

Māori values for freshwater planning

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Overview presented at *Freshwater Symposium: Tools for implementing the freshwater reforms*, Wellington, organised by the Values, Monitoring & Outcomes research programme, funded by the Ministry of Business, Innovation and Employment.

Garth Harmsworth spoke about freshwater issues from a Māori perspective, the situation and the challenges. He then provided a tikanga-based model and practical steps for increased dialogue, collaboration, co-planning and co-management of fresh water. He provided six recommended steps – and gave examples of each – for better involvement of Māori in freshwater planning and management.

Māori and local authorities have made huge strides in developing and fostering positive working relationships, particularly since the RMA 1991. However, despite 20 years of progress there still remains a high degree of frustration over the limited representation of Māori perspectives and knowledge in land use planning and policy formulation. (Awatere et al. 2013)

Significant issues for Māori around water management – examples

Comments after Pita Sharples' speech on water at the National Iwi leaders summit (2009):

- 'Māori are increasingly keen to explore their **rights to fresh water**. These rights may exist as a consequence of custom and customary use, under the common law doctrine of aboriginal title, or under Article Two of the Treaty of Waitangi ...'
- 'The message that is coming consistently from Māori is that, to date, **the legal framework for managing water has not provided an adequate role for Māori**'.
- '**Māori want a stronger voice in freshwater management and a role in decision-making as befits a Treaty partner.**'
- 'Māori can bring a unique contribution to freshwater management through the ethic of **kaitiakitanga**. The contribution that tangata whenua can make towards sustainably managing our water resources will be of benefit to all New Zealanders.'
- '**Water is at the heart of Māori well-being.**'

The situation and challenges

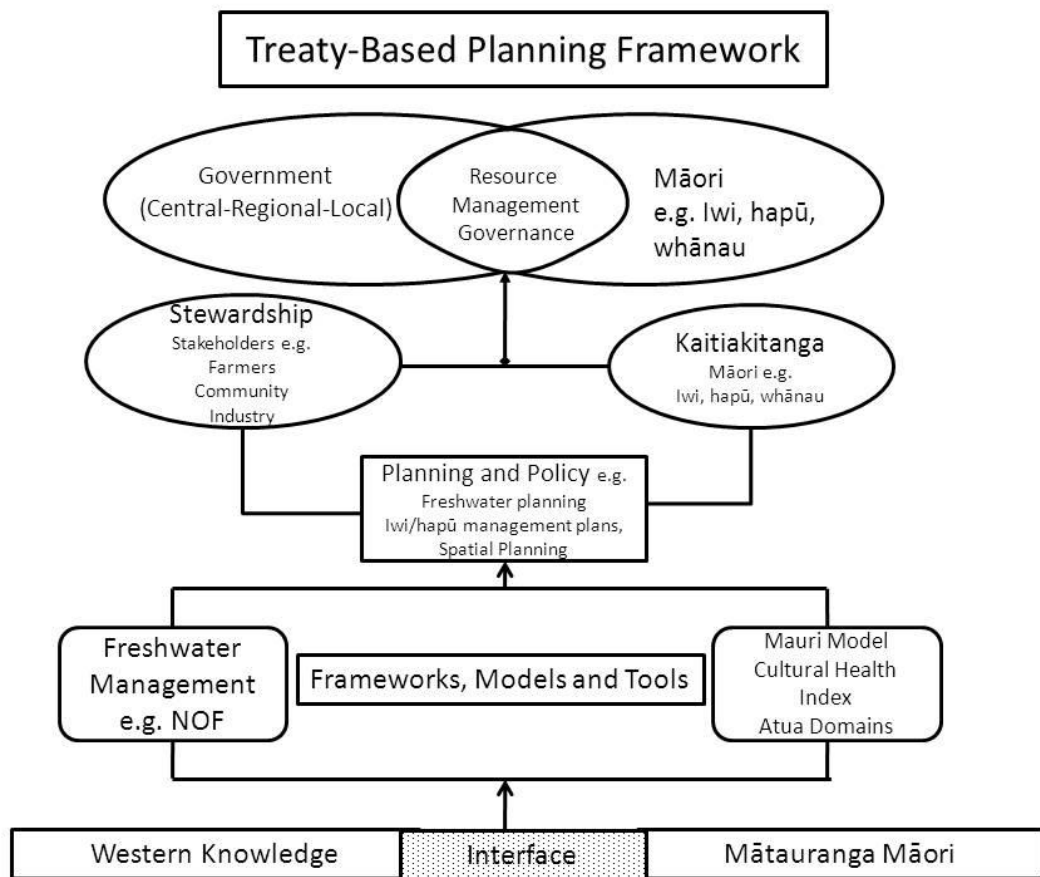
- Iwi/hapū achieving a fuller legal expression of their rights and interests to fresh water
- Improving water governance with particular regard to the role of iwi – new governance models, e.g. co-management (*to give better effect to the Treaty partnership with respect to water*)
- Defining what principles would represent best-practice freshwater decision-making from an iwi/hapū perspective
- Understanding and articulating Māori values

- Mātauranga Māori and Western science in parallel to inform management and decision-making
- A need to build Māori capability and capacity
- Actions on the ground

Key steps for freshwater management

Garth provided **six recommended key steps for freshwater management** – and gave examples of each – for better involvement of Māori in freshwater planning and management:

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



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

A table of internal core Māori values (guide behaviour) – customs, ethics, principles, decision-making

Whakapapa (ancestry, lineage, rights)	Whānaungatanga (relationships, family connections)
Tikanga (custom, tradition, protocols, values)	Kotahitanga (unity, consensus, participation)
Rangatiratanga (sovereignty, empowerment, autonomy, management,	Mana, mana whenua, mana moana, mana atua, mana whakahaere, mana tangata,

decision-making)	whakamana (based on whakapapa represents authority, power, control, status, leadership)
Manaakitanga (caring for, looking after, hosting)	Kaitiakitanga (environmental guardianship)
Tohungatanga (the retention and use of knowledge to benefit the tribe or business)	Tau utu utu (reciprocity, giving back what you take)
Wairuatanga (spiritual well-being, taking into consideration the spiritual dimension)	

A table of external Māori values – expressed in the landscape, lakes, rivers (~location specific), etc.

Wāhi tapu (sacred sites), e.g. urupā (burial grounds), sacred shrines (tuahu), wai whakaika (ritual or ceremonial sites), ana (caves)	Wāhi taonga (treasured sites), e.g. marae, kainga (settlements), pā (old fortified villages), forest
Wāhi tupuna (ancestral sites) – waka landing and anchorage sites (e.g. unga waka, tauranga waka), old battlegrounds, ara (tracks), rock outcrops, wāhi tohu (indicators), etc.	Mahinga kai – resource sites (traditional food source/collection areas), wāhi raranga – plant sources for weaving
Taonga: flora and fauna, taonga species (plants, trees, animals, birds, fish, etc.), habitats (e.g. wetlands), rongoa (medicines), etc.	Te Reo – place names
Landmarks: mountains, peaks, hills, lakes, rivers, coastal, geothermal areas, etc.	Rock and mineral source and trade areas (e.g. pounamu/nephrite/greenstone)
Important archaeological sites: artefact finds (e.g. adzes, carvings-whakairo, rock art, middens-ovens, waka/canoe remains etc.	Metaphysical (e.g. Taniwha), Atua domains

A table of general classification of water (relationship to tapu and noa)

Wai ora	Water in its purist form, e.g. rainwater
Wai puna	Spring water
Wai whakaika	Ritual waters, pools, ceremonial
Wai māori	Freshwater water, water for normal consumption
Wai mate	Water that has lost mauri, is degraded, and no longer able to sustain life
Wai kino	Water that is dangerous, such as rapids
Wai tai	Seawater, saltwater, the surf or the tide

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

Examples of visions outcomes for the Waikato River:

- *Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri*
The river of life, each curve more beautiful than the last (Waikato –Tainui)
- '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' (GEC)
- 'Restore the mauri of the river'

4. Whakamāramatia ngā Uaratanga: Goals and objectives are established

Examples of Te Uri o Hau (TUOH) goals:

- Mauri of water and air is restored and protected
- Promotion of natural water flow
- Protection and restoration of biodiversity
- Promotion of co-governance arrangements with TUOH
- No discharges to waterways and coastal–marine ecosystems
- Integrated management of Kaipara and Mangawhai harbours is led by TUOH ngā hapū

Examples of Te Uri o Hau goals achieved to date:

- IKHMG Plant 2 million trees: IKHMG's goal is to plant 2 million native plants around the Kaipara Harbour by 2015
- IKHMG Farm Flagship sites: There are 5 flagship farm sites set up around the North and South Kaipara Harbour, IKHMG are also looking at 2 industrial sites; Fonterra and Topuni timber mill and 1 more farm flagship site. These sites were chosen as they were in high priority areas
- TUOH education trail and marae biodiversity project: This project is coordinated by Mikaera Miru and involved tupuna marae working with schools to educate tamariki in their kaitiaki role

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

Examples of issues to be considered when developing monitoring approaches:

- Is the outcome/goal(s) achievable in some time frame?
- How do we measure progress towards (or away from) from a vision/outcome /aspirations/goals?
- How do we know we are making progress? What incremental steps? What are the trends?
- We could use Māori monitoring approaches, tools, indicators.

Some examples of monitoring methods and tools:

- Cultural Health Index (CHI) (Tipa & Teirney 2003, 2006)

- Cultural indicators of wetlands (Harmsworth 1999, 2002)
- State of Takiwa 'toolbox' (iwi environmental monitoring and reporting tool), see www.ngaitahu.iwi.nz
- Adaptation of the Cultural Health Index (CHI) by Tiakina te Taiao for their own use and application in the upper South Island (Te Tau Ihu) (Young et al. 2008; Harmsworth et al. 2011)
- CHI for estuarine environments (Tiakina Te Taiao – Walker 2009)
- Development of coastal and marine health index (presently underway)
- Development of cultural indicators for lakes (underway by Ngāi Tahu)
- The Mauri Model (Morgan 2007, 2006, 2008)
- Significance assessment method for tangata whenua river values (Tipa 2010)
- KEIAR framework (Waikato case study) (Dixon & Ataria 2011)
- An Internet-based iwi resource management planning tool (Kaitiaki Tools) (NIWA 2009)
- Iwi Estuarine Monitoring Toolkit (Ngā Waihotanga Iho) (Rickard & Swales 2009a,b)

Examples of indicators:

Tangaroa

- Water clarity
- Water flow
- Water quality
- Shape and form of river, riverbank condition, sediment
- Insects
- Fish

Tāne Mahuta

- Riparian vegetation
- Catchment vegetation
- Bird life (species)
- Ngahere/Taonga
- Pests

Haumia tiketike

- Mahinga kai
- Rongoa

Tūmatauenga

- Human activity, use of river
- Access
- Cultural sites

Tāwhirimātea

- Smell

Mauri/Wairua

- Feeling, taste, well-being

In future, environmental monitoring programmes could be classed into three main types that are complementary:

Māori-knowledge based	Community–scientific based	Scientific based
<p><i>Māori indicators –</i></p> <ul style="list-style-type: none"> - In depth Māori understanding and knowledge of particular environments. - Understanding of Māori values, goals, and aspirations required. 	<p><i>Community-based indicators –</i></p> <ul style="list-style-type: none"> - Requiring low levels of technical input and skill but scientifically robust and part-value based - Cost-effective, relatively simple and short duration. 	<p><i>Scientific indicators –</i></p> <ul style="list-style-type: none"> - Requiring higher levels of technical input and skill, robust sampling strategies, analysis and interpretation - May be time-consuming
<p>Examples</p> <ul style="list-style-type: none"> - Taonga lists - Key sensitive taonga indicators - Te Mauri/ wairua - Knowledge on uses and preparation of taonga - Land-uses, point discharges, modification, impacting on cultural values and uses - Key pest species 	<p>Examples</p> <ul style="list-style-type: none"> - Hydrology - Soils/Nutrients - Intactness of wetland - Connectivity/Buffering or Fragmentation - Introduced plants - Animal damage - Modifications to catchment hydrology - Water quality within catchment - Other land-use threats - Key undesirable species - % catchment in introduced vegetation - Animal access 	<p>Examples</p> <ul style="list-style-type: none"> - Chemistry, water quality, nutrients - Hydrology - Water table modelling - Botanical mapping, classification of plants - pH - Bacterial counts - Giardia - Cryptosporidium - GIS applications - Satellite imagery - Studies of fish, macroinvertebrates, macrophytes

6. Whakamāramatia ngā mahi: actions on the ground that demonstrate kaitiakitanga and progress iwi/hapū towards their goals/objectives/aspirations through tangible projects

Garth gave an overview of two new developments (Awatea Basin and the Lincoln Land Developments subdivision) that have incorporated naturalised stormwater management reflecting cultural values into their designs. The naturalised stormwater waterway will use soil adsorption, sedimentation and detention basins, wet ponds, swales and wetlands to treat and manage stormwater runoff before it enters our rivers and waterways.

- Traditionally, stormwater has been discharged directly from pipes, concrete channels, boxed drains and pumping stations into the waterways, often carrying contaminants and other pollutants.
- The naturalised waterways recognise that the natural environment is highly sensitive to the effects of land-use activity. Sealed surfaces, as an example, result in a greater risk of flooding and reduce surface water filtering into groundwater, placing our aquifers at risk.

Garth highlighted the usefulness of iwi-led assessment approaches for monitoring the health of water, as part of freshwater management, and presented cultural and environmental monitoring within the context of the six recommended steps. Garth then demonstrated the links between cultural-, community- and science-based monitoring to what he called complementary monitoring and provided a table showing the parallel streams.

Conclusions

Garth finished the talk by highlighting what still needs to be addressed from a Māori viewpoint, for example:

- **Indigenous rights, Māori customary rights, property rights** – iwi/hapū achieving a fuller legal expression of their rights and interests to fresh water; clarification of ownership (tino rangatiratanga, mana motuhake, whakamana) – land, waterways, coastal
- **Governance of water management** – improving governance *to give better effect to the Treaty partnership with respect to water* – new governance arrangements/models, e.g. co-management
- **Best-practice freshwater decision-making** – defining what principles would represent best-practice freshwater decision-making from an iwi/hapū perspective, collaborative processes
- **Understanding and articulating Māori values:** mātauranga Māori and Western science in parallel to inform management and decision-making
- **Building capacity** for iwi/hapū, and Crown agencies/councils/industry, etc.
- **Actions on the ground** – collaborative projects (partnerships), community projects e.g. sustaining enhancing Māori values, restoration and enhancement projects, enhancing mahinga kai, kaimoana, use of cultural and environmental monitoring, indicators, etc.
- **Māori-led research** – mātauranga Māori alongside Western science, improved access to science research findings
- **Outcomes: Sustaining/enhancing resources/species/habitats through kaitiakitanga – cultural protection of habitats, taonga, sites** – protection and enhancement of the freshwater environment, cultural sites, sustaining and protecting habitat and species, ecosystems, taonga, mahinga kai, etc.

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