

New WAMSI Strategic Initiative

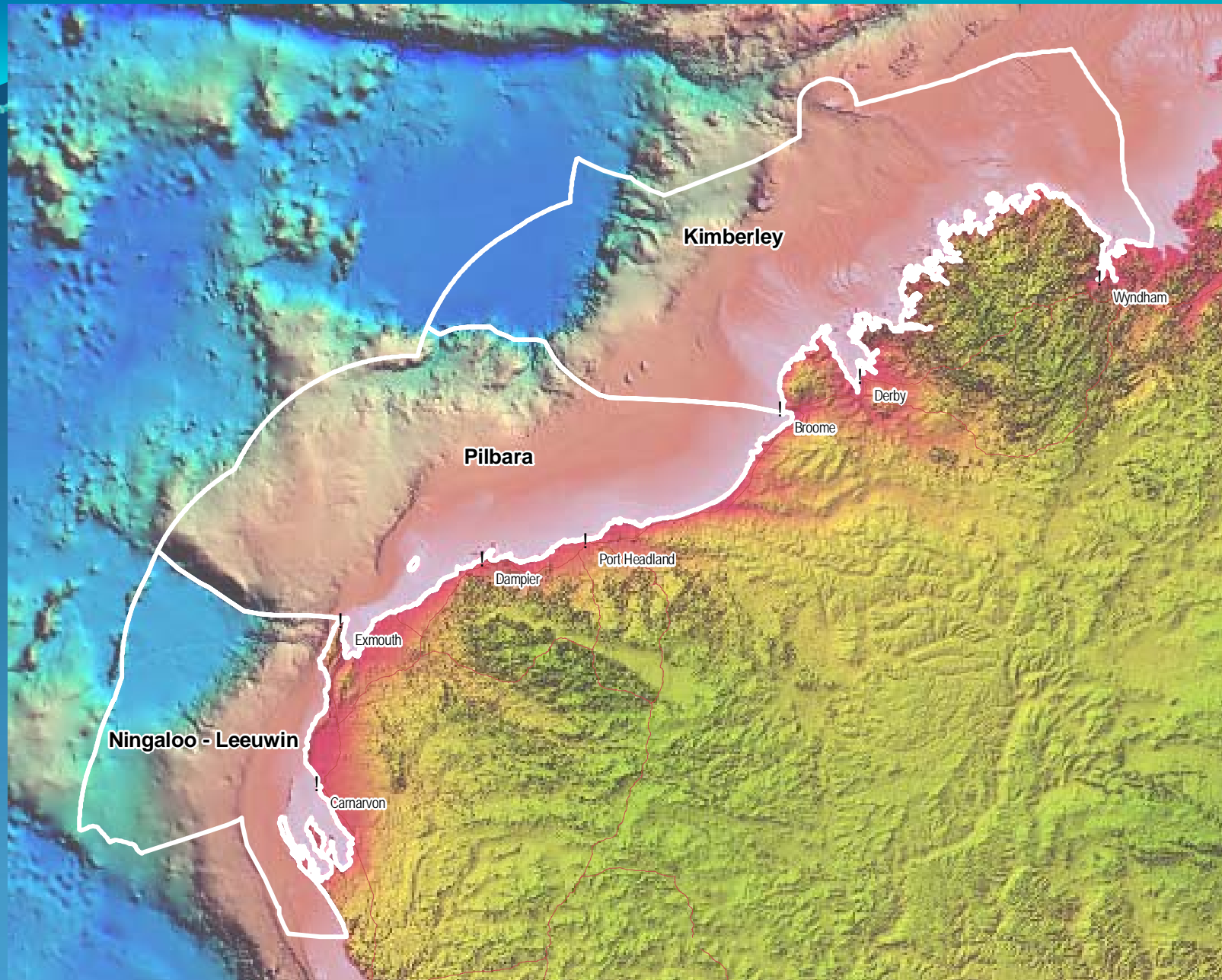
Marine Science Case Business Case and Co-Investment Strategy

KIMBERLEY - BROWSE REGION

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Vision

strategic science to underpin the conservation and sustainable management of the Kimberley marine environment and resources for the economic, social and environmental benefit of the region, the State and the nation.



WAMSI Strategic Marine Science Plan for the Northwest Region
Bathymetry of the Northwest Region. Courtesy: Geoscience Australia, National Oceans Office

Strategic Issue

- Scarcity of knowledge and understanding at a regional to local scale



WAMSI Strategic Marine Science Plan for the
WAMSK Kimberley-Browse Region Case for the Kimberley-Browse Region

Purpose

Assess:

- Big strategic issues, key questions for the region
- Science needed to address the issues
- Resources required to conduct the science
- Potential providers of those resources

Prepare:

- a business case which demonstrates the benefits of the science to the region, the state and the nation

Previous work

Physical

- SE Indian Ocean and ITF
- Connectivity (inter-region, inter-atoll, intra atoll)
- Internal waves
- Tidal mixing
- Bathymetry
- Seabed geomorphology and composition

Previous work

Biological and ecological

- **main focus**
 - **outer-shelf atolls**
- **surveys & biodiversity assessments**
 - **intertidal communities**
 - **some fringing reefs**
 - **nearshore and shallow reef fish communities**
- **fisheries data; effects of trawling**



WAMSI Strategic Marine Science Plan for the Kimberley-Port of Esmeralda Region
Kimberley-Port of Esmeralda Region Courtesy: Dr Steve Blake, WAMSI

Science Gaps

Across most of the region little is known about:

- Distribution of habitats and biological communities;
- Natural variability
- Environmental requirements of key species and communities
- Ecologically significant processes;
 - upwelling, vertical mixing and productivity
 - long and cross-shelf connectivity
 - Sensitivity of species and communities to stress

Strategic Science

- addresses common requirements of multiple sectors
- interdisciplinary ; geared to understanding ecosystems
- managing effects of human uses on ecosystems
- environmental and operational risk
- addresses large range of space and time scales
- useful in the long term
- vital for sound decision making

Stakeholder Engagement

- Regional community
- Non Government Organisations
- Private Sector
- Federal Government
- State Government
- Scientific community

End Users – marine planners, managers, operators, public

- marine bioregional planning
- marine conservation
- biosecurity
- sustainable fisheries
- environmental protection
- indigenous, heritage, and wilderness
- tourism
- aquaculture
- mineral resources
- industries
- infrastructure
- coastal use
- catchment management

WAMSI

- fifteen organisations involved in marine research
- nation's major marine research providers
- federal & state government, universities, private sector
- multi-disciplinary, multi-agency research teams
- issue-based research within a strategic framework
- access to nation's major research facilities
- opportunities for postgraduate training and postdoctoral research