



National Environmental  
Research Program

**MARINE BIODIVERSITY** *hub*



## Landscape approaches to managing high conservation priority species

Tony Smith CSIRO

MARINE BIODIVERSITY *hub*



## Project objective

To improve the scientific basis for on and off reserve management of sharks and rays in SE Australia

The premise underlying this project is that conservation values are not distributed uniformly across the EEZ, but that high conservation value species and habitats tend to be aggregated in “hot spots”. This project aims to develop improved understanding of the location of such **biologically important areas** and the biota they contain





## Project staff

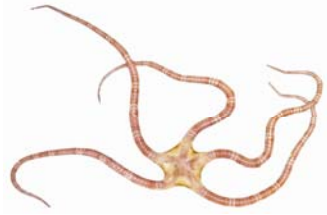
Ross Daley (CSIRO) – shark and ray expert

Penny Johnson (CSIRO) – Atlantis ecosystem modelling

Tony Smith (CSIRO) – project leader

Helen Webb (CSIRO) – ecological risk assessment





## Background

Sharks and rays are a diverse fauna in SE Australia

Mostly low productivity species putting them at higher risk

Considerable uncertainty about species ranges, stock structure and movement – aim to synthesise current knowledge

A few well studied species but information relevant to management not easily accessible





## The fauna (a small fraction )



Shortfin mako



Whiskery shark



Sawtail catshark



Smooth hammerhead



Bluntnose sevengill



Grey skate





## Outputs (to 2013)

Refined species distribution maps for sharks and rays in SE Australia

Locations of biologically important areas for sharks and rays in SE Australia

Nursery, foraging and corridor areas for selected key species

Preliminary exploration of options for on and off reserve management of sharks and rays in SE Australia





## Outcomes

Identify the role of marine reserves in protection of high conservation value sharks and rays in SE Australia

Identify species where spatial management plays a key role in protection

Improved management arrangements on and off reserve

Fewer species nominated for listing?





## Links

Project 1 – values

Project 2 – assets and threats

Theme 3 – canyons

Strong links to Australian shark and ray research community





# Contacts

## Director

Prof Nic Bax

Tel: +61 3 6232 5341

nic.bax@csiro.au

## Deputy Director

Paul Hedge

Tel: +61 3 6232 5023

paul.hedge@csiro.au

## Executive Officer

Vicki Randell

Tel: +61 3 6227 7270

vicki.randell@utas.edu.au

## Research Leaders:

National monitoring, evaluation and reporting

Dr Keith Hayes

Tel. +61 3 6232 5260

Keith.Hayes@csiro.au

Supporting management of marine biodiversity

Dr Tony Smith

Tel. +61 3 6232 5372

Tony.D.Smith@csiro.au

National ecosystems knowledge

Dr Scott Nichol

Tel. +61 2 6249 9346

Scott.Nichol@ga.gov.au

Regional biodiversity discovery to support marine  
bioregional plans

Dr Julian Caley

Tel. +61 7 4753 4148

J.Caley@aims.gov.au



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### Disclaimer

The information in this presentation was generated by the Marine Biodiversity Hub and its partners for the purpose of consultation and collaboration with marine stakeholders in improving the evidence-base for decision making for marine biodiversity management. The Marine Biodiversity Hub is supported through funding from the Australian Government's National Environmental Research Program. The results should not be used or taken as final and are not for circulation outside of this audience without prior permission.

### Contact:

Tony Smith  
CSIRO  
Hobart

[tony.d.smith@csiro.au](mailto:tony.d.smith@csiro.au)



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