Seeking whole-of-system understanding
An integrated study of environmental, economic and social values

Dr Ben Baghurst
Research Director
The Great Australian Bight

- High levels of endemism
- Australia’s largest commercial fishery - the SA Sardine Fishery
- Globally significant feeding ground for Southern Bluefin Tuna and Pygmy Blue Whales
- 25% of Australia’s seafood production by value, more by volume
- 80% of Australian population of Long-nosed fur seals and Australian sea lions
- Ecotourism hotspot
GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM
Overview

- $20 million whole-of-ecosystem research program- $14 m BP + $6 m CSIRO+MISA
- Unique partnership for all involved
- One of the few whole of system studies conducted in Australia
- Dynamic GAB ecosystem models created will be used to inform sustainable development in the region
- Program commenced in April 2013 and finishes on September 30, 2017
**Aim**

To improve understanding of the environmental, economic and social value of the Great Australian Bight

**Approach**

- Working Group established in 2012
- Science Plan developed
- Literature Review conducted
- Research Prospectus developed
Program Elements

- Management Committee
- Research Director and Research Officer
- Independent Science Panel
- BP’s Subject Matter Experts
- Ecological and socio-economic data being made publicly available
- Biennial stakeholder Science Symposium
- 7 themes, 16 inter-related projects, ~100 scientists and technical staff, 3 PhD students
Program Governance

Independent Science Panel

Management Committee

Research Office
(Research Director and Science Support Officer)

Project Leaders Team

Technical Working Groups
(BP SMEs and PIs)

BP Subject Matter Experts

Communications Committee

Jane Ham
Management Committee

Rob
Flinders Uni

Phillipa
CSIRO

Tim
UoA

Rochelle
BP

Gavin
SARDI

Dave
CSIRO

Rod
BP
Independent Science Panel

Prof Iain Suthers
Dr Ian Poiner (Chair)
Prof Robert Harcourt
Dr Malcolm Clark
Dr Sarah Jennings
Prof Peter McCabe
Dr Richard Brinkman

GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM
Advantages of Approach

- Undertaking research during exploration phase enables temporally replicated analyses of ecosystem structure and function prior to production.
- Engaging with the local scientific community collectively builds the knowledge base and assists development of local scientific capability.
- Integrated program provides for efficient development and validation of quantitative ecosystem models to:
  - elucidate inter-connections
  - establish tools to support decisions regarding future development
  - predict, monitor and assess potential impacts
- Program with capacity to use the new Marine National Facility (RV *Investigator*).
GABRP Connections

Australian Government
Geoscience Australia

National Offshore Petroleum Data Repository Project

National Mooring Network Facility

Australian Animal Tracking and Monitoring System Facility

Integrated Marine Observing System

IMOS Ocean Current

Ocean Glider Facility

TERM-Australia model
Victoria University

Satellite Remote Sensing

Australian Ocean Data Network

GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM
**Keys to Success**

- Understand drivers and critical needs of the other parties
- Establish a clear governance structure
- Lever investment from partners
- Negotiate publication rights and freedom to operate upfront
- Engage with the local scientific community
- Don’t underestimate the legal resources required initially
- Ensure there is contingency / flexibility in the budget
To Close

- Major project reports and journal papers now starting to flow
- Field data collection is complete
- Models developed will be a lasting legacy of the program
- Project information is available through Marine Innovation Southern Australia
  - [www.misa.net.au/GAB](http://www.misa.net.au/GAB)
- Discussions commenced about filling key remaining data gaps