



# NODE 3 OVERVIEW

Chris Simpson  
DEC



# WAMSI Node 3 - Managing and conserving the marine state: *best practice management and underpinning science*



**Dr Chris Simpson**  
**WAMSI Node 3 Leader**  
**Program Leader,**  
**Marine Science Program, DEC**

**Dr Kelly Waples**  
**Node 3 Science Coordinator**  
**Principal Research Scientist, DEC**

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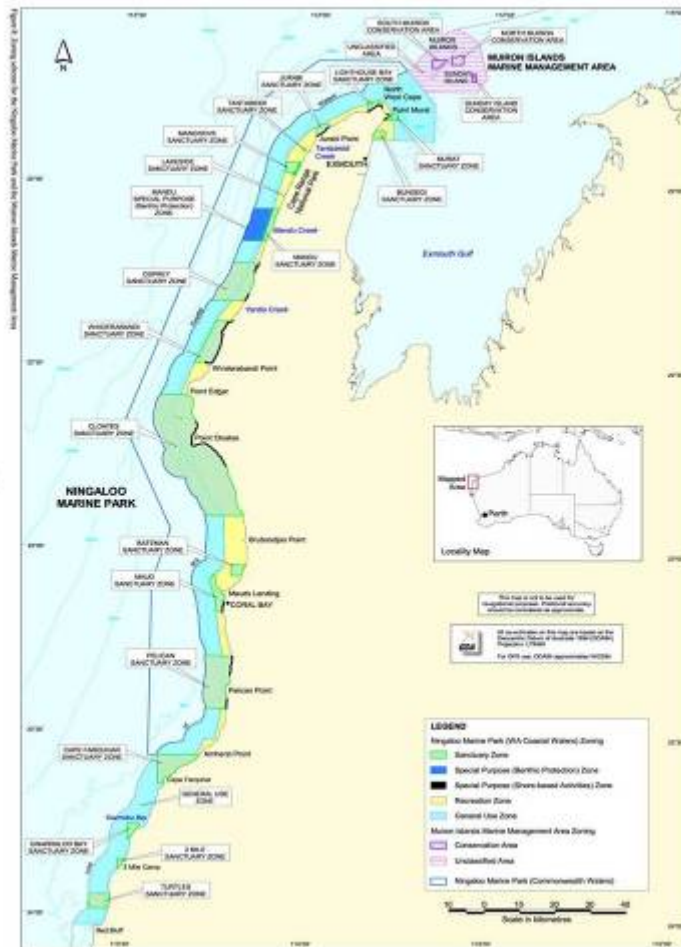


# Purpose

- What research is being done in WAMSI Node 3
- Why it is being done
- Where we are headed from here



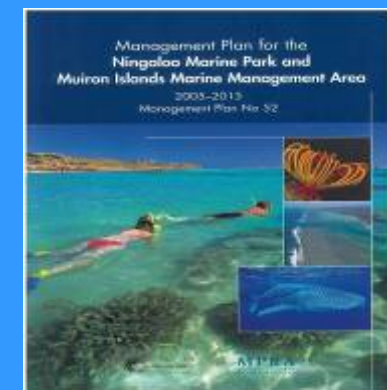
# History: Ningaloo Research Program



Premier releases draft NMP management plan in 2004 and provides \$5 million for research into NMP

*“Improve the scientific underpinning for the conservation and management of Ningaloo Marine Park”*

**Ningaloo Research Program: WAMSI Node 3, CSIRO Wealth from Oceans Flagship, MU, AIMS, industry**





## \$30 + Million Funding for Research at Ningaloo over 5 years

- \$5M for WAMSI Node 3 (NRP)
- ~ \$10+M co-investment in Node 3 by AIMS, CSIRO, State Govt and universities
- ~ \$12M for *Wealth from Oceans* Flagship: Ningaloo Collaboration Cluster hosted by MU
- \$1M p.a. for AIMS core research
- \$1M of industry-funded research (to AIMS)
- \$1.5 M for CoML project (AIMS)
- IMOS Acoustic curtain
- Ningaloo Global Acidification Reference Site + Others?

## WAMSI Node 3 – Ningaloo Research Program

- **Inventories** - *'snapshot' of ecological and social values*
  - **Baselines** - *natural variability in time and space*
  - **Processes** - *cause-effect relationships: ecosystem response to natural and human pressures*
  - **Prediction** - *Development of models to predict response/s of ecosystems to natural disturbances and human use*
- 
- **Science program based on research needs identified in the NMP management plan**
  - **Projects were designed to answer specific management questions**



# NODE 3 SCIENCE PLAN- Major projects

Deepwater biodiversity\*

*AIMS*

Biodiversity- fish, sharks, invertebrates\*

*CSIRO*

Whale Sharks\*

*AIMS*

Geomorphology, sedimentology and habitats\*

*Curtin*

Oceanographic processes\*

*UWA*

Monitoring reef 'health'

*AIMS*

Effects of fishing\*

*CSIRO/AIMS*

Groundwater link to NMP\*

*Curtin*

Northwest marine research inventory

*DEC/CSIRO*



**Node 3: 25 Projects/sub-projects  
~60 scientists working in NMP**





western australian  
marine science institution

# Wealth from Oceans National Research Flagship Ningaloo Collaboration Cluster

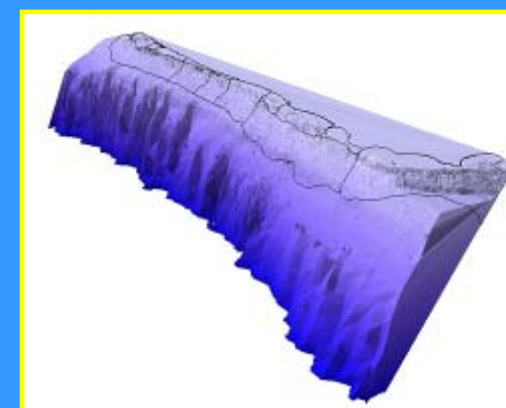
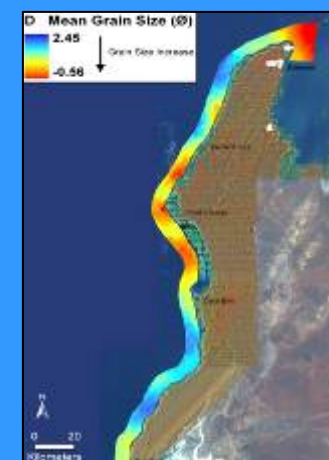
- Lagoon bathymetry and habitats\* - CU, MU
- Lagoon biodiversity\* - MU
- Human use of Ningaloo Reef\* –MU
- Socio-economics of tourism\* - CU
- Recreational site choice – UWA
- Science integration – CSIRO
- MSE - CSIRO





## Emerging findings – just a few

- Diverse and abundance filter-feeding communities in deeper water of NMP
- Shark and ray populations are healthy
- Significant decline in abundance of targeted finfish and lobsters
- Oceanic processes may protect NMP from ‘bleaching’ events seen elsewhere
- Geological record of reef growth will help understand CC impacts on NMP
- Human use patterns tied to access points and infrastructure nodes



# WHERE TO FROM HERE

- Focus on research implications for management
- Focus on data management
- Focus on knowledge transfer and uptake
- Complete research projects by end of 2010
- Complete Node 3 summary report by June 2011



# Summary

- Ningaloo Research Program is nearing a successful completion
- Great return on Government investment in marine science
- High quality science outputs produced
- Data management, implications for management and knowledge uptake is a major focus over 2010-11
- Science base to manage NMP is significantly improved
- Knowledge is transferable to other coral reefs in WA (and elsewhere)



# Acknowledgements

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