



Using mātauranga Māori to inform freshwater management

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RECOMMENDATIONS

Iwi/hapū values can inform all aspects of policy and planning for freshwater management. There are 6 recommended steps for integrating mātauranga Māori (Māori values and knowledge) into freshwater management:

1. Mana Whakahaere: A Treaty-based planning framework is used for engagement and policy development
2. Whakamāramatia ngā Pou Herenga: Tāngata whenua values are defined and reflected in engagement processes
3. Whakamāramatia ngā Huānga: Outcomes are defined at the beginning of the engagement process
4. Whakamāramatia ngā Uaratanga: Goals and objectives are established
5. Whakamāramatia ngā Aroturukitanga: Monitoring approaches are developed and implemented
6. Whakamāramatia ngā Mahi: Actions on the ground that demonstrate kaitiakitanga and progress iwi/hapū towards their goals/objectives/aspirations through tangible projects

Mātauranga Māori is dynamic and locally specific, based on long-standing interactions – through time and space – between people and their surrounding environment. A necessary first step therefore is to determine the cultural values, activities, and uses associated with specific waters. Monitoring can be used to effectively assess progress towards or away from stated goals and objectives. Limits and standards can be used to support cultural values, activities and uses within a defined area, such as a region, tribal areas, or catchment.

BACKGROUND

Freshwater is essential to New Zealand’s economic, environmental, cultural, and social well-being. New or improved models of engagement and collaboration between the central/local government and iwi/hapū on freshwater resources rely on reconsidering the nature of partnerships and governance models we adopt. The Treaty of Waitangi is the basis for developing freshwater management approaches informed by mātauranga Māori. The Treaty provides the principles and guidance on how we should work together to achieve common goals and outcomes for freshwater management in New Zealand.

PROCESS TO INTEGRATE MĀTAURANGA MĀORI INTO FRESHWATER MANAGEMENT

Creating a robust, consistent, and replicable process to support the engagement of iwi/hapū in the management, decision-making, planning, and policy development for freshwater ecosystems and to ensure that tāngata whenua values and interests are identified and reflected in freshwater management involves six key steps:

1) Mana Whakahaere: A Treaty-based planning framework is used for engagement and policy development

A Treaty framework for developing freshwater management policy for central/local government informed by mātauranga Māori is outlined in Figure 1 (Awatere et al. 2011). At the core of the framework are key Treaty of Waitangi principles, including reciprocity (recognition of the essential bargain), rangatiratanga (authority, self-determination), shared decision-making, partnership, active protection, and ōritetanga (mutual benefit, the right of development and redress).

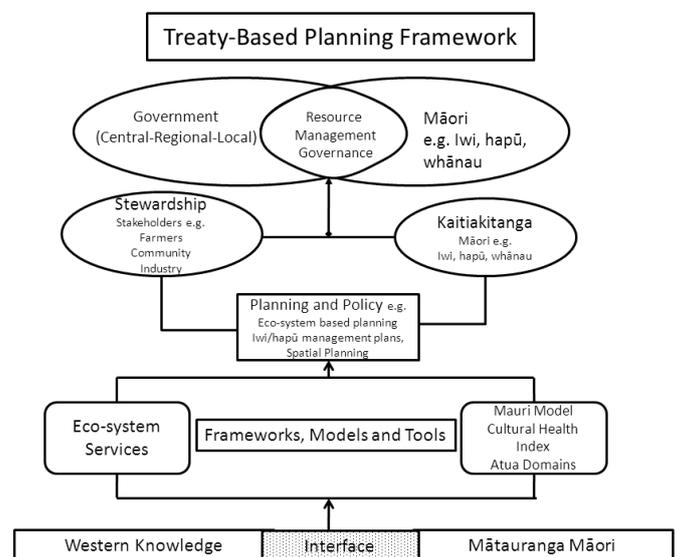


Figure 1. A Treaty-based planning framework – relies on forming excellent relationships between iwi/hapū and the Crown (i.e. Government and Councils) and recognition of mātauranga Māori in all planning frameworks.

Reconnecting, rebuilding and maintaining relationships between iwi/hapū and local government is essential for helping local government recognise the relevance of mātauranga Māori in contemporary resource management, and appropriate tools that

can be clearly understood, communicated, and applied are key to its uptake by local government, developers, and other stakeholders. The framework provides guidance on how Māori interests and values can help inform regional planning objectives and policies for freshwater management in local government plans.

Along with documentation of issues and objectives, policies informed by Māori interests and values will result in an integrating and holistic outcome, as sought by Māori. At the same time the establishment of joint projects (with appropriate funding) between local government and iwi/hapū that give effect to the relationship in tangible ways for both parties are essential (see for example Jolly, 2004; Goodhall, 2003; and Environment Canterbury, 2011). This is one of the reasons for why there has been effective involvement of Ngāi Tahu in the Canterbury Water Management Strategy (Environment Canterbury, 2011). Both parties negotiated a work programme with budgets, timeframes and responsibilities that identified clearly how iwi/hapū were to be involved in the policy, planning, monitoring and evaluation processes of the Canterbury Water Management Strategy.

2) Whakamāramatia ngā Pou Herenga: Tāngata whenua values are defined and reflected in engagement processes

Identifying and understanding key Māori values is important for involving iwi/hapū in freshwater management and for ensuring tāngata whenua values and interests are identified and reflected in engagement processes.

Māori values, derived from the traditional belief system, are part of the wider Māori knowledge system, and can be defined as instruments through which Māori make sense of, experience, and interpret the environment. Māori values can be represented in many forms:

- in the environment as places or sites of significance; the basis for recognising Māori treasures (taonga), such as iconic flora and fauna species, significant biodiversity, mahinga kai and environmental issues;
- in the language; through relationships between people or organisations; and the intrinsic cultural basis for controlling or modifying human behaviour, forming the principles and ethics by which we live and advance.

A few examples of Māori spiritual and metaphysical values are shown below (taken from Te Rūnanga o Koukourārata’s Strategic Plan (2007–2012)).

Whakapapa

The bonds of interconnection to our natural environment are demonstrated in our whakapapa and preserved in our traditions. Understanding that which binds us to not only to each other but to our natural environment empowers us to develop projects that strengthen those bonds. Doing this ensures that resources are managed in a sustainable manner to guarantee their availability for future generations.

Kaitiakitanga

“[Our] Rūnanga is described as “an environmental people”, with a responsibility to be the kaitiaki for its local environment and resources. Strong emphasis is placed on protecting and enhancing the natural environment – the utilisation and improvement of the land, the coastline, the kaimoana, the water, the reserves, the mataitai, the cockle beds, the island, the beach areas”.

Whānau ora

The physical well-being of our natural environment is paramount for the physical well-being of our people. Our gardens encompass the ocean and provide sustenance to those who partake in these resources. Therefore it is only logical that the polluting of our natural environment will greatly impact on our own physical well-being. To restore and maintain the health of one is to restore and maintain the health of all.

Wairuatanga

Equally, we believe the spiritual well-being of our natural environment is paramount to our spiritual well-being. If the mauri or life force of our natural environment is strong then we too as a people are strong. It is our legacy from our tipuna to ensure the mauri of our natural environment is strengthened for future generations.

Whānaungatanga

How we relate to our natural environment is reflected in how we relate internally with each other and externally with other organisations. By building and maintaining mutually rewarding relationships we ensure future sustainability of all resources.

Manaakitanga

By nurturing and caring for our natural environment we ensure it is able to furnish us with the resources we require to provide hospitality to our manuhiri, kaumātua and whānau members. It is therefore important for our Rūnanga to undertake management projects to ensure the sustainable longevity of our natural environment.

An example of Māori cultural use values is outlined below (from Section 3.3.6 Mahinga Kai of *Canterbury water – supporting the Canterbury Water Management Strategy*):

MAHINGA KAI

Of the many uses Ngāi Tahu have for aquatic resources, mahinga kai – the use of foods and resources gathered from the sea, rivers, and lakes – has always been, and continues to be, at the heart of Ngāi Tahu culture and identity. Tangata whenua are likely to designate as wāhi taonga, sites and habitats that sustain species valued as cultural materials, mahinga kai or taonga species. In effect this could also see ditches, drains, and culverts, which function as (and are fished) as substitute habitats classed as wāhi taonga. Having a well-functioning, healthy and vibrant marae that is able to manaaki manuhiri is a source of mana for tangata whenua. Mana is reduced if they cannot bring visitors on to their marae with pride. A number of the kaitiaki targets focus on mahinga kai.

3) Whakamāramatia ngā Huānga: Outcomes are defined at the beginning of the engagement process

It is critical to define the desired outcomes at the beginning of the engagement process. An emerging definition for a Maori-defined outcome is: “*A desired or agreed end point, goal, vision, often within some time-frame – can be a Māori whakatauki (proverb)*”. Two examples include:

Kei te ora te wai, kei te ora te whenua, kei te ora te tangata

When the water is healthy, the land and the people are healthy (nourished)

(Whakatauki from the Honourable Pita Sharples at the Iwi Māori National Summit on Freshwater Management, 2009)

Waikato River – the vision or outcome is:

Tōku awa koiora me ōna pikonga he kura tangihia o te mātaamuri

The river of life, each curve more beautiful than the last

“Our vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and well-being of the Waikato River, and all it embraces for generations to come”

“Restore the mauri of the river”

4) Whakamāramatia ngā Uaratanga: Goals and objectives are established

Involvement of iwi/hapū in freshwater management is integral to meeting the Crown’s responsibilities under the Treaty. Broader statutory obligations such as those in the National Policy Statement on freshwater management (2011; see Box 1) and the Resource Management Act (1991; see Box 2) are useful for helping to shape objectives for planning and policy. Some

relevant language relating to mātauranga Māori and freshwater management are demonstrated in the boxes below.

Box 1: National Policy on Freshwater Management

Objective D1

To provide for the involvement of iwi and hapū, and to ensure that tāngata whenua values and interests are identified and reflected in the management of freshwater including associated ecosystems, and decision-making regarding freshwater planning, including how all other objectives of this national policy statement are given effect to:

Policy D1 – Local authorities shall take reasonable steps to:

- a) Involve iwi and hapū in the management of freshwater and freshwater ecosystems in the region
- b) Work with iwi and hapū to identify tāngata whenua values and interests in freshwater and freshwater ecosystems in the region,
- c) Reflect tāngata whenua values and interests in the management of, and decision-making regarding, freshwater and freshwater ecosystems in the region

Box 2: Resource Management Act

Section 6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- d) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

Section 7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to:

- e) kaitiakitanga.

Some examples of objectives are (from Harmsworth & Awatere 2012):

1. To restore/sustain/enhance the mauri of freshwater ecosystems in ways that enable provision for the social, cultural, and economic well-being of Māori, particularly in the following areas:
 - a) Estuaries and harbours: protection of ecosystems and habitats used for cultural purposes and activities, including recreation, fishing and shellfish gathering, kaimoana, mahinga kai, cultural practice.

- b) Catchment ecosystems that sustain cultural values and life-supporting connectivities and relationships to communities.
 - c) Groundwater and aquifers, including all special cultural sites such as waipuna – springs for sustainable cultural use and water supply.
 - d) Lakes, rivers and streams: protection of freshwater ecosystems and cultural values, food gathering, recreation, water supply, for distinct cultural and spiritual use and practice.
 - e) Wetlands: protection of wetland ecosystems for their distinct cultural values, use and taonga.
2. To protect, manage, and enhance cultural sites and areas of cultural importance (e.g. wāhi tapu, wāhi taonga, mahinga kai).

5) Whakamāramatia ngā Aroturukitanga: Monitoring approaches are developed and implemented

Within a planning and policy context, several iwi/hapū are trialling, testing, and refining cultural monitoring approaches, indicators (Box 3), and tools for their own use to:

- identify, and to articulate values and perspectives of environmental change and issues
- help measure progress towards (or away from) stated goals and outcomes

The effectiveness of a cultural monitoring framework depends on whether it has been shaped by the ideology of iwi/hapū (see Box 4).

To accompany cultural monitoring frameworks, iwi/hapū are developing or have developed specific indicators (Box 3) for freshwater management. For example, the Ngāi Tahu State of the Takiwa framework focuses on mahinga kai in freshwater ecosystems (Jolly, 2004; Mattingley and Pauling, 2005). A number of indicators are based on measuring water quality, flow and clarity.

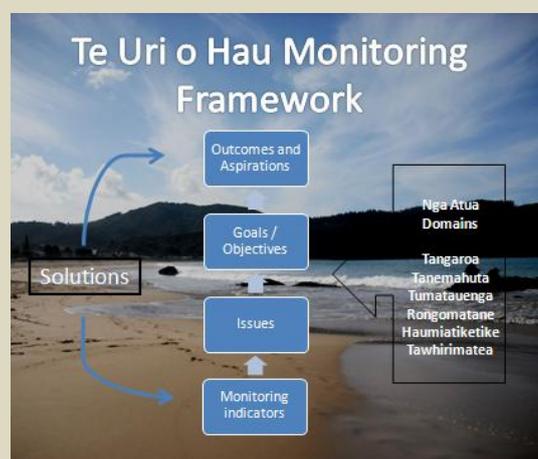
Tiakina Te Taiao, a kaitiaki group from the Motueka catchment, use a Ngā Atua (Māori deity) domains framework where indicators and descriptors have been developed for each Atua domain representing an ecosystem from Tangaroa (estuarine and river ecosystems) to Tane Mahuta (terrestrial ecosystems). Examples of indicators based on the Atua domains framework are provided in Table 1. These cultural monitoring approaches and indicators will be used to help measure progress towards shared goals and outcomes.

Box 3: Defining a Māori environmental indicator

A tohu created and configured by Māori to gauge, measure or indicate change in an environmental locality. A Māori Environmental Performance Indicator leads a Māori community towards and sustains a vision and a set of environmental goals defined by that community.

The Ngā Atua domains framework has been adapted by Te Uri o Hau to monitor their aspirations and outcomes for the Kaipara Harbour (see Box 4).

Box 4: Te Uri o Hau (Kaipara) monitoring framework



Source: Te Uri o Hau Environs Holdings Trust, 2012

This framework links Maori indicators to the outcomes and aspirations for the Kaipara Harbour that were identified by Te Uri o Hau.

Table 1. Cultural Indicators to complement the Ngā Atua domains framework. These indicators are based on the Cultural Health Index (CHI) and organised by Atua domains (from Tiakina Te Taiao – Nelson-Motueka region)

<p>Tangaroa</p> <ul style="list-style-type: none"> • Water Clarity • Water Flow • Water Quality • Shape and form of river, riverbank condition, sediment • Insects • Fish <p>Tāne Mahuta</p> <ul style="list-style-type: none"> • Riparian vegetation • Catchment vegetation • Bird life (species) • Ngahere/Taonga • Pests 	<p>Haumia tiketike</p> <ul style="list-style-type: none"> • Mahinga kai • Rongoa <p>Tūmatauenga</p> <ul style="list-style-type: none"> • Human activity, Use of river • Access • Cultural sites <p>Tāwhiri-mātea</p> <ul style="list-style-type: none"> • Smell <p>Mauri/Wairua</p> <ul style="list-style-type: none"> • Feeling, taste, wellbeing
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6) Whakamaramatia ngā Mahi: : Actions on the ground that demonstrate kaitiakitanga and progress iwi/hapū towards their goals/objectives/aspirations through tangible projects

An increasing number of local projects by iwi/hapū demonstrated throughout New Zealand are being used to express values and achieve their collective goals, objectives, and desired outcomes (i.e. based on iwi/hapū aspirations). These actions are used to reinforce mātauranga Māori, cultural activities and uses within a region, tribal rohe or catchment and include examples such as restoration and enhancement of wetlands and mahinga kai, riparian planting, protection and maintenance of cultural sites, and long term sustainability of taonga spp. and habitats (e.g. tuna, inanga, harakeke). Actions and projects are used to strengthen the inter-connection iwi/hapū have with freshwater ecosystems and catchments. Many iwi/hapū groups are increasingly developing collaborative projects with councils for agreed joint work programmes with defined goals, budgets, timeframes and responsibilities.

GLOSSARY OF MAORI WORDS

atua	god, supernatural being, deity
aroturukitanga	monitoring
Haumia-tiketike	atua of wild or uncultivated foods
huānga	outcomes
hapū	sub-tribe
inanga	whitebait
iwi	tribe
kaimoana	seafood
kaitiaki	Māori resource manager
kaitiakitanga	sustainable resource management
kaumātua	elder
mahi	actions
mahinga kai	garden, cultivation, food-gathering places
mana	prestige
manaaki manuhiri	provide hospitality to visitors
manaakitanga	reciprocity
mana whakahaere	decision-making power
marae	meeting place
mātaaitai	marine reserve
mauri	life force
ngahere	forest
Ngāi Tahu	tribal group of much of the South Island
Mātauranga Māori	Māori knowledge
ora	health, well-being
ōritetanga	mutual benefit, the right of development and redress
pou herenga	value and interests
rangatiratanga	authority, self-determination
rongoā	medicine
Rūnanga	council
takiwā	district, area, territory, vicinity, region
Tāne Mahuta	atua of the forests and birds
Tangaroa	atua of the sea and fish
tangata whenua	local people
taonga	treasured possession
Tāwhiri-mātea	atua of the winds, clouds, rain, hail, snow and storms

Te Uri o Hau	a Ngāti Whātua hapū based on the northern side of the Kaipara Harbour
Tiakina Te Taiao	a Resource Advisory Management committee from the Motueka catchment
tipuna	ancestor
tohu	signpost or indicator
Tūmatauenga	atua of war and people
tuna	eel
uaratanga	goals, objectives
wāhi taonga	heritage areas
wāhi tapu	sacred sites
waipuna	freshwater springs
wairua	spirit
wairuatanga	spirituality
whakamāramatia	defining
whakapapa	ancestry
whakatauki	proverbial saying
whānau	family
whānaungatanga	relationships

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