



## Project Progress Reporting Form WAMSI Top-up Scholarship

<b>STUDENT:</b>	Abbie McCartney	<b>DATE:</b>	NOVEMBER 2008
<b>SUPERVISOR:</b>	A/Prof. Michael Burton		

<b>PROJECT TITLE:</b>	The Policy Relevance of Choice Modelling: An Application to the Ningaloo and Proposed Capes Marine Parks
<b>NODE LEADER:</b>	Chris Simpson
<b>PROJECT NUMBER:</b>	

<b>REPORTING REQUIREMENTS</b>	
1	<p><b>PROGRESS REPORT FROM SUPERVISOR [TO INCLUDE]</b></p>
	<p>Overall aims of research</p> <p>This project aims to identify if there is a divergence between community and expert values for ecological assets, and to identify if such divergences are due to differing understandings of ecological processes, or due to fundamentally divergent value systems.</p>
	<p>Progress made on the project</p> <p>The survey instrument has been designed, and implemented for the community sample, with over 900 completed returns. Initial analysis of this data identifies impacts of both scientific information provided, and also mechanisms by which policy would be implemented. Engagement with the sample of experts is about to commence.</p>
	<p>Any major risk issues</p> <p>The only major issue is whether there is engagement by the target group of marine scientists, who are being asked to complete the survey, and make tradeoffs across assets. There has been significant interaction with local marine scientists in the development of the survey, so hopefully this will not be the case.</p>
2	<p><b>PROGRESS REPORT FROM STUDENT TO [INCLUDE]</b></p>
	<p>Summary of progress [to be used on the WAMSI website]</p> <p>Progress over the past year has been generally centred on completing and administering the Choice Modelling (CM) questionnaire for the Ningaloo and Proposed Ngari Capes Marine Parks.</p> <p>A number of steps were taken before survey administration began, including: creation of the different survey versions for various target samples; optimising statistical design; survey</p>

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focus groups; formatting and uploading the web-based survey. Each of these steps are described in more detail as follows:

### *Questionnaire versions*

Based on a drafted questionnaire that was reviewed by both marine and non-market valuation experts, the questionnaire was divided into five different versions in aid of addressing the research aims. Questionnaires have been created for the general public and for marine expert populations, in an effort to examine if the two groups hold similar or diverging preferences in relation to the marine parks. Within the public questionnaire, information effects are accounted for – there are various versions with differing levels of information regarding the marine parks. The influence of management process is also considered in an alternate version of the questionnaire. Typically in CM studies a dollar value is estimated for a desired outcome, for example in this case I am estimating how much people are willing to pay for the outcome of improved conservation of specific ecological attributes in the two marine parks. The management process used to achieve that desired outcome is usually ignored, however it is possible that the process may influence peoples preferences for this outcome. As such, the questionnaire generally includes both management processes and conservation outcomes regarding the marine parks, while one version of the questionnaire acts as a control mechanism by eliminating the process component. Each version contains a section on Ningaloo and Capes, and general socio-demographic questions. The expert questionnaire also includes questions on general areas of expertise.

The versions are as follows:

- 1) Public: low information, with management processes and conservation outcomes
- 2) Public: medium information, with management processes and conservation outcomes
- 3) Public: high information, with management processes and conservation outcomes
- 4) Public: medium information, with conservation outcomes only
- 5) Expert: high information, with management processes and conservation outcomes

### *Statistical design of the choice sets*

The choice sets are the questions that elicit the dollar value estimates for the ecological attributes in the marine parks, and they are based on a strategic statistical design. The initial design was created in liaison with Leonie Burgess, from the University of Technology, Sydney, who is at the forefront of innovation in optimal CM designs. The design required a large number of choice sets to be answered by respondents, and so a blocking factor was incorporated into the design. This design was tailored for the public questionnaire versions with the 'process/outcome' questionnaires requiring five blocks of five choice sets, and three blocks of five choice sets for the 'outcome only' questionnaire.

The design was then revisited for the expert questionnaire. The expert sample size is expected to be significantly smaller than that obtained for the public samples, and therefore it will be more difficult to retrieve significant results from the data. As such, the preliminary results from the high information public data have been used to improve the efficiency of the expert design by inserting prior expected values into the design creation. For this reason, the expert sampling has been left until the end of the survey administration. The expert design has now been constructed and is currently being formatted for sampling to begin.

### *Focus groups, pre-testing and web-upload*

A focus group was held prior to formatting the questionnaire on the web-survey software. The focus group consisted of members of the general public, who were asked to complete one version of the public questionnaire, and were afterwards shown subsequent versions. They were invited to openly discuss any issues they had with particular questions,

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formatting or the topic in general. The questionnaire was also discussed once more with marine and economic experts for final comment.

The questionnaire was then coded onto a software program that supports web-based surveys. Following this the survey was uploaded, and the live version of the questionnaire was pre-tested by colleagues.

### *Survey administration*

A marketing research company was employed to administer the survey to members of the general WA public, with the majority of the sample being drawn from the Perth Metropolitan region. Surveying began in July and was completed in August, 2008. There were 921 completed questionnaires from 1250 responses (Table 1). Sampling of the expert population is expected to begin in November 2008, and be completed in early 2009.

**Table 1:** Summary of the number of public sample responses.

Responses:	Block 1	Block 2	Block 3	Block 4	Block 5	Total	As % of email invites sent for the survey
<b>Minimum information</b>							
Completed	51	50	53	50	50	254	7.664%
Incomplete	14	15	16	25	17	87	2.625%
Total responses						341	10.290%
<b>Medium information</b>							
Completed	50	51	50	58	51	260	6.093%
Incomplete	13	11	11	31	14	80	1.875%
Total responses						340	7.968%
<b>High information</b>							
Completed	51	51	52	51	51	256	5.767%
Incomplete	24	15	18	14	17	88	1.982%
Total responses						344	7.749%
<b>Outcome only</b>							
Completed	50	51	50	n.a.	n.a.	151	3.805%
Incomplete	27	25	22			74	1.865%
Total responses						225	5.670%
<b>Total completes</b>						<b>921</b>	<b>5.761%</b>
<b>Total incompletes</b>						<b>329</b>	<b>0.021%</b>
<b>Total responses</b>						<b>1250</b>	<b>7.818%</b>

### Summary of major findings to-date [to be used on the WAMSI website]

As survey administration is not yet complete exact figures cannot be presented from the data analysis. However, statistically significant effects are being found from the preliminary analysis of the public sample data. There is some evidence of the level of information affecting public preferences, as well as there being some effects from the incorporation of management processes into the choice model.

### Presentations made at workshops & conferences

- November 2007: Presented at the Environmental and Resource Economics Early-Career Researcher Workshop (Ecrew), Charles Sturt University, Bathurst. At Ecrew I presented my research aims as well as an overview of the drafted questionnaire and intended

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	<p>public/expert sampling strategy. There were a number of non-market valuation experts and peers at the workshop that were able to provide invaluable feedback on the project.</p> <p>- February 2008: Brief presentation summarising my research topic at the WAMSI/Australian Marine Science Association 'Marine Science in WA Show-and-Tell Seminar'.</p>
	<p>Final report [approximately 10 pages if the project has concluded]</p> <p>n.a.</p>
3	<b>OTHER REQUIREMENTS</b>
	Major findings to be reported immediately [ to be used for media, website, increased funding opportunity]
	Supervisor & student present at a minimum of one WAMSI organised event
	Node Leader, supervisor and student to meet at a minimum of 2 times yearly [preferably more]
	Final report to be placed on WAMSI website