

# Ningaloo

## WAMSI Node 3

### The Policy Relevance of Choice Modelling: An Application to the Ningaloo and Capes Marine Parks

#### Comparing community and scientific values of environmental assets

Public consultation is increasingly important in contemporary Australia. Democratic accountability requires governments to consult the public on decisions regarding public assets, including environmental assets such as Ningaloo Marine Park.

On the other hand, scientific opinion is a cost effective means of acquiring information about complex environmental policy and management decisions, and is often used as an alternative to broad public consultation.

This assumes that scientific opinion adequately reflects public preferences, but to date there has been limited attention on public/scientific preference comparisons.

#### Modelling choices

This study aims to quantify, in a directly comparable manner, the public and scientific preferences for ecological assets at Ningaloo by applying the economic choice modelling technique to the Ningaloo Reef and proposed Ngari Capes Marine Park in Western Australia.

Potential management processes and conservation outcomes are also considered within the study to obtain information on general public and scientist preferences for input into future management decisions.

For example, conservation of fish stocks could be achieved by various management approaches such as seasonal closures on recreational fishing, or a reduction in legal catch limits. Individuals may value the fish stocks differently depending on the level of conservation offered and the management approach used to conserve them.

#### In addition the project will:

- investigate the suitability of choice modelling as a tool for valuing marine parks
- provide estimates of specific ecological values that can be considered in future marine policy and planning
- determine if there are different preferences for the management processes used to achieve a conservation outcome
- compare public and scientist preferences and values of ecological assets, and see if they are different
- determine if information and publicity play a role in selecting management processes of the marine parks.

#### Outcomes

Preliminary analysis suggests that the inclusion of management processes in the choice model has an effect on public preferences.

There is also evidence of information effects, with people who are more knowledgeable having a more positive reaction towards conservation; and evidence of publicity effects, with the well-publicised Ningaloo displaying higher dollar values for the conservation of its ecological attributes than the proposed Capes Marine Park.

Future results of this research will impact upon the accepted consultation strategies for marine park management.

If the research suggests that the preferences of the public and scientists are similar, then scientists can be used as an adequate and cost effective means of representing public interests in policy and management decisions.

On the other hand, instances of diverging preferences will highlight the need for broad public consultation. As preferences may differ



Courtesy of Chloe Sykes

due to varied knowledge bases, it may also suggest the need for more investment into public education and awareness campaigns.

#### Next steps

Further research would be advantageous with respect to the application of the choice modelling tool and its payment structure. Typical applications use a hypothetical payment vehicle such as an increase in taxes to provide improvements in environmental condition. It is possible that both the public and scientists may react differently to other payment structures, such as a reallocation of existing government funds. This may significantly change preferences for management of Ningaloo and the Capes.

Replications of the study in other environmental contexts (e.g. terrestrial) would also be useful to determine if preferences differ on a broader scale.

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Ningaloo research is an initiative of the Western Australian Marine Science Institution, CSIRO's Ningaloo Collaboration Cluster and the Australian Institute of Marine Science, working in partnership with government, local communities and enterprises.



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