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**The Application of Choice Modelling to Determine the
Economic Values of Non-market Goods and Services:
A National Park Case Study**

A thesis presented in partial fulfilment of the requirements for the degree of
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ABSTRACT

National parks and protected areas form the basis of global conservation initiatives and provide a raft of benefits in the form of various consumptive and non-consumptive uses. However, it is extremely difficult to express these economic benefits in monetary terms. The lack of economic values for these areas often results in sub-optimal conservation outcomes. Non-market valuation techniques can be used to estimate monetary values for these key environmental assets. These values are able to provide critical information which can be used to inform management decisions and ensure the implementation of effective conservation policy.

This research applied the choice modelling stated preference technique to estimate the value of non-market goods and services associated with national parks. The study focuses on the ecological and recreational attributes of Abel Tasman National Park, New Zealand. The park receives high levels of visitor usage and is well regarded for its unique intrinsic values.

A standard multinomial logit model was used to estimate the non-market values. The results indicate park users were willing to pay an actual cash value for the protection of native bird species, better onsite educational material and less congestion. Respondents also revealed a cash value associated with their preference for retaining the existing accommodation facilities which they felt suited their wilderness experience.

The monetary values revealed in this study can be used to guide future park development, inform resource allocation decisions and ensure adequate conservation financing. Accordingly, it is recommended choice experiments be adopted as standard management practice.

Keywords: choice modelling, choice experiments, non-market valuation, national park, Abel Tasman National Park.

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LIST OF ABBREVIATIONS

ABMs	Attribute-Based Methods
ATNP	Abel Tasman National Park
CBA	Cost-Benefit Analysis
CIs	Confidence Intervals
CM	Choice Modelling
CT	Cheap Talk (script)
CVM	Contingent Valuation Method
DOC	Department of Conservation (New Zealand)
HPM	Hedonic Price Method
IIA	Independence of Irrelevant Alternatives
IID	Independently and Identically Distributed
IUCN	International Union for Conservation of Nature
IUFs	Indirect Utility Functions
MDGs	Millennium Development Goals
MLE	Maximum Likelihood Estimation
MNL	Multinomial Logit
ODA	Official Development Assistance
OMEPE	Orthogonal Main Effects Plan
RUSC	Random Utility Site Choice (model)
RUT	Random Utility Theory
TCM	Travel Cost Method
TEV	Total Economic Value
WTA	Willing to Accept
WTP	Willing to Pay

