

# RAPUA HE RAUTAKI RANGAHAU

RESEARCH STRATEGIC PLAN 2007-2016



**The educational potential of te ngahere and takutai  
moana as a foundation for kaitiakitanga**



Compiled by Tūmana Research for  
**Te Kura Kaupapa Māori o Harataunga**

## hei MIHI

*Tūwhera ki a Ranginui, tāmaua ki a Papatūānuku*

*Tauacwhia te tipua te whakaata mai nei*

*Hokia te maunga tapu whakatau ai*

Ki te Aio, ki te ngao o te tukupu hei whakakōtahia i a tātou katoa, kei te mihi. Ki a rātou kua huri ki tua atu o te arai; haere, haere, haere, okioki ai koutou mā. Tēnei mātou te mihi nei ki a koutou ngā matua tipuna. Ahakoa kua ngaro koutou i te tirohanga kānohi tēnei matou e pono tonu ana ki ta koutou manaaki, atawhai, arahi, arataki i a matou i roto i o matou mahi katoa. I ngā marama tata kua pāhure, e toru ngā tōtara o te wao nui o Harataunga kua hinga atu koutou mā George McLeod (nee Tamahori), George Potae, Parekura White. Haere hoki atu ki te ao wairua, ki te ao kōram aramā.

I tōna nei wā, he kaha no Parekura ki te tautoko i tēnei o ngā kura me ngā kaupapa kua whakaraupapahia ki roto i tēnei pūrongo. He kaha nōna, he toa ia mo te orange pai o te taiao, o te ao mātauranga, o te ao Māori. Kei te rangatira Parekura, kua mokemoke tātou katoa i to wehenga atu, heoi ano, ko ōu mahuetana iho ka mau tonu hei ohaki hei whaitanga mā mātou ngā uri whakaitipu. Kaati! Tihei mauri ora.

Tēnei matou, Te Kura Kaupapa Māori o Harataunga, te mihi nei ki a koutou te tahua pūtea mō ngā kaupapa rangahau mō ta koutou āwhina mai i a matou mō ēnei tau e rua. Kei te whai ake nei te purongo kua roa nei koutou e whanga ana. Ko te tumanako, ka whai hua nui te roa o tērā tātari.

Kati, e kiiā nei te kōrero, mā te huruhuru te manu ka rere ai, a, na ta koutou tautoko a pūtea mai, kua timata tēnei pipi manu te whakaroha i ona parirau. Ma te wā pea ka amio haere pērā i te toroa, kia whānui rawa tona tirohanga atu ki te ao katoa me tōnā ataahua.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Rawiri Wright

Tūmuaki

Te Kura Kaupapa Māori o Harataunga

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## HEI KŌRERO WHAKATAKI

He Kura Kaupapa Māori tēnei o roto o Hauraki, ara, te Tara o Te Ika a Maui, 15km mai i te taone o Waiau. He hāpori Māori, he hāpori taratahi, he hāpori noho tātahi, he hāpori ahuwhenua ano hoki to mātou. He ahua 250 ngā tangata ka noho tuturu mai i Harataunga, ko te nuinga he Māori, (ahua 90%).

Harataunga has had a school since 1894. At first it was called Kennedy Bay Native School then it became Kennedy Bay School but in 1994, under the leadership of Hirini and Tai-Haere Maika, the school applied for Kura Kaupapa status. In 1997, after 100 years of tuition in the English language, Kennedy Bay School closed its doors and re-opened as Te Kura Kaupapa Māori o Harataunga. Tīhei Mauri Ora!

The designation of Kura Kaupapa status encapsulated the hopes and dreams and aspirations of many Māori in Harataunga and surrounding communities. It represented new beginnings and opportunities for whānau and tamariki to have an active involvement in the retention and transmission te reo me ngā tikanga Māori; opportunities for the creation of education pathways that would have meaning for tangata Māori from this particular rohe; opportunities for the socialisation and normalisation of te ngākau Māori, opportunities for tamariki and whānau to live, participate and succeed in society as Māori.

### Te Aho Matua

Te Kura Kaupapa Māori o Harataunga is a Te Aho Matua kura. The learning environment is underpinned by a distinct set of principles and philosophies<sup>1</sup>. Within the context of *Rapua he Rautaki Rangahau*, the following particular philosophies have relevance:

- △ students learn in an environment that is controlled by their whānau
- △ parents are tutors and educational facilitators in the learning programme
- △ the environment must reflect and enhance the importance and value of Māori cultural heritage, identity and uniqueness
- △ the learning programme cultivates an awareness of the place of the individual in the universe and her/his relationships and responsibilities to all people and things in nature
- △ the self-esteem, confidence and tribal leadership potential of each student shall be cultivated
- △ knowledge and involvement in tribal affairs is essential

<sup>1</sup> Te Rūnanga Nui o ngā Kura Kaupapa Māori o Aotearoa (1998). *Including Te Aho Matua into s155 of the Education Act, 1989 - a Submission to the Associate Minister of Education*. PO Box 146, Coromandel.



Within Te Aho Matua, the tamaiti is placed at the heart or centre of the community and the world that surrounds them is their classroom. Each child has a fundamental connection to the vitality and survival of their whānau, hapū, iwi – a potential future contribution.

Education and learning is a collective experience with the tamariki, whānau, marae and community as key participants. The Kura Kaupapa provides opportunities for whānau to invest in the protection and transmission of knowledge, beliefs, customs and practices that have importance, relevance and meaning within their own community. Te Aho Matua identifies six parts or areas of essential learning that are crucial for the development and education of a Kura Kaupapa child

Marau	Hei Whakamarama
Te Ira Tangata	a wholistic approach to learning and development; a focus on all round development not just career orientation; respect for physical and spiritual uniqueness; the importance of a nurturing environment and creative expression; different learning styles
Te Reo	respect for all languages, bilingual competence in English and Māori for all tamariki, commitment to everyday usage of te reo Māori, total immersion as the key to language competence, the language of the kura is, for the most part, exclusively Māori
Ngā Iwi	whānau as the socialising agency; whakapapa as the foundation for establishing links and consolidating knowledge; understanding of historical, cultural, political and economic events; the importance of belonging, identity, whānau interaction and involvement
Te Ao	the natural world and universe as the learning environment; fostering understanding of interconnectedness, balance and relatedness; capacity for learning from all aspects of experience; kaitiakitanga as an inherent role and function
Āhuatanga Ako	teaching and learning as stimulating, exciting, fulfilling; importance of concentration, listening, self-motivation, co-operation, support; learning through all of the senses; active/collective generation of knowledge; respect for relationships, responsibilities, protocols; expansion of the learning environment; a variety/range of learning/teaching techniques
Te Tino Uaratanga	development of free and open, inquiring minds, competent thinkers, listeners, speakers and readers in Māori and English; personal integrity, confidence and self-determination; secure identity; leadership qualities and capability

**Table 1: The six parts, or essential learning areas, of Te Aho Matua**

### Te Ara Wero

Since re-designation in 1997, the whānau and community of Te Kura Kaupapa Māori o Harataunga have celebrated many outstanding achievements but the journey is also marked by a raft of complex challenges. In addition to obstacles usually navigated by the small rural school, such as the limited access to services, accommodation and facilities; problems



with transport, recruitment and retention of qualified staff; inadequate funding and exorbitant workloads carried by the sole teacher/principal - this kura has had to cope with a completely different set of issues<sup>2</sup>.

Most of the people in Harataunga are of Māori descent, mainly Ngāti Porou, but very few are speakers of te reo rangatira. The main language, in the vast majority of homes, is Pākehā. In the decade leading up to 2004, there were several attempts to establish a Kōhanga Reo next to the Kura but, for various reasons, each initiative failed and successive cohorts of pepi paopao were not able to benefit from pre-school exposure to te reo Māori. This situation has improved somewhat over the last few years with whānau making the commitment to travel, roughly 40kms a day over steep hilly terrain, to attend an established Kōhanga Reo in Waiau.

The paucity of te reo Māori speakers within the community combined with the enrolment of new entrants who have little, if any, fluency has created particular challenges for Te Kura Kaupapa Māori o Harataunga. The protection of te reo Māori within the kura is a non-negotiable priority<sup>3</sup>. This is important to not only ensure the critical mass of speakers needed to normalise the everyday use of te reo Māori but also uplift the mauri of te reo or provide an environment that fosters, strengthens and enables fluency, vocabulary expansion and the emergence of complex language patterns. For this reason, most parents and pākeke are not able to assist curriculum delivery, as tutors or educational facilitators, and the Kura has not been able to take advantage of the teaching potential contained within this community<sup>4</sup>. Given the particularly unique and distinguishing features of Harataunga are the magnificent ngahere and takutai moana, it is not surprising to find this is precisely the skill-set and knowledge-base that whānau mainly have to offer. The mismatch between knowledge and language skills has impacted on the kura's ability to fully realise their Te Aho Matua aspirations. Particular strategies are needed to operationalise the opportunities for tamariki to benefit from the knowledge-base and expertise that whānau members have on te ngahere and takutai moana.

#### Te Kura Tuatahi

It is not the intention to suggest the curriculum delivered at this kura does not have any bush or sea content. Within the kura tuatahi, tamariki develop a general awareness and



understanding of te ngahere and takutai moana through immersion in tikanga, kōrero and kaupapa around, for example, te timatanga o te ao, ngā atua, karakia, pūrakau, whakatauki, mōteatea, waiata and other kāwai tupuna. In addition, this kura has a firm, across-the-school commitment to waka ama with all ages participating at one level or another. There are the usual bush and beachwalks, day trips, swimming and other outings that provide opportunities for learning. Over the last few months, tam ariki and whānau have also taken part in the release of several kiwi as part of a recently established iwi commitment to Ngā Whenua Rāhui<sup>4</sup>. At the kura tuatahi level, however, there is clearly a need for the development of teaching techniques, strategies and resources which consolidate and empower the educational potential of te ngahere and takutai moana and enable delivery to be formalised within the curriculum.

#### Te Wharekura

Although registered as a state primary school, Te Kura Kaupapa Māori o Harataunga has been hosting wharekura students since 2003. This is possible under the Ministry of Education satellite system. Initially, two wharekura students came into the kura with a new Tūmuaki and his whānau. These rangatahi came from another Te Aho Matua Kura that is accredited for wharekura curriculum delivery. This kura took on a tuākana role for Harataunga, guiding parents and whānau through the satellite system, sending through relevant teaching resources and funding entitlements; providing moderation, assessment and tuition support, generally enabling the rangatahi to continue wharekura studies from Harataunga. A satellite arrangement is often the only alternative for Kura Kaupapa whānau who want their rangatahi to continue a mātauranga Māori education but do not meet the eligibility criteria for wharekura funding. However, those who have worked the satellite system readily talk about the burdensome workload and numerous administrative, logistic, funding difficulties for both tuākana and teina kura<sup>5</sup>. With the wisdom of experience behind them, the satellite system has become untenable for many kura and very few, if any, tuākana will take on a new teina. The satellite arrangement is unsustainable as a long-term strategy for wharekura.

<sup>2</sup> Baty, S. (2006). Rural and Urban Schools with rolls less than a hundred and how they are managing a variety of common issues. Sabbatical Report, Te Puru School, Thames.

<sup>3</sup> The new entrants or pepi paopao have their own Kaitiaki Reo.

<sup>4</sup> Kura parents and whānau are very active in administration, ringawera and kaiawhina roles.

<sup>5</sup> Ngā Whenua Rāhui is administered by the Department of Conservation.



During 2004 and 2005, Te Kura Kaupapa Māori o Harataunga continued to host wharekura students, with the tuākana kura carrying the administration and the teina whānau doing all of the delivery, facilitation and organisation. By the end of 2005, two of the three wharekura parents had abandoned the satellite system and re-located their rangatahi so they could attend the tuākana wharekura kānohi-ki-te-kānohi. Meanwhile another four students at Te Kura Kaupapa Māori o Harataunga were completing their primary education and moved into the wharekura at the beginning of 2006. When Te Kura Kaupapa Māori o Harataunga included the wharekura option in their ten-year roll projections the outcome was astonishing.

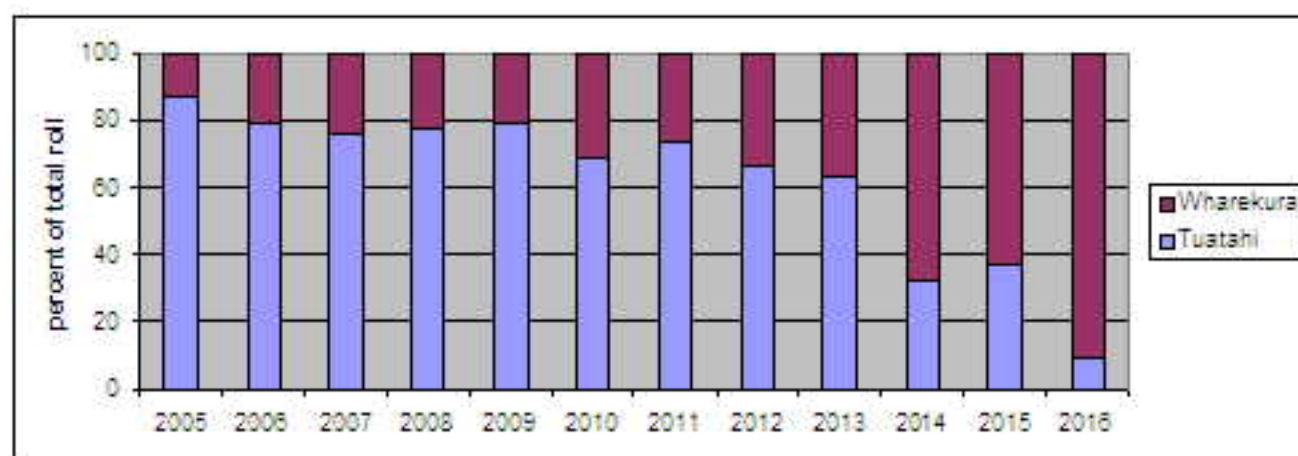


Figure 1: Te Kura Kaupapa Māori o Harataunga roll projections, 2005-2016

Figure 1 presents Te Kura Kaupapa Māori o Harataunga roll projections for kura tuatahi and wharekura tamariki during the period 2005-2016<sup>7</sup>. This graph suggests the proportion of wharekura students hosted at Te Kura Kaupapa Māori o Harataunga will gradually increase from twenty percent in 2006 to forty percent in 2012 and eighty percent in 2016. Such projections reflect the level of commitment to a mātauranga Māori education amongst the kura whānau and community. These projections also highlight the need for strategic planning to clarify how the wharekura curriculum will be delivered within Harataunga. Of utmost importance, is the need for a system that not only creates career opportunities and options for tauira but also ensures the realisation of Te Aho Matua aspirations and expectations. To this end, *Rapua he Rautaki Rangahau* aims to explore the educational potential of te ngahere and takutai moana as a foundation for the transmission of knowledge about kaitiakitanga.

<sup>7</sup> personal communications with Te Kura Kaupapa Māori o te Waiu; Te Rūnanga Nui o ngā Kura Kaupapa Māori o Aotearoa.



## Ngā Whainga o Rapua he Rautaki Rangahau

Amongst the whānau and community of Harataunga, *Rapua he Rautaki Rangahau* is an action research methodology that aims to raise awareness about opportunities and strategies for the realisation of collective kaitiakitanga aspirations. This document will:

- i. Explore the educational potential of te ngahere and takutai moana as a foundation for generating knowledge about kaitiakitanga
- ii. Identify possible techniques, resources and support systems for gathering and consolidating information about the ngahere and takutai moana
- iii. Explore opportunities within the National Qualifications Framework for development and delivery of a curriculum that cultivates kaitiakitanga of te ngahere and takutai moana
- iv. Identify obstacles and challenges for the development and delivery of kaitiakitanga curricula within Te Kura Kaupapa Māori o Harataunga along with possible options, alternatives or solutions
- v. Present a timeline and action plan for implementing research strategies and methods to operationalise the educational potential of te ngahere and takutai moana as a foundation for generating and transmitting knowledge about kaitiakitanga within the whānau and community of Te Kura Kaupapa Māori o Harataunga during 2007-2016

## Ngā Pāinga me ngā Hua

The general content and discussion contained within this document will produce a number of outcomes for the whānau and community of Te Kura Kaupapa Māori o Harataunga. In particular, the mere publication of this document will:

- △ uplift and clarify kaitiakitanga aspirations
- △ generate discussion, debate and consciousness-raising about kaitiakitanga techniques, objectives and support systems
- △ activate the potential for collective participation in the implementation of kaitiakitanga techniques and strategies across several communities and agencies
- △ orient thinking towards the educational potential of te ngahere and takutai moana as a mechanism for the transmission of knowledge about kaitiakitanga and advancement of Te Aho Matua aspirations
- △ reinforce alignment of the Kura and Marae around kaitiakitanga, as a fundamental component of mana atua, mana tangata, mana whenua
- △ assist the socialisation of worldviews which uphold the importance of kaitiakitanga as an indicator of Māori identity within this community

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<sup>7</sup> Technically speaking, wharekura students cannot be listed on a kura tuatahi roll but for all intents and purposes, they are part of the kura whānau and Te Kura Kaupapa Māori o Harataunga will be responsible for their education.



- △ stimulate thinking about possible solutions and alternatives to obstacles that may prevent the achievement of kaitiakitanga objectives

In addition to the benefits gained from merely producing this document within the community, *Rapua he Rautaki Rangahau* will aim to identify specific research goals, objectives and priorities for Te Kura Kaupapa Māori o Harataunga over the next five-to-ten years, including timeframes for the implementation of methods and techniques that will help to:

- gather and consolidate knowledge about te ngahere and takutai moana
- develop teaching resources for the transmission of knowledge about kaitiakitanga of te ngahere and takutai moana within the kura whānau and community
- maximise the opportunities for collaboration with kaitiakitanga support systems, initiatives and programmes
- operationalise opportunities for assessment and recognition of kaitiakitanga knowledge within the National Qualifications Framework
- highlight research issues that require further clarification
- ensure the achievement of research goals and objectives

Over time, the implementation of *Rapua he Rautaki Rangahau* strategies is expected to produce numerous benefits for the kura whānau and community, including:

- △ reclamation of kaitiakitanga as an essential knowledge-base and indicator of Māori identity
- △ advancement of Te Aho Matua and mātauranga Māori aspirations
- △ clarification of collective kaitiakitanga goals and objectives
- △ active involvement in kaitiakitanga strategies and techniques
- △ a structured approach to the transmission, assessment and formal recognition of kaitiakitanga knowledge within the kura tuatahi, wharekura and community
- △ strengthening of the relationship between Kura and Marae as the kaiwhakahaere of mana Māori and mātauranga Māori within this community
- △ collaboration across a number of communities and agencies for kaitiakitanga and educational purposes
- △ development of data-collection techniques and monitoring systems that will inform and contribute to iwi management plans, resource management issues and the achievement of Harataunga Conservation Plan objectives
- △ involvement in the development and implementation of research methods

Most importantly of all, *Rapua he Rautaki Rangahau* will contribute to the protection of te ngahere and takutai moana as ngā taonga tuku iho and the chiefly garments of mana tangata, mana wherua, mana atua and mātauranga Māori for the whānau, hapū and iwi of



Harataunga.

## A. te ngahere & takutai moana

This section of *Rapua he Rautaki Rangahau* looks at the educational potential of the ngahere and takutai moana. It aims to broadly identify distinct components, topics or themes that could be studied within a kura environment to foster knowledge and learning about kaitiakitanga. The issues around curriculum delivery, assessment and priorities for development and implementation will be considered later.

### Te Takutai Moana

*Kuku, kuku ika, kuku wehewehi,*

*Takina kokoe nā, te iho o ika,*

*Te iho o Tangaroa –*

*Uara ki uta rā, uara ki tai rā*

nā Mohi Ruatapu, Ngāti Porou

The people of Harataunga have always had a close relationship with Tangaroa, the sea is a dominant feature of this community. Many would say that Tangaroa is the foundation and source of life, the nucleus of survival and being. In some genealogies there is talk of ancestral connections, the marine origins of humanity. The forebears of Harataunga whānau were among those who traversed the great oceans from one destination to another - they knew the many moods, energies and expressions; they experienced the wrath, danger and aggression; they understood the calm, rejuvenating qualities. On one hand, Tangaroa upholds and supports life. On the other hand, Tangaroa is capable of devastation, death and destruction. Our people have always collected kaimoana for the table, marae and functions - the sea has been, and continues to be, an important source of food and nourishment.

Through daily exposure and involvement with the sea, our people were actively engaged in kaitiakitanga - the generation and transmission of lore about harvesting, safety, survival and guardianship.

Times have changed considerably over the last few decades. Rangatahi no longer have daily exposure to the opportunities for learning about Tangaroa. Yet we still expect our rangatahi to be kaitiaki and kaitiakitanga in the world that they inherit will be more



complex, challenging and demanding than it has ever been.

In addition to the continual demise of traditional knowledge and skill, Tangaroa must now be shared with strange worldviews and attitudes. Māori access rights and responsibilities have evolved and transformed to fit increasingly rigorous regulation and legislation amidst insatiable contemporary appetites for coastal development and sub-division. Sustainability and customary rights are the key themes that will underpin kaitiakitanga in te ao hou. Te takutai moana offers opportunities for learning about hei pātaka kai; hei wāhi rehia; ngā manu moana and hei puna mātauranga, mōhiōhio pūtaiao.

### 1. Hei Pātaka Kai

Mai ra ano kua haere tēnei iwi ki te hi, ki te hao, ki te whakarite ā rātou kūpenga, ki te ruku, ki te kōhi kai moana hei kai mā rātou, ōtira mō ngā ahuatanga katoa ka tū ki te marae, ki te kura, ki te manaaki i nga manuhiri – ahakoa ko wai, ahakoa no whea. Heoi ano, kua ngaro te nuinga o ngā ingoa tūturu mō tēnei mātaitai, mō tēnā toka, mō tērā kāwa. Kua ngaro hoki ngā tikanga e pā ana ki ngā momo ika, ngā momo hua katoa, ngā wā pai ake ki te hi, ki te kōhi rānei mō tēnei momo, mo tērā momo. Kua ngaro hoki ētahi tikanga e pā ana ki te mahi turu i ngā momo kai rereke, ngā painga o ngā kai rereke, ngā ahuatanga rongoa o ngā hua maha a Tangaroa. No reira, ko ētehi kaupapa hei whakaurutanga atu ki te rautaki rangahau e pā ana ki a Tangaroa hei pātaka kai ko:



Δ ngā rohe, ngā paenga rānei o ngā mātaitai o te iwi nei i ngā wā o mua;

Δ ngā pou rāhui o te rohe nei

Δ ngā ingoa tūturu o ngā ahuatanga whenua, ngā ahuatanga moana, ngā toka, ngā kāwa, ngā wāhi kōhi i ngā hua rereke a Tangaroa

Δ te maramataka kōhi kai moana (ka whai i ngā ahuatanga o Hine Marama, ngā tohu o te taio, he aha rānei?)

Δ ngā momo hua o mua atu me ngā momo ka kōhia, ka hūia i ēnei rā

Δ ngā rautaki me ngā tikanga kōhi kai, hao kai i mua atu me ērā o nai a nei (ara, ko ngā momo hangarau o nehe me ērā o te wā nei)

Δ te maha (te iti rānei) o ia momo hua o ēnei rā me ērā o ngā tau kua tahake

Δ he aha ngā momo rautaki, tikanga whakarite kai, tunu kai rānei o mua atu? Ka whai tonu i ērā o ēnei rā?





## 2. Hei Wāhi Rehia

I ngā tau o mua, ki te kore te tangata he waka hoe (he kopapa, he aha rānei) kua whaiti rawa tana aheinga te haere atu ki tēnā wāhi, ki tērā takiwā. Heoi ano, i ēnei rā – na te ahua tanga o ngā motokā me ngā rorī, ka tāea toru te tangata te hāerere hāere, kāore he rarū. Ano hoki, na te maha o ngā momo o rēhia kua tipu mai i ngā tau tata nei e pā ana ki te moana, ko tēnei wāhanga o te rautaki rangahau ka whakaaro ake mo Tangaroa hei wāhi rehia ki te whakapakari i te tinana o te tangata, kātahi ko tōnā hauora, ko tōnā waiora:

- he aha ngā momo o rēhia moana o mua atu
- he aha ngā momo o ka tāea i ēnei rā
- he aha ngā momo o waka i hangaia i mua atu – ngā hangarau e pā ana
- he aha ngā momo o waka ka tāea e tātou te hanga i ēnei rā
- he aha ngā tikanga, ngā karakia e pā ana ki ngā mahi waka (whakatere, hauu)



## 3. Ngā Manu Moana

E ai ki ētahi, kei Harataunga e noho ana ētahi manu moana kāore e tino kitea i wāhi kē atu. Ko ngā momo kaupapa hei whakaurutanga atu ki te rautaki rangahau ka pēnei:



- Δ whakaraupapahia ngā momo o manu moana ka noho mai (ērā ka noho tūturu mai, ērā hoki e whakawhiti mai ana)
- Δ ngā wāhi noho o ngā momo manu katoa, ngā kai, ngā momo kōhanga e hangaia ai, te rahi o ia momo
- Δ mo ngā manu motuhake (ērā kāore e tino kitea ana i wāhi kē)



- he aha ka tae mai ai
- he aha ko noho mai ai
- he aha ngā āhuatanga o te taiao e rata ana ki a rātou

## 4. Hei Puna Mātauranga, Mōhiiohio Pūtaiao



E ai ki ngā kōrero tuku iho, he nui noa atu ngā mōhiotia a kui mā, a koro mā e pā ana ki te moana me ona āhuatanga katoa. Ki tēnei tākiwa, kua korekore rawa atu ērā mōhiotia i ēnei rā. He ngāwari noa iho te ki ko tō moana he wāhi kiki ana i ngā take, i ngā kaupapa pūtaiao o nehe rā, o te wā tonu nei hoki. Heoi anō ko ngā kaupapa hei whakaurutanga atu ki tēnei wāhanga ka hanga rite ki te wāhanga kāpata kai, ēngari ka tāea te whakawhānui atu te tirohanga pūtaiao pērā i:

- te oranga o te wai tai ki ngā wāhi rereke o te whanga nei, o waho hoki
- te oranga o ngā mātaitai
- he aha ngā āhuatanga kā paangia atu ki te oranga o ngā momo mātaitai
- he mahi ka tāea e tātou te tangata te whakarite hei tiaki i te taiao moana?
- he aha ngā take, ngā kaupapa (ngā pakihi rānei) ka tāea te whakarite e pā ana ki te moana kia whai oranga te tangata?



## Te Ngahere



Tāne  
 Tāne-atua  
 Tāne-i-te-kapua  
 Tāne-mahuta  
 Tāne-maiki-roa  
 Tāne-te-hiringa  
 Tāne-mataahi  
 Tāne-matinitini  
 Tāne-nui-ā-rangi  
 Tāne-pekepeke  
 Tāne-rore  
 Tāne-tahurangi  
 Tāne-takoto  
 Tāne-te-hokahoka  
 Tāne-te-pō-tiwā  
 Tāne-te-torokaha  
 Tāne-te-waiora  
 Tāne-te-wānanga-ā-rangi  
 Tāne-tinorau  
 Tāne-tūturi  
 Tāne-euha  
 Tāne-ue-tika  
 Tāne-wai-kino  
 Tāne-wai-nui  
 Tāne-wai-patato  
 Tāne-whakarara  
 Tāne-wahirinaki



There is no need to look any further than the many names of Tāne-nui-ā-rangi to appreciate the learning opportunities that exist within te ngahere. Each name represents a particular attribute or quality that is worthy of detailed study. Tāne-the-source-of-light, Tāne-the-origin-of-knowledge, Tāne-the-creator-of-female-form, Tāne-the-breath-of-life, Tāne-of-the-spiritual-and-physical, Tāne-the-peacemaker, Tāne-the-archrival-of-Tangaroa, Tāne lord of the forest, father of plants and trees and birds and fish and insects and humanity.

The distinctive wide tidal bay of Harataunga is surrounded by a majestic hinterland of densely populated rejuvenating native bush. Of a landmass comprising 8891 acres, roughly 93 percent is bushland, mainly steep hilly terrain<sup>3</sup>. In terms of archaeological, botanical



and geological significance, experts say that Harataunga and the Coromandel range are among the most valuable in Aotearoa if not the world<sup>9</sup>. Along with developed countries elsewhere, New Zealand has a history of rapid forest destruction, less than 23 percent of the total island landmass has any type of indigenous cover. In a world where 30 square kms of indigenous rainforest can be destroyed in a single day and global deforestation is a cause of climate change, rising gas emissions, greenhouse effects, deterioration of ecosystems and depletion the planet's freshwater supply, Harataunga is indeed a taonga tuku iho that requires active protection<sup>10</sup>.

The time is right for kura tamariki and whānau to get involved in kaitiakitanga ngahere. Under the rangatiratanga of Winiata Harrison and Parekura White, Harataunga has recently taken advantage of Ngā Whenua Rāhui opportunities to whakamāna te mauri o te ngahere<sup>11</sup>. Pre-monitoring surveys have shown that several native species are close to extinction including the rata tree, pateke duck and pingao. A range of pest eradication, monitoring, restoration and protection initiatives are now underway. At the national level, a collaboration of iwi including Ngāti Porou are also addressing kaitiakitanga of the ngahere. Under the WAI 262 treaty claim, this collection of iwi is compiling the evidence of concerns about misappropriation of Māori cultural and intellectual property rights for indigenous flora and fauna. Within the context of kura kaupapa curriculum delivery, te ngahere presents a huge range of opportunities for learning about hei kapata kai; hei wahi rehia; te wao nui a Tāne; ngā maru and he puna mātauranga, mōhiōhiō pūtaiao.

### 1. Hei Kapata Kai

He wāhi whakangau poaka ēnei whenua, heoi ano kei konei ano ētahi atu kararehe hei whaitanga mo te hunga whaiwhai kararehe o te ngahere. Ko ngā momo kaupapa hei whakaurutanga atu kā pēnei:

- △ whiriwhirihia he rautaki kaute (whakataurite rānei) te maha o ngā poaka (me ētahi atu kararehe) ka noho mai ki konei
- △ he aha te ngā whakaawenga, ngā pānga rānei o ērā ki runga i te ngahere



Ko tētahi o ngā tino pēpeha o te rohe nei ka kīia: "Nau mai, haere mai ki Hauraki, he aute

<sup>9</sup> White, P. (2006) Harataunga Conservation Plan, pg 4.



te awhea”<sup>12</sup>. Ko te *aute* rā he tipu, he kai, he mahinga taputapu. E ai ki ngā kōrero he tipu i mau mai i Hawaiki ra ano i te wā o ngā waka o te hekenga nui. Ka hāere tonu ngā kōrero, i whakatōkia te tipu rā ki ngā wāhi maha puta noa i te motu ēngari kihai i mau pai atu, kihai i tipu pai mai – hāunga ki Hauraki nei.

## 2. He Wāhi Rehia

Atu i te whakangau poaka, ōtira te patu i ngā momo kararehe kaitukituki manu, ko te ngahere o tēnei takiwā he wahi hikoikoi, he wāhi kōhi i ngā momo rau rongoa, he wāhi keri koura tomu. Heoi anō ko ētahi pātai e pā ana ki aua tū āhuatanga katoa, kā pehea ērā i raro i te maru o te kaupapa tiaki i a Papatūānuku hei pai here mō ngā uri whakatipū? He aha ngā pānga, ngā whakaawenga o ērā tū momo mahi katoa? Koia rā te timatanga o ētahi rangahau nui mo ngā tau kei te hāere mai me te whakaaro hoki mō te oranga tomutanga o te Wao nui a Tāne, ōtira ko ana tamariki katoa.

## 3. Te Wao Nui a Tāne

Ngā rākau, he kiwi, he korimako, he kaka, he tui, he kāhu, he kereru, ngā pepeke, ngā pungawerewere, ngā noke ...

## 4. Ngā Kāinga Tawhito/Wāhi Tapu

He maha tonu ngā kāinga tawhito me ngā wāhi tapu kei te takiwā nei. He maha o rātou kua whakaatu mai e Parekura White ki roto i ana mahi rangahau mo te tono a te iwi nei ki te Rōpū Whakamana i te Tiriti o Waitangi<sup>13</sup>. Heoi anō, he maha anō kāore anō kia rongokōrero, kāore anō kia kite, kāore anō tētahi kia tae atu mo ngā tau e hia nei. Ko te āhua nei, kua ngaro kē atu te nuinga o ngā kōrero e pā ana ki te maha o ngā pā kāinga tawhito me ngā wāhi tapu.

E ai ki ngā rongonga kōrero, kei tata mai ētahi ana i whakamahia hei okiokinga mo ngā whēua tipuna. Kua kitea e tētahi i tōnā oranga i konei, heoi ano, kāore hoki ia i te tino maumahara kei whea tērā. Ehara i te mea ka kimihia hei wāhi tirohanga atu mā te iwi whānui, heoi ano, he take pea kia mōhio tētahi hei kaitiaki i tērā mōhiotia mō ngā uri whakatupu.

<sup>12</sup> Personal communication with Robert McGowan, Dept of Conservation on 13/12/06 and Professor Patrick Brown, School of Geology, Geography and Environment Sciences, Auckland University on 12/12/06

<sup>13</sup> available at [www.mongabay.com](http://www.mongabay.com)

<sup>14</sup> White, P. (2006) Harataunga Conservation Plan, Harataunga Marae, Kennedy Bay Coromandel.



## 5. Hei Pataka Mātauranga

No te timatanga rā āno o ngā kereme ki te ropu whakamana i te tiriti mō ngā whenua kei tēnei takiwā, i timata hoki ngā rangahau e pā ana ki ngā kāinga tawhito. Na, ahakoa kua mutu ētahi o aua mahi, ka ora tonu ētahi o ngā ingoa o aua wāhi ki runga pepā noa iho. Kāore anō te muinga o ērā kia tāngia ki runga i tētahi mahere whenua, kāore ano ērā kia āta tirohia mēnā he taonga, he mahuetanga onamata tonu kei reira. Me te maha hoki o ngā kōrero kāore ano kia kōhia hei whakakikī i ngā wharuarua o te mōhio, o te mahara o ngā iwi e noho mai nei.

## Hei tuāpapa mo te mātauranga me te kaitiakitanga

At the descriptive level, it is a straightforward matter to understand how te ngahere and takutai moana may contribute to the generation, transmission and protection of knowledge about kaitiakitanga.

	Hei Pataka Mātauranga	Hei Pataka Mātauranga	Hei Pataka Mātauranga	Hei Pataka Mātauranga	Hei Pataka Mātauranga
<b>Te Ngahere</b>					
<b>Te Ngahere</b>					

**Table 2: Possible fields for the collection of information takutai moana and neahere items**

Table 2 shows that the collection of information about species and techniques or practices which *used to be here* could be compared against *what is here* to highlight changes, differences or gaps and thus, inform the identification of kaitiakitanga goals, objectives and priorities.

In addition to information about the presence or absence of species and practices, it may also be possible to collect more complex levels of information about mātauranga Māori, mōhiohio pūtaiao techniques. Within te ngahere and takutai moana, Table 3 suggests it may be possible to collect information about a range of kaitiakitanga techniques such as the knowledge-base on waka building, waka routes, navigation, currents and tides; harvesting, hunting, fishing, kai preservation and/or species habitat, ecosystems, foodchains and life-cycles.

<sup>12</sup> Aute = mulberry

<sup>13</sup> Ko ana mahi rangahau ēnei i whakaritehia mo ngā tono ki Te Rōpū Whakamana i te Tiriti o Waitangi (Waitangi Tribunal)

	Takutai Moana				Te Ngahere						
	hei patihia kai	he wāhi rehia	ngā manu mo ana	ngā rau emi ng pingao, pōhā	hei kapaha kai	he wao nui o Tane	ngā manu, karamahi, pēpeke mā	ngā rau emi	ngā ara	ngā wāhi rehia	ngā wāhi tapu
transport											
site/building											
seascapes, tides & navigation											
hunting, fishing, harvesting											
habitat, ecosystems											
food chains & medicines											
food preparation/preservation											
kaitiakitanga											

Table 3: Possible fields for gathering information about kaitiakitanga techniques

The collection of information about traditional uses and applications will further expand the opportunities for learning about kaitiakitanga. For example, Table 4 has been adapted from Ngā Tipu Whakaoranga and presents a template of possible fields for gathering information about traditional uses and applications<sup>14</sup>.

	ingoa (fruit)	other names	whakapapa	kāwai tupuna, ngā whakatairāhi, haka	āhua, lifecycle	harvesting techniques	kaitiakitanga	rāanga, whakairo, toki	chemistry	contemporary uses	kaitiakitanga	tohihi	te whakapapa	other uses
<b>Takutai Moana, eg</b> manako, kōwhiri, pōhā ngā rau, ngā rau whakapapa, ngā rau ngā manu, ngā rau kōwhiri, ngā rau														
<b>Te Ngahere, eg</b> ngā rau, ngā rau pōhā, kōwhiri, ngā rau ngā manu, ngā rau ngā rau, ngā rau, ngā rau														

Table 4: Possible fields for collection information about traditional uses and applications

Within te ngahere and takutai moana, the types of information that could be collected could include things like the ingoa, name or names of species along with their whakapapa, kāwai tupuna, āhua, lifecycle, habitat, ecosystem, harvesting techniques, chemistry and traditional or contemporary uses as kai, rongoa, rāanga, whakairo or toi, construction, fishing,



hunting, scents, recreation or past-time activities. The use of models or templates like this will clearly inform the identification of kaitiakitanga objectives, techniques and priorities.

In general, this chapter of *Rapua he Rautaki Rangahau* has aimed to stimulate thinking about potential opportunities for education about kaitiakitanga that exist within te ngahere and takutai moana. Within this broad range of possible opportunities, the kura whānau will need to prioritise particular topics, themes and marau for short or long-term research and development. The workload associated with development of course outlines, teaching resources and assessment packages to enable the delivery of these topics within the kura tuatahi and wharekura curriculum would be arduous and time-consuming. Indeed, it would be impossible for a small kura to carry such a workload without substantial assistance and support. The next section of this strategic plan will therefore explore possible sources of support within Aotearoa at present that could be utilised to assist the development and delivery of te ngahere and takutai moana teaching resources. Kua whakaraupapahia ki runga nei te maha o ngā take hei rangahautanga mā te iwi o tēnei awaawa itī nei. Pērā anō te kōrero a rātou mā, “Ahakoa he iti, he māpihi m aurea”.

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<sup>14</sup> Manaaki Whenua (2005) Ngā Tipu Whakaoanga – the People Plants Database. Landcare Research, Wellington.

## E. identifying, gathering & consolidating knowledge

This chapter of *Rapua he Rautaki Rangahau* will consider various methods, strategies and directions for gathering information about the ngahere and takutai moana. Such information will assist the identification of priorities for research and development of the curriculum and teaching resources. Given the specific needs and aspirations of a Te Aho Matua Kura, it is important that potential sources of information and support are filtered or sorted for appropriateness or relevance. More specifically, the following criteria have particular relevance for Te Kura Kaupapa Māori o Harataunga:

- △ te ao Māori is the primary source of information for development of teaching resources
- △ local knowledge, skills and expertise will be upheld, acknowledged and integrated into teaching resources where-ever possible
- △ a comprehensive review of alternative sources of knowledge will help to identify additional content and support systems
- △ teaching resources will contribute to the generation and transmission of knowledge about kaitiakitanga within the kura whānau and community
- △ teaching resources will be developed and delivered in te reo rangatira

### Research Methods

Against these criteria, a layered approach to the implementation of research methodologies will provide the opportunity to systematically work through potential sources of information and knowledge at the local, regional and national levels. In the first instance, research methodologies will need to focus on the identification of Harataunga-specific knowledge, that is uncovering the information that has a direct bearing on the historical and contemporary experiences of Harataunga whānau, hapū, iwi. The next layer of methodologies will involve an extended literature review to identify additional information that may have relevance for Harataunga. The third layer of methodologies will explore supplementary sources of assistance and support for the development and implementation of Harataunga-specific curriculum resources. The final layer of methodologies will explore existing educational programmes and initiatives that may help the whānau and community of Te Kura Kaupapa Māori o Harataunga to build-on-gains and learn from others with a commitment to this kaupapa.

Implementation of the above methodologies may be simultaneous or consecutive but



kaiwhakahaere will need to operationalise the objectives of *Rapua he Rautaki Rangahau* and must have the capacity to work with reo Māori. Each level of research methods will aim to foster and enable the:

- identification of potential sources of knowledge
- collection and consolidation of relevant information
- scoping of potential support systems, initiatives and resources
- the mapping or linking of knowledge, information and support sources to curriculum themes, topics or marau

In a nutshell, therefore, the primary objective of level one to four research methodologies is to identify sources of information and support for the development of Harataunga-specific curriculum teaching resources.

#### Consolidating Harataunga-Specific Knowledge

The main objective of level one research methods is the consolidation of local knowledge and expertise. Table 5 presents techniques that may help to gather this information.

Research methods will mainly include interviews and focus group discussions with local whānau; review of historical records including kāwai tūpuna traditionally used to record and transmit information. An expert reference group may also be established to consolidate support and brainstorm techniques for the transmission of knowledge.

	Methodology	Objective
1.	Interviews/focus group discussions with kaumatua, local experts	gather local knowledge, practices, experience, expertise; identify possible sources of support, identify themes for further study
2.	Explore kāwai tūpuna	identify/consolidate the information contained within waiata, whakataukī, mōteatea, tauparapara, whakairo, pūrakau, karakia and other genre/ artforms
3.	Review historical and archival records specific to Harataunga	systematic review of information contained in Māori Land Court records, treaty claims, radio and film archives, books, theses, articles and local, regional or central authority reports
4.	Expert Reference Group	identify/consolidate sources of support, brainstorm resource content, teaching techniques

**Table 5:** Level one techniques for gathering information about te ngahere and takutai moana

The value of level one techniques for gathering information about historical experience and identifying change-over-time should not be under-estimated. For example, the tuamui of the



whare tipuna at Rakairoa marae is painted with a whakapapa of m aru, ika and m ātaitai thought to be associated with the lifestyle of Harataunga whānau. This whakapapa may provide a strategic plan or vision for the restoration and re-introduction of species. Furthermore, while preparing for the WAI 792 treaty claim Parekura White discovered historical documents which showed that in 1852 the boundaries of Harataunga were defined by a range of natural features and activities:

*"At the mouth of the river Harataunga, thence by the sea coast to Te Harakeke, turning thence inland to Hapapawera, thence to Tapuae, thence to Kaipana, thence to Tokatea, thence to Te Ranga, thence to Pukewharariki, turning thence towards the sea to Taraingapouto, thence to Piripirikahu, turning thence along the boundary of the land reserved for native occupation and cultivation to the Waimoho stream, turning thence by the Waimoho stream to its junction with the Harataunga river, turning thence along the course of the river Harataunga to the point of commencement at its mouth."*<sup>15</sup>

When compared against the recently written mōteatea, *Aku Whenua Tipu*, it is evident the names of landmarks which define the boundaries of Harataunga, or the actual landmarks themselves, have for some reason changed during the 150 years between 1852 and 2000<sup>16</sup>. These reasons for change may provide important information about the kaitiakitanga roles and responsibilities of Harataunga whānau.

Appendix One presents some of the research material that would be suitable for review during the implementation of level one techniques. This does not include kāwai tūpuna which the kura is already utilising within their daily routine. During all stages of the information gathering process it will be important for the Kura to subscribe to an academic library with electronic portals to the comprehensive range of databases available. Many of the electronic portals enable full-text access, for example - *Te Kupu Toho ki ngā Pukapuka Meneti o te Kooti Whenua Māori*, the Māori Land Court minute book records from 1863 onwards, *Te Ara*, the Encyclopedia of New Zealand and the newly development *NZ Digital Library* for access to Māori newspapers and periodicals published during the period 1842 to 1933.

#### Literature Review

The level two research methodologies will mainly involve an extensive literature review to identify information that may have relevance for the development teaching resources about te ngahere and takutai moana in Harataunga. Appendix Two presents a number of resources



that could be reviewed for this purpose. A wide range of electronic datasets and reference materials have been identified including academic theses and film or audio resources. Most of the electronic datasets have te reo Māori gateways and some literature has te reo Māori content. This Appendix does not capture literature that may be held at Te Whare Wānanga o Raukawa, Te Whare Wānanga o Awanuiārangi or Te Wānanga o Aotearoa<sup>17</sup>. It is highly likely all three Wānanga will contain material that is very relevant for this kaupapa.

#### Support Systems & Supplementary Resources

The main objective of level three methodologies is the identification of support systems and supplementary resources or networks to support the development, implementation and delivery of te ngahere and takutai moana curriculum content in Harataunga. It is encouraging to discover the wide range of initiatives currently available in Aotearoa, many of which are delivered in te reo Māori. Appendix Three lists at least twenty-eight electronic portals for information about te ngahere and takutai moana. Many of these portals have te reo Māori gateways and many have been particularly designed around the needs of Māori. For example, *Ngā Tini a Tangaroa*, *Ngā Riponinga o ngā Ngārara Unahi Mohe o Aotearoa*, *Te Whakaora Ake i ngā Tini a Tāne i ngā Whenua kua Rauwekehia e te Tangata* and *Ngā Pēpeke me ngā Pungawerewere o Aotearoa* provide reo Māori access to electronic datasets on freshwater fish, flora and fauna, spiders, birds and threatened species. The *Hokitanga Accord* is an exciting example of a Māori-driven kaitiakitanga initiative that may also be of use in Harataunga. This multi-lingual electronic portal has been developed by a collaboration of northern iwi to promote protection of the marine environment.

In addition to electronic portals, Appendix Three lists a vast number of documents and resources that aim to assist the development and implementation of systems or processes for measuring, monitoring and protecting the waterways, ngahere and moana. Much of this information is produced by government agencies particularly the Department of Conservation (DoC), Ministry for the Environment (MfE), National Institute for Water and Atmospheric Research (NIWA), Environment Waikato (EW) and Manaaki Whenua. Many of these agencies have invested in the development of resources, expertise and support services for Māori. For example, Māori development teams are working at DoC, EW, MfE

<sup>17</sup> P.White (2006) Harataunga Conservation Plan, pg 4.

<sup>18</sup> Ake Whenua Tipu was composed by Pakariki Harrison.



and NIWA<sup>15</sup>. Most of these teams will do whatever they can to meet the needs of a Kura Kaupapa Māori.

On top of the supplementary resources and services provided by government agencies, Appendix Three identifies a wide range of groups and organisations with expertise, knowledge and resources that may assist the achievement of *He Rapua Rautaki Rangahau* objectives. Some of these are specifically-Māori initiatives and others provide Māori-relevant content. For example, the Mahia wānanga on whale resources, the collective of Māori healers and the iwi/hapū chatroom set up by Ngā Kaitiaki. Furthermore, the NZ Plant Conservation Network is dedicated to the protection of indigenous species and NZ Ducks hosts a fascinating website with online access to native duck calls.

#### Education Programmes & Supportive Initiatives

The final approach to gathering information for the development of Harataunga-specific teaching resources and curriculum content looks at the issue of environmental education resources, programmes and initiatives. Appendix Four lists some of the education initiatives, programmes and resources currently available in Aotearoa. Some have been presented in te reo Māori but many could be adopted, or adapted for use in a school like Te Kura Kaupapa Māori o Harataunga.

Unfortunately, most of the interactive education programmes have been designed for delivery in the English language, eg [www.tuitime.org.nz](http://www.tuitime.org.nz), Ocean Policy pages for Kids, GLOBE cloud activities, Wild About New Zealand and [www.howstuffworks.com](http://www.howstuffworks.com). However, these initiatives provide content and design ideas that could be adapted for use within a Kura Kaupapa setting. With relatively little effort, some of the online factsheets and workshops could also be adapted for use within a Kura Kaupapa setting. Other organisations like NZ Birds and the Natural History Unit Sound Archive have developed electronic resources, eg bird images and bird calls, that can be downloaded for use in any context. The World Wildlife Fund (WWF) also produces environmental education and teaching resources for delivery in schools. In 2004, this organisation conducted a stocktake of environmental education resources in New Zealand and was alarmed by the lack of Māori language resources. The development of reo Māori education programmes and

<sup>15</sup> Tūmana did not have the authority to search the literature held in any of the Wānanga libraries.

<sup>16</sup> eg Maruwhehua, Te Kūwaha



resources is now a priority for WWF.

A number of organisations do produce te reo Māori resources that may be suitable for use in Harataunga. For example, Te Kauri-Waikūkū Trust, funded through the MoE Learning Experiences Outside the Classroom (LEOC), tailor their education programmes to the needs of schools at no cost to the school itself. The main teacher, Joe Murray, is a known speaker te reo Māori who has already worked with the Harataunga whānau. The Trust mainly aims to teach skills for protection of the environment eg taking data, use of GPS, logging and downloading data and already have assessment materials for some standards.

Auckland Museum have a range of education programmes, workshops and services including a reo Māori search engine. Researchers at the Auckland Museum will also create new resources around the specific needs and objectives schools like Te Kura Kaupapa Māori o Harataunga. Although developed for use in the greater Wellington area, Take Action for Water produces a range of te reo Māori education resources and programmes that could be applied in any rohe. Similarly Biodiversity NZ and the National Waterways Project (NWP) have developed interactive, te reo Māori websites to assist learning about kaitiakitanga. In collaboration with Te Kawerau a Maki Trust, Waitakere City Council has released a reo Māori DVD called Ngā Kaitiaki o te Mauri which helps tamariki learn how to look after awa. Most inspiring of all, however, is the Enviroschools programme established by Environment Waikato. This organisation has employed a Kaitiaki Reo to deliver curriculum-linked environmental programmes and resources in total immersion and kura kaupapa settings. Over the last year, the Enviroschools programme has been delivered at a wharekura in Hamilton. This is an exciting example of an up-and-running programme that is ready for implementation in the kura kaupapa and wharekura setting at little or no cost to the kura itself.

The Environmental Monitoring and Action Project (EMAP) is also funded under the MoE Learning Experiences Outside the Classroom strategy. EMAP is a clearing-house for environmental education programmes and resources in schools. The website contains links to many of the resources and programmes currently used in schools throughout Aotearoa. EMAP especially promotes education resources and programmes that can be linked or mapped to the NCEA curriculum, they have employed a kaiwhakahaere for this purpose and their website contains links to exemplars and examples developed by various groups or



organisations, eg the National Waterways Project, Waicare, Environment Waikato, the University of Waikato curriculum checklist for hydrology and biodiversity resources.

The development of teo Māori environmental education resources is a priority for many organisations and the availability of such resources will clearly improve over the next few years. In the meantime, the development of Harataunga-specific teaching resources could be supported in other ways. Professor Patrick Brown at the School of Geology, Geography and Environmental Sciences at Auckland University believes his school would be willing to assist the identification and development of Harataunga-specific content and resources. The School has the right mix of experience and expertise, they also have the capacity to deliver in teo Māori and are currently collaborating with Te Wānanga o Awanui-ā-rangi on a similar initiative. Professor Brown says Harataunga has a number of unique formations and fascinating sites that would make the development of education resources particularly attractive and worthwhile. Similarly, Maree Kleinlangeweisloo of the Maruwhemua team at the Ministry for the Environment believes her organisation would be willing to work on the development of teo Māori education resources for use in Harataunga.

The information contained in this chapter is not exhaustive and has not explored the usual techniques for development of teaching material in kura such as the use of the exemplars, school journals and resources available through their own networks, the Ministry of Education or Te Kete Ipurangi<sup>19</sup>. However, this chapter has identified additional sources of information, knowledge and support for the development and delivery of Harataunga-specific ngahere and takutai moana education and teaching resources within a Te Aho Matua kura setting. Despite the availability of fewer teo Māori resources, a wealth of support is clearly available for kura who wish to pursue this kaupapa. In order to make sensible decisions about the relevance and/or appropriateness of education resources and programmes for this community, the whānau and community of Te Kura Kaupapa Māori o Harataunga will also need information about the National Qualifications Framework, particularly the options and opportunities for assessment, evaluation and formal recognition of knowledge. This is the subject-matter of the next chapter.

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<sup>19</sup> All 60 journals of Te Wharekura are available at [www.tki.org.nz/r/maori/wgarejyra/index\\_m.php](http://www.tki.org.nz/r/maori/wgarejyra/index_m.php)



## I. the National Qualifications Framework

In August 2006, the Wharekura at Te Kura Kaupapa Māori o Harataunga lost one of its taurira because his family wanted a greater level of discussion and debate about the curriculum options, objectives and rationale<sup>20</sup>. This event was the culmination of several attempts to work through some of the issues that impact on curriculum delivery for a teina wharekura working the satellite system in a community with very few speakers of te reo Māori. Apart from the burdensome issues of workload, inadequate funding, difficulties finding kaiako and not enough support or resources, there is the need to generally improve understanding about options and opportunities that may exist within the National Qualifications Framework (NQF).

This chapter explores the NQF system from the perspective of a Te Aho Matua kura that is striving to realise the educational potential of te ngahere and takutai moana as a foundation for the generation and transmission of knowledge about kaitiakitanga. Before attempting this task, it is important to revisit the philosophical principles which primarily underpin a Te Aho Matua approach to engagement with the national curriculum and qualifications framework<sup>21</sup>. More specifically, some of the key expected outcomes of a Kura Kaupapa education are:

- △ protection of the Māori worldview, spiritual beliefs, language, customs and cultural practices
- △ empowerment of whānau as governors, managers and delivery agents of their children's education
- △ wholistic, all round development of the child, not just career orientation
- △ expansion of the learning environment to include marae, the wide-open spaces of bush, sea and sky and all other places which contribute to learning
- △ excellence in education and high standards of attainment, with appropriate measures for assessing and evaluating the achievement of children at all levels of the national curriculum

With regard to the national curriculum for a wharekura or secondary school, the National Certificate of Educational Achievement (NCEA) is only one component of the National Qualifications Framework but it is the main qualification for secondary school students. In addition to the three NCEA qualifications - Level 1, 2 and 3 – a student can also get University Entrance through the NCEA system. Many of us grapple with the fact that there are two pathways through which a student can obtain the NCEA or University Entrance



qualifications. One pathway is through the delivery and assessment of Achievement Standards (AS). The other pathway is through Unit Standards (US). Each standard is assessed internally or externally for a set number of credits and the credits obtained from all achievement standards as well as all unit standards count towards the NCEA qualification<sup>22</sup>.

	Level 1	Level 2	Level 3
Any AS or US	84 credits (at Level 1 or higher)	80 credits (at Level 2 or higher)	80 credits (at Level 3 or higher)
approved standards for LITERACY	8 credits (at Level 1 or higher)		
approved standards for NUMERACY	8 credits (at Level 1 or higher)		
Any AS or US		20 credits (at any level)	20 credits (at Level 2 or higher)
total number of credits required	80	80	80

Table 6: Number and type of credits required for NCEA Levels 1, 2 and 3<sup>23</sup>

Table 6 displays the number and type of credits required for a student to obtain NCEA at Levels 1, 2 or 3. At Level 1, for example, a student must obtain 80 credits from any Level 1 achievement or unit standard and fulfill the literacy and numeracy requirements. The literacy requirement can be obtained in English or te reo Māori while the numeracy requirement is gained from mathematics, statistics and probability or pangarau<sup>24</sup>. It is possible, therefore, for a student to obtain the NCEA qualification completely in te reo Māori. NCEA Levels 2 and 3 do not have literacy or numeracy requirements but students must obtain the set number of credits at specified levels of study.

Both NCEA and University Entrance can be obtained through achievement or unit standards but the latter qualification requires a set number of Level 3 credits, a higher number of Level 1 numeracy credits and students must study at least two subjects from an approved subject list<sup>25</sup>. Furthermore, it is not possible to gain the University Entrance qualification completely in te reo Māori, in order to obtain the required number of credits a student must study at least one subject the English language.

<sup>20</sup> After four months in the mainstream system, this family is preparing to tōno for re-enrolment in the wharekura.

<sup>21</sup> Te Rūnanga Nui o ngā Kura Kaupapa Māori o Aotearoa (1998). *Including Te Aho Matua into s155 of the Education Act, 1989 - a Submission to the Associate Minister of Education*. PO Box 146, Coromandel.

<sup>22</sup> available at [www.nzqa.govt.nz/ncea/assessment/ach/index.html](http://www.nzqa.govt.nz/ncea/assessment/ach/index.html)



## Achievement Standards

There are 731 achievement standards. These are developed by the Ministry of Education (MoE) and differ from unit standards in three main ways:

- students receive a grade (either achieved, merit or excellence)
- AS are developed from MoE national curriculum statements and are only used for NCEA assessment within schools
- AS tend to have fewer assessment criteria<sup>25</sup>.

MoE have developed achievement standards for thirty different subjects (see Appendix Five). Each subject contains a matrix of roughly three to eight standards designed for delivery at each of the three NCEA levels.

The achievement standards that have been developed for Te Reo Māori and Te Reo Rangatira provide some general opportunities to study kaitiakitanga components of te ngahere and takutai moana (see Appendix Six). However, the more usual route for studying the environment is through the science and geography achievement standards.

Table 7 lists the achievement standards found within the matrices for Science and Geography at NCEA Levels 1, 2, 3<sup>27</sup>. This table also presents information on the credits available for each standard; when the Achievement Standard or Paerewa Paetae was created and whether Assessment Specifications and/or Assessment Material has been developed. The externally assessed standards are shaded yellow and internally assessed are shaded grey. In general, Paerewa Paetae are a direct translation of the Achievement Standard. Both documents contain the criteria for achievement of the standard, explanatory notes and comments about the quality assurance process. However, the Paerewa Paetae do provide an opportunity to whakamāori the kaupapa of each standard. The only other way this can be achieved is through the development of te ao Māori assessment material.

<sup>25</sup> available at [www.nzqa.govt.nz/ncea/acrp/secondary/7/71.html#literacy](http://www.nzqa.govt.nz/ncea/acrp/secondary/7/71.html#literacy) and [www.nzqa.govt.nz/qualifications/asg/candidate-info01.html#ncea](http://www.nzqa.govt.nz/qualifications/asg/candidate-info01.html#ncea) on 5 February 2007

<sup>24</sup> "mathematics" and "pangarau" refer to different standards, mathematics is from achievement standards, "pangarau" is from the NZQA Māori Field

<sup>25</sup> available at [www.nzqa.govt.nz/ncea/acrp/secondary/6/62.html](http://www.nzqa.govt.nz/ncea/acrp/secondary/6/62.html)

<sup>26</sup> available at [www.nzqa.govt.nz/publications/newsletters/qanews/june-2001/story1.html#usa](http://www.nzqa.govt.nz/publications/newsletters/qanews/june-2001/story1.html#usa)

<sup>27</sup> available at [www.nzqa.govt.nz/ncea/index.html](http://www.nzqa.govt.nz/ncea/index.html)



	Level Reference	Standard	Credits	Achievement Standard	Planned Phase	Assessment Specification	Assessment Material (Y/N)
SCIENCE	1	90186 Carry out a practical science investigation with direction	4	2006			///
	2	90187 Process information to describe a Use of science knowledge with direction	4	2006			////
	3	90188 Describe aspects of biology	5		2006	2006/2007	
	4	90189 Describe aspects of chemistry	5		2006	2006/2007	
	5	90190 Describe aspects of geology	5		2006	2006/2007	
	6	90191 Describe aspects of physics	5		2006	2006/2007	
	7	90192 Describe aspects of astronomy	5		2006	2006/2007	
	2	90212 Carry out a practical science investigation with supervision	4	2006			////
	3	90264 Describe the nature and effects of stars	2	2006		2006/2007	
	4	90265 Describe the chemical properties and effects of fertilisers	4	2006		2006/2007	
	5	90267 Describe New Zealand's medicinal history	2	2006		2006/2007	
	6	90268 Use physics concepts and principles to describe the behaviour of light	4	2006		2006/2007	
	7	90271 Research information to present a scientific report	2	2006			////
	8	90272 Describe the factors and processes involved in the evolution of New Zealand plants and animals	4	2006		2006/2007	
	3	90277 Carry out a practical scientific investigation with guidance	4	2006	2006		/
	4	90278 Research a current scientific controversy	4	2006	2006		/
	5	90279 Describe genetic processes	4	2006	2006	2006/2007	
	6	90280 Describe selected organic compounds and their uses	4	2006	2006	2006/2007	
	7	90281 Describe geological processes affecting New Zealand	2	2006	2006	2006/2007	
GEOGRAPHY	1	90282 Describe selected properties and applications of EMR, radioactive decay, sound and ultrasound	4	2006	2006	2006/2007	
	2	90283 Report on a recent astronomical event or discovery	2	2006	2006		///
	1	90202 Examine an extreme natural event and the human response	3	2005*	2006	2006/2007	
	2	90203 Examine population patterns, processes and issues	3	2007	2006	2006/2007	
	3	90204 Examine resource use in a farming or mining context	2	2005*	2006	2006/2007	
	4	90205 Apply skills and ideas with direction in a geographic context	4	2005*	2006	2006/2007	
	5	90206 Carry out and present directed geographic research	5	2005*	2006		///
	6	90207 Examine a contemporary geographic issue and evaluate courses of action	3	2005*	2006		///
	7	90208 Examine a global geographic topic	3	2005*	2006		///
	2	90221 Examine a natural landscape	3	2005*	2006	2006/2007	
	3	90222 Explain an urban settlement	3	2005*	2006	2006/2007	
	4	90223 Examine similarities in development within or between countries	3	2007		2006/2007	
	5	90224 Apply skills and ideas in a geographic context	4	2005		2006/2007	
	6	90225 Carry out and present directed geographic research	5	2005*			///
	7	90226 Examine a contemporary geographic issue and evaluate courses of action	3	2005*			/
	8	90227 Examine a geographic topic at a global scale	3	2005*			/
	3	90201 Analyse natural processes in the context of a geographic environment	4	2006	2006	2006/2007	
	4	90202 Analyse a cultural process	4	2006	2006	2006/2007	
	5	90203 Explain the contribution of geography to planning and decision-making processes	3	2006	2006		///
	6	90204 Select and apply skills and ideas in a geographic context	4	2006	2006	2006/2007	
	7	90205 Carry out and present geographic research with consultation	5	2006	2006		///
	8	90206 Analyse a contemporary geographic issue and evaluate courses of action	3	2006	2006		///
	9	90207 Analyse a geographic topic at a global scale	3	2006	2006		///

Table 7 : Achievement standards and assessment details for Science and Geography, Levels 1-3

The previous chapter showed that several organisations are engaging in the development of AS assessment material for schools but little of this material is available in te reo Māori and mātauranga Māori worldviews are seldom, if ever, presented<sup>28</sup>. The last column in Table 7 displays the number of assessment materials that MoE have purchased for the Science and Geography achievement standards<sup>29, 30</sup>. Only 17 of the 44 achievement standards listed have assessment materials and none of this material is in te reo Māori. Furthermore, none of the content contained within these assessment materials reflects a Māori worldview. For example, the three resources developed for AS90186 ask students to investigate the effect



of surface area on the rate of a reaction, the number of weeds in a playing field and the impact of slope on distance of travel. Similarly, the geography assessment materials developed for AS9026 look at travel routes between home and school, traffic surveys and how a dairy farm works. Although interesting and educational, such topics do not create opportunities for students to explore Māori worldviews.

### Unit Standards

The Unit Standards (US) are developed by three Standard Setting Bodies, ie: the National Qualifications Services; Māori Qualifications Services (MQS) or Industry Training organisations. Thus far, 17,056 US have been registered on the NQF. Unit Standards differ from achievement standards in a number of ways:

- US are developed from MoE curriculum statements *as well as* the expectations of tertiary providers and industry
- US are more specific than AS, with more detail about the type of assessment that is required
- each unit standard is located within a particular classification system made up of fields, subfields and domains

There are 17 fields on the NQF and one of these is Field Māori (see Appendix Seven). Each field has up to 26 sub-fields, each sub-field has a number of domains and each domain contains unit standards<sup>31</sup>. Within Field Māori, 17 sub-fields and 667 unit standards are currently registered on the NQF.

The Field Māori sub-fields, domains and unit standards are specifically designed to reflect Māori pedagogy, knowledge and skills<sup>32</sup>. They aim to provide pathways for formal recognition and maintenance of the mātāuranga Māori worldviews. The Māori Qualifications Service have chosen the wharenui to symbolise the kaupapa of Field Māori (see Figure 2)<sup>33</sup>. The disciplines, or sub fields, within Field Māori are represented by the fourteen pou within the wharenui as the place where knowledge is nurtured. The four cornerstones are Reo Māori, Tikanga, Ngā Mahi a te Whare Pora and Whakairo.

<sup>31</sup> see EMAP clearing-house for environmental teaching and assessment resources

<sup>32</sup> available at [www.tki.org.nz/e/community/ncea/resources.php](http://www.tki.org.nz/e/community/ncea/resources.php)

<sup>33</sup> Each tick represents a resource, some AS have up to four sets of assessment materials, others have none.

<sup>34</sup> Some domains are currently empty, eg hangarau in Field Māori, but the unit standards are under construction.







Sub-field	Domain	Level	Unit Standards				
General Education Māori	PŪHĀU	1	15975: Account for natural phenomena in a local context using pūrākau and wāhanga (2)	15977: Demonstrate knowledge of kōhanga Māori in relation to the production of kōi (2)	15980: Demonstrate knowledge of kaitiakitanga (2)	15984: Demonstrate knowledge of the use of kōhanga Māori (2)	15985: Demonstrate knowledge of kōhanga for the preparation of kōhanga for kōi (2)
		2	15989: Demonstrate knowledge of a native mammal and its significance to Māori (2)	15990: Demonstrate knowledge of a native bird and its significance to Māori (2)	15991: Demonstrate knowledge of a native invertebrate and its significance to Māori (2)	15993: Demonstrate knowledge of a native marine fish species and its significance to Māori (2)	15995: Demonstrate knowledge of a native freshwater fish species and its significance to Māori (2)
		3	15976: Demonstrate knowledge of traditional insecticides and fungi used by Māori (4)	15982: Demonstrate knowledge of kōhanga Māori for kōi (2)	15987: Explain kōhanga Māori for the use of kōi (2)	15992: Explain harvesting and processing for a native freshwater and a native marine fish species for kōi (2)	15994: Demonstrate knowledge of a native freshwater and a native marine plant species used for kōi (2)
	KAITIAKITANGA	1	15970: Identify and describe the role of kōi Māori in the natural world (2)	15971: Identify and describe a Māori view of the natural world (4)	15972: Describe kōi and its role in relation to the way Māori interact with the natural world (2)	15973: Explain the role of kōi in relation to how Māori manage the environment (2)	15974: Describe kōi in relation to the way Māori interact with the natural world (2)
		2	15975: Explain kōi and its role in relation to the way Māori interact with the natural world (2)	15976: Describe kōi and its role in relation to the way Māori interact with the natural world (2)	15977: Explain kōi and its role in relation to the way Māori interact with the natural world (2)	15978: Explain kōi and its role in relation to the way Māori interact with the natural world (2)	15979: Carry out a local kaitiakitanga activity with direction (2)
		3	15976: Explain kōi and its role in relation to the way Māori manage the environment (2)	15977: Explain kōi and its role in relation to the way Māori manage the environment (2)	15978: Carry out a local kaitiakitanga activity with direction (2)	15979: Analyse the different views Māori and Pākehā have in relation to the natural world (4)	
		4	15977: Explain kōi and its role in relation to the way Māori interact with the natural world (4)		15978: Carry out a local kaitiakitanga activity with direction in relation to a local Māori resource management issue (2)		
	WAIKŌI	4	21547: Whakamārama te kōhanga o te wāhanga (2)		21548: Whakamārama te kōhanga o te wāhanga (2)		
		4	21549: Whakamārama te kōhanga o te wāhanga (2)		21550: Whakamārama te kōhanga o te wāhanga (2)		
		4	21551: Whakamārama te kōhanga o te wāhanga (2)		21552: Whakamārama te kōhanga o te wāhanga (2)		
Environment Māori	KAITIAKITANGA	5	21553: Describe the environmental implications of the exercise of Māori customary fishing rights (2)				
		5	21554: Analyse regional or local environmental issues affecting Māori and present findings (2)				

Table 8: Field Māori examples of kaitiakitanga unit standards

The Māori Qualifications Service have developed some assessment resources to assist the delivery of Field Māori unit standards. As with achievement standards, this work is painfully slow and more resources are urgently needed<sup>35</sup>. However, a kura may wish to take advantage of the opportunities for students to achieve one of two additional Field Māori qualifications. Te Waharoa, for example, is equivalent to NCEA Level 2 and Te Ngutu Awa is equivalent to NCEA Level 4. The requirements for both qualifications are deliberately non-prescriptive, enabling Kura to structure assessment content around their own objectives and aspirations. Furthermore, if the course is structured carefully, a student can get the NCEA Level 2 and Te Waharoa qualifications simultaneously.

<sup>35</sup> available at [www.nzqa.govt.nz/for-maori/resources/index.html](http://www.nzqa.govt.nz/for-maori/resources/index.html)



## O. challenges for the kaitiakitanga curriculum

The preceding chapters have attempted to provide a framework for exploring the educational potential of te ngahere and takutaki moana as a foundation for the generation and transmission of knowledge about kaitiakitanga. In the first chapter, *Hei Korero Whakataki*, it is suggested the pursuit of a kaitiakitanga curriculum will facilitate the realisation of Te Aho Matua aspirations for Te Kura Kaupapa Māori o Harataunga. The second chapter identified some of the opportunities for learning and knowledge-creation that may be found within te ngahere and takutai moana. The third chapter looked at alternatives for gathering information and establishing support systems to assist the development and implementation of teaching resources within a kura kaupapa setting. The previous chapter has presented information about the national qualifications framework, specifically the pathways and options for formal recognition of kaitiakitanga knowledge at the wharekura level.

Within the discussion presented thus far, a number of obstacles or challenges have been identified for whānau wishing to shift the direction of curriculum delivery at Te Kura Kaupapa Māori o Harataunga towards kaitiakitanga of te ngahere and takutai moana. Such challenges can be grouped within the following categories:

- clarification of the kura's strategic direction and vision
- whānau participation as teachers and tutors
- identifying curriculum targets and priorities
- development of teaching and assessment materials
- funding
- monitoring quality and effectiveness

### Clarification of the strategic vision

For any organisation, the strategic vision or mission statement is an important declaration of intent, purpose and the reason-for-being. A strategic vision explains the underlying goal, objectives and expected outcomes of investing time and energy in a particular initiative or direction. In this case, the main expected outcome of *Rapua he Rautaki Rongahau* is the establishment of a kura curriculum that helps kura tam ariki-mokopuna, whānau and community to learn about kaitiakitanga. In order to demonstrate the achievement of this goal, the kura must be able to define what is meant by the term kaitiakitanga. It is important



that the kura takes the time to clarify and describe their vision of kaitiakitanga, to identify and explain the key characteristics and indicators of kaitiaki and kaitiakitanga.

If roll-projections are anything to go by, the demographic profile and associated needs of tamariki and whānau at Te Kura Kaupapa Māori o Harataunga will change dramatically over the next five-to-ten years. The wharekura is squarely positioned to play an increasingly important role in curriculum development and delivery. Without the manaakitanga and aroha of a tuākana kura, rangatahi attending the wharekura at Harataunga, over the last few years, would not have been able to continue their journey into te Ao Māori. Although the experience of this alliance has been positive and worthwhile, with numerous successes and achievements, the satellite system holds various limitations for the teina kura, specifically:

- △ for practical reasons, the curriculum offered at the teina kura must fit within the curriculum that is offered at the tuākana kura<sup>36</sup>
- △ for practical reasons again, rangatahi at the teina kura all study the same subjects, that is, they are not able to choose different options<sup>37</sup>
- △ in this instance, the tuākana kura teaches to achievement standards, the unit standards are not able to be studied
- △ by sheer necessity, the satellite arrangement is with a kura in another rohe which means Te Kura Kaupapa Māori o Harataunga is not helping to strengthen the capability for wharekura delivery within pare Hauraki<sup>38</sup>

If Te Kura Kaupapa Māori o Harataunga decides to embrace the development of kaitiakitanga education opportunities, then the issues of wharekura curriculum options and teaching to achievement standards will need to be addressed<sup>39</sup>. It is possible for a teina kura to offer unit standards or other subjects that are not normally part of the tuākana curriculum but this would impose additional workloads on the tuākana kura. Even if the teina kura developed all of the teaching and assessment materials, moderation by an accredited team at the tuākana kura would still be needed. In other words, the tuākana kura must be willing to invest precious time and resources in the teina process. Before reaching this point, the teina kura will need to fully investigate and identify the additional standards they would like to deliver. For an informed choice and decision, Te Kura Kaupapa Māori o Harataunga will need to wānanga this issue and decide whether unit standards will be beneficial for curriculum delivery<sup>40</sup>. Both teina and tuākana kura would then need to engage in strategic planning and preparation for the introduction of any additional standards over time.



Within Te Aho Matua, kura are encouraged to create opportunities which accommodate different styles of learning and actually honour or uphold the differences between children's attributes, talents and abilities. This approach to the learning environment is underpinned by the principle of kotahitanga, that co-operation, combined effort and learning how to work together is one of the more important lessons in te ao Māori, creating pathways through which the long-term wellbeing of whānau hapū/iwi is assured.

With the current satellite arrangement, wharekura students at Te Kura Kaupapa Māori o Harataunga have to study the same subjects. In terms of kaitiakitanga, however, it may be more beneficial to implement a system that fosters learning of different but related skills, rather than the same set of skills. Life experience within Harataunga, has certainly shown that one person is not able to do everything, that the burden of carrying particular kaupapa must be shared, that different people have different sets of skills all of which contribute to the overall achievement of goals. It is prudent to wonder whether kaitiakitanga is any different? If monitoring kiwi is the task, for example, it is likely that some, but not all of the taura, will enjoy tramping through the bush to collect data. Perhaps some taura would be better suited to the data-entry, data-analysis and reporting aspects of the task? Perhaps assessment materials can be written to capture the various roles, functions and components of an inherently collective task? Within the National Qualifications Framework, there may be ways in which wharekura students can understand and experience how kaitiakitanga happens in the real-world, that whānau need to co-operate and work together around particular kaupapa, with different members performing different tasks and developing different sets of skills. *Rapua he Rautaki Rangahau* provides opportunities for the kura whānau to think strategically about these issues, to plan for change around specific goals. Similarly, the principles of kotahitanga, co-operation and working together also apply to strategic thinking about location of the satellite arrangement and strengthening of the capability for wharekura delivery. The decision to satellite with a tuākana kura in another rohe was motivated by three main factors: the belief that Harataunga does not qualify for wharekura status (or funding) under MoE criteria; the fact that none of the other kura

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<sup>26</sup> teaching and assessment materials are not available for other subjects

<sup>27</sup> namely, not enough human resources to provide options

<sup>28</sup> Te Kura Kaupapa Māori o Harataunga is the only Kura Kaupapa in Hauraki at present, others are in the pipeline and a number of schools have rūmaki units

<sup>29</sup> The Field Māori unit standards provide more flexibility for kaitiakitanga delivery

<sup>40</sup> MQS and MoE advisors are willing to attend hui for this purpose



rumaki in Hauraki had reached wharekura level and relationships with the selected tuākana kura had already been established. However, it seems the rules may have changed and Harataunga could become registered as a Hauraki-based education provider with capacity to deliver unit standards at the wharekura level<sup>41</sup>. Furthermore, there may even be ways in which Harataunga could meet the MoE criteria for wharekura status. In Wellington, for example, a number of rumaki kura have recently combined to become a wharekura<sup>42</sup>. This may also be an option in Hauraki. In Manaia, the kura rumaki is already teaching at the wharekura level and Hoterini is definitely working towards this goal<sup>43</sup>. Rangatahi and whānau who have come through the bilingual unit at Coromandel Area School have also expressed an interest in the wharekura option<sup>44</sup>. Although of little tangible benefit thus far, the Hauraki Māori Trust Board have a strategic commitment to Māori education with Haurakitanga and the Environment as key curriculum priorities<sup>45</sup>.

*Mokohia au ki ngā tikanga o Hauraki*

*Kia toa, kia tū manawa pū, he Māori tōku reo, tōku ihi, tōku mana*

nā Toko Renata, Hauraki Māori Trust Board

Registration or accreditation for delivery of wharekura standards would hold a number of advantages for Te Kura Kaupapa Māori o Harataunga including the likelihood of more students, increased funding and teacher allocations as well as opportunities to design and develop the content of our own Te Waharoa and Te Ngutu Awa qualifications. Accreditation as an education provider may also enable the Kura to pursue options for delivery of kaitiakitanga programmes within the wider community or registration as an LEOC provider. Clearly, more information is needed but the issues of wharekura status, developing wharekura capability within Hauraki and education delivery within the community are worthy of genuine consideration.

In summary, *Rapua he Rautaki Rangahau* requires clarification of the following strategic directions and issues:

- Δ will achievement standards, unit standards or both sets of standards best assist the delivery of a kaitiakitanga curriculum at Te Kura Kaupapa Māori o Harataunga?<sup>46</sup>
- Δ in terms of kaitiakitanga, is it more beneficial for students to learn the same skills or different sets of skills and how could this be incorporated into curriculum delivery?
- Δ does Te Kura Kaupapa Māori o Harataunga want wharekura status or registration as an NZQA education provider? why? and how could this be achieved?



Δ should Te Kura Kaupapa Māori o Harataunga contribute to the development of wharekura capability in Hauraki and how could this be achieved?

### Whānau participation as teachers and tutors

There is a wealth of knowledge about kaitiakitanga within the kura whānau and community. Among divers, for example, the flowering kōwhai is a sign that kina are fat and milky and ready to eat. Those who fish know when, where and how to catch the different types of fish, they know the tides, winds and currents, how to navigate by the moon and stars. The hunters and gatherers know what berries, fruits and leaves to eat, what rongoa to take, where to drink, how to survive and keep warm, the perilous places to avoid. The weavers and carvers know where to find their materials, how to harvest and prepare it for use. The people here have knowledge about building ponga, nikau and raupo whare, some can remember walking the tracks that stretch from one side of the peninsula to the other, up to Moehau and down to Papa Aroha, across to Kapanga, Koputauaki and Whangapaoa. Others remember the original names of places and stories about historical events that mark boundaries and wāhi tapu.

Despite the abundance of skills and expertise, an exchange of information about this knowledge-base can, more often than not, only happen in the English language. The vast majority of locals do not have the skills to converse in te reo Māori. This creates a challenge for Te Aho Matua kura with a commitment the normalisation of te ngakau Māori. On one hand there is the genuine desire for whānau to be involved in the transmission of local knowledge and skills. On the other hand, everyday usage of te reo Māori is essential for the development of language skills, particularly among pepi, paopao and nohinohi. The kura kaupapa is a place of safety and protection for te reo Maori, one of the few havens left in a modern world where English and American culture are the accepted trademarks of global assimilation.

Te Kura Kaupapa Māori o Harataunga needs strategies to overcome this challenge. For example, the following techniques are among those that could assist the transmission of local kaitiakitanga knowledge within the kura environment:

<sup>41</sup> Personal communication Pania Peta, MQS advisor, 22 December 2006

<sup>42</sup> Personal communication, Mereana Maika-Angus, 22 January 2007

<sup>43</sup> Personal communication Debra Ruka-Meihana, Hauraki Māori Trust Board, 26 January 2007

<sup>44</sup> A strategy for development of te reo Māori skills would be needed for these rangatahi.

<sup>45</sup> available at [www.haurakimaori.co.nz/what\\_we\\_do.htm#education](http://www.haurakimaori.co.nz/what_we_do.htm#education)

<sup>46</sup> the issues of which additional standards should be added to the curriculum and when is discussed below?



- interview kaitiaki local experts to identify and gather information about key steps, stages, practices, philosophies, tikanga
- take photographs, illustrations, images of each stage, step, process or tikanga
- create video/film footage of entire tikanga from beginning to end
- research Māori kupu and terminologies
- whakamāori te reo of all resources – documents, labels, talkover on video
- consolidate information into single resource for kaiako delivery within the kura
- whakamāori delivery of the resource by local expert, ie they present the practical/experiential components but the kaiako describes/presents all of the information and supplementary resources in te reo Māori

Focus groups, expert reference groups and literature review may help to add detail, contextual information and expand the content of teaching materials when necessary. In a few cases, the knowledgeable expert will have te reo Māori skills and may be able to present the information themselves. In some instances, the wharekura students may be able to develop resources. It will be important, however, for this work to be structured and planned around pre-identified curriculum targets and priorities. In order to do this, the kura will need to gather baseline information about the skills and knowledge-sets available within this community. Budgets and funding will also be needed to cover the expenses of resource development.

### Identifying curriculum targets and priorities

The second chapter of this document briefly looked at ideas for learning about kaitiakitanga from the ngahere and takutai moana. A number of possible curriculum themes, directions and topics were identified. Clearly, the takutai moana and ngahere are sources of information and knowledge about kapata kai, wāhi rehia, ngā māmū moana, te wao mui o Tāne, ngā wāhi tapu and puna mātauranga, mōhiōhio pūtaiao. Appendix 8 lists additional themes and topics that some kura whānau have expressed an interest in studying. At first glance, it seems as if a wide range of options may be suitable for inclusion in a kaitiakitanga kura curriculum. In reality, however, the rate at which a kura curriculum can change is frustratingly slow, only a handful of new topics can be introduced for study each year. An important challenge for Te Kura Kaupapa Māori o Harataunga will be the establishment of a fair and systematic process for identifying the priorities for research, development and implementation within the kura curriculum each year.



		local knowledge	mauri tū	te reo Māori	support systems	
Tāhūrai Moana	Hoī Pātaka Kai					
	kina	2	3	0	3	8
	pāki	1	0	1	2	4
	Hoī Wāhi Rāhia					
	waka ama	3	3	3	3	12
	Ngā Manu Moana					
Te Ngahere	tutunuihau pūkūhau (dotters)	0	1	0	3	4
	Hoī Pōna Mātauranga					
	pingao	0	2	0	3	5
	Hoī Kāpata Kai					
	aita	0	0	0	1	1
	kararehe	3	3	0	2	8
	Hoī Wāhi Rāhia					
	ngā ara tāwhiro	2	2	1	1	6
	Te Wao Nui a Tāne					
	tōkare	1	0	0	3	4
	kiwi	2	3	1	3	9
	ngā pēpēke	0	0	0	3	3
	Wāhi Tapu					
	ngā pākīinga tāwhiro	1	0	1	2	4
	Hoī Pōna Mātauranga					
	ngā aia	1	0	1	3	5
		16	17	8	32	

Table 9: A possible technique for exploring the strengths and weaknesses of local skill-sets and initiatives<sup>47</sup>

From the scores obtained in this example, the development of teaching and assessment materials for waka ama, kiwi, kararehe and kina would seem to be an immediate priority for the kura. The remaining topics fall into medium and long-term priority groups. This table contains other information that could assist decision-making about relative priorities. Although most topics have strong support systems, meaning the capacity to access networks, links and supplementary sources of information, the urgent need for mechanisms and strategies to facilitate delivery in te reo Māori is once again highlighted.

Given the time, workload and cost associated with development of new course outlines and teaching materials, it would make sense for the kura to place a high priority on topics or resources that build-on-the-gains of initiatives and skill-sets already operating within the local community, such as fishing, hunting and initiatives which come out of the Ngā Whenua Rāhui project, Harataunga Conservation Plan.

In addition to building-on-gains within the community, the kura may want to factor other types of information into the prioritisation process. Table 10, for example, shows how rating scores could help to explore the range and breadth of information available for each topic including mātauranga Māori perspectives. Similarly, the rating system could help to differentiate between topics which have ready-to-use course outlines, teaching plans and

Table 9 demonstrates the manner in which a simple rating scale may help to sort possible study topics<sup>48</sup> into high, medium or low priority groups. In this fictitious example, each potential topic is weighted on the basis of local knowledge or skill-sets, current activity within the community (mauri tū)<sup>49</sup>, capacity for delivery in te reo Māori and establishment of support systems to supplement the the development of resources.







Table 11, for example, shows how potential curriculum subjects, topics or themes could be mapped to relevant domains and sub-fields of the MQS developed Field Māori. This would precede the mapping of each topic to specific unit or measurement standards. If desired, the content of curriculum topics could also be extrapolated to the mainstream scientific disciplines - particularly science, biology, chemistry, physics, mathematics, astrology, meteorology and information technology. This may help to provide evidence of Kura Kaupapa exposure to the hard sciences. To assist evaluation and monitoring, the kura may also want to map the content of each standard or topic to a set of kaitikaitanga indicators.

In terms of techniques to assist whānau decision-making about priorities for development and implementation within the kura curriculum, a scoring or weighting system holds several advantages. The rating scale is only one of the techniques that could be used but it does allow the various attributes of each topic to be quickly sorted and differentiated into groups. The establishment of a systematic and rigorous process for decision-making about curriculum priorities will certainly help policy development and make a useful contribution to the formalities of kura review.

### Development of teaching & assessment materials

Literally thousands of measurement and unit standards are registered on the NQF, each standard has assessment specifications that are developed by the Ministry of Education or New Zealand Qualifications Authority. Theoretically, each standard also comes with a set of assessment plans and materials that aim to guide, inform and supplement the development and delivery of course outlines and teaching resources. In practice, however, assessment materials have not yet been developed for many, if not most, of the standards and many of the registered standards cannot, therefore, be utilised or offered within the secondary school system<sup>50</sup>.

There is a process for the development of assessment plans and materials. Typically, these are created by the schools themselves with support from MoE or NZQA advisors or relationship managers. As already mentioned, some external organisations have invested in the development of assessment resources for schools, eg NIWA, Environment Waikato, WWF, Take Action, Waicare and Te Kauri-Waikūkū Trust<sup>51</sup>. No matter who develops them, all assessment materials have to be moderated by an accredited team to ensure they



meet NZQA criteria and requirements. Given the scarcity of assessment materials for many standards, the Ministry of Education is very interested in purchasing the materials that have been developed within any one school so they can make them available for use in other schools<sup>50</sup>.

The cost of developing assessment materials is high, generally beyond reach, for most schools. Time and human resources must be invested in researching the content, writing course outlines and the development of teaching resources as well as assessment plans and materials. Good planning and preparation is also important to ensure sufficient time for moderation and fine-tuning before implementation within the classroom.

Chapter I has shown that Te Kura Kaupapa Māori o Harataunga will need to invest heavily in the development of teaching and assessment materials appropriate for the delivery of kaitiakitanga curriculum standards. Some assistance is available through Māori Advisors at the Teacher's Colleges and the MQS School Relationship Managers, both of whom are funded to work with kura for this purpose. Neither the teachers nor tūmuaki at the kura in Harataunga have the time to engage in research and development of new assessment materials. Funding will be needed to employ somebody specifically for this task. In the meantime, the above prioritisation process should identify the few, ready-to-use, te reo Māori assessment materials that could assist the delivery of kaitiakitanga curriculum standards in a kura kaupapa and wharekura setting, eg the EnviroSchools programme and Te Kauri-Waikūkū Trust.

With regard to teaching resources for the kaitiakitanga curriculum, a range of mediums could be used including handouts, illustrations, carvings, purakau, video, photography and electronic formats. One exciting idea, the kura has already worked on, is the development of an interactive software programme called *He Tipua Whakamaharatia*. It is hoped this software programme will be a tool for the collation, consolidation and transmission of knowledge that is gained from *Rapua he Rautaki Rangahau* in a format that can be accessed by all age-groups within the kura. The hope is that kura tamariki and rangatahi will work on the development of this software programme themselves.

<sup>50</sup> this is discussed in Chapter I, see table 7

<sup>51</sup> see Chapter I

<sup>52</sup> see [www.tki.org.nz/e/community/ncea/resources.php](http://www.tki.org.nz/e/community/ncea/resources.php)



It is envisaged *He Tipua Whakamaharatia* will be an interactive, 3 dimensional graphics programme that simulates the exact contours, characteristics and layout of the land, bush and sea in Harataunga. When entering this programme, the user will become a tipua, manu kōtuku or wairua that flies above the whenua generating information and instilling knowledge about the ingoa, whakapapa and kaitiakitanga of each awa, maunga, wāhi tapu, puke and significant sites including ancient passageways, customary food gathering places and battle sites. Over time, it is hoped *He Tipua Whakamaharatia* will evolve to collect a wide range of information about hei kapata kai, hei wāhi rehia, ngā manu me ngā kararehe, te wao nui o tāne, he puna mātauranga, mōhiotio pūtaiao. Each tamaiti will have their own username, password and opportunity to customise and create their own kaitiakitanga knowledgebase.

Appendix Nine presents the information that has thus far been gathered about possible methodologies, costs and timeframes for the development and creation of *He Tipua Whakamaharatia*. As with any interactive medium, this programme will have the capacity to store large volumes of information, so within any of the three options presented, there is ample space to include tests, homework sheets and classroom activities for educational purposes. Within the extended kura whānau, there are kaiwhakahaere with the skills and expertise to manage this project as well as ensure the goals are realistic and actually achieved.

### Funding

Progress towards the strategic vision and challenges which have been presented within *Rapua he Rautaki Rangahau* will require a significant financial investment. The main cost is human resources. With funding, Te Kura Kaupapa Māori o Harataunga would have the opportunity to ensure that people with the expertise to assist this kaupapa have an absolute commitment to the completion of specific tasks and objectives within required time-frames. The workload is too heavy for reliance on the goodwill or voluntary input of kura whānau and staff. The tūmaki and teachers already have a full workload, they will still need to assist the planning and preparatory phases of this work, but do not have the time to lead such a project. The kura whānau and community also have an important contribution to make in planning, preparation and decision-making roles, but the weight of this workload



must be carried by people who can focus on the achievement of goals, without the worry of having to earn an income elsewhere. During the initial stages of this project, it is envisaged at least one but preferably two people will be needed for project-management and research components of this work. Both people will need te reo Māori skills. From time-to-time, consultants may also be needed for specific tasks and expertise.

The second reason for needing financial support is to cover the working expenses generally associated with project management and research tasks, eg consumables, telecommunications, subscriptions to academic libraries, venue and facilities for interviews and meetings, some transport and accommodations costs.

The third and final reason for funding is associated with the development and production of teaching resources. In general, this funding would provide the leeway to bring in people to help with photographic, video and electronic images or graphics as needed. Working expenses for the development of *He Tipua Whakamahereatia* have already been budgeted<sup>53</sup> but this project will also need funding for its own kaiwhakahaere and project management plan.

A number of agencies have funding opportunities for initiatives that focus on kaitiakitanga, protection of the environment, the development of curriculum assessment materials and/or the advancement of Māori knowledge. Appendix Ten lists some of the organisations that may be responsive to funding applications for *Rapua he Rautaki Rangahau* purposes.

### Monitoring Quality and Effectiveness

This document has identified a number of variables that could be used to build a framework for measuring, monitoring and demonstrating the effectiveness of *Rapua he Rautaki Rangahau* as a strategic research plan for the whānau and community of Te Kura Kaupapa Māori o Harataunga. At a preliminary level, the effectiveness of this strategy would simply be demonstrated by the achievement of expected outcomes and goals. Amongst kura tamariki, whānau and community, for example, *Rapua he Rautaki Rangahau* specifically aims to:

- △ facilitate the realisation of Te Aho Mātua aspirations
- △ create opportunities for learning about kaitiakitanga within the kura curriculum
- △ establish processes for formal recognition of kaitiakitanga knowledge within the National Qualifications Framework



Δ empower the reclamation of kaitiakitanga within kura whānau and the wider community

Expected outcome	Indicators of expected outcome
1. Facilitates the realisation of Te Aho Mātua (TAM) aspirations	<ul style="list-style-type: none"> <li>• increased awareness, debate and ownership of TAM aspirations</li> <li>• active and vibrant kaitiakitanga culture</li> <li>• advancement of mātauranga Māori kaitiakitanga perspectives</li> <li>• whānau/community involvement in kura as tutors and teachers</li> <li>• co-operative kaitiakitanga tasks with assessment at NCEA levels</li> <li>• increased uptake of kaitiakitanga career options</li> </ul>
2. Creates opportunities for learning about kaitiakitanga within the kura curriculum	<ul style="list-style-type: none"> <li>• course outlines, teaching resources, class activities, assessment materials</li> <li>• active involvement with Ngā Whenua Rahui and Harataunga Conservation Plan</li> <li>• collaboration with marae and others for kaitiakitanga</li> <li>• implementation of te reo Māori environmental education programmes</li> <li>• gradual introduction of options and alternatives for kaitiakitanga studies</li> </ul>
3. Establish processes for formal recognition of kaitiakitanga knowledge within the NQF	<ul style="list-style-type: none"> <li>• clarification of kura position on teaching to achievement or unit standards</li> <li>• working relationship with MoE/MQS advisors</li> <li>• gradual expansion of kura curriculum to include a wide range of relevant standards</li> <li>• introduction of Te Waharoa and Te Ngutu Awa opportunities</li> </ul>

<sup>22</sup> see Appendix Nine



4. Empower the reclamation of kaitiakitanga within kura whānau and the wider community	<ul style="list-style-type: none"> <li>• active involvement in kaitiakitanga of te ngahere and takutai moana</li> <li>• development of kaitiakitanga skills and expertise within the kura community</li> <li>• establishment and strengthening of mutually beneficial networks, alliances and working relationships</li> <li>• engagement in joint ventures with the marae and/or community for kaitiakitanga purposes</li> <li>• formal acknowledgement of kaitiakitanga skills, knowledge and expertise within the community</li> <li>• uptake of initiatives and strategies for the transmission of knowledge about kaitiakitanga</li> </ul>
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**Table 12:** Example of a framework for measuring and monitoring progress towards the achievement of *Rapua he Rautaki Rongahau* outcomes

Beneath these broad categories, more detailed information could be collected by building a framework of indicators designed to measure and monitor the actual progress towards particular outcomes, gains or achievements. Table 11 presents a range of possible indicators. Amongst kura whānau, for example, six different variables could help to measure the outcome - “Facilitates the realisation of TAM aspirations”, ie: increased awareness, debate and ownership of TAM aspirations; active and vibrant kaitiakitanga culture; advancement of mātauranga Māori kaitiakitanga perspectives; whānau involvement in the kura as students, tutors and teachers; co-operative kaitiakitanga tasks with assessment at NCEA levels and increased uptake of kaitiakitanga career options.

Both quantitative and qualitative responses would help to gather information about the achievement of goals. In some cases, simple yes/no responses would be sufficient. In other cases, small surveys and/or detailed descriptions of particular activities and achievements would be needed.

In addition to the achievement of goals and expected outcomes, the progress of *Rapua he Rautaki Rongahau* could also be measured against set targets and deliverables. First and foremost, an important target is clarification of the above-mentioned strategic directions particularly the issue of curriculum delivery through measurement or unit standards. Another important deliverable is the establishment of a fair and systematic process for identifying priorities. With regard to curriculum changes, progress will be slow and



incremental, with just a few additions each year. However, Table 13 shows how the kura could plan the introduction of new teaching resources around set targets for each kaitiakitanga theme.

Kaitiakitanga theme	# new teaching resources each year	# teaching resources after 5 years	# teaching resources after 10 years
hei kapata kai	1	5	10
hei wāhi rehia	1 every 2 <sup>nd</sup> year	2-3	5
he wāhi tapu	1 every 2 <sup>nd</sup> year	2-3	5
ngā manu	1 every 2 <sup>nd</sup> year	2-3	5
ngā kararehe	1 every 2 <sup>nd</sup> year	2-3	5
te wao nui o Tāne	1	5	10
hei puna mātauranga	1 project per year	5	10

Table 13: Possible targets for development of new teaching resources around kaitiakitanga themes

In this way, the breadth and range of kaitiakitanga teaching resources will gradually increase and taura will have more options for study. Furthermore, the collection of data on achievement of targets is another way to demonstrate effectiveness.

The concept of kaitiakitanga itself provides another paradigm for measuring the effectiveness of this strategic plan. If the kura takes the time to define what is meant by the terms kaitiaki and kaitiakitanga they could then think about what it looks like in terms of specific knowledge, behaviour, attitude or techniques. In defining the attributes of a kaitiaki, the kura will create their own standard for conceptualising excellence and this in turn, will be the ultimate measure of success and achievement.



## U. timeline & action plan 2007-2016

The few remaining pages of this document present an action plan and timeline for implementing the various strategies and objectives that have been discussed within *Rapua he Rautaki Rongahau*. This represents a process for operationalising the educational potential of te ngahere and takutai moana as a foundation for generating and transmitting knowledge about kaitiakitanga within the whānau and community of Te Kura Kaupapa Māori o Harataunga during the ten year period 2007-2016. Table 14 presents the key activities, parties and actions that are needed to realise the vision of kaitiakitanga knowledge transmission through the curriculum at this kura. Table 15 presents a possible timeframe for achievement of key milestones and objectives.

The first activity the kura whānau and community will need to embrace is wānanga. During 2007, it is envisaged at least two wānanga will be needed. The first wānanga is needed to examine and confirm the kura's commitment to kaitiakitanga, as a core curriculum subject and foundation for long-term investment and development. This wānanga needs to happen as soon as possible, in the first few months of 2007. If the kura whānau and community choose in favour of a long-term commitment to this kaupapa, then a second wānanga will be needed to clarify strategic directions and intentions on a number of critical issues. After this, there will be annual wānanga for reporting, priority setting and evaluation purposes.

Strategically, it is envisaged a number of funding applications will be submitted during the ten year planning period. The first will be a relatively small application seeking base-line funding to cover the appointment of a kaiwhakahaere (project manager) and kairangahau for an initial 18 month period. It is hoped these two kaimahi will be in place by the end of 2007. During this period, the kaimahi will establish the necessary framework of relationships, processes and procedures and write funding applications around the specific project costs of identified priorities, eg identification of priorities, development of resources and assessment materials and monitoring.

The timeline has been developed around funding applications being written every 3 years. This is the normal period for project funding and a reasonable timeframe for the demonstration of outcomes. Monitoring, evaluation and reporting processes will inform the writing of funding applications. In general, the applications for base funding and project



costs. At least two of the funding applications will be for base funding but others will be written around specific project costs, eg *He Tipua Whakamāhoratia*.

In addition to the kaimahi, a steering committee will be set up to manage and monitor progress. This committee will be made up of the kaimahi and representatives from the kura and other agencies such as Ministry of Education and Māori Qualifications Service when needed. The steering committee will be in place throughout the duration of this project. They will meet as and when needed and act as the interface between the kaimahi and kura whānau, key tasks will include review of the models for the identification of priorities, whakamāori and resource development and mapping of topics to curriculum standards. In essence, the steering committee will have a quality assurance role.

In this context, the term “resource development” means all of the activities associated with the development of resources, including research methodologies for gathering local knowledge, expansion and whakamāori of content, alignment with other teaching or assessment materials and any associated writing, creation or collation of the actual resource. The implementation of research methodologies for resource development will commence shortly after the kairangahau has been appointed, in early-2008.

As part of the process for identifying priorities, kura whānau will consider the acceptability of two ready-to-use, te reo Māori environmental education programmes. If acceptable, it is envisaged these programmes will be delivered towards the end of 2007. Additional curriculum changes will be rolled-out over time as the resources and materials become available.

Monitoring and evaluation of project achievements and outcomes is planned to commence at the end of 2009 and will, thereafter, be repeated at two-yearly intervals. The monitoring and evaluation process is timed to inform wānanga, prioritisation, funding applications and reporting. Furthermore, the completion of an evaluation report will signal the beginning of a new cycle in the project with new priorities and curriculum targets. If curriculum targets and priorities are achieved, this project will produce a raft of new teaching resources and assessment materials that will be appropriate for use in any kura with a genuine commitment to the transmission of knowledge about kaitiakitanga.

*He ao te rangi ka ūhia,*



*mā ngā hūwhuru te manu ka rere!*






Table 14: Action Plan for the implementation of Rapua he Rautaki Rangahau objectives, 2007-2016

Key Activity	Key Parties	Manuhiri	no	yes
<b>Wānanga</b>				
1. Meaning of kaitiaki/kaitiakitanga - is this something the kura wants to aim for?	Kura	✓	no action needed (NAN)	proceed with Rapua he Rautaki Rangahau objectives/actions
2. Strategic vision				
(a) measurement or unit standards or both?	Kura, Ruamata	MODIFIABLE	NAN	establish networks/relationships with key parties identify priorities, develop materials as needed
(b) contribution to Hauraki wharekura capability?	Manahi, Hoteini, HMTB, Kapanga		reaffirm alignment with Ruamata	develop action plan, timeframe
(c) wharekura status or continue satellite?	Kura, Ruamata		NAN	develop action plan/timeframe for registration/accreditation as wharekura
(d) community education/LEOC provider?	Kura		NAN	develop action plan
<b>Identification of Priorities</b>				
1. wānanga acceptability of free, ready-to-use environment education programmes for immediate implementation in kura	kura	providers	No further action needed	implement course outlines, teaching/assessment materials
2. gather baseline data on local knowledge-base	kairangahau			additional data-gathering as needed, eg interviews, literature review, focus groups
3. wānanga learning opportunities within Harataunga Conservation Plan, Ngā Whenua Rauhū	kura	DoC/MEG		establish process to whakamāori information
4. establish process for identifying priorities	kaimahi	MODIFIABLE		
5. identify priorities for resource development	kura			plan curriculum targets
<b>Resource Development</b>				
1. research content of priority topics	kairangahau	action needed		methods for data-gathering, support system feedback to informants, kura
2. develop resource materials	kaimahi			
3. whakamāori resource content	as per process			
<b>Curriculum Implementation</b>				
1. as per targets and priority schedule	ngā kaitiaki	as needed		report on quality/implementation issues
<b>Monitor quality and effectiveness</b>				
1. develop paradigms and templates	kaimahi			feedback to kura whānau
2. collect data	kairangahau			data entry/analysis
3. report to funders/stakeholders	kaimahi			commence work on next set of priorities



**Table 15: Timeline for the achievement of key milestones and objectives, 2007-2016**

	2007	2008	2009	2010	2011	2012	2013	2014
wānanga								
funding applications								
establish steering committee								
appoint Project Manager								
appoint kairangahau								
identification of priorities								
implement research methodologies								
resource development								
curriculum implementation								
evaluation/monitoring								
reporting								

	fulltime
	as and when needed
	part-time



# Appendix One

Harataunga-specific information: reference material<sup>54</sup>

## 1. Electronic Databases

Name/Title	Comment/explanatory notes	reo Māori
Māori Land Court Minute Book	an index of Māori Land Court records from 1863 to the present day, access through subscription or arrangement with an academic library	some
Henry Fisher Index of Māori Placenames	index to names contained in the Journal of Polynesian Society 1892-1910 available through subscription or by arrangement with Waikato University library	some
Waitangi Tribunal Reports	electronic access to Tribunal reports (1987-present) available through <a href="http://www.waitangi-tribunal.govt.nz/reports">www.waitangi-tribunal.govt.nz/reports</a>	some

## 2. Reference Books, Theses & Articles

Name/Title	Comment/explanatory notes	reo Māori
Māori Landcourt Minute Books	full text copies held at Māori Land Court District Offices, Archives NZ and academic libraries	some
Medicinal/food properties of native bush in Harataunga and NZ	a manuscript by Richard (Dick) Hovell for the NZ Army in the 1940s, no known copies (requests submitted to the NZ Archives & Waioaru Army Museum)	
Archaeological landscape of Kennedy Bay	an article by G. Barton, available through the National Library	
The Māori Language in Coromandel, Kennedy Bay & Manaia	P. Martin (1986), report for the NZ Council for Educational Research, Wellington	
Māori Trustee: In the Interests of Whom?	Research paper prepared by Parekura White (1998) for Master of Public Policy, Victoria University	
Hauraki Treaty Claim: WAI 792	prepared by Parekura White (1999) on behalf of ngā hapū e toru, contains history of Ngāti Porou land occupation, includes map document, Traditional History Report and information on historical pā sites and schedules of owners	some
Hauraki Treaty Claim: WAI 866	submitted by Pakiriki Harrison (2000)	
Hauraki Treaty Claim: WAI 289	prepared by Sam Moeke (2005) on gold mining and timber license revenue in Harataunga	
Hauraki Treaty Claim: WAI 968	submitted by Korohere Ngapo (2005) documents	some
Maata Ngapo Te Mana, Te Ohaki	Marutahu tribal history in Harataunga	
Searching for Synergy	thesis, Korohere Ngapo (2001) on the Maata Ngapo in Harataunga, available at Waikato University	✓
	Reflexivity, indigenous/scientific identities and conservatory values: towards a new sustainability?, PhD Thesis Katie Simon (2001), Waikato University	
Ngā Whenua Rāhui Proposal	MJ Johnston (2004) for Harataunga and other blocks on the Coromandel Peninsula	

<sup>54</sup> The yellow highlight means a copy of the document or resource is available within Kura wānau



Harataunga Kawenata	Kennedy Bay Animal Pest and Outcome Monitoring Survey, May 2006, Ngā Whenua Rāhui	some
Harataunga Conservation Plan	Parekura White (2006)	
Local, regional, central authority reports	Harataunga-specific information is contained within a number of official reports and papers, eg the Dept of Conservation has conducted ecological reports on several occasions, the local/regional Councils have maps, photographs and other relevant information	

### 3. Film, Audio & Other Resources

Name/Title	Comment/explanatory notes	reo Māori
Folk who live in the Bay	A visit to Kennedy Bay on the Coromandel Peninsula, Radio NZ Spectrum documentary, (late 70s) interviews with Riria Harrison, Curly Hale, Dick Hovell and others	some
Harataunga Marae	Whakapapa of specific design, whakairo, tukutuku, kowhaiwhai patterns	
Tangaroa	film on contemporary Harataunga experience, Māori Television (2005)	

### 4. Other rauemi/resources

Name/Title	Comment/explanatory notes	reo Māori
Harataunga Marae	contains whakairo, tukutuku, kowhaiwhai, artwork patterns and designs that may have relevance for te ngahere and takutai moana, eg the tuanui	
Ngā Uri o Māata Ngāpo Marae	under construction around Harataunga-specific kaupapa themes	



## Appendix Two

Extended literature review: reference list

### 1. Electronic References

Source/Title	explanatory notes	reo Māori
Māori Nuipepa (1842-1933)	access through NZ Digital Library available through academic libraries	✓
Te Waka Māori o Aotearoa (1884 -)	periodical published by P. Ngata in Turanganui, access to full-text articles via the NZ Digital library	✓
Takitimu: hoea te waka, ha!	periodical published by C. Webb in Gisborne, access to full-text articles via the NZ Digital Library	✓
Transactions & Proceedings of the Royal Society of NZ	full-text access to scientific, research articles written about NZ (1868-1961), articles by Elsdon Best, William Colenso and others available at <a href="http://rsnz.natlib.govt.nz">http://rsnz.natlib.govt.nz</a>	some
Ngā Tangata Taumata Rau	Māori biographies available at <a href="http://www.dnzb.govt.nz/dnzb/Maori_default.aspx">www.dnzb.govt.nz/dnzb/Maori_default.aspx</a>	✓
Māori Land Legislation	available through the University of Auckland	some
The Māori Bibliography	subject index to Māori reference material, available through Waikato University	some
Te Ao Hou (1952-1975)	Māori relevance material only, available at <a href="http://www.teaohou.natlib.govt.nz/teaohou/allthumbnails.html">www.teaohou.natlib.govt.nz/teaohou/allthumbnails.html</a>	some
He Pūkaka	a guide to Māori sources at Archives NZ, available through academic libraries	
Te Ara Encyclopedia of NZ	a wide range of information about traditional Māori lifestyle, available through <a href="http://www.teara.govt.nz">www.teara.govt.nz</a>	some
Te Haurapa	an introduction to researching tribal histories and traditions, Charles Royal (1992) available at <a href="http://www.rootsweb.com/~nz/auckl/akgen3fk.html">www.rootsweb.com/~nz/auckl/akgen3fk.html</a>	some
Flora & Fauna Treaty Claim, WAI262	contains research reports on Crown laws & policies, Māori perspectives, kaitiakitanga practices, impact of new organisms, mātauranga Māori and taonga, traditional rights and responsibilities, indigenous ecosystems available at <a href="http://www.waitangi-tribunal.govt.nz/resources/researchreports/default.asp">www.waitangi-tribunal.govt.nz/resources/researchreports/default.asp</a>	some



#### 4. Reference books, theses and articles

Source/Title	Comment/explanatory notes	reo Māori
NZ Medicinal Plants	Brooker, S.G; Cambie, RC & Cooper, RC (1987), Heinemann Press	some
Hauraki Customary Indicators Report	(1999) available from <a href="http://www.mfe.govt.nz/publications">www.mfe.govt.nz/publications</a>	
A Māori History of Tokomaru Bay	thesis, Mark Iles (1981), Auckland University	some
The Māori Tribal Histories of Hauraki	book by JP Nicholls, available through the National Library	
Whakaaturanga o ngā Tikanga o te Whakapuraretanga o Hauraki mo te mahinga koura	manuscript by Tiemi Make (1896), available through the National Library	✓
Taonga Tuku Iho	an illustrated encyclopedia of traditional Māori life, available through most academic libraries	some
Ngā korero a Mohi Ruatapu (1993)	contains discussion about Māori traditional fishing practices and customs, edited by Anaru Reedy, University Press, Christchurch	some
Fishing for Kahawai in the Waipatu River	article by Koro Dewes in Te Ao Hou 23, 1958	some
List of Waikato Tribes 1803-1884	thesis, Alfred Brown, Waikato University	some
Hauraki Treaty Claim: WAI 100	submitted by the Hauraki Māori Trust Board, documents the history of Hauraki tribes	
The Contemporary Use of Rongoa Māori	Robert McGowan (2000), PhD thesis, Waikato University	some
Ngā Waka Māori	Anne Nelson (1991), traces origin and development, contains maps, plans and ports	
Ngā Waka o Neherā:	Jeff Evans (1997), a historical account of the first voyaging canoes, contains maps & bibliography	
Ko au te awa, ko te awa ko au	thesis by Amanda Rudge (1993), Massey University	some
An investigation of Tuhoe Medicinal Plants	thesis by Darryn Hosie (2003), Waikato University	some
E iti noa na te aroha:	a qualitative exploration in the realms of Māori healing, thesis by Monique McLeod (1999), Waikato University	some
Ngā Riwai Māori	thesis, Graham Harris (2001), Auckland University	
Te Whakaika Make or break	thesis, Hone Kaa (2000), Auckland University adze manufacture at Tahanga Quarry, thesis, Marianne Turner (1992)	✓
The function, design and distribution of NZ adzes	thesis, Marianne Turner (2000), Auckland University	
Traditional Ecological Knowledge	alternative perceptions for conservation knowledge, thesis, Amelia Linzey (1995), Auckland University	



Archaeology, CRM, GIS and Pouto Peninsula Te Puni Kokiri	a case-study of Māori experience, thesis, Moira Jackson (1997), Auckland University Ngā Kai o te Moana: Kaupapa Tiakina (1993), discusses past and present kaitiakitanga techniques, taiapure and mātaihai reserves	
Interpreting GIS as a mediator between intent and experience Pā Distribution in NZ	the Māori experience, thesis, Chris McDowall (1999), Auckland University thesis, Ken Gorbey (1970), Auckland University	
Oruarangi: the archaeology and material culture of a Hauraki pā Hape-ki-Tuarangi	Louise Furey (1996) contains maps and diagrams, available from the National Library the history of Marutahu by Wiremu Maihi te Ranikaheke (1941), translations by Graham George	some
Troublesome Specimens	a study of the relationship between the Crown and the tangata whenua of Hauraki 1893-1896, thesis, John Hutton (1995), Auckland University	
Coromandel Coastal Survey	a survey of archaeological sites on the Coromandel peninsula, Easdale, S et al (1982) includes maps, available from National Library	
Coromandel in the Golden Days	discusses Ngāti Porou settlement in Harataunga, book by Sam Chapman (1974)	
Te Takoto o te Whenua Goldfields of the Hauraki Peninsula	Taimoana Turoa & Charles Royal (2000), history of the people and landscapes in Hauraki books by J. Campbell (1896), J. Downey (1935), J. Wauchop (1897) and H. Cadell (1896) available through the National Library	
Taylor's NZ Māori publications	a bibliography of publications on Māori and Moriori life from books and articles published prior to 1970, available through most academic libraries	some
Horouta	the history of the Horouta waka, compiled by Haronga, TH, Gordon, P & the Halbert whānau, 1999	some
Pakanga ki te Tai Rawhiti	Ngāti Porou bush survival techniques, originally published in 1913, reprinted in 1997 by Kiwi Publishers	some
Te Takutai Moana	International Research Institute for Māori & Indigenous Education, University of Auckland (2003)	some
Te Whānau Moana: ngā kaupapa me ngā tikanga Māori fishing gear	Ngai Tahu Trust Board (2003) A study of the development of Māori fishing gear in the North Island, thesis, Eleanor Crosby (1966), Auckland University	some
Tangaroa Which Native Plants can I grow here?	thesis, P. Cletus (1992), Auckland University Andrew Crowe (1997) – lists native plants, Māori names, discusses habitat/ecology	
Life Size Guide to Native Trees	and other common plants of NZ's native forest, Andrew Crowe (1996), laminated flip chart	
A field guide to Native edible plants of NZ Which NZ Insect?	including those eaten by Māori, Andrew Crowe (1983), information about how to recognise, Māori names Andrew Crowe (2002)	
Poisonous Plants & Fungi in NZ	Northern Regional Council (1995)	



Māori Bird Lore Waikato Regional Coastal Plan (2005)	Murdoch Riley (2001) contains maps and names of rivers in Harataunga
Freshwater Issues for Māori	briefing paper (2006) on concerns about impact of current regulations for Māori, available from <a href="mailto:maria.bargh@vuw.ac.nz">maria.bargh@vuw.ac.nz</a>
Draft Water & Sanitary Assessment (2005)	Thames-Coromandel District Council evaluation of regions water quality, section on Harataunga

## 5. Film, audio resources

Title	comment/explanatory note	reo Māori
Te Matapihi	search series for material of relevance, available through NZ Film Archive, eg Te Matapihi, 16/12/06 documentary on traditional Māori uses and techniques for preserving Ti Kouaka, based on a thesis by Barry Frankhauser	some
Marae	search series for relevant content	✓
Māori Medicine	available through NZ Film Archive, produced around 1993, a combined episode of programmes shown on Marae and Waka Huia, explains the uses of native plants and medicines	✓
Waka Huia	search of NZ Film Archive for relevant topics, eg Mataatua Waka 1990, Kaimoana, Ngā Tamariki a Tāne	✓



## Appendix Three

### Supplementary resources

#### 6. Electronic datasets/resources

Organisation /Contact Details	name of database/resource	reo Māori
Ministry for the Environment <a href="http://www.mfe.govt.nz/publications">www.mfe.govt.nz/publications</a>	<i>Reporting on our Environment</i> – provides templates for measurement and monitoring freshwater, land, ecology, biodiversity, oceans, electronic access to a huge range of maps eg seabeds, rivers & estuaries, marine mammals and seabirds, benthic invertebrate and plant biodiversity, fish and models	
Biodiversity <a href="http://www.biodiversity.govt.nz/resources">www.biodiversity.govt.nz/resources</a>	<i>Ngā Tini a Tangaroa</i> – electronic guide to Māori names and freshwater species electronic database on NZ bird and birdnames, produced by Ornithological Society of NZ	✓
National Institute of Water & Atmospheric Research (NIWA) <a href="http://www.niwa.science.govt.nz">www.niwa.science.govt.nz</a>	<i>Aquatic Flora</i> – quick guide (with pictures and Māori names)	some
	<i>Aquatic Fauna</i> – quick guide (with pictures and Māori names of species)	some
	<i>Freshwater Information NZ</i> – web-base programme to assist the measurement of water quality	some
	<i>Atlas of NZ Freshwater Fish</i> – contains names, pictures and distinguishing features	some
	<i>Freshwater Invertebrate Identification Guides</i>	some
	<i>Traditional Māori Weather and Climate Forecasting</i>	✓
Hokiang a Accord available at <a href="http://www.fish4U.co.nz">www.fish4U.co.nz</a>	multi-lingual electronic database on protection of the marine environment	✓
Manaaki Whenua <a href="http://www.landcareresearch.co.nz/databases/index.asp">www.landcareresearch.co.nz/databases/index.asp</a>	<i>Ngā Tipu Whakaoanga</i> : People Plants Infobase – contains traditional uses of NZ native plants, names, medicinal properties, uses, proverbs, techniques for preserving	some
	<i>Ngā Tipu Aotearoa</i> – electronic database on NZ plants includes ferns, mosses, algae	some
	<i>Ko te Aitanga Pēpeke o Aotearoa</i> – electronic database on terrestrial invertebrates in NZ	some
	<i>Ngā Ripoiinga o ngā Ngāwara Unahi Mohe o Aotearoa</i> – electronic database on NZ trees	✓
	<i>Te Whakaoa aka I ngā tini a Tāne I ngā Whenua kua Ravekehia e te Tangata</i> – online access to resources on Te Waonui o Tāne including seabirds, forests and shrublands, threatened species and monitoring techniques	✓



<i>Ngā Pepeke me ngā Pūngawerewere o Aotearoa</i> (includes teaching resource)	✓
<i>Ngā Aitanga Tuara-kore a Tāne</i> (NZ Terrestrial Invertebrates/BUGS)	✓✓
NZ Fungi – electronic database includes taxonomy and pathology, Māori summaries	a lot
GIS Portal – huge electronic database of maps and land features	some
Soils Portal	
Land Environments of NZ	some
Plants Portal – online gateway to NZ plants	some
GTB on Native plants	some
National Vegetation Survey – online access to information about terrestrial ecosystems	some
Reconstructing Initial Human Settlement Impacts on the Vegetation of NZ – electronic tool	
<i>The Green Toolbox</i> – online access to a programmes for land management and restoration	
Indigenous concepts, values and knowledge for sustainable development – slideshow	some
<i>Flora of NZ series</i> (6 volumes)	some
Images of NZ freshwater invertebrates	some

## 7. Reports, publications & other reference material

Organisation/website	title/explanatory notes	reo Māori
Department of Conservation <a href="http://www.doc.govt.nz">www.doc.govt.nz</a>	<i>Māori methods and indicators for marine protection</i> : a process to identify tohu to measure the health of the rohe moana of Ngāti Konohi (2006)	some
	<i>Māori methods and indicators for marine protection</i> : Ngāti Konohi interests and expectations for the rohe moana (2005)	some
	<i>Māori methods and indicators for marine protection</i> : Ngāti Kere interests and expectations for the rohe moana (2005)	some
	Protecting and restoring our natural heritage – a practical guide (2002)	
	NZ Threat Classification – system to classify indigenous species threat of extinction	
	Pingao recovery resources and models	some
	Marine Mammal Action Plan 2005-2010 – overview of species, threats/risks, strategies	
	Frogs – a range of resources on native frogs	



Ministry for the Environment <a href="http://www.mfe.govt.nz/publications">www.mfe.govt.nz/publications</a>	<i>A Cultural Health Index for Streams and Waterways: A tool for nationwide use</i> (2006)	some
	<i>Using the Cultural Health Index: How to assess the health of streams and waterways</i> (2006)	some
	<i>Oceans Policy</i> (2006) – a current programme of work looking to improve the sustainability of oceans	
	<i>Māori and Oceans Policy</i> (2003) looks at desired outcomes, issues and policies	some
	<i>Effective participation in resource consent processes: a guide for tangata whenua</i> (2005)	some
	<i>Whakamau ki ngā Kaupapa</i> – making the best of iwi management plans under the Resources Management Act 1991	some
	<i>Ki te Ū o te Hiahia</i> – tools for greater Māori participation – ways in which Māori can make greater use of the RMA (2006)	some
	Protecting our Native Plants and Animals: Communities in Action (2002)	some
	Land Environments of NZ (LENZ) – includes full colour atlas, scales and guidelines for a classification system on soils and landforms	some
	Freshwater for a sustainable future: Issues and Options (2004)	
	New Zealand: a valuable body of water	
	Keeping our coastal waters clean (2004)	
	<i>The New Zealand Stream Health Monitoring and Assessment Kit</i> – SHMAK (1998)	
	Flow Guidelines for Instream Values (vols A&B) (1998) contains sections on Māori values and requirements	some
	<i>Mātauranga for Sustainable Hapū Development</i> (2004), Harmsworth et al	some
	<i>The Waipatu Project</i> (2002) Māori community goals for enhancing ecosystem health	some
Environment Waikato <a href="http://www.ew.govt.nz">www.ew.govt.nz</a>	Wetlands: creating and enhancing wetlands	some
	Coastal Water Quality	some
Waikato Regional Council <a href="http://www.ew.govt.nz">www.ew.govt.nz</a>	Beachcare – protection guidelines	
	<i>How Healthy are Our Rivers?</i> (2006) – contains information/resources on how to monitor/measure the health of rivers	✓
Ecoquest Education Foundation	<i>Muddy Feet: Firth of Thames Ramsar Site Update</i> (2004) produced by Ecoquest Education Foundation, describes methods and techniques for measuring the health of coastal ecosystems	



Biodiversity <a href="http://www.biodiversity.govt.nz">www.biodiversity.govt.nz</a>	a guide to aquatic insects (produced by Entomological society of NZ) NZ Orchids written by the NZ Native Orchid Group	
Manaaki Whenua (Landcare Research) <a href="http://www.landcareresearch.co.nz">www.landcareresearch.co.nz</a>	A collaborative research model for working with iwi (2001) discussion paper	some
	Indigenous values and GIS: a method and framework (1998)	some
	<i>Plight of the Kerehu</i> (2004) supporting material for working with iwi	some
	<i>Co-ordinated Monitoring of NZ Wetlands</i> (2002): Māori environmental performance indicators for wetlands	some
	Can non-market valuation measure indigenous knowledge (2005)	some
	Report on the incorporation of traditional values/tikanga into contemporary Māori business organisation and process (2005)	some
	Māori and biodiversity (2002) future information and research	some

## 8. Organisations, groups & networks

Organisation	contact details	comment/explanatory notes	reo Māori
Mahia Coastal Marine Strategy	133 Parakiwai Road, PO Box 26, Mahia (06) 837 5677, <a href="mailto:mahiamanagement@gmail.com">mahiamanagement@gmail.com</a>	wānanga for Māori on recovery of whale resources, traditional uses, customary practices	some
Ngā Ringa Whakahaere o te Iwi Māori	<a href="http://www.nrw.co.nz">www.nrw.co.nz</a>	network of Māori healers, resources on traditional foods, rongoa, manu	✓
NZ Plant Conservation Network	<a href="mailto:marino.tahi@xtra.co.nz">marino.tahi@xtra.co.nz</a> 0276183380	a national network, committed to the protection of indigenous species	some
NZ Carnivorous Plant Society	<a href="mailto:brianquinn@whoosh.co.nz">brianquinn@whoosh.co.nz</a>	website and resources	
NZ Bird Society	<a href="http://www.nzbirds.com">www.nzbirds.com</a>	images, Māori mythology	some
Ducks NZ	<a href="http://www.ducks.org.nz">www.ducks.org.nz</a>	a range of resources including online native duck calls	
Forest & Bird NZ	<a href="http://www.forestandbird.org.nz">www.forestandbird.org.nz</a>	wide range of information	
Miranda Naturalists Trust	<a href="http://www.miranda-shorebird.co.nz">www.miranda-shorebird.co.nz</a>	monitoring ecology, protection techniques	
Coastal Dune Vegetation Network	David Blair, 03 4350258, <a href="http://www.kaitiaki.org.nz">www.kaitiaki.org.nz</a>		



Ngā Kaitiaki	<a href="http://www.kaitiakitanga.co.nz">www.kaitiakitanga.co.nz</a>	iwi/hapū chatroom, networks, initiatives, events	✓
NZ Native Freshwater Fish Society	<a href="http://www.nzfreshwater.org.nz">www.nzfreshwater.org.nz</a>	information, resources and links	some
NZ Ecological Society	<a href="http://www.nzes.org.nz">www.nzes.org.nz</a>	resources and links	
QEII National Trust	<a href="http://www.nationaltrust.org.nz">www.nationaltrust.org.nz</a>	wetlands, coastlines, native habitat, streams, threatened species, archaeology	some
Fish & Game NZ	<a href="http://www.fishandgame.org.nz">www.fishandgame.org.nz</a>	resources and links	
Moehau Environment Group	<a href="http://www.meg.org.nz">www.meg.org.nz</a>	general information on Moehau conservation issues	
Federation of Māori Authorities (FOMA)	<a href="http://www.foma.co.nz/panui">www.foma.co.nz/panui</a>	pānui, networks, links of relevance for Māori, eg water regulation, flora/fauna	some
Māori Independence Site	<a href="http://www.aotearoa.wellington.net.nz">www.aotearoa.wellington.net.nz</a>	networking on issues for Māori eg water	some
Online Community Action Network	<a href="http://www.converge.org.nz/pma/water">www.converge.org.nz/pma/water</a>	networking and pānui on water issues for Māori	
World Wildlife Fund – NZ	<a href="http://www.wwf.org.nz">www.wwf.org.nz</a>	networks, links and resources on habitat protection, marine environment, threatened species	



## Appendix Four

### Education initiatives

#### 9. General

Organisation/Name of Resource	Title	reo Māori
Te Kauri-Waikūku Trust, contact Joe Murray 027 248 3094 <a href="http://www.tekauri.org.nz">www.tekauri.org.nz</a>	tailor-made programmes for schools, registered LEOTC provider, free to schools, assessment materials for biology, geography	✓✓
Ministry for the Environment <a href="http://www.mfe.govt.nz/issues/oceans/kids.html">www.mfe.govt.nz/issues/oceans/kids.html</a>	Ocean Policy Pages for Kids – has information on harvesting sea foods, the impacts of human activities on land and the introduction of marine pests	
Environment Waikato, contact Dean King (manager), Pine Campbell (reo Māori tutor) 0800 800 401 <a href="http://www.ew.govt.nz/forschools/index.htm">www.ew.govt.nz/forschools/index.htm</a>	Enviroschools Programme – a range of programmes, resources and activities for schools, teachers and students, Kaitiaki Reo tutor and experience working with Wharekura, a series of curriculum-linked teaching units, focusing on streams, rivers and the coast	✓✓
Waitakere City Council, <a href="http://www.waitakere.govt.nz">www.waitakere.govt.nz</a>	have produced an electronic resource on native fish and a te reo Māori DVD called <i>Ngā Kaitiaki o te Mauri</i>	✓✓
WAICARE <a href="http://www.waicare.org.nz">www.waicare.org.nz</a>	provide stream education and assessment resources and course outlines for secondary schools	
Environmental Monitoring & Action Project funded through MoE Learning Experiences Outside the Classroom (LEOC) <a href="http://www.emap.rsnz.org/resources.php">www.emap.rsnz.org/resources.php</a>	education resources, funding and support, links to more than 38 education resources, focus on water (hydrology), atmosphere, soil and biodiversity, highlights te reo Māori resources, emphasis on compatibility with secondary school curriculum	some
National Waterways Project contact Kathryn Hicks ( <a href="mailto:hicks.k@rsnz.govt.nz">hicks.k@rsnz.govt.nz</a> ) <a href="http://www.nwp.rsnz.org/content/resources_curriculum.htm">www.nwp.rsnz.org/content/resources_curriculum.htm</a>	collates/develops waterways resources for schools provides sample units of work, exemplars for delivery to Achievement Standards	
National Waterways Project – NWP Pollution Detective Multimedia Module <a href="http://www.nwp.rsnz.org/content/nwp_flash/index.htm">www.nwp.rsnz.org/content/nwp_flash/index.htm</a>	te reo Māori interactive activity to help students learn about pollution, also available in CD-ROM	✓✓
Aotearoa Cloud Chart <a href="http://www.emap.rsnz.org/pdf/GlobeCloudChartA4.pdf">www.emap.rsnz.org/pdf/GlobeCloudChartA4.pdf</a>	poster to help students learn about cloud identification	✓



Traditional Māori Weather & Climate Forecasting <a href="http://www.niwa.science.co.nz/pubs/posters/maori_climate.pdf/view_pdf">www.niwa.science.co.nz/pubs/posters/maori_climate.pdf/view_pdf</a>	poster	some
GLOBE <a href="http://gpdi.globe.gov/trainingmaterials.htm">http://gpdi.globe.gov/trainingmaterials.htm</a>	online cloud activities, resources and professional development for teachers	
Take Action for Water <a href="http://www.gw.govt.nz">www.gw.govt.nz</a>	an educational programme on protection of the water and environment, can be delivered in te reo Māori, comes with a wide range of education resources for teachers and students, eg Take Action for Water Bug Card, Stream Health Report Card, Wetland Worksheet	✓✓
University of Waikato, available through <a href="http://www.emap.rsnz.org/resources.php">www.emap.rsnz.org/resources.php</a>	NCEA curriculum checklists for waterways and biodiversity resources	
NZ Association for Environmental Education, <a href="http://www.nzaee.org.nz">www.nzaee.org.nz</a>	workshops, forms, resources and regional coordinators	
Wild About New Zealand <a href="http://www.wildaboutnz.co.nz/main/site/home.html">www.wildaboutnz.co.nz/main/site/home.html</a>	a hands-on biodiversity investigations and action programme about protection of wildlife, website contains links to a range of resources for primary and secondary schools	
Up the Creek <a href="http://www.biodiversity.govt.nz">www.biodiversity.govt.nz</a>	an interactive website to help tamariki learn how fresh water supports life, te reo Māori portal	✓✓
The Whitebait Connection, Ngā Maunga ki te Moana Conservation Trust <a href="http://www.whitebaitconnection.co.nz">www.whitebaitconnection.co.nz</a>	an action-based environmental education programme for protection of streams and rivers, provide workshops, teaching resources	some
Fish and Game NZ, <a href="http://www.fishandgame.org.nz">www.fishandgame.org.nz</a>	a range of education resources and packages	
<a href="http://www.tuitime.org.nz">www.tuitime.org.nz</a>	an interactive nature adventure for teachers and children, developed by NZ Ecological Society	
<a href="http://www.nzbirds.com/birds/birdsong.html">www.nzbirds.com/birds/birdsong.html</a>	picture/sounds of 10 native birds	
Natural History Unit Sound Archive, <a href="http://www.archivebirds.nz.webbase.net.nz/index.html">www.archivebirds.nz.webbase.net.nz/index.html</a>	birdsound albums and photogallery	
<a href="http://www.howstuffworks.com">www.howstuffworks.com</a>	a range of interactive resources	



Kiwi Conservation Club, <a href="http://www.kcc.org.nz">www.kcc.org.nz</a>	fact sheets and teaching resources on native birds, pests, ngahere	
Auckland Museum, <a href="http://www.aucklandmuseum.com">www.aucklandmuseum.com</a>	a wide range of education programmes, web exhibitions, workshops, student programmes, research services including a te reo Māori search engine, will develop specific programmes for kura/schools	✓✓
World Wildlife Fund – New Zealand <a href="http://www.wwf.org.nz">www.wwf.org.nz</a>	environmental education programmes for NZ children	
Te Kete Ipurangi, funded by MoE <a href="http://www.tki.org.nz">www.tki.org.nz</a>	Online learning centre, provides environmental education resources and professional development for schools and teachers, te reo Māori portal	✓✓
Moehau Environment Group in partnership with BNZ Save the Kiwi, Department of Conservation and Environment Waikato	Summer Holiday Programme for children and families in the Coromandel region, includes learning about forest streams, bush insects, pest management and tracking kiwi	

## 2. Ngā Rauemi i te Reo Māori

Author	Title	year
Rewa McConnell, Pat Hohepa	Te Waka a Aoraki, published by Te Tari Mātauranga	1989
Matahi Whakataka- Brightwell	Waka, published by Learning Media, accompanied by Teachers Notes, discusses traditional methods/techniques for double-hull canoe	1994
J. Tangaere	Ngā Kai Moana	1986
K. Westerskov & I. Hancock	Kitakita o Aotearoa	2000
K. Mahuika	Kei roto i te Moana	
Kanuka Grove	Te Moana – teaching resources	
Kahu Stirling et al	Moana	1993
Tawai te Rangi	Roimata Toroa	2000
Taitamariki Mihaere	He kai pikiniki i roto i te ngahere	1999
Henare Everitt	Takutai Moana – takutai o mataora, te rea, tutei tiro moana	1999



## Appendix Five

### NCEA matrices for achievement standards

- Accounting Matrix
- Agriculture & Horticulture Matrix
- Art History Matrix
- Biology Matrix
- Chemistry Matrix
- Classical Studies Matrix
- Dance Matrix
- Drama Matrix
- Economics Matrix
- English Matrix
- Geography Matrix
- Graphics Matrix
- Health Matrix
- History Matrix
- Home Economics Matrix
- Human Biology Matrix
- Information Management Matrix
- Languages Generic Matrix
- Latin Matrix
- Mathematics Matrix
- Media Studies matrix
- Music Matrix
- Physical Education Matrix
- Physics Matrix
- Science Matrix
- Social Studies Matrix
- Technology Matrix
- Te Reo Māori Matrix
- Te Reo Rangatira Matrix
- Visual Arts Matrix

## Appendix Six

Achievement Standards for Te Reo Māori & Te Reo Rangatira<sup>55</sup>

Level 1
Level 2
Level 3

<sup>55</sup> the grey standards are assessed internally and the yellow standards have external assessment



AS90131: Whakarongo i te reo o tōna ake ao (6)

AS90449: Whakarongo i te reo o tōna ao mōhio (4)

AS90542: Whakarongo i te reo o te ao whānui (4)

AS90132: Kōrero i te reo o tōna ake ao (6)

AS90440: Kōrero i te reo o tōna ao mōhio (6)

AS90543: Kōrero i te reo o te ao whānui (6)

AS90133: Pānui i te reo o tōna ake ao (6)

AS90441: Pānui i te reo o tōna ao mōhio (6)

AS90781: Pānui kia whai māramatanga i te reo o te ao whānui (3)

AS90134: Tuhituhi i te reo o tōna ake ao (6)

AS90770: Tuhituhi i te reo o tōna ao mōhio (6)

AS90784: Pānui kia wetewete i te reo o te ao whānui (3)

AS90757: Hanga tuhinga i te reo o tōna ao mōhio (4)

AS90782: Whakaoti tuhinga ōkawa i te reo o te ao whānui (4)

AS90783: Hanga tuhinga auaha i te reo o te ao whānui (4)

- AS90135: Whakarongo i ngā horopaki huhua noa (4)  
AS90442: Whakarongo ki te reo whaikupu (3)  
AS90536: Whakarongo ki ngā kōrero uaua (3)
- AS90136: Kōrero i ngā horopaki huhua noa (4)  
AS90443: Rangahau, whakarite me te whakaputa whaikōrero
- AS90537: Matapaki i te kaupapa e taunga ana (3)
- AS90137: Pānui i ngā horopaki huhua noa (4)  
AS90751: Whakaputa i te kōrero tene (2)  
AS90537: Kaupapa kōrero kāore e taunga ana (3)
- AS90138: Tuhituhi i ngā horopaki huhua noa (4)  
AS90752: Pānui i te reo tawhito (4)
- AS90538: Pānui i te reo e taunga ana (3)
- AS90139: Mātakitaki i ngā horopaki huhua noa (4)  
AS90753: Pānui i te reo hou (3)
- AS90538: Pānui i te reo kāore e taunga ana (3)
- AS90140: Whakaatu i ngā horopaki huhua noa (4)  
AS90754: Whakaputa i te tuhinga (4)  
AS90539: Tuhituhi kōrero (3)
- AS90755: Titotito i te kōrero whakangahau (3)  
AS90539: He tuhinga rangahau (3)
- AS90756: Mātakitaki me te hanga i te whakaaturanga (3)  
AS90541: Te Reo Ataata (?)



## Appendix Seven

### Fields on the National Qualifications Framework

Field	Sub-fields
Agriculture, Forestry & Fisheries	Agriculture, Animal Care & Handling, Equine, Forestry, Horticulture, Pest Management, Pork Production, Poultry Production, Rural Contracting, Seafood, Sports Turf, Wool Harvesting
Arts & Crafts	Dance, Drama, Electronic Media, Film & Television, Graphic Arts, Music, Performance Production, Performing Arts General, Photographic Imaging, Photography, Visual Arts
Business	Accounting, Business Administration, Financial Management, Information Management, Insurance, Management, Marketing, Not-for-Profit Systems & Structures, Office Systems, Public Sector Services
Community & Social Services	Career Practice, Civil Defence, Community & Workplace Fire & Emergency Management, Community Recreation, Community Support, Diving, Fire & Rescue Services, Fitness, Human Services, Journalism, Outdoor Recreation, Snowsport, Social Services, Specialist Rescue, Sport
Computing & Information Technology	Computing
Core Generic	Core Generic, Supported Learning
Education	Adult Education & Training, Adult Literacy Education, Early Childhood Education & Care, Educational Administration, Generic Education & Training, Pacific Islands Early Childhood Education, Special Education, Teacher Education
Engineering & Technology	Aeronautical Engineering, Blaster Coating, Civil Engineering, Extractive Industries, Gas Industry, Highway Construction and Maintenance, Industrial Measurement & Control, Mechanical Engineering, Motor Industry, Pavement Surfacing, Petrochemical Industry, Technology, Telecommunications, Water Industry
Health	Dental Support, Emergency Services, Health Studies, Mental Health, Natural & Traditional Health & Healing, Occupational Health & Safety, Pharmacy, Public Health
Humanities	Christian Ministries, Christian Studies, Christian Theology, Communication Skills, English, Health & Physical Education, Languages, Pacific Studies, Religious Studies, Sports Education
Law & Security	Biosecurity, Compliance & Law Enforcement, Offender Management, Police, Security



Manufacturing	Boating Industries, Cablemaking, Clothing Manufacture, Dairy Manufacture, Energy & Chemical Plant, Food & Related Products Processing, Footwear & Leather Trades, Furniture, Glass & Glazing, Industrial Machine Knitting, Joinery, Leather Manufacturing, Manufacturing Skills, Meat Inspection Services, Meat Processing, Outdoor Fabric Products, Paperboard Case Manufacturing, Plastics Processing Technology, Printing, Pulp & Paper Manufacturing, Solid Wood Manufacturing, Supply Chain Management, Textiles Manufacture, Wood Panels Manufacture, Wood Processing Technology
Māori	Funeral Services Māori, General Education Māori, Hauora, Mana Wahine, Māori Business & Management, Māori Education & Training, Māori Performing Arts, Ngā Mahi a te Rehia, Ngā Mahi a te Whare Pora, Reo Māori, Reo Māori Media, Seafood Māori, Te Mātauranga Māori me te Whakangungu, Tikanga, Tourism Māori, Whakairo, Whenua
Planning & Construction	Architecture, Construction, Construction Trades, Masonry, Painting & Decorating, Plumbing, Gasfitting and Drainlaying, Quantity Surveying, Surveying
Sciences	Environment, Home & Life Sciences, Mathematics, Science, Statistics & Probability
Service Sector	Aviation, Beauty Services, Call Centres, Cleaning & Caretaking, Commercial Road Transport, Cranes, Distribution, Driving, Funeral Services, Hospitality, Lifting Equipment, Logistics, Maritime, Property Consultation and Valuation, Rail Transport, Real Estate, Retail & Wholesale LAPSIN, Retail, Distribution & Sales, Service Sector Skills, Stevedoring & Ports Industry, Storekeeping & Warehousing LAPSING, Tourism, Transport Studies
Social Sciences	Anthropology, Economic Theory and Practice, Social Science Studies



## Appendix Eight

Kaitiakitanga themes – additional topics for study

Theme	Explanation
Re-introduction of species, eg kiwi, pateke, pingao, rata, kereru	involvement in preparation, release, monitoring, tracking, ongoing protection
Eradication of pests/weeds, eg possums, goats, stoats, rats, cats, magpies, pines, ginger, woolly nightshade etc	identification, preparation, implementation, of eradication and monitoring techniques
how to look after a beach	study and protection of eco-systems, birdlife, sand-dunes, kaimoana – impact of cars, motorbikes, boats, mussel farm debris, people – identification/implementation of protection and monitoring techniques, eg appointment of kaitiaki, planting pingao, pohutukawa
cleaning up the estuary	measuring health, monitoring quality/water flow and composition – protection against pollution
how to look after the awa	measuring and monitoring the health of our awa – pollution, water composition and quality, eco-systems, fish/animal/plant life, implementation of restoration and protection mechanisms
fresh-water systems	importance in life, cycles of depletion and replenishment - how to protect, nurture, safeguard
eating from the bush, rivers and sea eg flounders, eels, koura and pigs	traditional vs modern techniques on how to catch, clean, prepare for eating/cooking
takutai moana	what species live where?, ecosystem's habitat, food and life-cycles
rongoa	the healing properties of native flora and fauna, how to identify, prepare, use/apply
walking tracks	whakapapa and location
wāhi tapu	whakapapa and location
historical names – maunga, awa, boundaries, waahi tapu, places	whakapapa, location, names, kāwai tupuna
waka ama	as a structure for learning about the takutai moana - tides, winds, currents, navigation, resistance, speed, direction, movement
self-sufficiency	water/waste systems, alternative sources of power eg wind/solar, gardening, food production, building whare
building a whare – techniques and materials	raupo/nikau/ponga whare – design, harvesting, techniques, adobe/mud brick housing, creating building materials eg harakeke, plywood?
toxins in our environment	what are they? where are they? how to eliminate



## Appendix Nine

He Tipua Whakamaharatia: 3 methods for an interactive map-exploration

### Method 1: Menu-driven video clips

The first method will require use of a helicopter and professional level video camera, to record media for a menu-driven program which will allow users to experience a trip around the various mountains of Harataunga. The user could navigate through a variety of methods, such as simple point and click on buttons to load video, or at a more extravagant end of the scale, with the aid of an animated character, which would aid more in appeal to a younger audience. The videos could pause during or after running and display information about the selected region.

#### **Rough action plan:**

1. Map out scenic routes around significant points of Harataunga.
2. Hire a helicopter (such as from <http://www.heliflight.co.nz> or <http://www.helinz.co.nz/>) and record video of journey.
3. Digitally encode video and gather all information wanted included about the areas.
4. Using Flash or similar technology, create a menu-driven interface that will allow user to play video and access information about significant areas of the trips.

#### **Pros:**

- Depending on expense of helicopter/camera hire, could be the cheapest of options.
- Simple to use, less intimidating to older users than a full 3D interface.
- Would be faster to complete, possibly taking as little as six months.
- Will provide a more realistic image of the areas.
- Requires vastly less powerful computer to run smoothly, realistically able to run on all computers bought in the last 3 years.

#### **Cons:**

- Depending on precise cost of helicopter/camera hire, could be most expensive of options.
- Lacks visual appeal in comparison to option 2.
- Less interactivity.

#### **Approximate costs involved:**

- Development: \$1000
- Helicopter/Camera hire: \$5000-\$7000
- Digitising and media construction: \$500-\$1000
- Application development: \$3000-\$5000

**Approximate total:** \$15,000

**Approximate timespan:** 5-6 months

### Method 2: 3-Dimensional exploration



The second method will likely be more time consuming to produce, but will give the user a far greater sense of immersion and possibly provide a more attractive application for the younger audience that this will most likely be aimed at. However, due to the fledgling nature of New Zealand's digital media industry, expertise required to create a 3D world could come at quite a large premium.

The basic premise behind this method is that the users will be able to navigate a three dimensional representation of the Harataunga bay in the form of a spirit (atua?) and upon arrival to significant areas of the environment the user will be prompted with information about the location. The most likely factor against this method is the need for a comparatively fast computer to run the three-dimensional area, possibly requiring the purchase of new hardware for schools and other organisations.

**Rough Action Plan:**

- Obtain satellite photos/reference photos for all areas that are to be included.
- Devise clear and concise design for interface and mechanics of application.
- Using the New Zealand Game Developers list, choose a developer that best suits the nature of the project/project budget.
- Work with the developers to create the application, possibly through a liason.

**Pros:**

- Could have vastly more visual appeal than options 1 or 3.
- Would provide a superior degree of immersion, making the product more attractive to youth used to video games.
- Allows for more interactive environment.

**Cons:**

- Longest production time.
- Higher production costs.
- Will require superior computers than either options 1 or 3.
- Potentially more intimidating to an older audience than other methods.

**Approximate costs:**

- Construction of specifications: \$1000-5000
- Development of application: \$10,000-\$25,000

**Approximate total:** \$30,000

**Approximate timespan:** 8-9 months

**Method 3: HTML-based or web-distributed**

The final option is a simple HTML-based program. One of the tangatawhenua would take a photographer out and take a number of photos of the maunga, which would compromise the media segment of the application - possibly augmented by videos of walks along the bush-paths or some other video element. Users would navigate the application by links or buttons, which would provide information about



different areas and provide media about the location.

While this may sound unexciting in comparison to the other options, HTML is a versatile medium, and is capable of providing an elegant solution at a fraction of the cost, and could be developed in two or three months. A preview, or low-bandwidth version with no videos and lower-quality images could be hosted online for easy access anywhere.

**Rough Action Plan:**

- Gather all media to be included - take high-quality photos and videos of areas to be included in the application, filming bushwalks to be played in the background or in windows and write up all text.
- Design and construct HTML pages.

**Pros:**

- Cheapest of all methods.
- Requires least amount of time to develop
- Could be easily altered to suit different audiences.
- Versions could be hosted online to provide previews for interested parties.

**Cons:**

- Less visually appealing, potentially the least appealing.
- Much less stimulating for the younger audience least interactive of options.

**Approximate cost involved:**

- Photographer: \$500-\$1000
- Videowork: \$500-\$1000
- Web design: \$1000-\$2000

**Approximate total:** \$4000-\$5000

**Approximate timespan:** 3-4 months

**Design Budget:**

It should be noted that all options require a further design budget of \$1000, for creation of packaging and advertising, possibly under the guidance of the firm contracted to design the application itself, or in the case of option 3, an outside firm would be recommended.



## Appendix Ten

### Funding Organisations

Organisation	Purpose of fund
<p>Ministry of Education</p> <p>Sustainable Management Fund  <a href="http://www.mfe.govt.nz/withyoufunding">www.mfe.govt.nz/withyoufunding</a></p> <p>Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme  <a href="http://www.biodiversity.govt.nz/land/nzbs/tfbis/tfbis/index.html">www.biodiversity.govt.nz/land/nzbs/tfbis/tfbis/index.html</a></p>	<p>keen to purchase assessment materials, current tender for LEOC resources, \$7M earmarked for Māori environment resources</p> <p>fund projects that contribute to freshwater management and communities making a difference</p> <p>fund to increase awareness of and access to data and information about terrestrial freshwater biodiversity, eg ecological surveys</p>
<p>Mātauranga Kura Taiao Fund</p> <p>Robert McGowan, 0800 112 772,  <a href="mailto:rmcgowan@doc.govt.nz">rmcgowan@doc.govt.nz</a>  <a href="http://www.doc.govt.nz/templates/page.aspx?id=39021">www.doc.govt.nz/templates/page.aspx?id=39021</a></p>	<p>for hapū/iwi initiatives to retain/promote traditional Māori knowledge and its use in biodiversity management, ie research - no closing date, initial seeding grants available</p>
<p>Māori Potential Funding  <a href="http://www.tpk.govt.nz">www.tpk.govt.nz</a></p> <p>Royal Society of NZ, a range of funding opportunities – Kiwi Advanced Research &amp; Education Network  <a href="http://www.rsnz.org/funding">www.rsnz.org/funding</a></p>	<p>funding for projects that help community groups to develop themselves</p> <p>a range of funding opportunities, eg Kiwi Advanced Research &amp; Education, Mapping fund, Marsden Fund, Skinner fund (for Māori/Polynesian research), Sir Peter Blake Environmental Educator Award (for teacher release)</p>
<p>Foundation for Research, Science &amp; Technology  <a href="http://www.frst.govt.nz">www.frst.govt.nz</a></p>	<p>funding through various portfolios, eg Environmental Research Fund, Māori Knowledge &amp; Development Fund - Te Tipu o te Wānanga, eg Kaitiakitanga and Environment Protection, Resilient Infrastructure &amp; Communities</p>
<p>Community Development Scheme  <a href="http://www.dia.govt.nz">www.dia.govt.nz</a></p>	<p>will fund school based education initiatives that have positive outcomes for the community, eg Kaipara College building Whare Nikau, cultural awareness</p>