr Peter Doherty)
- 4.8.3 Resilience of key inter-reef fish species (Dr Colin Simpfendorfer)
- 4.8.4 Impacts from industry and community use on inshore biodiversity (Dr Andrew Tobin)
- 4.8.5 Incorporating stakeholder values in the care of the GBRMP (Dr Stephen Sutton)
- 4.8.6 Analysis of recreational and tourism use and impact on the GBR (Dr Bruce Prideaux)
- 4.8.7 Forecasting risk of exposure to Irakandji (Professor Mike Kingsford)
- 4.8.8 Investigation of the motivations of commercial and recreational fishers to comply with GBRMP zoning (Dr Renae Tobin)





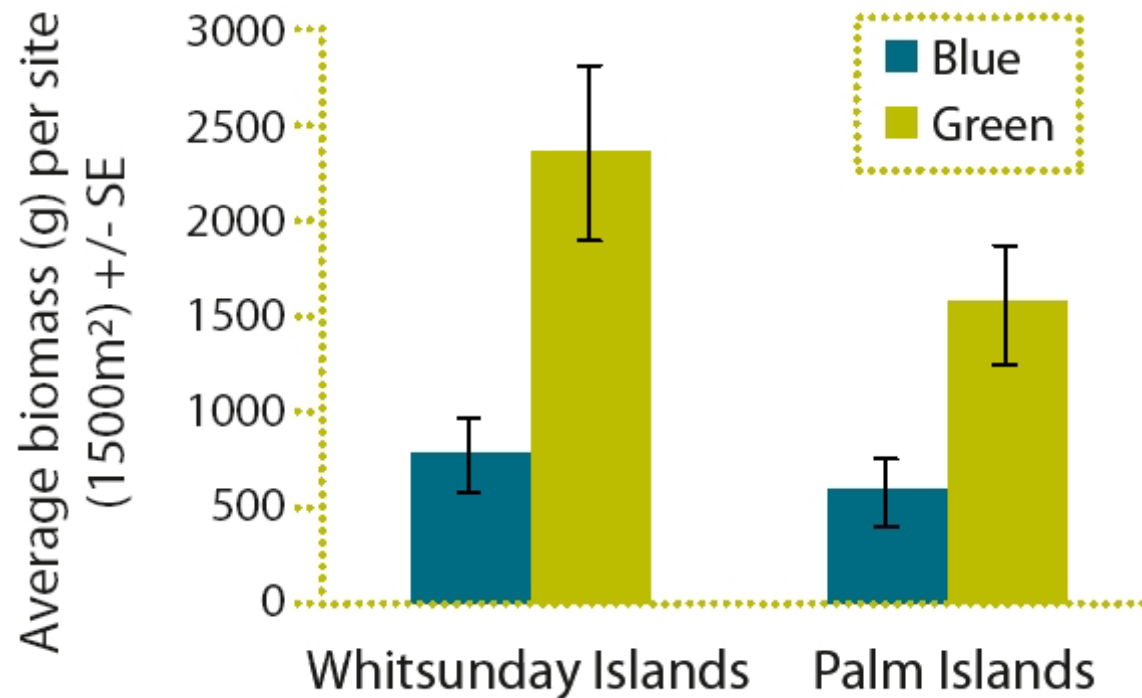
## Understanding reef connectivity

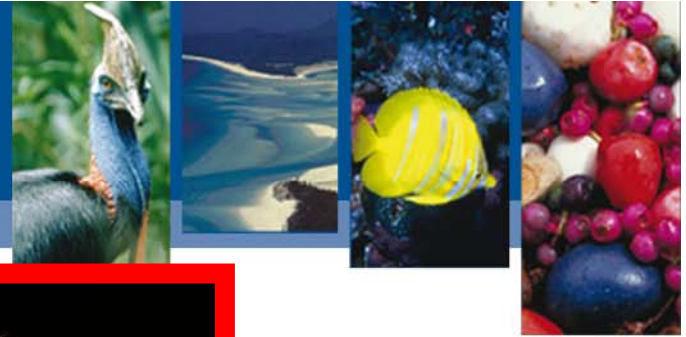




## Assessing the benefits of closed areas

- Inshore closed areas have 35-71% more coral trout than open areas.





## Where do size regulations need reconsidering?

- Size regulations for several species of coral reef fish were shown to need review.
- Current limits may not preserve sufficient spawning potential to ensure sustainability.



Yellowtail emperor



Flowery cod

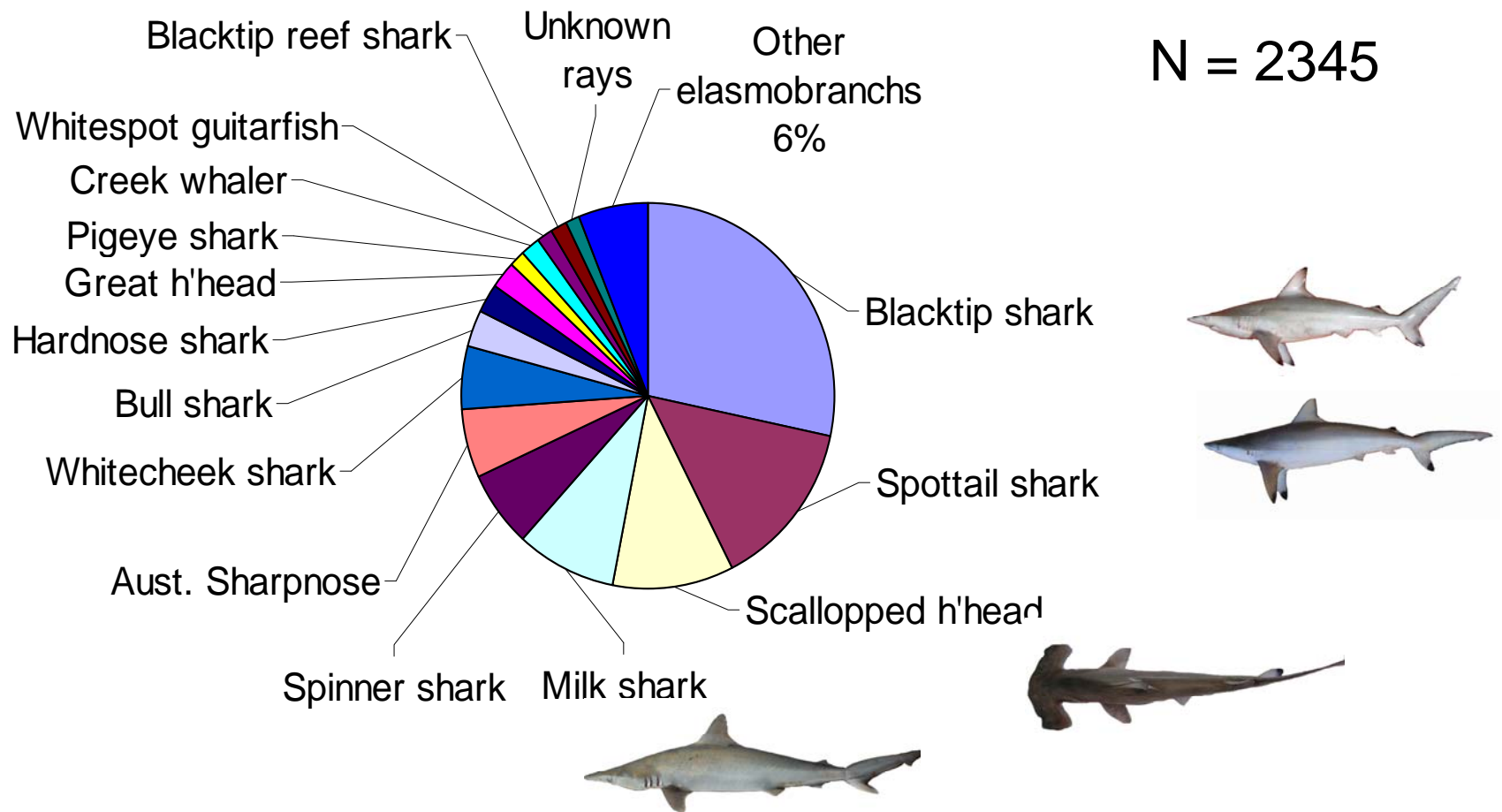


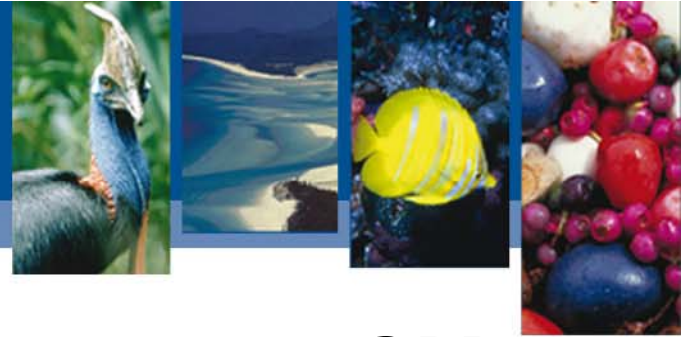
Green jobfish



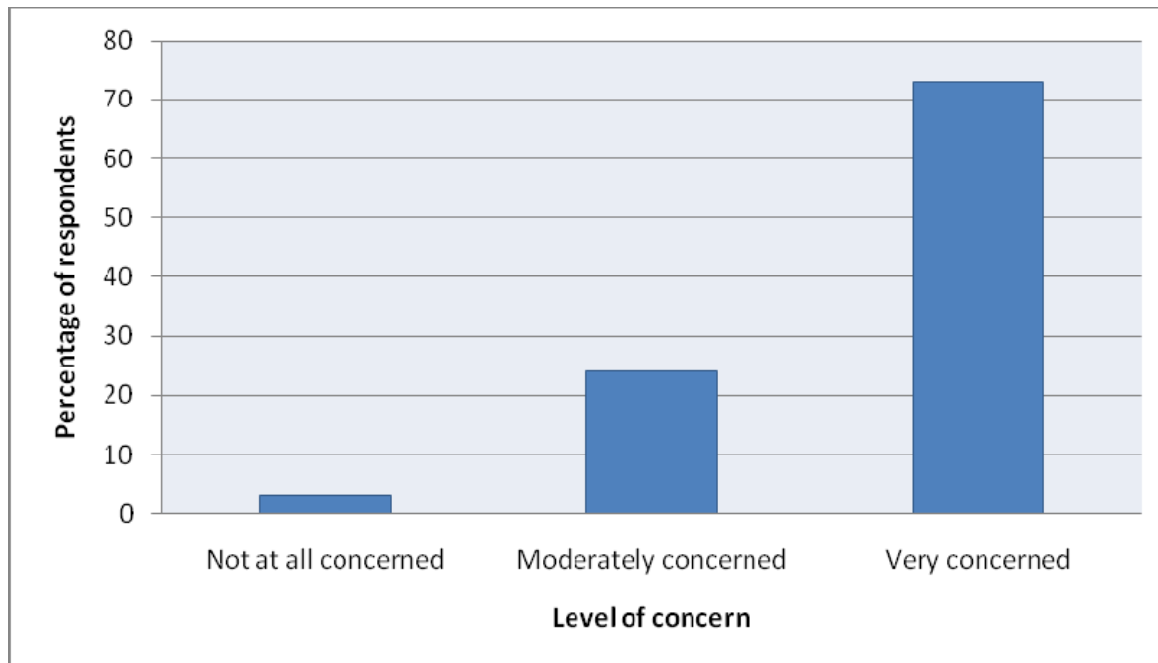


## Risks to shark populations



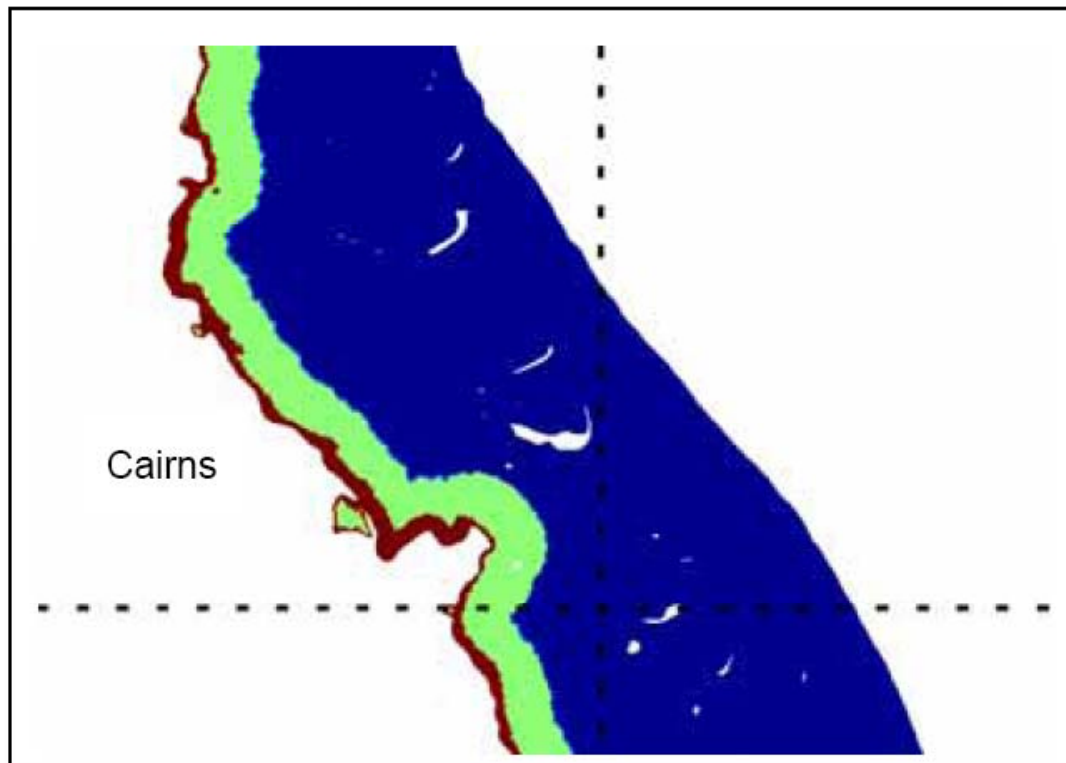


## Public concern about climate change on GBR





## Risk of exposure to jellyfish stings

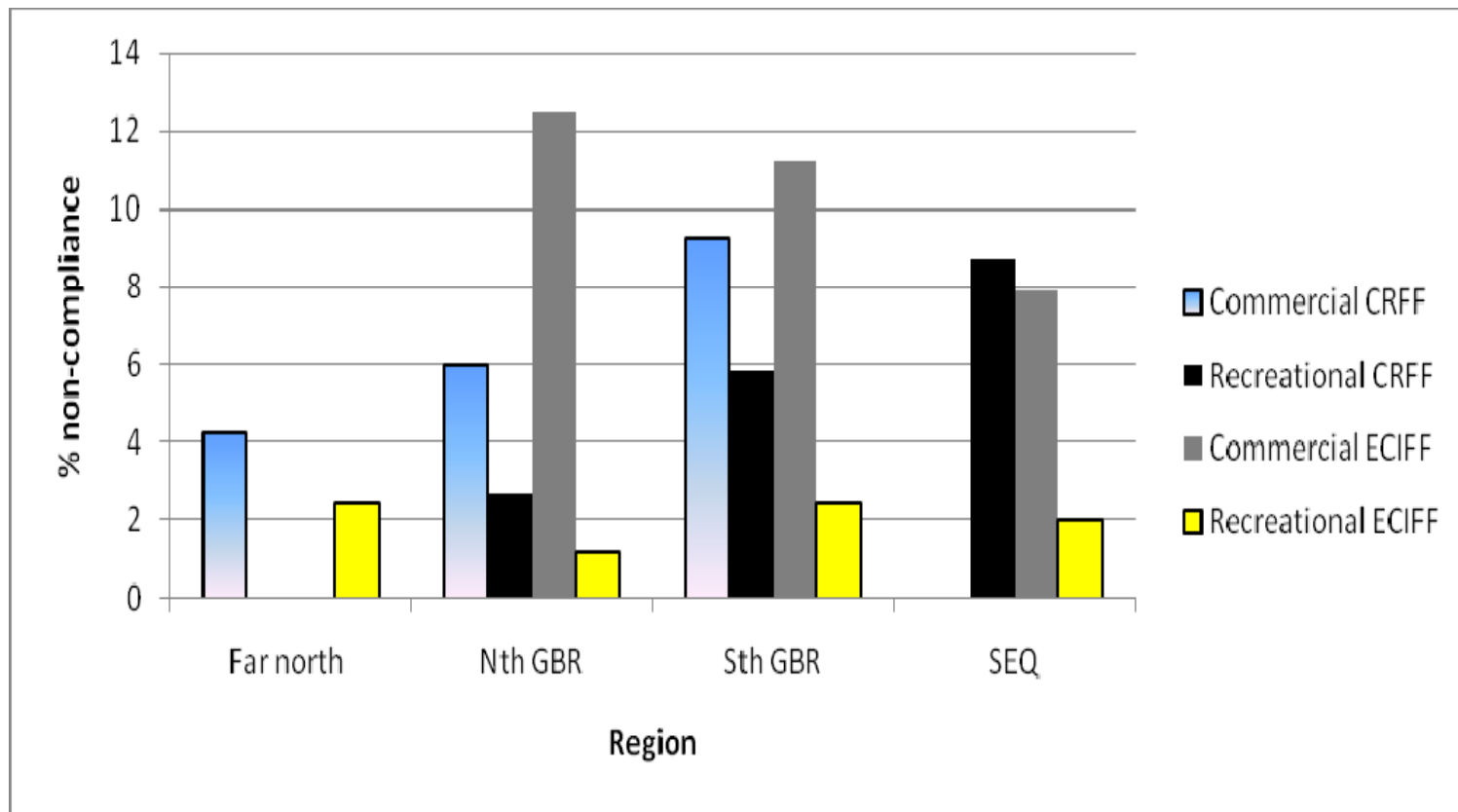


*Chironex fleckeri* risk map  
Maroon – extreme risk  
Green High risk  
Dark blue – very low risk





## Fisheries compliance





## Building capacity

- 2 x MTSRF PhD scholarships in Program 8
  - Andrew Chin (JCU). Ecology of blacktip reef sharks on inshore reefs.
  - Penny Blackmore/Fernanda Faria (JCU). Valuation of ecosystem services provided by coastal wetlands for fisheries.
- Numerous other students involved in projects
  - >20 students
  - PhD, MSc, MAppIsci, Hons
- Post-doctoral fellows

