

# Integrating Traditional knowledge systems and cultural values in Māori land use planning

## Iwi Futures – An Integrated Decision Support Framework

This summary report provides an overview and insight into the Iwi Futures programme. The programme set out to develop a nationally applicable Māori land and resource decision-support framework specifically designed for Māori landowners throughout New Zealand, to facilitate the sustainable land and community development. This framework was designed to work across all levels of land ownership - individuals, organizations, and groups.

The problem that it tackled was that standard approaches did not reflect Māori social and cultural imperatives, nor did they build capability with the communities to implement change.

## Planning within a framework

Standard planning and development approaches in New Zealand have not always been effective for Māori. This problem arises because local realities, cultural values and the aspirations of the land owners are not always considered. The aim of the Iwi Futures research program was to develop a nationally applicable Māori land and resource decision support framework (referred to as an integrated decision support framework or IDSF) specifically designed for Māori land owners to facilitate sustainable land and community development. The IDSF allows landowners to work within boundaries of their beliefs and values to:

- Evaluate resources;
- Explore alternative systems; and
- Analyse future pathway options.

## Planning that accounts for history and culture

This research program adopted a holistic approach to address the problem in the widest sense, including the history and philosophy or ways of 'knowing'. In general terms, the Māori world view emerges from a strong connection to the natural world. This connection is underpinned by several related philosophies of; traditional and cultural knowledge (*matauranga*); understanding of the relationships between people; and relationships with the world and different realms of reality. It is not possible to sum up the 'worldviews' of all Māori individuals and groups in a single story, but it is important to know that these beliefs, to varying degrees, matter when it comes to planning how best to use the land.

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The historical context matters because it has affected the way Māori land is governed today and the ability of the owners to plan, develop and adapt to change. Māori land was recognised during European colonisation by the Native Land Act in 1862 and is now covered by the Māori Land Act (Te Ture Whenua Māori) 1993. This land is almost exclusively owned by the descendants of the original owners, so that most land parcels now have multiple owners and each successive generation receives a diminished portion of the land titles. The increasing numbers of owners, with each generation, increases the diversity of how the land should be used and the priorities for the communities associated with the ancestral land.

The average size of the land parcels under Māori land tenure is 60 hectares, with an average number of 70 owners per title, but this can range from one to over 400 owners. Owners can have multiple interests in more than one block of land, which has resulted in owner-interests numbering more than two million, and they are increasing by 185,000 per year with successions. This statistic has an important implication for land use and community planning. As the number of owners with every generation increases significantly, so, too, does the diversity of views on how the land should be used and the priorities for the communities that live on, or close to, the ancestral land.

Ahuwhenua trusts and Māori incorporation are the two main ownership structures governing Māori land. But importantly, over 60 percent of land titles, representing about 20 percent of Māori land has no formal ownership structure.

Since ownership structures are critical mechanisms for decision making, the absence of a structure and the large number of owners makes land-use planning very difficult, if not impossible.

## **How the IDSF helps Māori make land-use plans**

The integrated decision support framework is underpinned by the landowner's identification of their social, cultural and environmental priorities and exploring the options that will best improve resource utilization and development that is acceptable to the community. The functional integrity of the system was important because the framework needs to increase the capability to design, manage, and evaluate resilient and flexible production systems, systems that will be responsive to external shocks, such as changes to the climate or markets. The framework provides a decision making process that generates potential development strategies and helps people make decisions about the best future pathways to take.

## **The approach**

The program applied a user-friendly systems approach to case studies and worked with landowner representatives (Fig. 1). Interviews and focus group meetings uncovered the landowner's aspirations and knowledge about their land. The biophysical information about the properties was pulled together in a GIS database. An analysis of the current performance of the farm's productive and environmental pastoral outcomes was carried out using two computer modelling programmes, Farmax and Overseer. Farmax allows for 'what if' farm production scenarios to be tested and Overseer models the nutrient balance of the existing and potential farming systems so

that together they help visualise the economic and environmental outcomes of different land-use options.

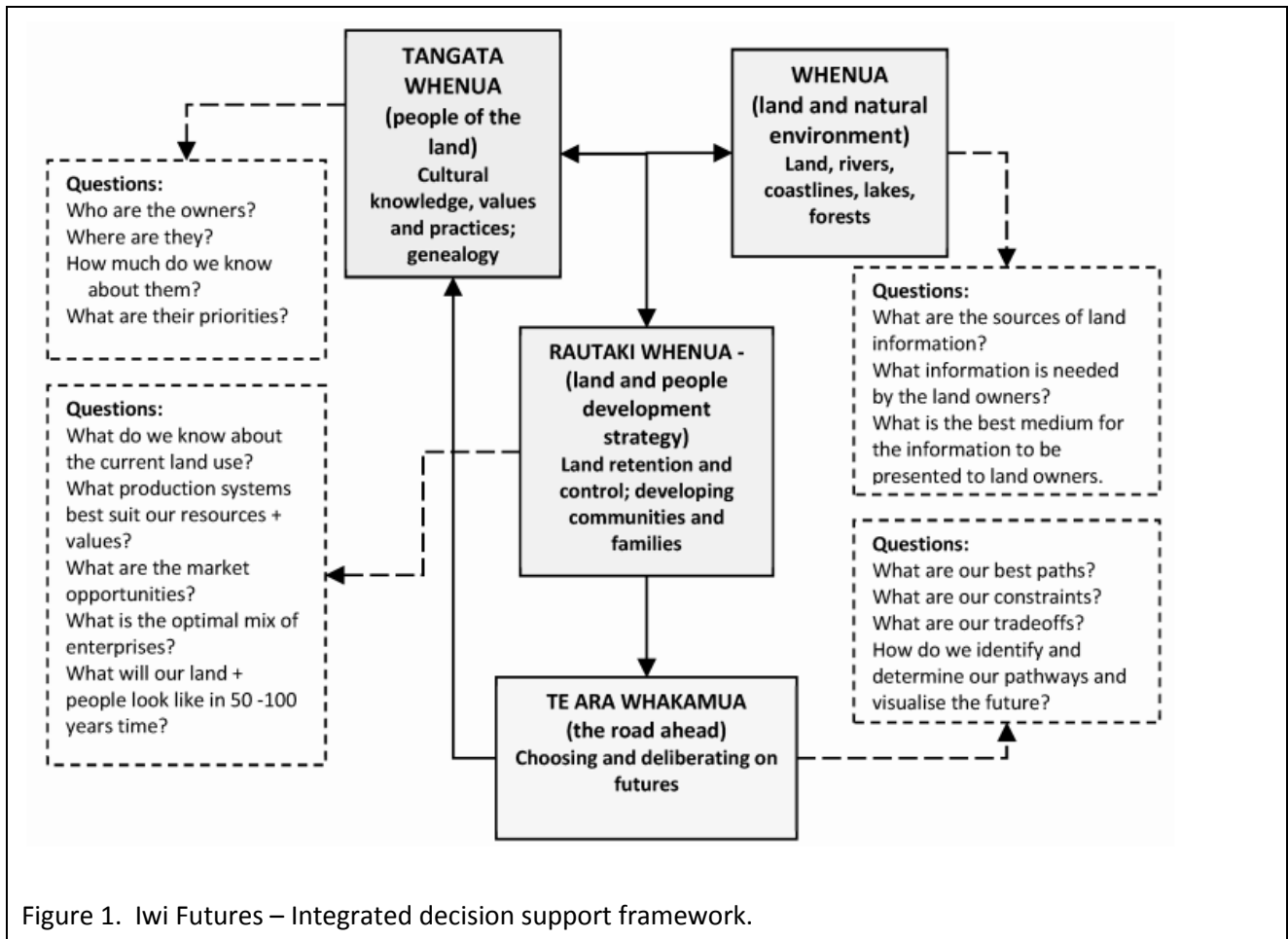


Figure 1. Iwi Futures – Integrated decision support framework.

## Two case studies from the Iwi Futures program



Location of Waimarama from google maps

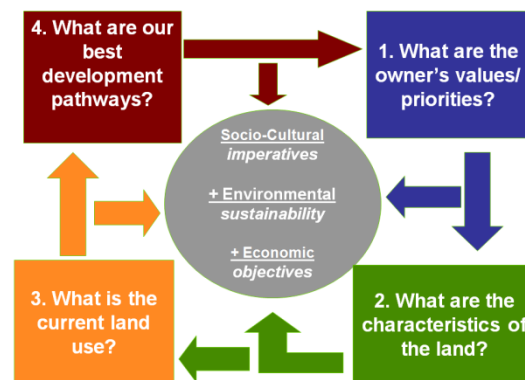
Waimarama and Aohanga Incorporations were two of the case study organisations involved in the program. These entities are large farm properties (approximately 2,000 ha and 7,280 ha respectively) located on the east coast of the North Island.

The farm committee for the Waimarama Incorporation explored the likely outcomes of potential joint business opportunities with neighbouring Māori land owners. Visualisation techniques were used to guide the deliberation process. A number of meetings were held between the Māori land owners and Iwi Futures researchers to discuss the results of the IDSF.

The management committee of the Aohanga Incorporation investigated tourism options as a part of a diversification strategy. However, the isolation of the property posed some limitations. This group valued local cultural and historical knowledge highly and were challenged to uphold those values while improving the farm and forest productivity. Planning continues and the IDSF is helping to also explore aquaculture and horticulture opportunities.

## Concluding remarks

The integrated decision system framework provided a process and set of tools that enabled landowner representatives to plan for future land-use pathways. The combination of land-use modelling and customary knowledge was vital to improving planning for the utilization and sustainable development of Māori land with multiple owners.



Key lessons were:

- There is a need to acknowledge the importance of including the historical and cultural context in the deliberation process.
- To make the best use of analytical tools within the decision support framework, there is a need for high levels of trust between the researchers and the land-owner groups coupled with a partnership approach between research, industry and landowners.
- Collaborative learning was valued by both the landowners and the researchers.
- The researchers and the landowners valued the ability to cross boundaries between professional and personal relationships.
- The Integrated Decision Support Framework can be applied to a generic audience.

## Further information

The full paper that this summary report is based on is- *Iwi Futures: Integrating Traditional Knowledge Systems and Cultural Values into Land-Use Planning*. (2013) Tanira Kingi, Liz Wedderburn, and Oscar Montes de Oca. In *Reclaiming Indigenous Planning*. R. Walker, T. Jojola, D. Natcher. Eds.: McGill-Queen's University Press: 339-356.

Available at <http://www.mqup.ca/reclaiming-indigenous-planning-products-9780773541948.php>

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