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Environmental Decision Support Systems for Māori landowners

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ABSTRACT

Environmental Decision Support Systems (EDSS) have been used to incorporate and transfer scientific knowledge to aid decision making processes since the early 1950s. Within the literature on EDSS there is widespread agreement about the importance of stakeholder participation. In the past, researchers have often failed to carry out extensive or unbiased stakeholder participation, resulting in EDSS that do not necessarily meet user requirements. By using more effective stakeholder participation processes, researchers will be able to better incorporate their knowledge with stakeholder requirements into future EDSS, helping landowner groups remove barriers to land development and aid land use decision making.

The aim of this research was to investigate how EDSS can be improved to better meet the stated needs of a particular group of landowners: Māori land trusts and incorporations in New Zealand. Initial research investigated Māori landownership issues, researching with Māori (Kaupapa Māori research) and reviewed current EDSS, concentrating specifically on New Zealand EDSS. Using Dillman's (2000) work as a guide, a survey was developed consisting of 22 questions designed to determine the decision making needs of Māori landowners, influences on Māori landowners' decision making, and future EDSS design. Māori landowners from Māori land trusts and incorporations in the Wairiki rohe were approached regarding participation in this research. Of the 50 groups contacted, five groups agreed to participate. In light of this research becoming a case study, further literature was reviewed to consider the strengths and weaknesses of this approach. The data collected from this survey was then analysed and used to make recommendations to aid the development of future EDSS for Māori landowners.

Two limitations associated with this research are: 1) that it was the researcher's first attempt to undertake cross-cultural research, and therefore based on a limited understanding of how to engage effectively with Māori; and 2) that only 14 participants from five Māori trusts or incorporations, all from Te Arawa entities, took part in the study. While the researcher did her best to overcome, or minimise the impact of these limitations, their impact needs to be considered in regards to the key results of this research.

There were five key results from this work: 1) Building a relationship with Māori stakeholders can take time and is extremely important for the success of a research project. Researchers need to allow time to develop rapport and to establish a good working relationship with stakeholders in order to facilitate effective participation; 2) For the Māori landowners surveyed, social considerations tend to be more important than economic considerations, with

the long term sustainability of different options a key concern; 3) Removing barriers to land use decision making and fulfilling the other decision making requirements of Māori landowners need to be integral parts of future EDSS; 4) Māori values are interlinked, with all the values of equal importance to the Māori landowners surveyed. These values underpin the decision making processes of Māori trusts and incorporations, so researchers need to understand the linkages in order to incorporate them into future EDSS; and 5) The ability to visualise their land was the feature of greatest importance to the Māori landowners surveyed. The ability to share information with others and the ability to connect with experts are also highly desirable EDSS features for respondents.

DEDICATION

I would like to dedicate this work with love to my grandparents

Jean and Bryan Cockell

and

Olive and Arthur Orton

for having the courage to immigrate to New Zealand in the first place, thus ultimately starting me on this journey.

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