

Geo-Ed

Resource management and Māori attitudes to water in southern New Zealand

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Abstract: Pre-contact Māori regarded land and water as a single entity, with a common regime of resource management practices. Underpinning these was a world-view that involved unique spiritual concepts, the most important of which was mauri: the notion that a body of water had its own life-force. Waters were classified according to the state of their mauri. The paper outlines traditional approaches and how they are applied today.

Key words: Māori, mauri, natural resources, tradition, water.

To Māori the land is indivisible from the waters and all resources associated with either. The whenua, or land, mentioned in Article II of the Treaty of Waitangi, guaranteed to Māori the land with its forests and rivers, its flora and fauna (Pond 1997: 1). However, besides being regarded as one with the land, water was also the subject of its own definition and values. Water was used in a variety of ways in addition to drinking and as a source of foods. Both inland waterways and sea-coasts were set aside for marine farming and aquaculture (Tau *et al.* 1990).

Life was difficult for Kai Tahu people in pre-contact Te Wāi Pounamu (South Island). Food had to return more calories than were expended in the efforts of acquisition. People operating at subsistence level could not invest effort in unproductive activity, eschewal of prey or production of confections. But it was important that areas of land and water from which food was harvested were not merely used but managed and conserved. Resources and their habitats were managed with a view to limiting long-term resource diminution, with the systems that evolved being particularly suitable to regional conditions (Garven

et al. 1997). This is clearly demonstrated in the management of water-based resources, which reflects how they are regarded.

Attitudes to water

The first and most fundamental influence on Māori attitudes towards water is the world-view, underpinned by the relationships between the atua of the creation story. Atua are distant ancestors, seen to be of ongoing influence in certain domains. The Kai Tahu version illustrates the approach to water as:

traditions to water begin with life itself, when Mākū mated with Mahoranuiātea, another form of water, and begat Raki [Ranginui]. Water therefore is the promoter of all life and represents the life blood of the environment. Its condition is a reflection on the health of Papatūānuku (Garven *et al.* 1997: 36).

Today, all water is seen to have originated from the separation of Ranginui and Papatūānuku and their continuing tears for one another. Rain is Ranginui's tears for his beloved and mist is regarded as Papa's tears for Raki.

Note about author: Jim Williams belongs to the Kai Tahu iwi. His PhD thesis argues that there was a pre-contact, Kai Tahu environmental ethic. His research interests include Southern dialect and Kai Tahu traditions, especially pertaining to resource management.

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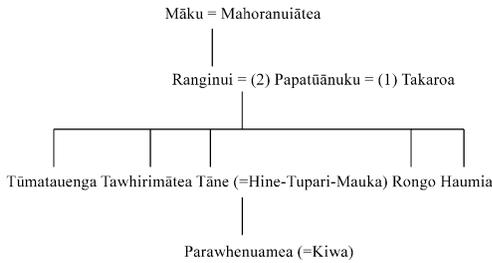


Figure 1 Kai Tahu hierarchy of atua, showing seniority decreasing from top to bottom and left to right.

Takaroa, as Papatūānuku's first husband, is on the same level (Fig. 1).

Amongst their children, Rongo and Haumia, representing cultivated and uncultivated foods, are weaker and need the protection of the forest (Tāne), which is subject to the vicissitudes of the elements (Tawhirimātea) and humankind (Tūmatauenga). Only humankind can provide protection for the realms of Tāne, Rongo and Haumia, especially from the elements and, then, only sometimes. But we have a duty to do so. This duty of care is termed 'kaitiakitanga' (see Kawharu 2000).

The tutelary deity of all water is Parwhenuamea, daughter of Tāne and Hine-Tupari-Mauka, and seen as the personification of rivers and streams, especially flood-waters. She is the wife of Kiwa, personification of the ocean. Thus estuaries are the shared domain where they meet.

Mauri

In Māori thought all things are believed to have mauri, or vital essence; the spark of life kindled at the conception of all living things. All mauri comes from atua and provides every entity with its unique personality. The key to the Māori view towards environmental issues is the importance of not altering mauri to the extent that it is no longer recognizable; an area being harvested must not have its essential character changed as a result of the harvest. An example of this might be that whereas it may be acceptable to cut one tree from a tōtara grove, a lone tōtara would not be available as it is part of the vital essence of the locality and to remove it would change its character. As will be seen from the examples

and case study that follows, the principle applied traditionally irrespective of whether we are dealing with an area of land, a grove of trees, a body of water or even another group of people.

This contrasts with the realm of Rongomaraeroa, the domain of cultivated food, where the entire crop was at the disposal of humans, so long as certain protocols were observed, because the crop was dependent on humans throughout its growth. Preservation of mauri controls the sustainability of resources.

Classification of waters

According to the traditions of Kai Tahu, it was the early iwi, Te Rapuwai, who first classified the waters of Te Wāi Pounamu. This was done according to its nature and its uses, which in turn determined all future uses.

As with all things emanating from atua, water always has mauri unless this has been taken away. Māori traditionally looked at water in terms of the interaction between the influences of deities and today the Māori perspective is, to some extent, still influenced by that traditional view. Water is seen as a living thing with mauri of its own and this mauri varies from one body of water to another; indeed mauri varies from one place to another on the larger bodies (see case study where the mauri of the Taieri River changes through four phases).

The purity of water is precious and jealously guarded because the mauri, the vital essence, is the same spiritual stuff as vivifies and enlivens human beings and all other living things. To violate the purity of water is therefore to violate your own essential purity. (Ritchie 1988: 127)

Mauri can be summarized in two different ways. First, there are two classes of water: waimāori and waitai. This most fundamental split, between fresh and salt water, is self-explanatory, the former being te wai ora a Tāne; the latter, te wai ora a Tangaroa. The intermediate class is waimātaiai (e.g. estuarine water, or coastal lagoons 'hāpua'). Second, there are three states in which water might be, irrespective of whether it is waimāori or waitai:

Waiora: (water of life) especially rainwater or tears; also springs, holy water and water from special places where the mauri of the water changes or where exceptional events have occurred in the past. Waiora can often rejuvenate a damaged mauri, even that of humans (through the ceremony known as 'pure').

Waikino: (bad water) either a dangerous place such as a stretch of water with rapids or snags, or water that has become physically or spiritually polluted. In each case the mauri has been changed and is susceptible to being changed back again. Flooding is an example of waikino.

Waimate: (literally dead water) is water that has become metaphysically dead through the complete loss of its mauri. It cannot support humanity or human food. It can absorb or contaminate the mauri of other living things or waters. This can come about in two ways: mixing of a number of incompatible mauri, in an unnatural way, or total pollution so that the water is no longer capable of sustaining human life. Many stagnant pools were seen in this light, resulting in 'waimate', or the more intensive 'waimatemate', becoming relatively common place-names. 'In [these cases], the mauri has been lost and can only be restored through Papatūānuku' (Ministry of Justice 2001: 46).

It remains inimical to Māori thought that waters of different mauri should be deliberately mixed. This is why the Tainui people would not agree to Waikato river water being used to pipe iron sand to the Glenbrook steel mill, and then discharged into the Manukau harbour. The mauri of the two waters is incompatible and, besides, the mauri of the Waikato would have been deliberately polluted (Oliver 1991: 23–7). However, after the 1995 water shortage in Auckland, Tainui agreed to piping Waikato river water to the city for human consumption as this use is consistent with a mauri that is waimāori and waiora.

Water can become polluted physically or spiritually. The mauri, or life-supporting ability and vitality of a coastal or marine resource, may be compromised through a variety of means. Discarded pieces of rope from boats and moorings, plastic packaging strips, lost fishing gear, waste glass and plastic bottles, and lengths of timber and aluminium are among the rubbish that is commonly found polluting

beaches and shores. Similarly, sewage, industrial waste and run-off from farms may carry traces of chemicals and pesticides. These are carried down rivers to the sea, where they compound and accumulate as they pass up the marine food chain, until they may debilitate or kill the higher predators. As a result of inappropriate land management and riparian clearance, fine terrestrial sediments are discharged into estuaries where they flow out across the sands smothering shellfish beds, in particular, spawning and nursery areas, and generally degrading the environment. Eutrophication is regarded as a type of pollution and is exacerbated by fertilizer run-off.

Drownings or frequent mishaps are often causes of spiritual pollution, which may be of a temporary nature, or long-term, or water may be considered polluted through exposure to menses. Elders have commented that the contemporary practice of women swimming during their menstrual cycle was one reason for the loss of fishing resources. Spiritually polluted water is regarded as having become tapu and therefore cannot be used in any way until the tapu has either been removed or is believed to have completely dissipated.

These various pollutions are all changes in mauri, the water having become waikino and unhealthy to humans and other species. Such changes might also result from natural interferences with the normal flow: containment by a gorge, waterfall or rapids or because of flooding, but only when considered a danger to human beings does it become waikino. A major river like the Taieri undergoes several changes between its headwaters and the sea.

Case study: Taieri River (properly: 'Taiairiari')

A helpful way of viewing mauri is to see it as 'personality' or 'mood'. This may apply at a general, and at a local, level. The pervading characteristic of the Taieri River (Fig. 2) is the regularity of flooding, all along its course but especially on the plain between Outram and Henley. The original name, Taiairiari, meaning stars twinkling in the sea, reflects this propensity and describes the overall mauri of the river.

From the headwaters to the sea, four distinct local 'moods' may be observed and

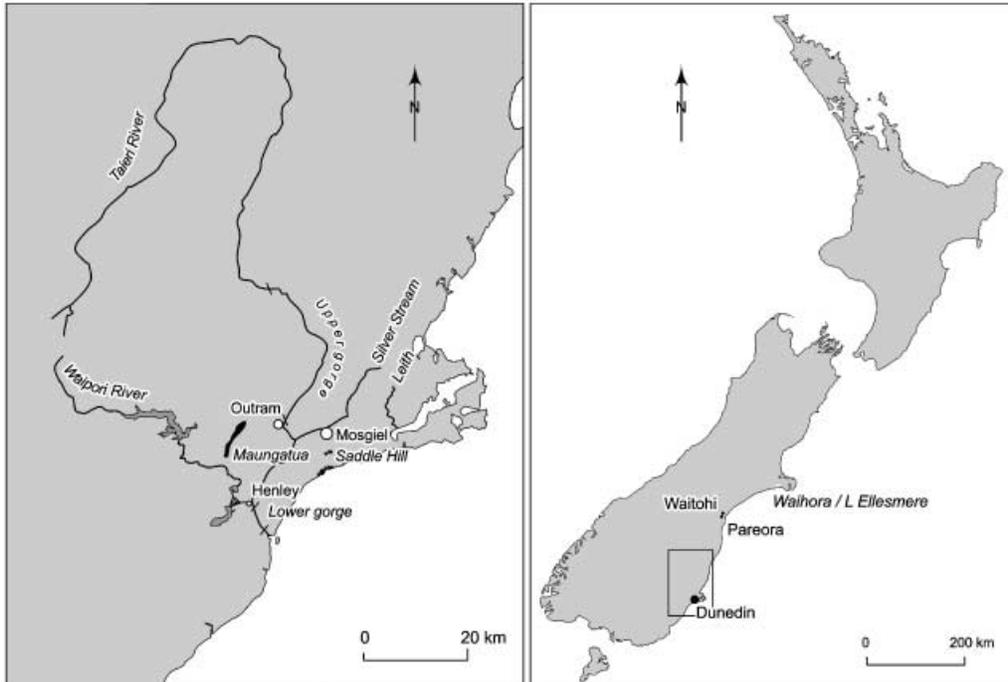


Figure 2 The Taieri River.

these might be compared to stages of human growth. First, on the Strath-Taieri, the river begins as small, tinkling streams that merge to become the young river, joyous and busy, noisily wending its way through braided, shingle beds. Side-streams gradually increase the volume but without changing the general nature of the free-running river. Second, there is the upper gorge, the turbulent teenage stage, where the flow is constricted and the river loses altitude quickly. Here the aspect is one of waikino. The bed is rocky and the gorge one long, turbulent, dangerous, white rapid. Side-streams add significantly to water volume. The third stage is when the mature river disgorges and meanders across the Taieri plain. Quite the adult river now, its flow is strong, stately and inexorable. Finally, just before it enters the sea, the lower gorge provides the confinement of old age. It becomes a swollen estuary, soon gathered up by the tide.

When the river floods, stages two and four show little change other than in turbidity from the increase in water volume. The first occasionally overflows but is relatively easily controlled and danger avoidable. The mature

river, however, quite irresistible when angry, bursts over the plain like an inland sea. The stars reflect in its nocturnal waters: Taiariari – the twinkling tide, reduced by Europeans to the meaningless Taieri, the name-change a metaphor for assumption of control by new organizations such as catchment boards which denied Māori any input to management regimes.

It is instructive to focus on the locality near Outram (Outram Glen, now a popular picnic spot), where the river disgorges, undergoing a change in mauri from the waikino of the gorge to once again become waiora. This is a special place, not only because the positive change in mauri is a place of ‘rejuvenation’ of the waters but also because the range through which the gorge flows, Maukaatua (Maungatua), is a tapu place,¹ thus intensifying the positive forces associated with the change of mauri. Hence, the pool is a ‘waipure’, a place where people with a weakened² mauri may go to enhance their convalescence. According to tradition, the course of the river between Outram and Henley was formed by the wriggling along of the taniwha Makamaka. Makamaka came down

the Silver Stream, had a 'nest' in the swamp that is now Mosgiel (Te Konika a Makamaka), and eventually became metamorphosed into the two-humped Saddle Hill. Makamaka is also regarded as spiritual guardian of this section of the Taieri.

Management of the waters

Various concepts give an insight into the various ways that traditional concepts and practices, and the Māori world-view that they were based upon, supported the management of waters and life within them. Many Māori continue to view matters through this lens.

Tapu: Water that had been ritually set aside was waitapu. It was subdivided into: waikino (dangerous water – see above); waipure (water for ritual cleansing); waitohi (waters of dedication, a ceremony somewhat similar to baptism); and waiwhakaheketūpāpaku (water burial sites). It was essential that water set aside for one purpose not be used for another. Food would not be taken from any waitapu and it would not be appropriate to ritually cleanse in water usually used for burying the dead. Nor was it appropriate to bury the dead in a fishing ground.

Today, place-names can be indicators to the classification of waters: Pareora (correctly, Pureora) and Waitohi, both in South Canterbury, were places where ritual cleansing and dedication, respectively, were carried out, not altogether dissimilar activities but each requiring its own form of waitapu. They are approximately equidistant from Waiateruatī, the major local traditional centre of population, but about 10 kilometres in different directions, an indication of the distances folk would travel for the appropriate type of water with which to perform a specific ceremony (see Tau *et al.* 1990; Garven *et al.* 1997).

Such sophisticated classification of waters indicates the extent to which spiritual concerns permeated traditional society. Dame Joan Metge (1979) demonstrates degrees of tapu in relation to water. She writes 'there are springs where water was used only for the sick; springs where water was used only for the dying; springs where water was used only for baptism (tohi)'. She goes on to point out that the tapu was a protective mechanism for springs.

It was fundamental to any area where resources were harvested that the locality be treated with respect. Metge offers a contrast: 'they [Europeans] fish anywhere at any time, make loud noises in the harbour, urinate and drop food in the water, gut fish in the sea or open shellfish on the shore, trample the shellfish beds, or raid the sea to line their own pockets. Worse, they treat a great food garden as a garbage can for unwanted waste' (Metge 1979). Burial sites were, and continue to be, secret places. 'To identify the location of these waters identifies the funerary places which Ngāi Tahu are less than anxious to do. For this reason Ngāi Tahu require some restriction on the information about these sites, and they are therefore identified in the "Silent file"' (Garven *et al.* 1997: 37).

Developers wishing to guard against impinging on an area with special values, may provide Kai Tahu with the co-ordinates of a project and apply to check whether any tapu site is registered in the vicinity. Thus a 'silent file' may be checked without specific details ever becoming public knowledge (Manatu Māori 1991: 9).

Restricted access: As with land, restrictions were applied to water bodies in a number of ways. Rāhui were temporary restrictions, usually imposed at species level to allow the species to be reserved, or build up after being depleted (Kawharu 2000: 357–8). Tapu was a permanent or semi-permanent restriction, usually over a small locality. Wakawaka were divisions, facilitating the sharing of a resource between kin groups. Access to particular stretches of water was limited to certain descent groups, or a succession of eel weirs may be erected, each operated by a different group. Eel drains at hāpua (coastal lagoons) are still operated in this traditional way and the licensing of white-bait stands on West Coast rivers is a contemporary usage consistent with the wakawaka principle.

Owheo: Sometimes whole catchments were permanently proscribed. Huata Holmes, a prominent southern Kai Tahu kaumātua, gave testimony to the Waitangi Tribunal, on 27 July 1988, that owheo was a conservation measure to allow land or water to remain unchanged. It could not be cleared, burnt for fern root, have houses or weirs constructed there. Unlike rāhui, owheo were permanent and applied to

all species in the area. Holmes advised that he had been given this information in 1947 by the late Te Ari Pitama and Mahui Manawatu. The stream in Dunedin, known as the Leith, is named Owheo in Māori as it was permanently under this prohibition because of sacred activities being carried out in the upper catchment. A number of local families still do not take resources from the Leith catchment, or eat anything taken from it by others, believing the proscription to continue.

Habitat enhancement: An example of traditional practice is the flushing of hāpua (coastal lagoons), in particular Waihora (Lake Ellesmere). Walter Mantell, Crown agent for early South Island land sales, recorded in his journal in 1848 that 'We passed the closed mouth of the Puarau lagoon which is occasionally opened by the Natives in the same manner as the Waihora' (Mantell, journal entry for 17 October 1848).

This enhanced the habitat for those species, like flounders, that disliked a muddy bottom, and assisted in the harvest of species like tuna (eels). Other practices were the positioning of fallen logs (pouwhenua) in the shallows of streams to provide shelter for species that avoided sunlight (such as most adult Galaxids, the major genus of native fresh-water fish). The objective in all cases was to improve a local ecosystem.

Population improvement: Shellfish beds were seeded from areas with superior strains and beds were improved by biological culling (Garven *et al.* 1997). The mauri of the waters where seeding took place must be compatible with the mauri of the waters from which the seed-stock originated. The places were marked to ensure that there was no interference with the process of seeding and strong social controls ensured the success of such practices. In recent times, many families have been unable to continue their traditional practices as there are no longer effective sanctions against transgressors.

Harvesting restrictions: Garven *et al.* (1997) point out that 'great care was taken to ensure that only young birds and fish were taken, leaving the breeding stock, and thereby sustaining the resource. This system is analogous to "modern" livestock farming systems where the welfare of the capital stock is always considered paramount' (p. 23).

They go on to say 'water-sourced foods were particularly important in Te Wai Pounamu because of the harsh climate which precluded the easy or extensive growing of horticultural crops' (Garven *et al.* 1997: 36). These were classified as kai moana (sea foods), kai awa (river foods) and kai roto (lake foods) and this division has persisted through to the present. Many such foods are species under-valued by non-Māori and accorded little consideration by regulatory agencies. The same authorities who accepted Māori representations to set up eel ladders allowing elvers to bypass a number of the South Island's hydro dams, refuse to recognize that lamprey (*Geotria australis*) have a similar need, as the latter were not seen to have any economic value.

Kaitiaki: Guardians of the waterways could be spiritual or a local group. One of the most prominent spiritual notions Māori have about waterways is that they were guarded by taniwha (spiritual guardians). They may act as guardians of a particular area, of particular people or as messengers, signalling the end to a fishing season or impending misfortune (Garven *et al.* 1997: 37). This has given rise to the common, over-simplified translation of taniwha as 'water-monster'.

Kaumātua, Tim Te Maihāroa (cited in *Te Karaka*, Vol. 13, 10) said that families known as rūpara were specialist kaitiaki of the waterways. His family acted in that capacity in regard to the Waitaki, right up to contemporary times. The world may have changed but, in the Māori world, families still try to exercise their traditional responsibilities.

Contemporary recognition of Māori values

In recent legislation such as the Resource Management Act (1991), and more particularly in the settlement of Kai Tahu's and other tribes' treaty claims, various levels of recognition have been accorded Māori vis-a-vis the management of waterways. In some cases this involves concepts virtually unknown previously to the wider New Zealand society. These are now summarized, in so far as they apply to water. In each case, new management regimes have been instituted, consistent with the Kai Tahu philosophy outlined above, and usually following traditional practice.

Taiāpure: Part IIIA of the Fisheries Act (1983), as amended by Section 74 of the Māori Fisheries Act (1989), permitted the establishment of taiāpure, described as: local fishery areas, in estuarine or littoral coastal waters, which are of special significance to iwi or hapū as a source of seafood or for spiritual or cultural reasons. They are established to give Māori a greater say in the management of the areas (Kai Tahu ki Otago 1995: 77). Several taiāpure have been registered in the Kai Tahu rohe.

Deed of Recognition: This takes the form of a formal agreement between Kai Tahu and the Crown, providing a basis on which Kai Tahu has registered their right to advocate their interests, in a given area, in Resource Management Act and Conservation Act processes. Deeds of recognition or statutory acknowledgements (see below) have been registered in relation to 12 named lakes, vesting the lake-beds in the iwi. The Tasman, Greenstone and Caples valleys are also subject to deeds of recognition.

Statutory Acknowledgement: An instrument that acknowledges Kai Tahu's special relationship with an area and provides the tribe a standing, that is greater than that of the general public, to challenge applications under the Resource Management Act and the Historic Places Act (but not the Conservation Act).

Nohoanga: Entitlements have been provided for 13 lakes and 19 rivers. This is a revival of a traditional concept which will, essentially, provide Kai Tahu with temporary campsites adjacent to nominated waterways for the express purpose of harvesting customary fisheries and other natural, water-based resources (e.g. raupō). These campsites may be occupied up to 210 days per year, between mid-August and the end of April; a clear reflection of traditional practices. A maximum of two nohoanga sites, up to a hectare each, are to be provided for each named waterway and are to be on Crown land.

Tōpuni: In traditional times a tōpuni was a fine dogskin cloak which was highly treasured and, accordingly, only worn by people of exceptional standing, perhaps as few as half a dozen in an entire iwi. Thus this metaphor is appropriate to designate areas of exceptional values. As a statutory concept, under the Kai Tahu Treaty claim settlement, tōpuni entails 'the creation of a separate, statutory "overlay"

classification over land administered under the Conservation, National Parks or Reserves Acts'. It will not override the existing protection or classification of the area to which it relates but will identify and acknowledge the special values (cultural, spiritual, historic or traditional) of the area. Kai Tahu will have the opportunity to define the types of action that could diminish or harm those values and the Crown will be required to control such behaviours.

Conclusion

Contemporary Kai Tahu approaches to the management of waterways focuses on water quality and quantity, and respect for ancestral knowledge and values that for centuries ensured that resources, so vital to the survival of the people, thrived. Put simply, that is the reason that Kai Tahu believe there is an ongoing role for Māori in the management of waterways and adjoining riparian areas. Māori concepts and practices as discussed above have an important role to play in the development of resource management law and decisions in New Zealand.

Acknowledgements

The author wishes to acknowledge access to the Potiki papers, on which much of the traditional material above was based. The guardians of the collection have asked that specific references not be used, but preferred that their tūpuna's intellectual property be recognized with a general acknowledgement.

Endnotes

- 1 Maukaatua is the spiritual guardian of the Taieri plain and forms the gateway to the hinterland and since the Kai Tahu Treaty settlement has become a tōpuni area (see Department of Conservation and Te Runanga o Ngai Tahu (n.d.).
- 2 By illness, wounding in battle or due to spiritual forces.

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