



# Enhancing and Extending Australia's Integrated Marine Observing System

*Melbourne, 11<sup>th</sup> August 2009*

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# Outline of talk

- Some 'givens'
- The opportunity
- Process to date, and from here
- Key messages in the Draft Five Year Strategy

# Some 'givens'

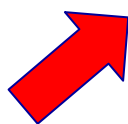
1. We're enhancing and extending IMOS, not starting again
  - This is about sustained ocean observing
  - We have contracts/co-investments in place to deliver agreed data streams to mid-2011
    - \$50M NCRIS + \$44M co-investment
2. We'll continue to develop the Node and Facility structure
  - Nodes provide the scientific rationale for IMOS
  - Facilities enable us to build institutional strengths into national capability
    - funding will flow through the Facilities
3. "I" MOS, integrated from global to national to regional
  - Linking from ocean basin to coastal via boundary currents
  - Linking from physics to biology via boundary currents

# The opportunity

- Another \$52M to enhance and extend IMOS
  - \$8M + \$8M 2009-11 to enhance planned activities
  - \$18M + \$18M 2011-13 to extend for two years
  - Requirement for
    - enhanced capability in the Southern Ocean
    - extended coverage in northern Australian waters
- Using this \$52M as a stake to ‘grow the pie’ through co-investment in 2009-13
- Using this re-commitment to sustained observing, in the context of a Marine & Climate Super Science Initiative, to build towards recurrent funding of a national facility(ies) for ocean observing

# Process to date, and from here

- Original IMOS Plan (2007-11)
  - never a 4-year plan
- Review of the NCRIS Roadmap
  - August 2008
- Federal Budget May 2009
  - Super Science Marine & Climate
  - One of only three priorities
- \$52M to enhance/extend IMOS
  - \$8M + \$8M 2009-11
  - \$18M + \$18M 2011-13
- Interim Plan to invest first \$8M



Facility	Southern Focus	Northern Focus	Enhancement
<b>Australian ARGO facility (\$1.8M – CSIRO)</b>	Deployment of ice capable floats. Increased deployment of floats in Southern Ocean. (\$.9M)		Increased deployment of standard floats to move towards completion of southern hemisphere array. Increase variables monitored to include oxygen as appropriate (.9M)
<b>Australian National Facility For Ocean Gliders (\$1.5M – UWA)</b>	Seagliders to be deployed on transects from SOTS site to Hobart (\$1M)	Seagliders to be purchased & deployed in North East Queensland outside of the Great Barrier Reef (\$.5M)	Extend operating bases to develop continent wide distributed capability
<b>Australian National Mooring Network (ANMN) (1.8M – CSIRO)</b>		New National Reference Station in situ monitoring outside of Stradbroke Island (\$.6M)	CO <sub>2</sub> & PH added to selected National Reference Stations. Acoustic current profile measurements added to all National Reference Stations (\$1.2M)
<b>ANMN - Northern Australia Observing System (\$1.7M – CSIRO)</b>		Wide consultation to determine the marine observing needs in Northern Australia, followed by implementation of the initial suite of instruments (\$1.7M)	
<b>Australian Acoustic Tagging &amp; Monitoring System (\$1.2M – SIMS)</b>	Instrumentation of Southern Ocean marine creatures and seals in the Great Australian Bight with tracking and oceanographic sensors utilising satellite communications for data recovery. (\$1M)	New acoustic receiver curtains to detect tagged animals in Queensland, extending the global Ocean Tracking Network. (\$.2M)	
<b>09/10 Total \$8M</b>	<b>\$2.9M</b>	<b>\$3.0M</b>	<b>\$2.1M</b>

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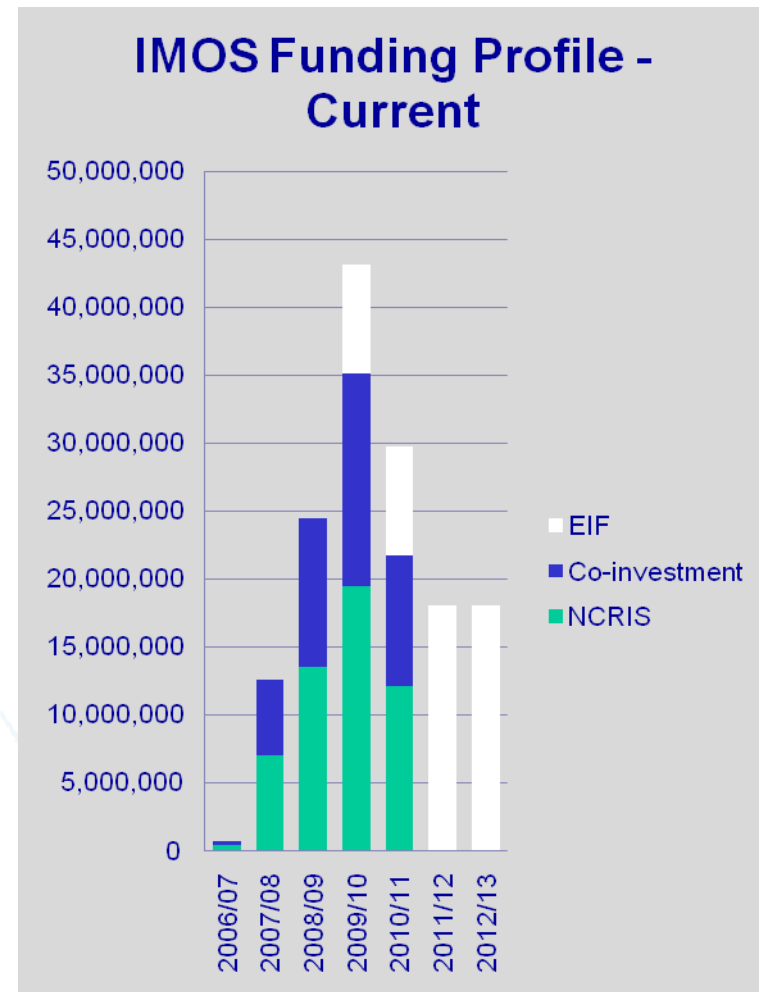
- 3<sup>rd</sup> August – Draft Five Year Strategy circulated
- During August – Consultation on Draft Strategy
- 10<sup>th</sup> September – Advisory Board approve Strategy
- Mid-September – call for Node Science & Implementation Proposals, and Facility Project Proposals
- End-October – Call for Proposals closes
- November – National meeting of Proposal proponents
- Xmas 2009 – Draft Project Plan for DIISR
- February 2010 - Final Project Plan to DIISR

# Draft Five Year Strategy

- Background, Goals, Initial IMOS Plan 2007-11 (based on Nodes and Facilities)
  - Covered in previous slides
- Investment parameters
- Lessons Learned
- Changes and Developments
- Ten Strategic Priorities

# Investment Parameters

- We have already created a lot of momentum in IMOS (green+blue)
  - Peak in 2009-10 due to lag time
  - 2010-11 a sustainable level
- EIF funding secure to 2013 (white)
  - A strength we can leverage
  - Need to understand ‘creation and development of infrastructure’
- Co-investment is only secure to mid-2011, before enhancement
  - Need to negotiate in-principle co-investments by Feb 2010



# Lessons Learned – mid-term review

- Bluewater & Climate Node
  - Improving understanding of impact of boundary currents on continental shelf environments, ecosystems and biodiversity?
  - Through operational analysis (e.g. via BLUElink>), and climate analysis (e.g. via ACCESS).
  - Highlights need for BW&C Node to contribute to BLUElink> and ACCESS , downscaling, nested modelling approaches etc.
- Facilities (general)
  - Ensuring they achieve critical mass and national reach, which may require resolution of different interests within a Facility
  - Managing gaps between potential impact and current delivery
- National Overview
  - Coherent strategy for monitoring the major boundary currents

# Changes & Developments

- \$52M from Education Investment Fund (EIF)
  - creation and development of infrastructure
- 2009 Federal Budget
  - Marine & Climate Super Science Initiative
  - Replacement blue-water research vessel capability (etc)
- National Framework for Australian Climate Change Science

# Ten Strategic Priorities (Draft)

1. Ongoing development of a coherent, well-positioned Bluewater and Climate Node
2. Impact and delivery through improving model output
3. Providing a national backbone for observing boundary currents
4. Ongoing development of Regional Nodes
5. Continuing to build institutional strengths into national capability
6. Exploring the potential for whole-of-system approaches
7. Driving down the cost per observation
8. Creating and developing the information infrastructure
9. Ensuring the data is actually used
10. Partnering for sustained ocean observing

# Summing up

- Some 'givens'
- The opportunity
- Process to date, and from here
- Key messages in the Draft Five Year Strategy



 **IMOS** Integrated **Marine Observing** System

**Thank you**

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