11 PROTECTING & RESTORING THE MAURI OF THE KAIPARA

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11.4 INTRODUCTION

Kaumatua recall a tribal record of a time when the Harbour was in full health before the forests were cleared and the effects of land clearance, sedimentation, unsustainable commercial fishing and agricultural landuses diminished its lifeforce. In those times the harbour and its catchment provided all the physical requirements for the hapū.

Environs Holdings Ltd(2007)

'Mauri...the elemental force that binds all things together and gives them their meaning'

Rev. Māori Marsden(1975)

From a Mātauranga Māori perspective, natural resources are imbued with mauri, an intangible and intrinsic value. Ensuring the mauri of natural resources are maintained is an integral part in defining who Kaitiaki of natural resources are. There is a subtle difference between Kaitiaki and Māori as defined by an ethnicity measure (Awatere 2008). Kaitiaki are people with an active role in the management of natural resources based on Mātauranga Māori values and perspectives. Māori, on the other hand, is a politically constructed label and used to describe the indigenous people of Aōtearoa/New Zealand.

Mātauranga Māori

A body of knowledge that was first brought to New Zealand by Polynesian ancestors of present-day Māori. It changed and grew with the experience of living in these islands. Following encounters with the European in the late 1700s and early 1800s, it grew and changed again before becoming endangered in many substantial ways in the 19th and 20th centuries. The elements that remain today – including the Māori language – have catalysed a renewed interest in this body of knowledge (Ministry of Research Science & Technology 2007).

Kaipara hapū, like other Māori, placed the resources of the land, sea and air on a level higher than man himself. Māori have been observing and interacting with their environment for centuries. The traditional Māori worldview acknowledged a natural order to the universe, built around the living and non-living, and the central belief was that all parts of the environment were interrelated or interdependent through the domains of Atua or departmental gods (Mardsen 1975).

Traditionally, Māori believed that small shifts in the mauri or life force of any part of the environment, for example through use or misuse, would cause shifts in the mauri of immediately related components, which could eventually affect the whole system. All activities and relationships with the environment were governed by mythology, religion, and Māori values (Mardsen 1975).

Within this framework spiritual qualities guided resource use through an elaborate system of ritenga or rules or values, with goals to regulate and sustain the wellbeing of people, communities and natural resources. Guiding values and concepts included *kaitiakitanga, tapu, mauri, rahui, mana, noa* and *wairua* (Murton unpublished).

Restoring the mauri or lifeforce of the Kaipara is of upmost importance to Kaipara Kaitiaki. How this will occur is unknown. But due to the bounding relationship between kaitiakitanga and tino rangitiratanga, opportunities must be created that will nourish this relationship. We have however, made a start, which will be described later in the chapter. This chapter is concerned with addressing the following questions with regard to restoring the mauri:

- What kaitiakitanga and tino rangitiratanga opportunities exist for Kaipara Māori?
- What is the status of the mauri of the Kaipara?
- What linkages being achieved between traditional knowledge & western science input into mgmt of the Kaipara
- What is the status of ancestral landscapes & seascapes? How are they managed by Māori and non-Māori regimes?
- What rites and rituals exist that maintain physical health & wellbeing?
- What is the status of waahi tapu in the Kaipara?
- What is status of Mātauranga Māori implementation in environmental mgmt?
- What is the importance of rohe?
- What aspirations do iwi have for the Kaipara? What are Ngāti Whatua sub-tribes goals for the Kaipara?

11.5 ORIGINS OF KAIPARA MĀORI

Building on the historical introduction of Ngāti Whatua in Chapter XX 'Introduction', more detail is provided here on their common ancestors and, the beginnings of their tribal and spiritual relationship with the Kaipara mauri.

Most tribes can claim descent from the crew of more than one canoe[1], for example, Ngāti Whatua can recite whakapapa that includes canoes of Te Arawa, Ngāti Porou and others of Tai Tokerau. The hapū of Ngāti Whatua are very closely related mainly because of their common Tupuna – Haumoewaarangi. Te Uri o Hau (The Uri (descendents, children) of Haumoewaarangi) a hapū of Ngāti Whatua, can also be recognised as an Iwi of their own, due to the fact that a number of hapū are also interwoven and associated with Te Uri o Hau.

[1] Kaumatua can recite Whakapapa that associates their iwi with other iwi and waka.

The Iwi of Ngāti Whatua derived its name when in the regions of Muriwhenua (before Ngāti Whatua moved into the Kaipara region) and Te Uri o Hau name originated from the Pouto peninsula some eleven or twelve generations ago after Haumoewaarangi was killed in the southern Kaipara harbour region (Wright 1996).

The Mahuhu o Te Rangi canoe is described as being "*the canoe of Ngāti Whatua*" (Graham 1939, Wright 1996) in which they arrived from Polynesia. This canoe is believed to have came to Aotearoa 28 generations ago (approximately 1225 A.D) (Graham1936). Mahuhu first landed near Takou (North Cape), where they found the people of Kui. They then sailed to Whangaroa, Whangaruru, Ohiwa (Bay of Plenty) and East Cape. All of these places were already populated by the Tini-o-Toi. At each place, one or more of the crew remained to marry and settle down among these tangata whenua.

From East Cape, the Mahuhu o Te Rangi canoe returned north to Takou, and others settled at Parengarenga. Rongomai, the elder brother that led the search on Mahuhu, then sailed down the west coast past Hokianga to Taporapora, an island which then existed inside the Kaipara Heads, where Rongomai finished his voyage. Because Rongomai is noted to have brought the Mahuhu o Te Rangi waka into the Kaipara harbour, Te Uri o Hau have established him as their common ancestor as did many other tribes as well. Smith (1897) writes of Rongomai being a common ancestor to Ngapuhi and Te Rarawa, Ngāti Porou, Ngāti Kahungungu and Tainui., and all descendants of Po. Po was Rongomai's son.

Rongomai settled at Taporapora with the inhabitants of Toi (Ngāti Awa), and it was from these people that Rongomai took his wife. They settled in the area of Manukapua and Ōkakukura where they lived for many years. A large whare, believed to have been erected by the Mahuhu o Te Rangi people, was the principle feature there, a place where the chiefs from many locations would recite ancient knowledge, karakia and Whakapapa. Here the Mahuhu o Te Rangi people stored their sacred relics from Hawaiiki (Sheffield 1963) and lived quite happily enjoying the abundance of kai.

Having neglected some uru-uru-whenua ceremonies before going fishing, Rongomai drowned while crossing the Taporapora channel. His body was eaten by tamure and araara (trevally) and cast up onto rocks at Pouto near Waikaretu. Hence the name of the rocky foreshore between Pouto and Waikaretu, Te Akitanga o Rongomai. This led to the bountiful fishing grounds being disused and his descendants, Ngāti Rongo, do not to this day eat the flesh of those fish (Graham 1936). His widow's lament:

Taporapora whakatahui waka, whakarere wahine

Taporapora that capsizes canoes, and bereaves women.

This proverb remains today as a reminder of the many lives lost in crossing the Kaipara channel.

After the tragedy of Rongomai, some of his people, including his son Po, left Taporapora to live in North Cape before settling in the Kaitaia area with the Kui people. The Mahuhu o Te Rangi canoe is said to have left Kaipara, travelling up the west coast to Rangaunu harbour (Graham 1936). After the Mahuhu o Te Rangi waka departed, the people of Rongomai

created a great storm which devasted the island of Taporapora and the remaining inhabitants and their taonga and whare were washed away. This event was known as Te Taraitanga (the shaving off) and now only parts of the former Taporapora site is visible at very low tide (parts of Manukapua still exists today).

It is from Po and his marriage to a women of the Kui people – Takarita – that their grandchildren became known as the Ancestress of many tribes in Aotearoa. Takarita unfortunately died in child birth but gave birth to Whatu-tahae, meaning "the stolen weaving". Te Whatu-tahae married Mawete, Po's nephew, and they had three daughters. The eldest daughter, Whatua kai marie was to become the ancestress of Ngāti Whatua. Kai marie is her supplement name, and is believed to have been attained due to

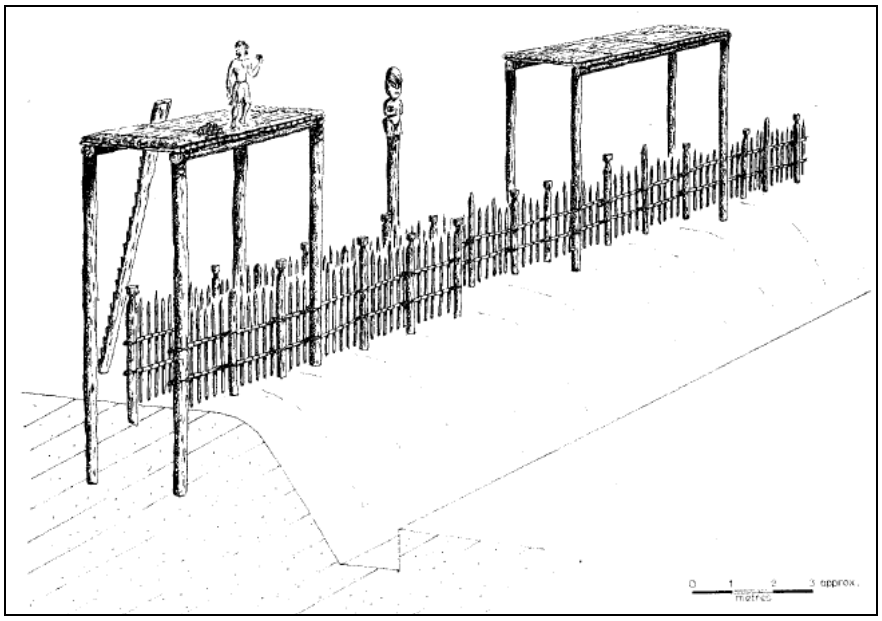
> *"her fame as a hostess and her universal liberality and benevolence. All who sought her in trouble, also refugees from war, secured her protection. Hence her prominence, and her being regarded as the founder of her tribe"* (Graham 1936).

Poroa, the second daughter, is believed to have migrated to East Cape, Waiapu, to be with her other relatives that settled there when the Mahuhu o Te Rangi waka first came to Aotearoa. She is reputed to be the ancestress of Ngāti Porou and Ngāti Kahungunu.

The third daughter was Taiko who was to become the ancestress of the Rarawa, Te Aupouri and the Ngapuhi tribes.

Te Roroa (the tall ones) occupied the hinterland and rich valleys between the Kaipara and Hokianga harbours, particularly the Kaihu valley, Waipoua, Tunatahi (Dargaville) and Manuganui Bluff areas of the catchment.

Figure 1. Schematic drawing of the palisade developments that once surrounded areas of Ōtakanini Pa, originally developed by Ngāti Awa and then subsequently developed by Ngāti Whatua and the Kawharu tribe (Source: National Library of New Zealand).



11.6 THE NATURAL WORLD OF KAIPARA MĀORI

According to Māori philosophy, mauri is the very essence of life itself (Barlow 1991). The philosophy of kaitiakitanga is concerned with the care and protection of mauri (Kawharu 2000). Certain customary lore's and practices regulate activities concerning conservation and use of the natural world in order to protect mauri inherent in all objects

Whakapapa is an integral part of all traditional Māori institutions and is a major determinant of rights to use, access and manage natural resources (Mahuika 1998). The implementation of whakapapa is through kaitiakitanga (Kawharu 2000). Tikanga such as tapu and rahui are the instruments used to regulate natural resources.

Like many indigenous societies Māori depended on a limited resource, supplementing it by manipulating the landscape. Strong incentives to nurture and sustain biotic diversity were closely integrated with moral and religious beliefs. Before influence of European missionaries, Māori believed that physical health and well-being were achieved in two ways. One was by maintaining the mauri of places – the life force by which natural elements cohere. And the other was by lifelong observance of the laws of tapu. Rites and rituals linked people and other species, allowing people to flow spiritually into nature, and for nature's rhythms to permeate Māori being (Murton unpublished). Daily tasks depended on conscious connection, both to benefit nature and limit peoples excesses, because what gave people life also gave them obligations.

Today, modern society often views nature and the natural world in contrast with culture, with human activities and thought (Murton unpublished). Traditionally, Māori did not separate and oppose the world to human existence. Birds, fish, insects and plants, also natural phenomenon such as the moon, mist, wind and rocks were felt to possess a life essentially similar to that of human beings. And all forms of life were related, for all were descended from Ranginui, the Sky Father, and Papatuanuku, the Earth Mother.

Human relationship to other living things and to the world itself, was expressed and explained in the form of whakapapa. The early history of the world which is recounted in narrative tales (often called myths) established the natural and proper behaviours, the tikanga, of all beings. Tikanga is used in speaking of the characteristic behaviour of natural phenomena, plants and animals, and it is also a term for human nature and human custom. All tikanga have a common origin in history, in the first ancestors and the relations between them. And since these ancestors and their descendants are bound by indissoluble ties of kinship, there is an underlying harmony in the world. Inevitably, though, there is conflict as well, and the narratives also explain the reasons for this.

An enormous amount has been written about Māori world-view (e.g., Marsden 1975, Mahuika 1998, Marsden & Henare 1992, Patterson 1992, Barlow 1991) which will not be replicated here but will be explained so an understanding is provided on the mauri of the Kaipara.

Māori attitudes toward land, natural resources (taonga), and sacred places (waahi tapu) are based on the kinship links described above. Māori recognise that within Papatuanuku there

are waahi tapu, places that are sacred, either because of the events that have taken place there, or because they may be resources sites. These include, and this list is not exhaustive:

- places associated with death (e.g. burial grounds and caves, trees in which bodies were placed, mud flats)
- places where people died and where bodies rested
- battlefields
- burial places of the placenta tuahu (altars)
- sources of water for healing and death rites
- ara purahoura (sacred pathways for messengers)
- mauri stones and trees
- carved poupou representing ancestors
- pa sites and pakakainga
- canoe landing sites
- sacred mountains, rivers, lakes, and springs (and those rivers and mountains names in Whakatauki)
- mahinga kai (e.g, birding, cultivation, fishing, forest and mineral resource sites)
- took taunga (rocks which identify fishing grounds)
- wahi taonga mahi a ringa (e.g. sites for resource materials such as kiekie, harakeke, obsidian, pounamu)
- ara (pathways connecting iwi areas and resource sites)
- landscape features which determine iwi and hapū boundaries
- mythological sites
- historic sites
- wahi whakamahara (sites recognised as memorials to events)

Not everyone has knowledge of such information. It is mainly the responsibility of kaumatua and kuia. The knowledge is special and may not be understood, valued or respected by others, and if the knowledge is made freely available the sites may be desecrated. They are not just places on a map; they have a wealth of “personal” Māori history associated with them.

11.6.1 A HOLISTIC CONCEPT

Māori world-view encompasses the spiritual (metaphysical) and natural (physical) world and recognises the two as part of an interrelated whole. This world-view recognises the past through their tupuna to the creator. Relationships exist between people today and their past, their tupuna, the Atua, and the physical "repositories" of their past, their waahi tapu, and their taonga.

11.6.2 TINO RANGĀTIRATANGA

The Kaipara is a symbol of Ngāti Whatua's existence. The Kaipara is deeply embedded in tribal and individual consciousness. The importance of the Kaipara is difficult to estimate.

Rangātira were responsible for the management of the various ecosystems of tangaroa and tane mahuta. They held mana, earned over time through leadership of his/her people, hapū or iwi in times of battle, travel and day to day tasks. If there was clear cohesion and unity within the settlement then this would be reflected as mana. A hapū or iwi could have different Rangātira within their own settlement, as one may have possessed different mana to another. For example, the mana of Haumoewaarangi was gained through his achievements in battle whereas that of Pokopoko was achieved as a peace-maker and taniwha slayer. The creation or upholding of mana was consistently worked on all the time where a Rangātira must always strive to achieve the highest and best results for their people. Therefore, Rangātira could hold mana over all things that contributed to the wellbeing and unity of his/her people. He/She could hold mana over people, land or both and their resources.

Genealogy is a potent source of knowledge about the past and present. The eloquent formal introductions which Māori use to identify themselves at Hui, powhiri or during introductions, is with reference to their mountain and river, to their ancestral dwelling place within the tribal landscape. Whakapapa provides Māori with a belonging or knowing to locate themselves in space and time (Roberts *et al.* 1998). All beings, human and non-human, share descent: they have the same origin; and as described by Patterson (1992) of a distinguished traditional Māori flax weaver, explains that harakeke (flax) "*is a descendant of the great god Tane-mahuta….today's Māori are related to harakeke and all the other plants: Tane is their common ancestor*".[p. 18].

11.6.3 WHAKAPAPA – MĀORI IDENTITY

Whakapapa (genealogy) affiliates you with other tribes, whether you like it or not, and the ancestral canoe is the foundation to your passport whenever and wherever you may travel amongst the descendants from Hawaiiki (Wright 1996). In the Muriwhenua fishing report (Waitangi Tribunal 1988), the claimants stated:

> "*It is important in the Māori order, that ancient connections are also recognised and maintained*"

And that the:

> "*…two neighbouring tribes, Ngāpuhi and Ngāti Whatua…also share significant historical and genealogical links with the claimant tribe*".

This statement highlights the very essence of being Māori and tangata whenua within Aōtearoa. Whakapapa explains the relationship with each other, the natural world, the environment and natural resources, as well as with spiritual and cosmological entities (Awatere 2008). Whakapapa is an integral part of all traditional Māori institutions and has a major influence on the right to use access and manage natural resources (Mahuika 1998). The implementation of whakapapa is through kaitiakitanga; a two-way relationship that involves obligations to give, receive and repay (Kawharu 2000).

Genealogies are potent sources of knowledge about the past and present, about the natural world and the beings that inhabit it (Roberts *et al.* 1998). The eloquent formal introductions which Māori use to identify themselves by reference to their mountain, river and sea, to their ancestral dwelling place within the tribal landscape, is an expression of whakapapa; the relationship of the people to the land locating themselves in space and time. All beings, human and non-human share descent; they come from the same origin. Patterson (1992) describes this through a distinguished traditional weaver of harakeke (New Zealand flax *Phormium tenax*):

> "*harakeke is a descendant of the great god Tane-mahuta….today's Māori are related to harakeke and all the other plants: Tane is their common ancestor."* [p.18].

11.6.4 THE EROSION OF PROPERTY RIGHTS

Access to and the management of scarce resources is a phenomenon faced by humanity today and throughout our collective history. Early Māori were no different. According to Wright (1996), the mana associated with controlling the use and access to resources was a pivotal force. It could, and it did, create many wars and many lives could be lost. It could cause mass migrations of tribes, as it did when Ngāti Awa migrated from the Victoria Valley in the north (Kaitaia area) because of social pressures that arose from an increasing population. Ngāti Whatua left the 'conquered land' between Maunganui Bluff and Hokianga because they thought the soil was of poor quality, obviously believing that the land could not sustain their people (Wright 1996).

Tribes sought the best for their whanau welfare, wellbeing and resources. The resources of the Wairoa river region have always been valued by the Te Uri o Hau and their ancestors, not in a sense of money value but from the perspective of 'richness, wholesome, plenty and beneficial' value (Wright 1996). The sustenance and nourishment of a resource, such as the land or air for birds, is described as an 'umbilical cord' to Te Uri o Hau. The source of the resource is connected to the iwi and hapū maintained that reciprocity by nurturing it as if it was within them. If the bond or link between the iwi and the resource was ever severed, both would suffer.

It is hard to visualise what Kaipara harbour and its foreshore looked like in 1840. The early Pāhekā accounts help us little, and let us understand how important water transportation had been for Māori, and how important it was becoming for Pāhekā as they entered this new land. For Māori, and then Pāhekā, having access to the shore was crucial. In 1840 none of the foreshore of the Kaipara had been lost from Māori control, although Pāhekā were residing at Mangawhare and Hoanga, in the northern Wairoa, where later they would receive title to the land along the foreshore. In some places along the Kaipara foreshore, Pāhekā did not reside so Māori had no barriers to full use of the shore (Waitangi Tribunal 2006, Murton unpublished).

By 1865, after the award of several Old Land Claims, and ten years of active purchasing by the Crown, Māori ownership of foreshore and shoreline had begun to be eroded (Murton unpublished, vol 3) (Figure 2, 3 and 4). This was especially the case along the Wairoa River where the shores of Hoanga, Mangawhare, Te Kopuru, Tatarariki, Oruapo, Arapohue, Whakahara, Tokatoka, Matakohe and Te Kuri blocks had been lost. In the upper reaches of the Arapaoa (Matakohe and Paparoa), on the eastern side of the confluence of the Arapaoa and Ōtamatea, the eastern side of the upper Ōtamatea (Wairau, Pukekararo, Te Ika A Ranganui, Maungaturoto) part of the southern bank of the Oruawharo and a small area on the Tauhoa. The process of losing the shoreline was well under way. Most of the eastern side of the southern Kaipara remained in Māori hands, apart from Matawhero, Kaukapapkapa and Waitai, but on the south Kaipara peninsula more than a third of the shoreline had been sold (Waitangi Tribunal 2006, Murton unpublished).

Figure 2. Crown purchases in southern Kaipara before 1865. Source: Waitangi Tribunal 2006.

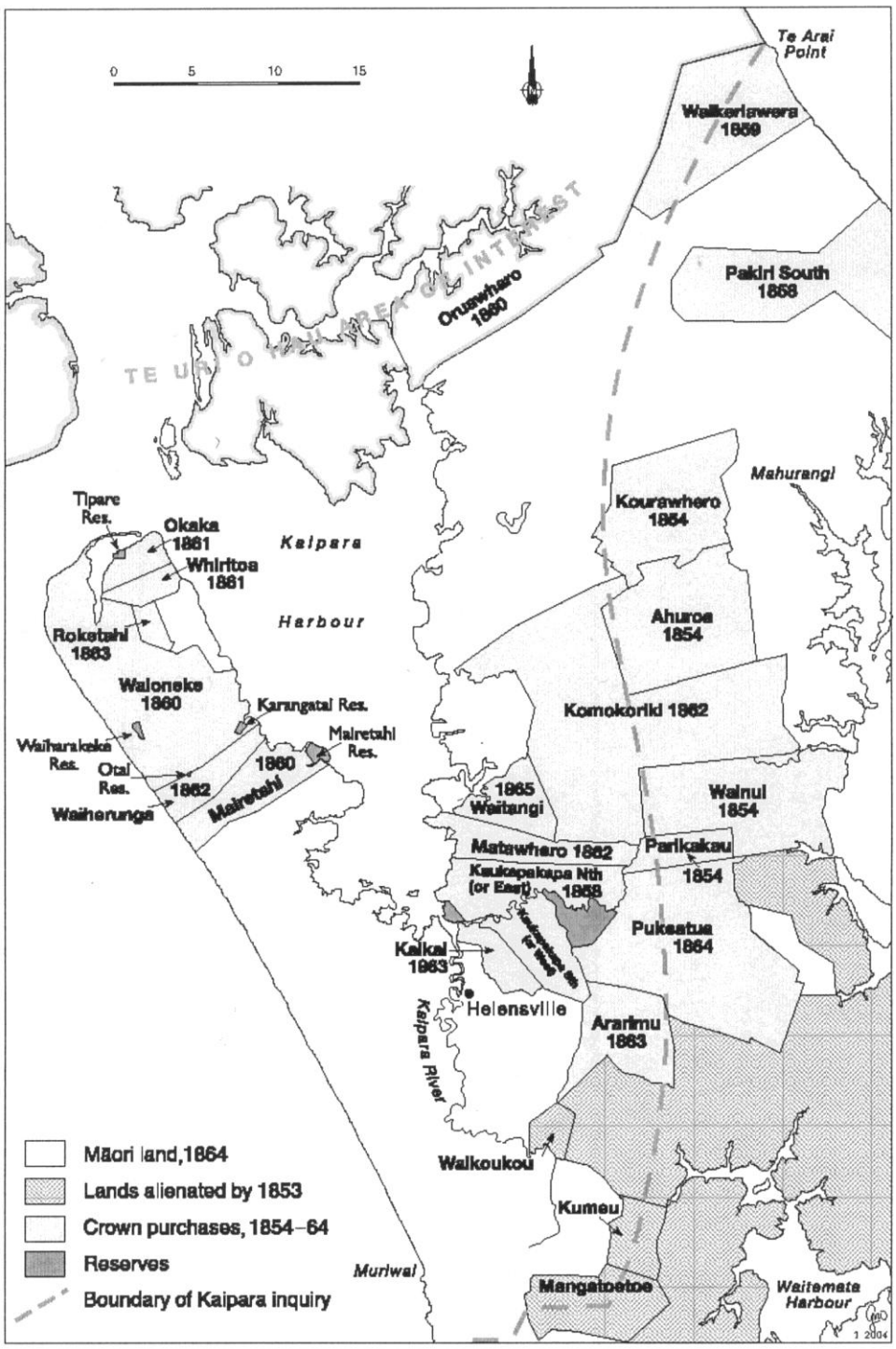


Figure 4. Land alienation in southern Kaipara, 1840-1900. (Source: Waitangi Tribunal 2006).

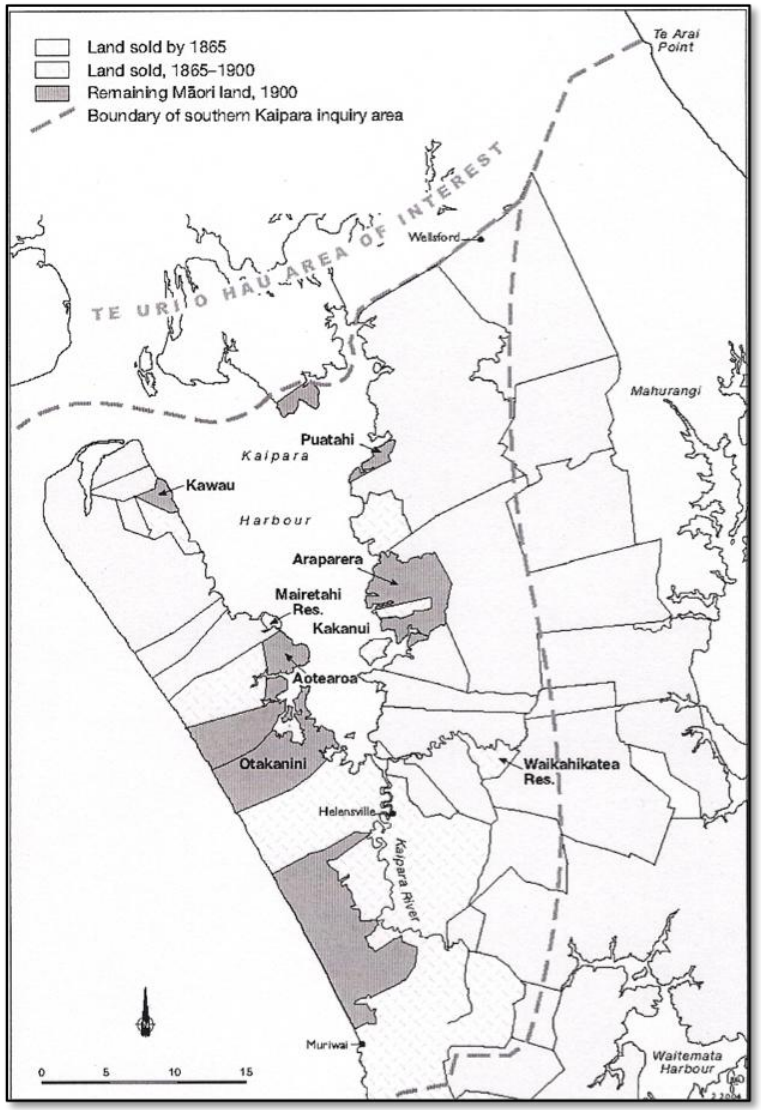
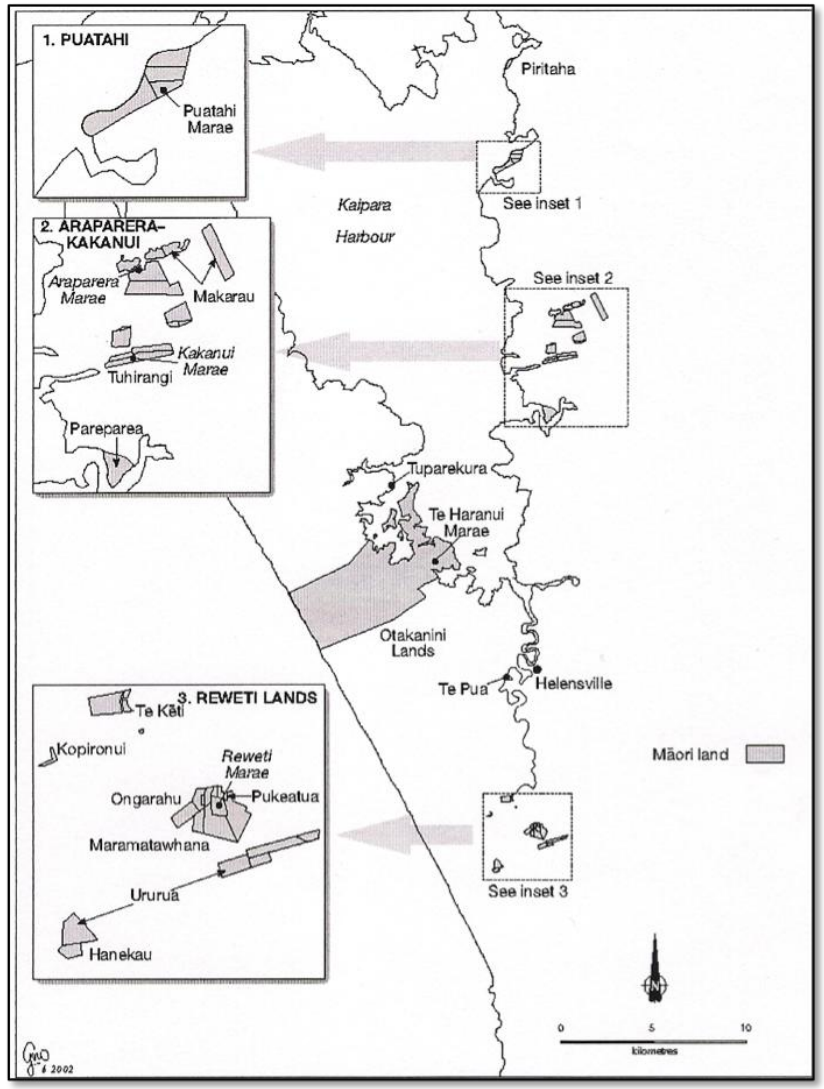


Figure 3. Māori land in southern Kaipara, circa 2000. (Source: Waitangi Tribunal 2006).



Over the next 20 years Crown ownership increased considerably, mostly through private sales, Pāhekā had come to dominate in their control of the shoreline of the harbour. After this, remote and less desirable parcels of land abutting the harbour were sold, so by 1930 Kaipara Māori owned very little shoreline property and as a result access to and the management of mahinga kai was diminished. The Waitangi Tribunal (1992, 2006) report and claimant research reports (e.g. Murton unpublished, Stirling 1996; Stirling 1998) detail the implications of this loss of control and rangitiratanga, authority to manage. In summary, this included:

- Fragmentation of entitlements. Kaipara Māori found themselves more often than not, excluded from schemes, such as cash advances to settlers (Murton unpublished, vol. 3). Thus, the economic opportunities and benefits were not provided to Kaipara Māori (Waitangi Tribunal 2006, chapter. 3).
- Crown not ensuring that existing reserves were protected and that Māori retained ownership of enough land for their current and future needs (Waitangi Tribunal 2006)
- The loss of control over land prejudiced Kaipara Māori and hindered the economic, social and cultural development for Te Uri o Hau and Te Roroa (Waitangi Tribunal 1992, 2006).
- Negative health and social statistics (D. Harding, Te Uri o Hau Settlement Trust, pers. comm., Aug. 2009)
- An increasingly polluted Kaipara Harbour and its tributaries
- More importantly, a diminished capacity to actively manage and access mahinga kai thus, exercising very little effective authority in relation to the welfare and protection of their people.

The individualisation of 'ownership' and 'rights' to whenua conflicted with traditional Māori land tenure (Murton unpublished, Pond 1997). The traditional Māori land tenure systems can be characterised as an ancestral trust estate held indefinitely by the hapū but with internal use rights distributed amongst such ancestral descendants who used them. The use rights being transferable within families but not outside of the group, without a general group sanction. Under Māori customary law, the western "ownership" concept, which vests the several rights of use, benefit, control, transfer, reversion and identification in a single proprietor divorced from community relationships simply did not apply (Murton unpublished, Pond 1997). In contrast, traditional Māori institutions were communally based with protocols for intra- and intergroup co-operation. Use and obligations were conditional upon contribution to the common good. For example, some but not all whanau were tasked with growing crops, while others had access to and managed diverse mahinga kai. The institution of mana guided the way resources were shared. Mana in this case is not so much about individual authority but more about collective well-being. Thus, the provision of resources for the collective not only enhances one's own mana but also the mana or well-being of the entire iwi or hapū (Durie 2001).

Erosion of communal rights to manage natural resources has had significant negative results for succeeding generations. For Ngāti Whātua, this is an impertinent outcome given the ineffaceable link between the iwi and the Kaipara as demonstrated through timeless tauparapara and mōteatea (Murton unpublished).

11.7 ABILITY TO ADEQUATELY PRACTICE KAITIAKITANGA

"We are all descended from Papatuanuku; she is our Kaitiaki and we in return are hers."

"To be good Kaitiaki is a responsibility not a right. It is responsibility that we as Te Roroa are born with and one where the right answers for the future are best found by first understanding the knowledge and wisdom left to us by our tupuna" (Alex Nathan, Chairman, Te Roroa Whatu Ora Trust, 2008)[2]

The construct of kaitiakitanga was developed in the early 1980s with the emergence of legislation and policy development (e.g., Resource Management Act, Fisheries Act) and was certainly not in common use or even used by Māori prior to this (Kennedy and Jefferies 2005). Kaitiakitanga gained momentum around the concepts of conservation and 'guardianship'. Kaitiaki is a word derived from the verb "tiaki" – to guard, to protect, to keep, to watch for, to wait for. With the prefix "kai" denoting the agent of the action, and sometimes used to mean talismanic object, such as a taniwha or the spirit of an ancestor, that dwells in a particular location or place (often a river or part of a river) (Kennedy and Jefferies 2005).

Kaitiakitanga in law

Kaitiakitanga is acknowledged in legislation. The Resource Management Act 1991, under section 6(e), 7(a) and 8 (see also Appendix 7), iwi/hapū environmental interests are recognised. Kaitiakitanga is defined as:

> *"…the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Mäori in relation to natural and physical resources, and includes the ethic of stewardship"* (s2, Resource Management Act 1991)

And defined under the Fisheries Act 1992:

> *"…the exercise of guardianship; and, in relation to any fisheries resources, includes the ethic of stewardship based on the nature of the resources, as exercised by the appropriate tangata whenua in accordance with tikanga Mäori"* (s2, Fisheries Act 1992)

[2] Te Roroa Whatu Ora Trust. (2008). Nga Ture mo Te Taiao o Te Roroa. Te Roroa Iwi Environmental Policy Document. Draft. 2008, pp44.

Legal definitions have not always sat well with iwi/hapū because kaitiakitanga is constructed under English Common Law perspective. For example, the original meaning of stewardship is 'to guard someone else's property'. Apart from having overtones of a master-servant relationship, ownership of property in the traditional Māori world, was a foreign concept: "*Thus the resources of the earth did not belong to man but rather, man belonged to the earth*" (Marsden & Henare 1992). Tutua-Nathan (2003) highlights the difference of perspectives between local government interpretation of kaitiakitanga and iwi/hapū perspective, ascertaining that before sections of the RMA can be effectively implemented "*tikanga Māori has to be understood by local and central government, the courts, and the general public*".

According to Tomas (1994), Kaitiaki and kaitiakitanga defined in the RMA are taken out of context:

> "*Kaitiakitanga is a concept which has its roots deeply embedded in the complex code of tikanga – the cultural constructs of the Māori world which embody the way Māori perceive the natural world and their position within it. It includes the rules and practices which were the means by which Māori regulated their world. Through its inclusion in the RMA the concept has become divorced from its Māori cultural and spiritual context. It has been redefined in terms of guardianship and stewardship, two terms arising out of feudal England. It has also been reduced from a fundamental principle of Māori society to one factor for consideration among many.*" [p. 30]

Tikanga Tiaki

The role of Kaitiaki (resource manager) is defined by Crengle,(1993), Minhinnck (1989), Kawharu (2000), and James (1993) to be defined and characterised locally and cannot be understood without reference to the values inherent in the belief system. The regulatory function is derived by mana (James 1993).

Kaitiaki must ensure that the mauri or lifeforce of their taonga is healthy and strong. A taonga whose lifeforce has been depleted presents a major task for the Kaitiaki. To uphold their mana the tangata whenua as Kaitiaki must do all in their power to restore the mauri of the taonga to its original strength. If they fail, not only will mana be diminished, but harm will come to members of the whanau and hapū.

Kaitiakitanga is an inherent part of the exercise of rangātiratanga.

Kaitiakitanga is about the comprehensive spiritual and environmental code which governs tangata whenua use of New Zealand's biological resources. This ancestral code is directly concerned with the care and protection of mauri, which according to the traditions of tangata whenua, is the dynamic life principle that underpins all biodiversity[3].

Kaitiakitanga has been exercised well before the Treaty of Waitangi. Article II of the Treaty guaranteed that hapū would retain the authority they needed (rangātiratanga) to continue to

[3] Adapted from Matiu & Mutu 2003 and Te Papa Atawhai Kaupapa Māori Strategic Policy, 2001

exercise kaitiakitanga. While the Crown gained the right to govern and to make laws under Article I of the Treaty, the Crown must heed the guarantees it made under Article II when designing and implementing its policies and laws.

Māori customs, values and attitudes derive ultimately from an indigenous body of knowledge which seeks to explain the origin of the universe. Two aspects fundamental to this cosmogony are whakapapa (genealogy) and the personification of natural phenomena. Māori cosmogony basically projects a slightly different set of ecosystems: Tumatauenga, domain of human society and mastery of fire and stone-rapping; Tanemahuta, domain of forest biota; Tangaroa, domain of aquatic biota; Rongomaraeroa, domain of cultivated and stored crops; Haumiatiketike, domain of wild staples (bracken fern root, flax, koromiko, nikau, ponga, edible ferns); Tauhirimatea, domain of physical forces.

Traditionally the transfer of knowledge had always involved expert individuals, tohunga and wananga (schools of learning). Modern influences have seen this system gradually decline and the recording, collection and dissemination of Mātauranga Māori has increasingly taken other forms. As well, we have seen the gradual decline in the traditional knowledge being passed on to whanau, hapū and iwi. A wealth of knowledge has been lost and is in danger of disappearing forever. Many kaumatua have traditional knowledge related to cultural activities and experiences associated with our native biodiversity.

Therefore, kaitiakitanga contains many elements that can be described as:

- Founded in whakapapa – the relationship between everything and everybody in the natural world. There is no distinction between people and their environment.
- Exercised on behalf of, and for the benefit of all who are related through whakapapa
- A set of inalienable responsibilities, duties and obligations that are not able to be delegated or abrogated
- A web of obligations: to the taonga, to the Atua and to ourselves and our uri. Kaitiaki have a responsibility to provide for everyone and ensure everyone benefits.
- Seamless and all encompassing – making no distinction between moana and whenua
- Given effect at whanau and hapū level
- Wider and more complex than existing legal definitions
- Given practical effect by: (1) exercising control over access to resources, and (2) sharing the benefits of the use of those resources
- Enabled through rangātiratanga, which includes the authority that is needed to control access to and use of resources, and to determine how the benefits will be shared. This means that it can be expressed in part through the concepts of “ownership”, “property”, “title” or “stewardship”. But it is much wider than any of these.

Kaitiakitanga is an alternative approach which has been incorporated into New Zealand's dominant regime. Where love, respect and care are paramount, kaitiakitanga is the essential kaupapa guiding the relationship of Māori with the environment. The Treaty of Waitangi delineates a Māori partnership with the Crown, suggesting that participation and input into planning should be of a much greater magnitude. Kaitiakitanga is made peripheral to resource management concerns as it lies outside of the moral boundaries endorsed by the dominant regime (J. Chetham, pers. comm., 2009).

11.7.1 STATUS OF KAITIAKI O TE KAIPARA

Through their iwi, Ngāti Whatua, and alongside other hapū in and around the harbour, Ngāti Whatua Ngā Rima o Kaipara, Te Uri o Hau (Environs Holdings Ltd., 2007) and Te Roroa (Te Roroa Whatu Ora Trust 2008) claim a Kaitiaki relationship . As Kaitiaki, they are responsible for both the knowledge (Mātauranga) and the practice (tikanga) of kaitiakitanga in relation to the resource.

Through a series of Hui carried out to discuss the cultural effects (to Te Uri o Hau values, culture and taonga) of the proposed construction of a marine turbine generation power station (the CREST Project) near the entrance to the Kaipara Harbour, the following effects to kaitiakitanga as a result of the proposal were identified and general status of kaitiakitanga:

- Te Uri o Hau, Te Roroa and Ngāti Whatua Nga Rima o Kaipara are Kaitiaki for the Kaipara Harbour, the waterways and all the flora and fauna that inhabit them and their margins within their respective rohe.
- There has been a large historical loss of knowledge of kaitiakitanga as a result of colonisation. The upcoming generation of kaitiaki was highly cognisant of the cost of the historical period of colonisation on both aspects of kaitiakitanga – Mātauranga and tikanga.
- Prior to the treaty kaitiakitanga was the resource management system for controlling effects of people on the environment
- The capacity to practice kaitiakitanga has been eroded over subsequent decades by the loss of title to large tracts of ancestral land and the progressive introduction of increasing layers of government control over resources and their management (e.g., land ownership laws, fisheries regulations, catchment and drainage boards, reserve and wildlife legislation, district and regional councils, Departments of Conservation).
- The practice of kaitiakitanga continues and is maintained in the isolated west coast communities of north Kaipara peninsula (e.g., Pouto community).
- Te Uri o Hau is committed to ensuring that today's Kaitiaki will play a significant future role in the monitoring and protection of the health of catchments and effects of developments on the health of the harbour
- Te Uri o Hau see revitalisation of their relationship as Kaitiaki as vital to their post-settlement processes.

Te Roroa face similar issues in their takiwa with the ability to adequately practice kaitiakitanga (Te Roroa Whatu Ora Trust 2008):

- Te Roroa iwi believe that since the signing of Te Tiriti o Waitangi the role of kaitiaki has been minimized, and despite the term 'kaitiakitanga' being recognised in legislation, there is still only limited opportunities given to Te Roroa iwi to fulfill their kaitiaki role and responsibilities.
- There is a lack of direct and effective involvement in sustainable management of ancestral taonga, particularly water, soil, minerals, air, indigenous flora and fauna – and our heritage.
- Effective recognition and implementation of the measures stated in Te Roroa Deed of Settlement are required at both agency and local levels to ensure practical expression is given to the future of kaitiakitanga.

Kaitiaki o Te Kaipara are currently practicing kaitiakitanga in a contemporary way and also using traditional methods, such as: karakia before fishing, returning the first fish, fishing by maramataka/seasons, other rites and rituals in the bush, Rahui on toheroa harvest along both north and south Kaipara peninsula beaches. In terms of contemporary practice of kaitiakitanga, Te Uri o Hau are committed through their marae and Environs Holdings Ltd., to develop a collaborative partnership with all stakeholders that have a role in the management of the Kaipara Harbour to develop and implement a sustainable catchment plan (Environs Holdings Ltd., 2009). Environs Holdings Ltd initiative, the Integrated Kaipara Harbour Management project, established the with Ngāti Whatua Ngā Rima o Kaipara Trust, the Integrated Kaipara Harbour Group (IKHMG). The IKHMG is comprised of four Councils, various Ministerial Departments including the Department of Conservation, community groups, amongst others. The IKHMG, as described in the Chapter 'Purpose and Vision', is driving an integrated ecosystem-based catchment management approach for realizing their shared vision for "*a healthy and productive Kaipara Harbour*".

Conclusion

While the principle of inclusion of Mātauranga Māori particularly kaitiakitanga in environmental management is recognised and accepted however, carrying out kaitiakitanga on a day-to-day level, integrated locally across Kaipara ecosystems or atua, is only just beginning. There are conflicting management approaches between government agencies which are in conflict with the tangata whenua approach.

The challenge for the IKHMG is to better understand cultural perspectives and to implement them in practice.

11.8 EVIDENCE THAT DESCRIBES THE STATUS OF MAURI

Being an intangible entity, of life-supporting value, utilising quantitative or scientific evidence to understand the status of the mauri is difficult.

According to Barlow (1991):

> *"Everything has a mauri, including people, fish, animals, birds, forests, land, seas, and rivers: the mauri is that power which permits these living things to exist within*

> *their own realm and sphere. No one can control their own mauri or life-existence" [p. 83].*

Māori ontology acknowledges the inherent or intrinsic values within an ecological system: encapsulated in the concept of mauri.

The Mauri was described by Kaipara kaitiaki as unhealthy causing tremendous loss of mana to the tribes. Historically, Kaipara Māori have witnessed significant changes in the characteristics of their rohe as a result of changing landuse and resource extraction. Te Uri o Hau, and other harbor hapū, consider the harbour and its ecosystem to have a mauri (Environs Holdings Ltd 2007) and as Kaitiaki of that mauri they have a cultural and spiritual responsibility to ensure it is maintained, protected and enhanced.

There are current activities that impact on the mauri of the Kaipara such as sandmining at Taporapora, commercial fishing, reclamation, foreshore and seabed structures, dumping, and pollution from wastewater treatment plants. Te Uri o Hau also believe such activities as the placement of marine turbines in the entrance of the Kaipara will have an impact and potential diminishing of the mauri of the harbour. Any resource activity that reduces or affects the flow of measureable energy will reduce or affect the mauri (Environs Holdings Ltd 2007):

> *" Mauri is intimately connected to the interrelationship and intertwining of all forces that make up an ecosystem – the physical and spiritual, the tangible and intangible, the past, present and future, human and non-human, individual components and interconnected wholes."*

TUOH Deed of Settlement 2002 statement of the cultural, spiritual, historic and traditional association with the Wairoa River:

> "*The mauri of the Wairoa River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding life. All elements of the natural environment possess a life force and all forms of life are related. Mauri is critical element of the spiritual relationship for Te Uri o Hau.*"

This statement is also made for the Kaipara Harbour coastal area, Ōtamatea, Ōruawharo, Ōtamatea, Arapaoa, Whakakei rivers.

Kaipara Māori hold numerous concerns for their mana. Mana is inter-generational. The historical degradation of the harbour over the past 200 years has already had significant adverse cultural effects on Kaipara Māori. All resource activities and development that have occurred in the Kaipara has seen resources extracted from Kaipara Māori rohe and given to others, most of whom are outside their rohe. Traditionally such exchanges are governed by strict tikanga – involving concepts of manaakitanga, muru and utu – all of which involve concepts of reciprocity (Environs Holdings Ltd 2007). Mana whenua are neither making decisions about the resource nor determining the manner and value of the exchange. Numerous issues arise from this effect.

Many assumptive decisions have been made by the Crown since European arrival into the Kaipara thus, mana whenua have not been wholly and directly involved in the use and

management of the Kaipara for over 200 years. The Marine Department was established in 1866 to make decisions on shipping, harbours and harbour works. The legal assumption has been that beaches and the foreshore "belong" to the Crown (Murton, Chapter 3.4.3, unpublished). Between 1866 and 1972, the Marine Department dealt with a range of activities relating to the foreshore: the approval and licensing of structures; the licensing of the right to pick oysters for commercial purposes; proposals to lease oyster beds; the leasing of the North Kaipara beaches to toheroa canners; the leasing of mudflats for reclamation purposes; the subdivision of the foreshore for oyster management purposes; oyster cultivation work; the licensing of the taking of sand, shell and shingle.

By 1879, Kaipara Māori lost control of most of the shoreline of the Kaipara through sale of the land above the mean spring high tide mark, but settlers, timber millers, gum diggers, and fishermen were flooding in. Kaipara rangitira did express their dissatisfaction about the inability of Pākehā and a government who did not care and acknowledge the rights of access and control.

The impact of this on the mauri is unknown. The spirituality surrounding this concept makes it even more difficult to restore. Should we measure its status since 1800's when alienation begun for Kaipara Māori? Or should it be measured from today's Kaitiaki?

11.9 ASSESSMENT MODELS FOR CULTURAL HEALTH

Contemporary development of cultural health indicators and ecological assessment toolkits has been recognised as a positive, scientifically robust and supportive element to current resource management decision-making processes (Tipa and Teirney 2003, Young *et al.* 2008; Rickard & Swales 2009). The development of these cultural health indicators and environmental outcomes was due to the concern that Mātauranga Māori in research, resource management, environmental management, sustainable management and monitoring is 'tacked-on' after the research. For example, research is already underway and the framework for management is already confirmed (Kennedy & Jefferies 2005). This co-opting of Mātauranga Māori see's it being reshaped in order to fit into a totally different western research/management framework thus, removing and/or distorting the holistic, fundamental connections and patterns within Mātauranga Māori (Kennedy and Jefferies 2005).

When setting out to develop and research a Māori outcomes and environmental indicators framework to test the hypothesis that implementation of the RMA has resulted in sustainable management of the environment, Jefferies and Kennedy (2009) considered three theoretical models to inform the approach. They are: Ngā wa model, Ngā Atua model and Ngā tikanga/kaupapa model. Described and reviewed in detail by Kennedy and Jefferies (2005), concluded that the tikanga/kaupapa model was to be used, due to model having less complexity to follow and would allow for close interpretation of key terms and concepts already being used for environmental management.

Before examples of current assessment models of cultural health are discussed (see below), a number of issues or caveats were identified in the development of these models or in acquiring/using Mātauranga Māori. They fall under the following themes:

- Environmental or resource management is not Mātauranga Māori resource management. The current approach is anthropocentric (humanity is separate from the environment – human needs are the starting point, the centre of attention) which underpins sustainable management in New Zealand, principally under the RMA; versus traditional Māori ideology of sustainable management, biocentric (humans are part of nature where all life is equal).
- Māori values to be included effectively in resource management process must recognise: access and control of intellectual property, preventing the misuse of Māori values in culturally inappropriate ways; enabling iwi/hapū to participate fully in development of information tools.
- Avoid co-opting Mātauranga Māori by building a body of knowledge together with iwi/hapū. Search for better relationships between human communities and the natural world must be gained (Blackhurst *et al.* 2003; Whangapirita *et al.* 2004).
- Placing a dollar value on indigenous values is why iwi/hapū are reluctant to share their indigenous knowledge. Indigenous knowledge should not be valued against/with other western knowledge when evaluating resource allocation in the current New Zealand resource and environmental management paradigm (Awatere 2009).
- Importance of kaupapa Māori research to be conceived, developed and conducted by Māori and the outcomes benefit Māori (Jefferies & Kennedy 2009a).
- A true kaupapa Māori environmental indicators and outcomes framework is limited when developed in English rather than Te Reo Māori. Mātauranga Māori encapsulates knowledge, cultural, language, beliefs, and values which are expressed in language.

Traditional Māori indicators, or tohu, of environmental "health" have been used for hundreds of years and enable Kaitiaki to both interpret and care for the natural environment (Young *et* al. 2008, Jefferies and Kennedy 2009). Tohu continue to be used today, such as alignment indicators (Table 1), where one event in nature aligns/occurs with another.

Table 1. Past and present seasonal indicators, tohu, used for harvesting kaimoana from the Kaipara by Te Uri o Hau hapū (Environs Holdings Ltd 2009).

Plant Cycle	Maramataka (Month)	Kaimoana Harvested	Season
Kowhai	November	Snapper, stingrays	Spring
Pohutukawa	December	Kingfish, Mullet	Summer
Algal Bloom		Mullet	
	February	Tuna/Eel	
Heather		Toheroa (fattest)	

Māori have been observing, interacting and acquiring knowledge about the natural world for centuries (Young *et al*. 2008, Te Rūnanga o Ngāi Tahu 2004, Environs Holdings Ltd 2007),

operating within a holistic framework that was/is guided by system of ritenga (rules) and tikanga. The wellbeing, regulation and sustainability of people, communities and the natural world were guided by particular values of kaitiakitanga, tapu, rahui, mauri, wairua, noa and mana, whereby strong, spiritual relationships were established with a given area, catchment or region (Young *et al*. 2008).

There is a need for the development of monitoring frameworks founded on the Māori worldview and Mātauranga Māori and some examples are provided below. The reasons behind their development were summarised by Young *et al*. (2008) as:

- Kaitiakitanga – the responsibility to carry out and practice kaitiakitanga, whakapapa, tikanga and environmental monitoring is an opportunity to apply their responsibilities and knowledge and obtain particular cultural aspirations.
- Undertake grass(flax)-roots action on a particular issue that is significant to their cultural well-being, such as contamination, cultural heritage, water quality, declining fish stocks. Undertaking cultural monitoring programs of the natural resources can provide iwi/hapū with a measure or detection of change that require long-term monitoring strategies and/or policy/rule development.
- Legislative or statutory obligation – particularly under the RMA, Treaty of Waitangi, Treaty Settlement Acts and Deed of Settlement. Giving effect to these obligations and responsibilities that require monitoring.

Jollands & Harmsworth (2007) discuss the advantages and necessities of using cultural approaches, knowledge (worldview) and techniques in monitoring sustainable development. However, it is important to note that initiation of the cultural health monitoring program must be with the iwi/hapū, an example of which is discussed below: the State of the Takiwā program initiated by Ngāi Tahu. A summary this case studies is also provided in Table 3.

11.9.1 CASE STUDY 1: CULTURAL HEALTH INDEX FOR STREAMS AND WATERWAYS

Tipa and Teirney (2003) developed the Cultural Health Index (CHI) based on Māori knowledge. Initially developed on the Taieri and Kakaunui rivers in the South Island, the CHI can be used confidently by any iwi/hapū at sites on streams of any size or river type – iwi/hapū groups in the Motukea catchment have adapted and applied the CHI (Young *et al.* 2008). The Motueka cultural health index stratifies the landscape into Atua domains (a Māori cultural framework). They are Tangaroa, Tane Mhuata, Haumietiketike, Rongomatane, Tumatauenga and Tawhiri Matea.

The CHI allows iwi/hapū to assess the cultural and biological health of a stream or catchment of their choosing. The development of the CHI was directed from the national Ministry for the Environment's Environmental Performance Indicators (EPI) Program. It was important that the tool be consistent with the directions prescribed at the national level.

Using mahinga kai was agreed by all kaumatua as the abundance, diversity and health of the life supported by the river is an indicator of its mauri (Tipa and Teirney 2003). From the beginning the use of the term 'mauri' in the CHI was difficult, primarily because of the intangible aspects of mauri that cannot be encompassed by an index. It was agreed that a

mauri index would be demeaning to tikanga mauri concept. Therefore, the phrase 'cultural health index' was chosen that addresses aspects of stream health and mahinga kai. Indicators were developed for sites located at the headwaters of the river to the lower reaches (streams). Mahinga kai indicators were obtained from interviews with kaumatua and Ngāi Tahu resource managers.

Application of CHI

The CHI has three components: (1) *Site:* Identify whether or not site is of traditional significance; would tangata whenua return to the site in future; (2) *Mahinga Kai:* assesses mahinga kai values of sites; (3) *Cultural Stream* Health: eight indicators – water quality, water clarity, flow & habitat variety, catchment landuse, riparian vegetation, riverbed condition/sediment, use of riparian margin, and channel modification.

A team of kaitiaki applies the CHI to their local stream, creek or river assessing its health in terms of Māori management principles.

A scoring system is used for each indicator resulting in an overall three-part Cultural Health Index, expressed as, for example A–0/2.1/4.2. Where A identifies the site as traditional (versus B for non-traditional); 0 identifies that the site will not be used in the future (versus 1 for will be used); 2.1 is the mahinga kai score (1–5 scale and averaged); 4.2 is stream health score (1–5 scale and averaged).

CHI and mauri

The CHI recognises that the mauri is tangibly represented by the physical characteristics of a freshwater resource, including indigenous flora and fauna, the fitness for cultural usage and its productive capacity. Different to current resource management approaches which are very technical, rather than based on a holistic philosophy that Māori utilise to protect the mauri.

11.9.2 CASE STUDY 2: STATE OF THE TAKIWĀ – NGĀI TAHU

State of the Takiwā is defined as *"an environmental monitoring and reporting approach that integrates Matauranga Māori and western science to gather information about the environment and to establish a baseline for the creation of policy and improvement of environmental health. A program developed as an alternative to conventional state of the environment reporting used by the Ministry for the Environment, that takes into account tangata whenua values."* The State of the Takiwā (SoT) forms a component of the overarching Ngāi Tahu ki uta ki tai natural resources plan, where wananga mahinga kai, a resource inventory and GIS database will contribute also to deliver the plan.

Development

The demand for the development and reporting of SoT was for the need to address the lack of Ngāi Tahu Whanui and/or cultural values in Regional Council monitoring programs and reporting of air, land, water and coast. There were three overarching influences in the development of SoT. They are: (1) Mahinga Kai, (2) Mauri, mana, manaaki (hospitality), and (3) Matauranga.

Mahinga kai (and whakapapa) is the main contributor with which Ngāi Tahu identify themselves with the whenua (land) and moana (sea) (Te Runanga o Ngai Tahu 2004). Mahinga kai (translated by Ngāi Tahu as 'working for food') customs underpin Ngāi Tahu and are central to their relationships with places, resources and their ongoing spiritual, economic, social and cultural wellbeing. Ngāi Tahu require that to undertake direct food gathering, rivers, beaches, oceans and forests must be in pristine condition and are "*good enough to eat from*" (Te Runanga o Ngāi Tahu 2004). It is vital that species and their habitats are maintained in pristine condition to fulfill this relationship.

Mauri, mana and manaaki are fundamental values that Ngāi Tahu required to be part of any environmental monitoring and reporting. Mauri is both a physical and metaphysical expression of environment health (Te Runanga o Ngāi Tahu 2004). The mauri in all living and non-living objects originates from the beginnings and is a value that is distinguished by qualities of health, abundance, vitality, the pristine and unpolluted. Mauri is a sacred taonga to Ngāi Tahu that is a integral to their whakapapa, which provides a spiritual link to the past, the present and to the future; hence Ngāi Tahu vision to "continue to provide for our people and our manuhiri (visitors), now and in the future *mo tatou, a, mo ka uri a muri ake nei – for us and our children after us.*" Upholding the mauri for Ngāi Tahu has a direct relationship to their ability as an iwi/hapū or whanau to provide manaaki to their manuhiri and in turn has an effect on their mana.

Mātauranga is traditional knowledge that has been gained through centuries of observation and the continued practice of mahinga kai customs for Ngāi Tahu (Te Runanga o Ngāi Tahu 2004). They have unique body of knowledge and experience that is important to understand and manage the natural environment, particularly the health and wellbeing of the mauri. This in turn provides Ngāi Tahu to provide historical accounts and knowledge of the past and changes that have occurred to the natural environment in their Takiwā.

Application of State of the Takiwā

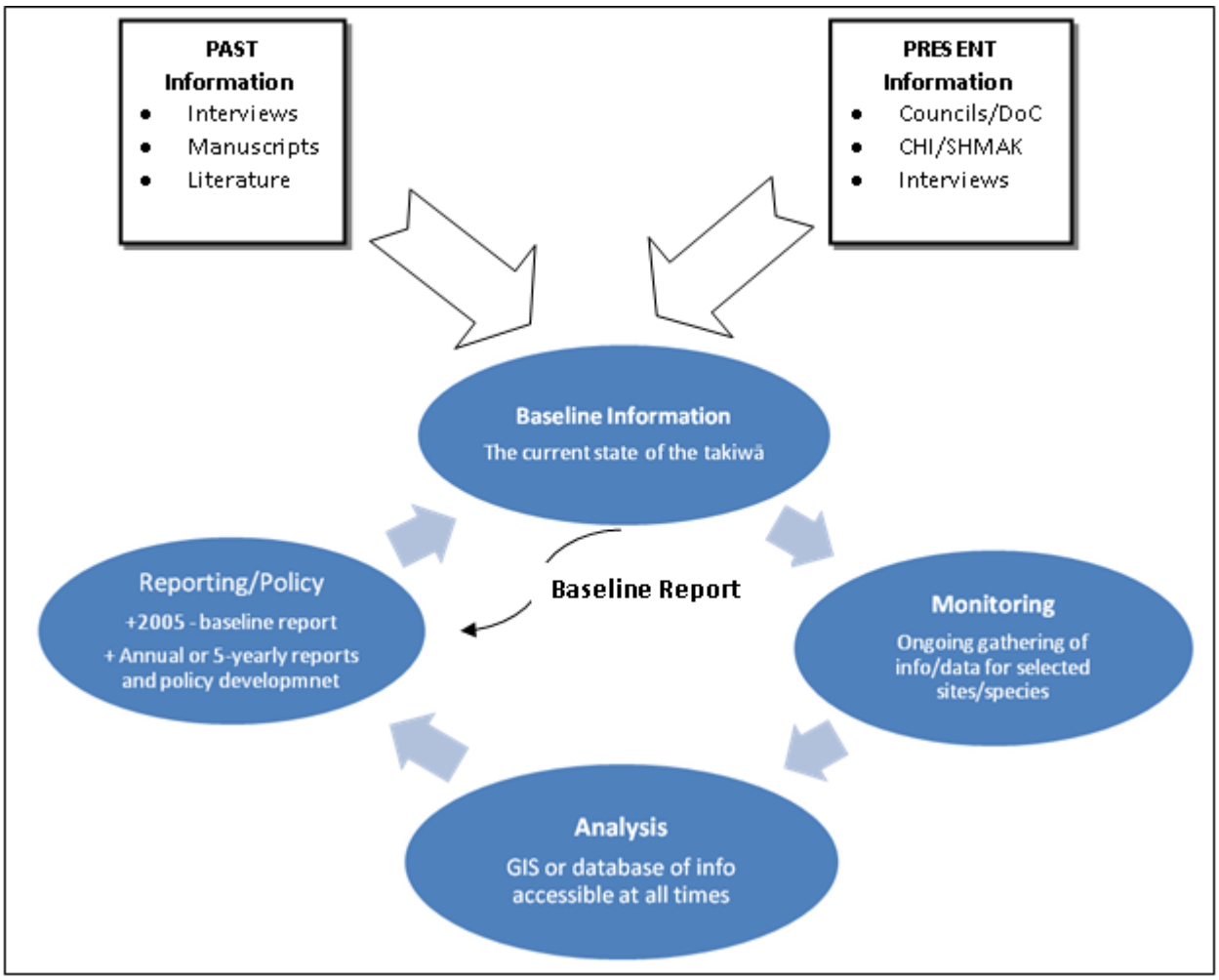
The main components (Figure 3) of the SoT monitoring framework are:

- **Baseline Information –** is collected from the past (interviews, manuscripts, literature) and present/current (provided from councils and Crown departments, CHI, SHMAK, national/regional monitoring data, interviews) information. This collection of information forms the core of the current state of the Takiwā. It was important for Ngāi Tahu to gather information on the past (1840 baseline) so they can understand the health of the environment as it was to their tupuna and the present baseline information provides an idea of what has happened since. Desktop research of written records, drawings, paintings, photographs was used to form a 'state' of the Takiwā at 1840.
- **Monitoring** – the design of the monitoring program depended on the sites (e.g. freshwater, lake, coast, marine), indicators and tools. Sites were chosen based on historical use, level of written and oral information, access, and relationship to existing monitoring sites (particularly local and regional council monitoring sites). Indicator type was determined for each monitoring program and determined from what the program was going to be reporting on, such as a resource (e.g., Tuna), issue (e.g., water pollution), or ecosystem (e.g., lake). The type of tools required will

be dependent on the site and the indicator (e.g., SHMAK kit, Cultural Health Index tool). Te Rūnanga o Ngāi Tahu have completed several SoT baseline reports, such as, for the Avon-Heathcote estuary and catchment (Pauling *et al.* 2007a) and South Island freshwater waterways (Pauling 2007b).

- **Analysis** – Ngāi Tahu recognised the importance of storing, accessing and analysing the information collected for the SoT program and have developed, with the support of the Ministry for the Environment, their own Takiwā 2.0 Database. A combination of hard copy literature, Microsoft Access databases and Geographic Information System (GIS) databases are utilised and stored. The Ngāi Tahu resource inventories and information databases are strongly integrated with the SoT and Ki Uta Ki Tai Plans where information gather through baseline studies, monitoring and reporting will be stored and organised.
- **Reporting/Policy Development** – this is the final product of the monitoring program and includes baseline monitoring reports and annual/seasonal reports. These reports will inform policy direction and development for Te Rūnanga o Ngāi Tahu.

Figure 5. Essential elements of Ngāi Tahu State of the Takiwā program. (Source: Te Rūnanga o Ngāi Tahu, 2004).



11.9.3 CASE STUDY 3: MĀORI ENVIRONMENTAL INDICATORS & OUTCOMES: MAURI OF WATERWAYS KETE

Jefferies and Kennedy (2009) developed a kete of environmental indicators and outcomes for mauri of waterways, mana whenua and waahi tapu as they relate to statutory plans. The Māori Outcomes and indicators framework and methodology kaupapa was developed over the past five years, to provide an effective suite of tools with which iwi/hapū can use to evaluate and assess the performance of councils in relation to their obligations under the RMA 1991 and Local Government Act 2002 from a Māori perspective. These were developed to align with environmental outcomes under the RMA and Local Government Act, and those of the wider community. Mauri of waterways also receives substantial attention under the RMA (Jefferies and Kennedy 2009).

As mentioned above, the maintenance, protection and restoration of mauri is a cultural and spiritual responsibility of kaitiaki Māori (Jefferies and Kennedy 2009a, b). The mauri of waterways outcomes and indicators kete (toolkit) was intended to provide tangata whenua a suite of tools to judge whether the mauri of waterways within their rohe is in good health; and to understand the contribution councils and Crown agencies make in achieving this goal.

The Mauri of Waterways kete and other kete developed has a multi-level structure (Figure 6), comprised of:

Framework/Structure	Explanation	Example:
Kaupapa	Overarching principle	
Tikanga	High-level principle/rule which must be obtained and upheld	
Outcome	A single expression of a group's ideal result for a particular tikanga	
Indices	A series of indicators grouped by theme	
Indicators	The high-level enquiry for evaluating whether outcomes are being achieved	
Measures	Lower-level enquiry or method, several of which collectively provide the information required for an indicator. Each measure is scored on a scale of 1 (best) to 5 (worst)	

Trialing of the Mauri of Waterways kete, Mana Whenua Kete and Wahi Tapu Kete (not all outcomes and indicators from each) was carried out with Ngāti Maru in Hauraki, Ngāti Whanaunga in Hauraki, and Ngāti Awa in Whakatane. Matamata-Piako District Council and Environment Bay of Plenty also participated in the trial. The status of the use of these Māori environmental outcomes and indicator kete by tangata whenua in collaboration with councils and crown agencies in the Kaipara is unclear.

Mauri Kete

The outcome is the mauri of all waterways are in optimum health, which is measured through five indices and associated indicators (Table 2). These have been developed to provide tangata whenua with a suite of tools to judge whether the mauri of waterways within their rohe are in good health and contribute to councils and Crown agencies moving towards that goal.

Figure 6. Schematic diagram of the Māori environmental outcomes and indicators framework (Source: Jefferies and Kennedy 2009a).

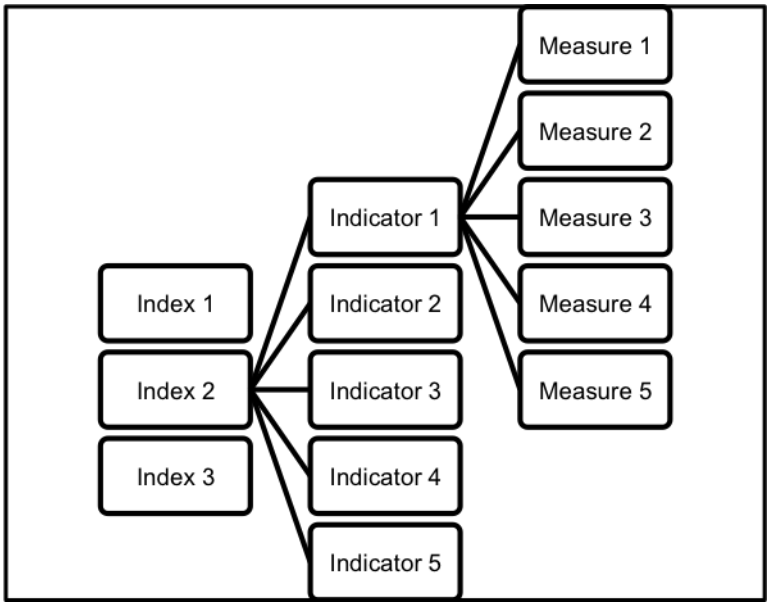


Table 2. Summary of Māori environmental outcomes and indicators for Mauri kete. (Source: Jefferies & Kennedy 2009b).

Outcome: Mauri of all waterways are in optimum health
Kaupapa: Mauri
Tikanga: Mauri of Water

Indice:	Indicators:	Measures (Some examples):
1. Extent to which local authorities protect mauri	1. Whether respondent agrees that Territorial Local Authority actively protects mauri	• "Strongly agree" to "Strongly disagree" scale
	2. Whether Territorial Local Authority documents contain provisions to protect mauri	4 measures
	3. Whether Territorial Local Authority act to protect mauri	4 measures
2. Extent to which tangata whenua protect mauri	1. Whether respondent agrees that tangata whenua actively protect mauri	• "Strongly agree" to "Strongly disagree" scale
	2. Whether tangata whenua have management documents with provisions designed to protect mauri	1 measure
	3. Whether tangata whenua act to protect mauri	4 measures
3. Extent to which other agencies protect mauri	1. Whether respondent agrees that other Government agencies actively protect mauri.	• "Strongly agree" to "Strongly disagree" scale
	2. Whether agency takes measures to foster understanding of mauri.	1 measure
	3. Whether agency has strategies designed to protect mauri.	1 measure
4. Extent to which actions of the wider community affect mauri.	1. Whether respondent agrees that actions of the wider community affect mauri.	• "Strongly agree" to "Strongly disagree" scale
	2. Extent to which individuals and groups are informed about mauri and how it should be protected.	1 measure
	3. Whether individuals and groups take active measures to protect mauri.	1 measure
5. Physical evidence that mauri is protected.	1. Whether respondent agrees that mauri is protected.	• "Strongly agree" to "Strongly disagree" scale
	2. Characteristics of the water.	7 measures
	3. Characteristics of the waterway and its immediate environment.	4 measures
	4. Characteristics of waterway inhabitants.	3 measures
	5. Presence of potential human threats.	2 measures

11.9.4 CASE STUDY 4: STREAM HEALTH MONITORING & ASSESSMENT (SHMAK) KIT FOR MĀORI

The Stream Health Monitoring and Assessment Kit (SHMAK) has been designed by NIWA in partnership with Federated Farmers of New Zealand, for farming families to monitor the "health" of the streams that flow across their land. The methodology can also be used by community groups, schools and regional councils, or anyone wishing to obtain an idea of general "health" of particular streams and freshwater waterways.

The SHMAK Kit philosophy defines "health" has the condition of the whole waterway, where water quality and ecology are measured. Like most monitoring long-term data trends are required to provide a robust and adequate picture of "health" using standard set of measurements and observations each sampling period.

The assessment part of the kit[4] involves assigning scores to each monitoring result which will inform an "overall" score for the condition of the stream. These scores are compared over time to see whether stream health is changing.

11.9.5 CASE STUDY 5: MARINE HEALTH INDEX

The Marine Health Index (MHI) is based on community knowledge and is a practical tool being developed by Te Tiaki Mahinga Kai (a national network of tangata kaitiaki, kaumatua, environmental managers, researchers, formed to improve management of mātaitai[5], taiapure[6], temporary closures (rahui)) for Te Runanga o Ngāi Tahu. The MHI builds on the Cultural Health Index for streams and waterways (Tipa & Teirney 2003), and applies similar methodology to the rohe moana.

The key factor to its development is that the MHI is developed for and with a particular community of people. The MHI uses science and community knowledge. The vision of the project is for the MHI to become a tool for communities to judge the state of their mātaitai and taiapure themselves in an independent, inexpensive and scientifically robust manner. Key indicators that have been nominated include: continuation of traditional harvest practices, changes in the taste, smell and size of kai, and visual water pollution and litter.

Te Tiaki Mahinga Kai are currently working with the Te Whaka A Te Werra mātaitai (Paterson Inlet, Rakiura, Stewart Island) and East Otago Taiapure at Karitane to develop the MHI.

[4] Kit comprises of: a manual within monitoring forms, instructions and background information; identification guides; monitoring equipment (water clarity measuring tube, conductivity meter, pH papers, thermometer, sample containers, magnifier).

[5] Taiapure is a community reserve to support customary fishing. See also Appendix 5.

[6] Mataitai is a community reserve to support customary fishing. See also Appendix 5.

11.9.6 CASE STUDY 6: IWI ESTUARINE MONITORING TOOL KIT (NGA WAIHOTANGA IHO)

The main objectives of the Nga Waihotanga Iho (*what is left behind, lift up*), the estuary monitoring toolkit for iwi, is to empower tangata whenua in the resource management decision-making process; provide easy-to-use inexpensive and robust tools for tangata whenua and community groups to monitoring environmental changes in their estuaries; and provide an educational resource for high-school students.

Estuaries are valued by tangata whenua: as a source of identity; to support mana and wairua of the iwi; for learning and custom, traditional knowledge; as Turangawaewae – a source of health; as a place of beauty and spirituality, connection with Tangaroa; as a source of kaimoana to share with guests and for special occasions; for recreation with hapū/whanau; for commercial value and employment (Richards & Swales 2009 – coastal society newsletter).

Like the SHMAK and CHI, the estuarine toolkit is founded on scientific principles and tangata whenua values. The toolkit is comprised of seven modules: habitat mapping, sediments, water and sediment quality, plants, fish, shellfish, and coastal management. This was to relate to the physical, chemical and biological aspects of estuaries. The toolkit manual provides step-by-step description of methods for each module. The toolkit was field trialed in February 2009 at Manaia estuary on the west coast of Coromandel Peninsula, working with participants from Ngāti Whanaunga, Ngāti Pukenga and Coromandel Area School. The participants underwent training with NIWA staff in order for them to conduct future assessments independently.

11.9.7 CASE STUDY 7: NGĀTI KERE METHODS & INDICATORS FOR MARINE PROTECTION

Ngāti Kere defined tohu to judge the health of the rohe moana such as observation by fishermen of size, form, colouring or amount of kaimoana from an area; Takapua rock is recognized rock for Karengo spores. If karengo is plentiful on the rock it provides an indication of the health of karengo in the rohe moana.

Ngāti Kere in the Hawkes Bay wanted an understanding from whanau of what modern marine management systems meant to them. Through a survey visions, values, species of importance and indicators of marine protection relevant to Ngāti Kere were identified (Wakefield & Walker 2005). Like Te Uri o Hau and Ngāti Whatua hapū, Ngāti Kere over-arching principle is:

> *"to strive to sustain the mauri of the rohe moana through Tikanga Māori practices"*

Ngāti Kere state:

> *" there is a mauri in the ocean. It is a thing we can't see or hear so it is difficult for us to put it into words. When we go to the beach or river we are recognizing who we are. It is a spiritual and cultural source of solitude, sustenance and satisfaction. When we go there we reconnect with the mauri of Tangaroa. We recognize that all the revering and respect of the moana, the looking after it, helps us to remember who we are and what our responsibility for management is. The moana is personified as an animate phenomenon."* (Wakefield & Walker 2005)

Through identifying species of importance, their values, and management systems Ngāti Kere wished to see the principles of manaakitanga and whanaungatanga applied to marine management. Many Ngāti Kere are lack understanding of modern management regulations and there is also a lack of understanding of the Ngāti Kere traditional management practices amongst authorities. Solutions included two-way discussions and information sharing within Ngāti Kere and also between Ngāti Kere and authorities. For example, a wananga with MFish so the learning can start and steps can be identified on how traditional and current management systems can be used to achieve the goals and objectives identified by Ngāti Kere.

11.9.8 CASE STUDY 8: TE ROROA IWI CULTURAL INDICATORS & MONITORING FRAMEWORK

Te Roroa iwi cultural indicators are based on a time when their tupuna managed resources under kaitiakitanga and the health of the environment was monitored under manaakitanga (Te Roroa Whatu Ora Trust 2008). Te Roroa iwi indicators were founded on Ngāti Raukawa's indicators identified under the Ngāti Raukawa Otaki River and Catchment Iwi Management Plan 2000. Monitoring of their environment must be fully integrated with monitoring the health of Te Roroa iwi as people and as a culture. Indicators have been developed under four themes:

1. **Whenua/ngahere** – number of kukupa sustainably harvested from our forests for cultural purposes. *If there are enough kukupa in our forests that we can once again harvest them, then our forests are healthy*.
2. **Awa –** number of rivers in our rohe that are classed as pristine. *Waipoua River is classed as the most pristine river in Northland. Our rivers should all be that healthy.*
3. **Moana** – number of people commercially employed sustainably harvesting toheroa. *If we can improve our toheroa stocks and habitat to a point where we can once again commercially harvest them in a sustainable manner, then our foreshore is healthy.*
   - number of marae able to provide sustainably harvested paua to manuhiri. *If we have plentiful and healthy paua then our coasts are healthy.*
4. **Hapū** – the ability of hapū to access materials and kai of cultural importance.
   - the rate of change of consumption and preparation of traditional plant and animal foods and medicines by Te Roroa, including ceremonial/cultural use as well as daily household use;

- extent of practice or use of karakia, wananga, powhiri, whakatau, rahui, and other oral traditions related to the use of traditional foods and subsistence practices;
- preservation and continued use of te reo o Te Roroa, songs, stories and ceremonies, traditional names for places, sites, foods and processes (planting, hunting, gathering, harvesting, preparation) and the rate of change and factors affecting these practices;
- integrity of and access to sacred sites;
- rate of rural-to-urban or urban-to-rural migration of Te Roroa;
- number of occasions that Te Roroa whanau, hapū members and representatives are effectively involved in planning, decision-making, implementation and evaluation processes undertaken by local government, agencies or other entities and the extent to which cultural concerns are considered and addressed.

Implementation of Te Roroa cultural indicators and monitoring framework is underway.

11.10 CONCLUSIONS

Ngā rangatira state that mauri is unhealthy and disconnected. This is causing a tremendous loss of mana to the tribes. From an Mātauranga Māori perspective, natural resources are imbued with mauri, an intangible and intrinsic value. Ensuring the mauri of natural resources are maintained is an integral part in defining who Kaitiaki of natural resources are. Māori believed that small shifts in the mauri or life force of any part of the environment, for example through use or misuse, would cause shifts in the mauri of immediately related components, which could eventually affect the whole systems.

Particular reasons for this have been outlined in the previous discussions but generally due to disintegration from practicing kaitiakitanga, rangitiratanga, whanaungatanga and manaakitanga at the appropriate scale (i.e. whanau and/or hapū) and access to the natural world of Kaipara. It is clear that there is a need to develop monitoring frameworks founded on Māori worldview and knowledge for the world of Kaipara.

Eight assessment models of cultural health were evaluated. Case studies included: (1) *Cultural Health Index for Streams and Waterways*; (2) *State of the Takiwā – Ngāi Tahu*; (3) *Māori environmental indicators and outcomes: Mauri of Waterways Kete*; (4) *Stream Health Monitoring and Assessment (SHMAK) Kit for Māori*; (5) *Marine Health Index*; (6) *Iwi Estuarine Monitoring Tool Kit (Ngā Waihotanga Iho)*; (7) *Ngāti Kere Methods and Indicators for Marine Protection*; (8) *Te Roroa Iwi Cultural Indicators & Monitoring Framework.*

All have been developed to take into account tangata whenua values. Table 3 summarises the core features of the assessment tools from what particular ecosystem is targeted by the tool; what cultural indicator(s) are being understood; the scale of application and/or integration of the tool, for example, can the tool be applied into State of Environment reporting or across the takiwā. Another feature is the validation with western scientific

methods to understand the "health" of mauri. The CHI, State of the Takiwā, and the Iwi Estuarine Monitoring Kit all involved western scientific methods to support and/or explain the status of the physical ecosystem. The Māori Indicators & Outcomes –Tikanga Mauri of Waterways Kete included a combination of measures to understand health of mauri. The kete includes measures of physical evidence that mauri is protected and evidence within agencies, wider community and tangata whenua organisations (e.g. provisions in planning documents designed to protect mauri). It is unclear what the scale of application or integration will be at this stage however, there is an opportunity for Kaipara hapū and/or the IKHMG to pilot the kete.

Table 3. Summary information of cultural health indicators and community group monitoring tools[7].

	Cultural Health Index freshwater	State of the Takiwā (Ngāi Tahu)	SMHAK Kit	Ngāti Kere Indicators	Iwi Estuarine Monitoring Kit	Marine Cultural Health Index	Māori Indicators & Outcomes - Tikanga Mauri of the Waterways Kete
Ecosystem:							
Freshwater – rivers and streams	x	x	x				X (RMA & LTCCP plans)
Freshwater – dune lakes and lakes		x					
Estuarine		x			x		
Coastal		x					
Marine		x		x		x	
Cultural Health:							
Mahinga kai	x	x	x	x	x	x	
Mauri	x	x					x
Sight, sound, smell	x						
Spiritual Value		x					
Traditional/Spiritual relationship		x					
Kaitaikitanga	x	x		x	x	x	x
Cultural landscape/seascape							
Ku uta ki tai (mountains to the sea, catchment)	x	x				x	
Manaakitanga		x		x			x
Whanaungatanga				x			
Scale of Application or Integration:							
Pilot	x			x	x	x	
Takiwā/Rohe	x	x					
SoE/Regional-scale							
SoE/National-scale			x				
Iwi/hapū	x	x		x	x	x	
Community			x				
Iwi/hapū-community			x				
Te Reo version					x		
Validation with western scientific methods:							
Yes	x	x			x		
No				x			X
			n/a				

[7] Te Roroa Iwi Cultural Indicators not included as still being developed for mauri kete.

11.11 GAPS & OPPORTUNITIES TO RESTORE THE MAURI

Ngā rangatira state that mauri is unhealthy and disconnected. This is causing a tremendous loss of mana to the tribes.

From an Mātauranga Māori perspective, natural resources are imbued with mauri, an intangible and intrinsic value. Ensuring the mauri of natural resources are maintained is an integral part in defining who Kaitiaki of natural resources are.

Kaipara hapū, like other Māori, placed the resources of the land, sea and air on a level higher than man himself, or more rightly, part of nature; a cosmology quite different to Christianity, which establishes a man:nature dichotomy, where nature serves man.

Māori have been observing and interacting with their environment for centuries. The traditional Māori worldview acknowledged a natural order to the universe, built around the living and non-living, and the central belief was that all parts of the environment were interrelated or interdependent through the domains of Atua or departmental gods (Mardsen 1975).

Māori believed that small shifts in the mauri or life force of any part of the environment, for example through use or misuse, would cause shifts in the mauri of immediately related components, which could eventually affect the whole systems.

All activities and relationships with the environment were governed by mythology, religion, and Māori values (Marsden 1975).

Māori ontology acknowledges the inherent or intrinsic values within an ecological system: encapsulated in the concept of mauri.

Eight assessment models of cultural health were evaluated. Case studies included: (1) *Cultural Health Index for Streams and Waterways*; (2) *State of the Takiwa – Ngāi Tahu*; (3) *Maori environmental indicators and outcomes: Mauri of Waterways Kete*; (4) *Stream Health Monitoring and Assessment (SHMAK) Kit for Maori*; (5) *Marine Health Index*; (6) *Iwi Estuarine Monitoring Tool Kit (Nga Waihotanga Iho)*; (7) *Ngāti Kere Methods and Indicators for Marine Protection*; (8) *Te Roroa Iwi Cultural Indicators & Monitoring Framework.*

When considering opportunities or solutions to restore the mauri, traditionally, when contemplating some important project, action or situation that needed addressing and resolved, the tribe would debate the kaupapa or rules and principles by which they should be guided (Marsden 1992). There is an appeal to first principles or broadly speaking, Tikanga Māori used to identify a method or plan (kaupapa) and a subsequent course of action (Tikanga) is adopted (Marsden 1992).

In writing this report, a similar course of action was not taken, but should do utilising first principles.

11.11.1 PRIORITY GAPS & OPPORTUNITIES

Identify Sites of Significance for Ngāti Whātua Ki Kaipara (Hapū)

Ancestral landscapes are about waahi whakahirahira (places which define the identity of tangata whenua), and are more than individual waahi tapu. The concept of whakapapa is inclusive of ancestry, heritage and history. Māori whakapapa sites the relationships between the cosmic world and the land, where Atua (gods) gave birth to those of the natural world (Takaroa/Tangaroa (gods of the sea), Tane mahuta (god of the forest) and many others), from whom descended the tipuna/tupuna (ancestors) of today's iwi.

Unlike archaeological sites, legislation does not automatically protect sites of significance to Māori. There is no specific recognition of whakapapa, ancestral landscapes and seascapes, or wairua, in either the Resource Management Act 1996 or the Historic Places Act 1993 (HPA). No legislation refers to important landscapes associated with seminal historic events. In many cases, HPA registration does not protect sites.

In 2003, the Resources Management Amendment Bill No.2 raises historic heritage to a matter of national importance. But the definition of historic heritage still does not make reference to cultural and ancestral landscapes and seascapes. The Amendment gives increased recognition to iwi/hapū management plans to assist with identifying heritage landscapes.

The Local Government Act 2002 mandates local governments to consider the cultural wellbeing of their communities. Long Term Council Community Plans may be a mechanism whereby cultural landscapes and seascapes can be considered.

Techniques need to be developed to understand the nature and significance of cultural landscapes and seascapes. These techniques are only in their infancy within most heritage-related disciplines. A community-based methodology could address this, within a community development context.

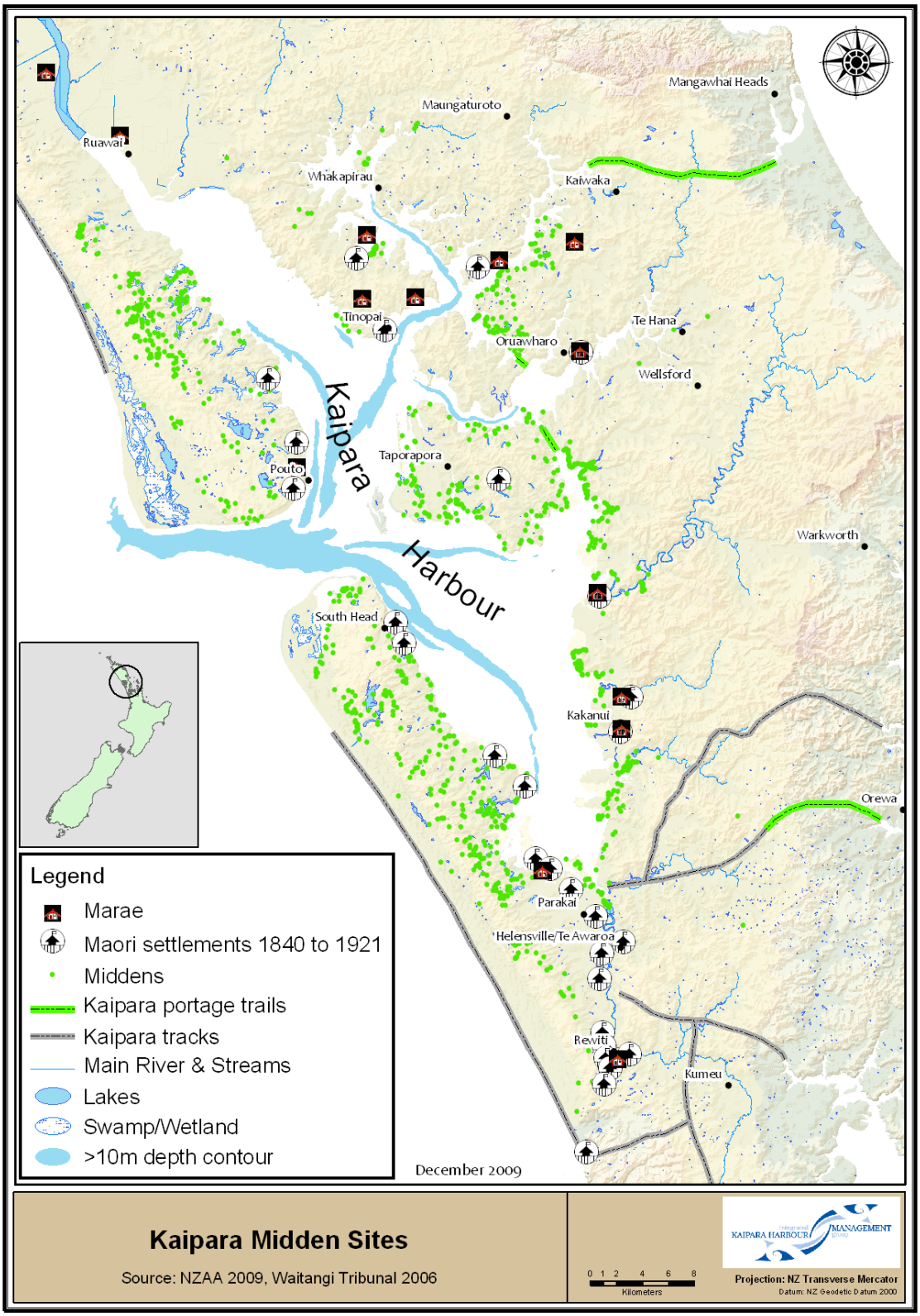
A National Policy Statement encompassing both the historic built environment and cultural heritage that includes reference to cultural and ancestral landscapes and seascapes. A NPS would help guide regional and district councils in developing plans and making decisions about landscapes and seascapes of significance to Māori.

Particular attention should be given to the following opportunities:

- **Spatially map** the ancestral and cultural landscapes and seascapes within the catchment (e.g. fishing grounds, waahi tapu sites) (Figure 8). Landscape and aesthetic values are inextricably linked, but what is the link between ancestral values. All parts of the Kaipara were occupied and known by generations of Māori, extending back perhaps a thousand years. The cultural relationship to the coast and harbour environments was central to their well-being and

authority. The Kaipara, the birthplace of Ngāti Whatua, the importance of this ancestral landscape relationship is in serious jeopardy of being lost as many Māori are separated from such heritage landscapes. Need for such documentation of ancestral landscapes for future planning and policy development. Stories need to be told.

Figure 7. A current example of our knowledge of cultural landscapes and seascapes using publicly available information.



Develop & Apply Ngāti Whātua Ki Kaipara (Hapū) Based Cultural Health Index

Upholding the traditional, cultural and spiritual recognition of the Kaipara to Ngāti Whatua ki Kaipara, which is stated under the Treaty of Waitangi and Deeds of Settlement, is necessary for the successful restoration of mauri.

Particular attention should be given to the following opportunities:

- **Development and application of a world of Kaipara CHI** is an opportunity to practice kaitiakitanga across different scales and, initiate a pathway to restore the mauri of waterways.

  Leadership in the CHI development will need to be by Ngāti Whatua ki Kaipara.

- **Investigate and report both traditional and western scientific** methods/mechanisms/measures/tools that will assist with restoring the mauri of fisheries, associated biodiversity and significant fisheries habitat.

- **Development and integration of Māori environmental indicators and outcomes Mauri kete in statutory and planning documents**. The IKHMG parties utilise the recently developed Māori environmental outcomes and indicators Mauri kete (other kete include − waahi tapu and mana whenua − using a staged process) (Jefferies & Kennedy 2009b). This may be for particular purposes such as: (1) assessing the Kaipara District Plan (or other plans), (2) evaluating council performance in use of Mātauranga Māori and kaitiakitanga; and (3) assessing plan change over time. The indicators and measures developed for each kete determines whether the overarching outcome is being achieved. Worksheets have been developed for each indicator and scores are recorded. Completed worksheets will then provide a total score and illustrate what indicators are performing at low/high levels. The worksheets may need to be reviewed by the IKHMG prior to undertaking the project.

- **Utilise the world of Kaipara Cultural Health Index (coastal and freshwater) in SoE reporting and monitoring programs.** Establishing a CHI based on a robust and comprehensive sampling design that compliments western scientific health measures (e.g. SHMAK, MCI) in State of Environment reporting programs would add value to resource management. There is a growing recognition by local government that understanding Māori views and beliefs is essential for resource management decisions (Awatere 2009, Kennedy and Jefferies 2005). Incorporating Māori values into environmental management should be seen as an opportunity for iwi/hapū to define the foundations of their knowledge systems (Awatere 2008). The challenge for both Māori and local government is to understand the application of these values within contemporary environmental management (Royal 1996).

Lack of Iwi Management Plan for Ngāti Whātua Ki Kaipara (Hapū)

An Iwi Management Plan can inform and direct opportunities identified in the two gaps above. The Iwi Management Plan usually cover the resource management issues within the rohe of a iwi. Such a Plan should give particular attention to promoting and achieving co-management and decision-making, seeking community input, capacity building, bringing about integration amongst iwi; the development should be led by iwi/hapū because of the need to restore mauri of Kaipara. They are recognised and given effect to under the Resource Management Act

11.11.2 OTHER GAPS & OPPORTUNITIES IDENTIFIED

Research & Science

1. **Understanding connectivity.** Investigate overlaps in ecology, resource management activities and tikanga Māori that are conflicting. For example, assessment of cumulative impacts (e.g. pollution from non-point and point sources, landclearing) and hotspot areas of impact.

Traditional, Spiritual & Cultural Relationship

2. **Restoration Wananga** — understanding the participation of community groups in restoration activities in the Kaipara Harbour and catchment is important to achieve the vision of the Integrated Kaipara Harbour Management Project, a healthy and productive Kaipara Harbour. Iwi/hapū/marae organisations and government departments/agencies cannot achieve this vision on their own. Current restoration projects are under-resourced, monitoring of their activities are low and, are also uncoordinated. A wananga will not only provide the opportunity to discuss projects and share stories (both spatially and temporally), document project objectives; but will assist with achieving a coordinated, more systematic and cost-effective, approach to a restoration program; and build a grass(flax)-roots communication network where their activities can be understood and successes and failures celebrated.

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