# TE ARA WHĀNUI O RANGITĀIKI
# PATHWAYS OF THE RANGITĀIKI

River document
February 2015

Just as everything in the universe takes a journey, the pathways taken – Te Ara Whānui – are reflected in the Rangitāiki River catchment.

The water, land, animals, plants and people each forge their own journey along many different pathways, united within the Rangitāiki.

February 2015
**www.rangitaiki.org.nz**

Prepared by the Rangitāiki River Forum
Published by Bay of Plenty Regional Council
5 Quay Street, Whakatāne
New Zealand

# Foreword – The future of the Rangitāiki

Ko te wai te oranga o ngā mea katoa - Water is the life giver of all things

For the iwi, hapū and whānau of the Rangitāiki River and its tributaries, the health and wellbeing of the Rangitāiki River and its resources is intimately connected with the health and wellbeing of the people.

The waters of the Rangitāiki have, since time immemorial, sustained those living within its catchment, and the importance of the river continues today in environmental, cultural, social/recreational and economic terms. The health and wellbeing of the Rangitāiki River and its resources was a matter of fundamental concern to both Ngāti Whare and Ngāti Manawa in the negotiation of their Treaty settlements with the Crown.

This saw the establishment, through the Ngāti Whare Claims Settlement Act 2012 and the Ngāti Manawa Claims Settlement Act 2012, of the Rangitāiki River Forum with the purpose of protecting and enhancing the environmental, cultural, and spiritual health and wellbeing of the Rangitāiki River and its resources for the benefit of present and future generations.

The Rangitāiki River Forum comprises representatives of the iwi of the Rangitāiki River (presently, Ngāti Manawa, Ngāti Whare, Ngāti Awa and Ngāti Tūwharetoa (BOP)), the Whakatāne District Council and the Bay of Plenty Regional Council. Provision is also made for other iwi with recognised interests in the Rangitāiki catchment to join the Forum at a future point.

The Forum's role includes, importantly, the promotion of the integrated and coordinated management of the Rangitāiki River and the development of the Rangitāiki River Document including a vision, objectives and desired outcomes for the Rangitāiki River.

For the past two years the Rangitāiki River Forum has been working on the Rangitāiki River Document in consultation with both stakeholders and other interested groups and the public. The publication of this Document - Te Ara Whānui o Rangitāiki - represents the culmination of that work and is intended to assist all decision-makers and other persons with an interest in the Rangitāiki River and its catchment in identifying issues and advancing collective strategies and actions in relation to the present and future health and wellbeing of the Rangitāiki River.

It is therefore with great pleasure that I, on behalf of the Rangitāiki River Forum, release the inaugural Rangitāiki River Document: Te Ara Whānui o Rangitāiki – Pathways of the Rangitāiki.

E taura whiri kotahi mai anō te kopunga tae noa ki te pu au - From the source to the mouth of the sea, all things are joined together as one.

D.S. Carson

Bronco Carson
(Former) Chairman, Rangitāiki River Forum

*Former Chairman*
*Bronco Carson*

*Existing Chair*
*Maramena Vercoe*

# Wawata

## What is our vision?

A healthy Rangitāiki River, valued by the community, protected for future generations. Tihei Mauri Ora.

E ora ana te mauri o te awa o Rangitāiki, e manaakitia ana e te iwi, e tiakina ana mō ngā whakatipuranga o muri mai. Tihei Mauri Ora.

### Mauri

Mauri of the water is protected.

### He Taiao

We want bountiful rivers that people cherish, where native habitats and customary harvesting practices sustain people, and where native species including whitebait and tuna (eels) abound.

# Contents



## He Tangata

A balanced, connected and respectful relationship with the rivers and resources which will be the foundation for resilient, sustainable and thriving communities in the Rangitāiki.

## He Awa

We want a clean and healthy environment characterised by clean water, healthy ecosystems and the return of some threatened species. We want to see people use and enjoy this environment for their spiritual, cultural and recreational needs, and to celebrate its heritage with pride.

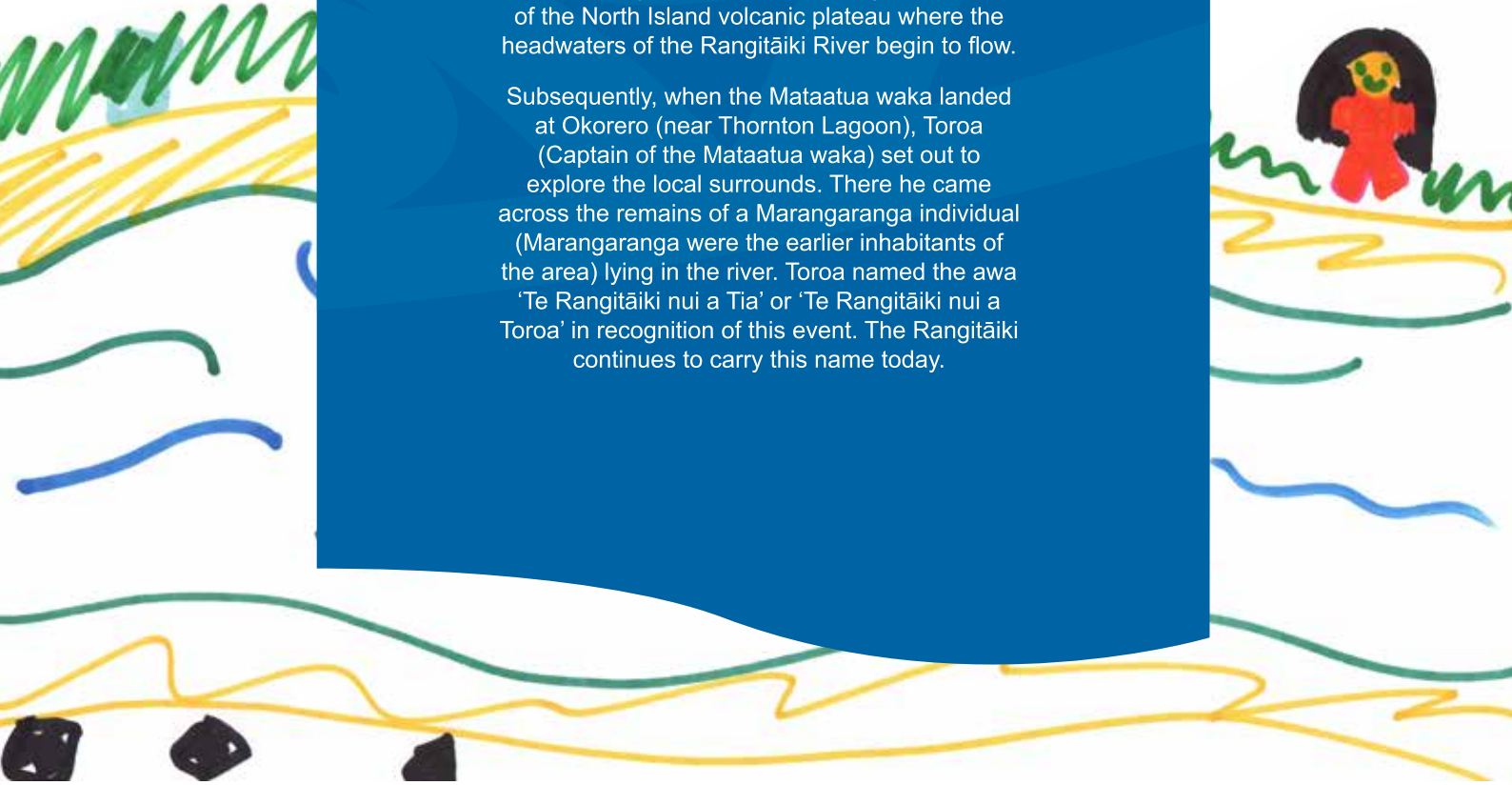
## Rangitāiki te awa

For the many hapū and iwi who belong to the Rangitāiki River, it is regarded as a tipuna, a giver of life that sustains the mauri of all within its embrace. The Rangitāiki provides an eternal link between the past, present and future generations. They each have their own story to share and are united by their collective association with the Rangitāiki through time immemorial.

The following accounts about the origins of the Rangitāiki were given by two kaumātua of Ngāti Awa and illustrate the richness and diversity of korero-a-iwi (traditional cultural history) pertaining to the awa.

The original name of the Rangitāiki is 'Te Waikoropupu o Kaimanawa'. The name originates from ancient times when the maunga (mountains) of the central North Island were at war with one another. One of the battles fought was for the honour of Ngaruahoe and Pihanga. Tongariro (the reigning champion) and Kaimanawa became embattled and fought ferociously. In the end Kaimanawa was defeated and Tongariro emerged as the victor. Kaimanawa, however, was noted to have put up a strong defence and the energy and perspiration expended during the battle became known as 'Te Waikoropupu o Kaimanawa' in recognition of this. Today, the Kaimanawa ranges form part of the North Island volcanic plateau where the headwaters of the Rangitāiki River begin to flow.

Subsequently, when the Mataatua waka landed at Okorero (near Thornton Lagoon), Toroa (Captain of the Mataatua waka) set out to explore the local surrounds. There he came across the remains of a Marangaranga individual (Marangaranga were the earlier inhabitants of the area) lying in the river. Toroa named the awa 'Te Rangitāiki nui a Tia' or 'Te Rangitāiki nui a Toroa' in recognition of this event. The Rangitāiki continues to carry this name today.



*Artwork by Sasha Knight, age 9, Thornton School.*

# Partnership in practice - Co-governance

For generations, the Rangitāiki River and its tributaries, including the Whirinaki, Wheao and Horomanga rivers, have played an important role in the lives of the many Bay of Plenty hapū and iwi who live alongside them.

It is a taonga, a significant cultural treasure to be shared and protected by all. As kaitiaki, hapū and iwi traditionally carried the responsibility of ensuring the health and wellbeing of the Rangitāiki River and its resources, for the benefit of present and future generations.

Crown control of the Rangitāiki River and its tributaries from the late 19th century compromised that relationship and undermined the ability of hapū and iwi to fully effect their traditional kaitiaki role. Specifically, the Rangitāiki River and its tributaries have been affected by the construction of the Matahina, Aniwhenua and Wheao power schemes. The dams have assisted New Zealand's economic growth, but at the cost of a decline in the health of the rivers. The eel fisheries and other resources that hapū and iwi rely on for cultural and physical sustenance have been severely affected.

Concern about the poor state of the Rangitāiki River and growing discontent with existing management regimes gave rise to a call by iwi for a greater role in the management of the Rangitāiki River. These concerns formed a platform for discussion between the Crown, Ngāti Manawa and Ngāti Whare as part of their respective Treaty settlement negotiations. Subsequently, the Rangitāiki River Forum (the Forum) was jointly established as a co-governance forum by the Ngāti Whare and the Ngāti Manawa settlement legislation in May 2012.

The Forum represents a partnership between Māori and the Crown. It comprises equal representation from each of the iwi – Ngāti Whare, Ngāti Manawa, Ngāti Awa, Ngāti Tūwharetoa (BoP) – that collectively claim mana whenua in the Rangitāiki catchment, and from local authorities (Bay of Plenty Regional Council and Whakatāne District Council). It provides a vehicle for participation of iwi in the governance of the Rangitāiki catchment through measures including the recognition of this document in resource and conservation management planning.

**From left:**
*Maramena Vercoe, (RRF Chair) General Manager, Te Rūnanga o Ngāti Manawa, Kataraina Belshaw, Strategic Engagement Manager BOPRC; Te Waiti Rangiwai, Operations Manager, Te Rūnanga o Ngāti Whare; Bronco Carson (former Forum Chair) Chairman, Te Rūnanga o Ngāti Whare; Sue Cubbon, BOPRC; Herewini Simpson, Senior Advisor (Treaty), BOPRC, Mayor Tony Bonne, Whakatāne District Council.*

**Absent:**
*Daryl Christie (Te Rūnanga or Ngāti Whare), Miro Araroa, (Te Rūnanga o Ngāti Awa), Shaneen Simpson-Almond (Tūwharetoa (BOP) Settlement Trust), and our three Councillors Tiipene, Councillor Bruning and Councillor Holmes.*

The purpose of the Forum is *to protect and enhance the environmental, cultural and spiritual health and wellbeing of the Rangitāiki River and its resources for the benefit of present and future generations.*

The Forum connects the partner agencies and guides how they will manage the Rangitāiki River catchment together. Bay of Plenty Regional Council, Whakatāne District Council, Taupō District Council and the Department of Conservation will use this document to guide their resource and conservation management activities in the catchment.

# Te kaupapa o tēnei rautaki
## About this document

The Rangitāiki is the longest river in the Bay of Plenty. It begins near the centre of the North Island and flows out to sea at Okorero (Thornton).

This river catchment is formed by a large number of tributaries including the Whirinaki, Wheao and Horomanga rivers. The Rangitāiki River and its tributaries provide a resource for all people of the region. In this way, it is considered by many people as a taonga. The river is also an important economic resource used by industries including hydroelectricity generation, agriculture, horticulture, forestry and tourism.

The Forum is a statutory body based on co-governance, with parties working together to achieve better outcomes. The Forum has prepared Te Ara Whānui o Rangitāiki – Pathways of the Rangitāiki (this document) to provide direction for work to improve the river's health and guide its future management. The Forum publicly consulted on a draft Rangitāiki River Document in 2014. The Forum listened to and considered submissions, and incorporated relevant contributions into this document. The Forum has considered the interests of those in the Rangitāiki catchment when preparing this document.

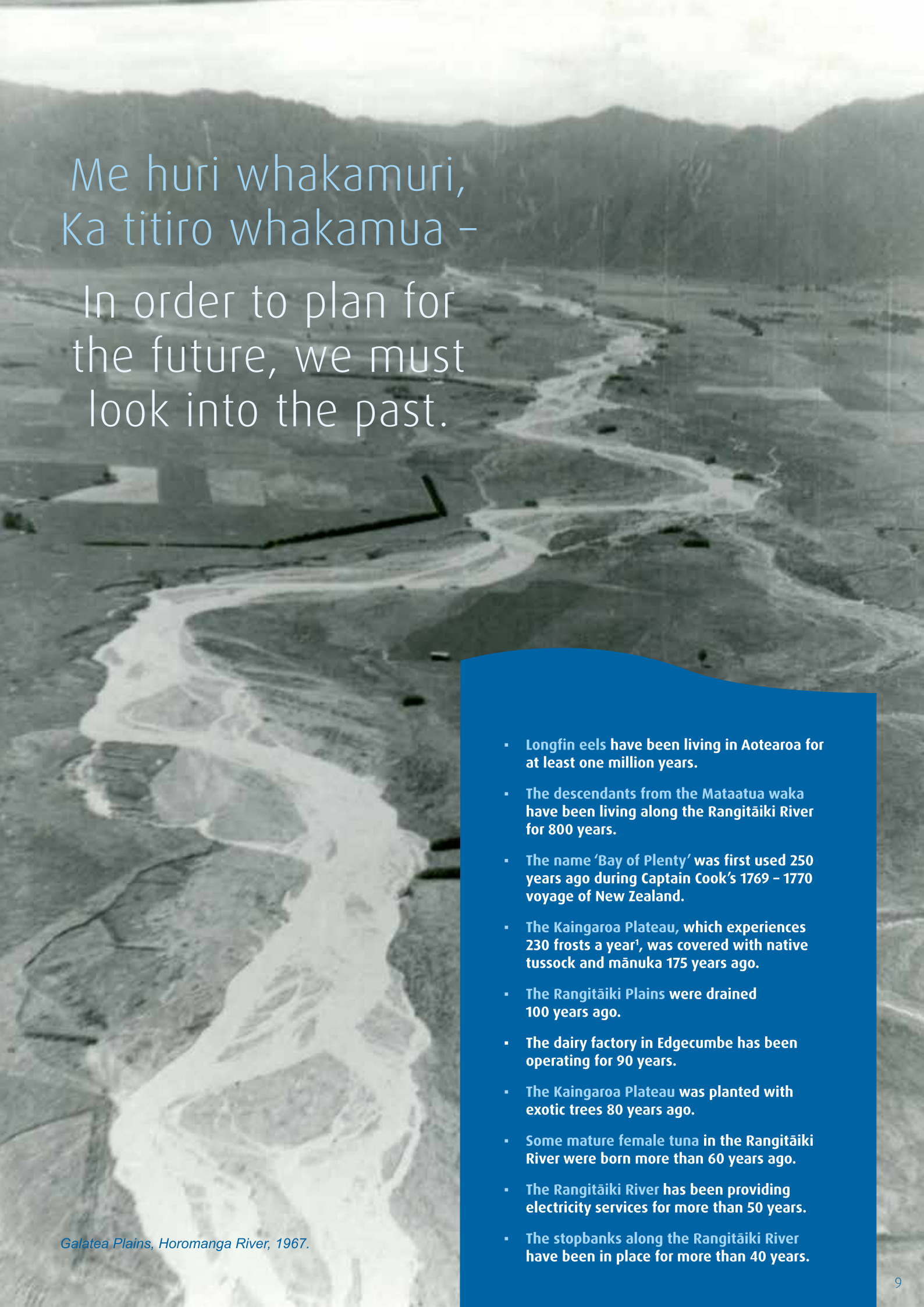
### Legislative context of this document

This document is required under the Ngāti Whare Claims Settlement Act 2012 and Ngāti Manawa Claims Settlement Act 2012. This legislation describes how the vision, objectives, and desired outcomes contained in this document affect Resource Management Act 1991 planning documents and conservation planning documents. This document does not contain rules, but provides pathways toward a future Rangitāiki River.

In the legislation, the Rangitāiki River means the Rangitāiki River and its catchment, including:

- The Rangitāiki River
- The Whirinaki River
- The Wheao River
- The Horomanga River.

The legislation requires all persons exercising functions and powers under the Resource Management Act 1991 that affect the Rangitāiki River to have particular regard to the habitat of tuna (anguilla dieffenbachia and anguilla australis) in the Rangitāiki River.



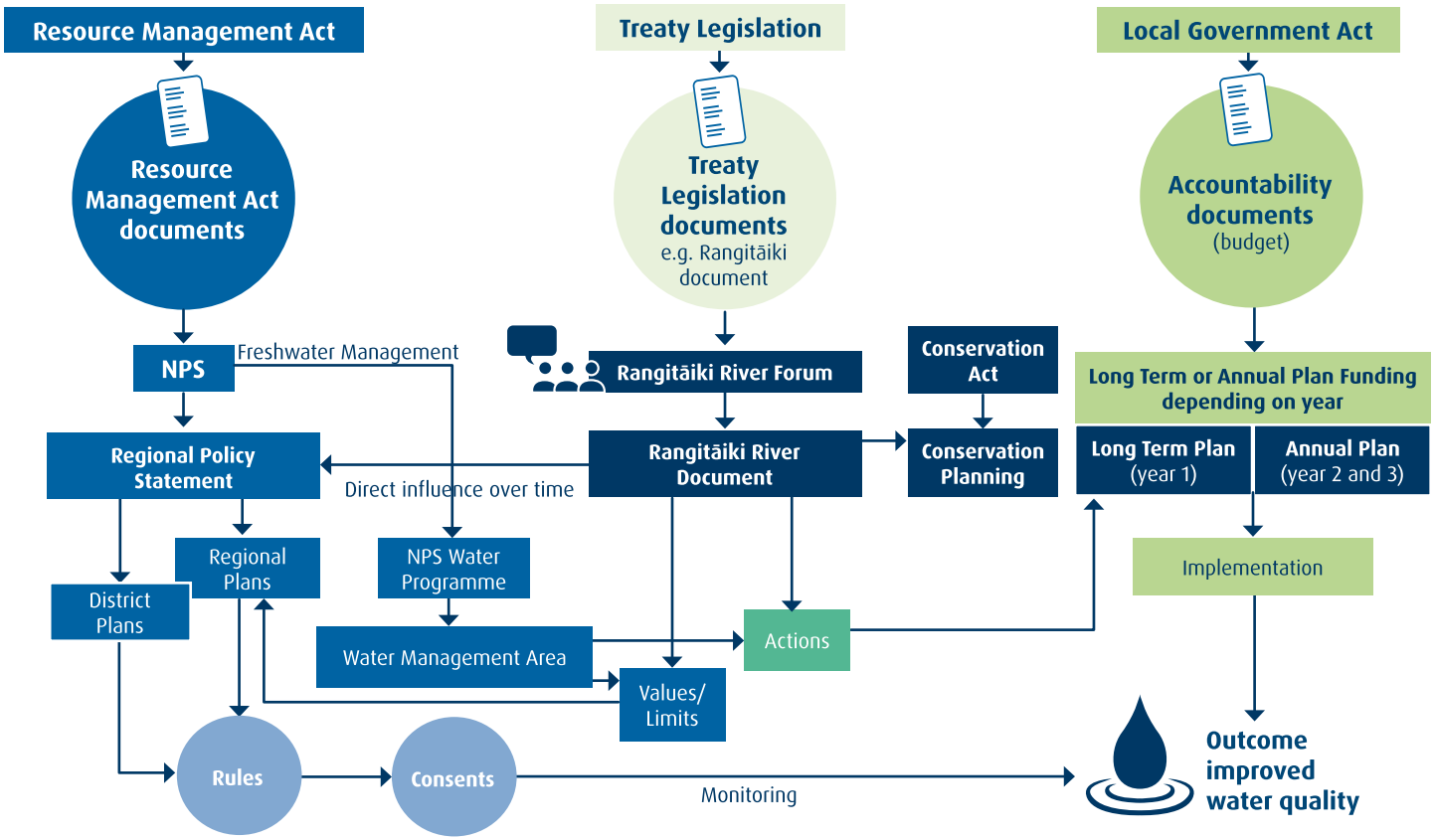
# Me huri whakamuri, Ka titiro whakamua –

## In order to plan for the future, we must look into the past.

- **Longfin eels have been living in Aotearoa for at least one million years.**
- **The descendants from the Mataatua waka have been living along the Rangitāiki River for 800 years.**
- **The name 'Bay of Plenty' was first used 250 years ago during Captain Cook's 1769 – 1770 voyage of New Zealand.**
- **The Kaingaroa Plateau, which experiences 230 frosts a year[1], was covered with native tussock and mānuka 175 years ago.**
- **The Rangitāiki Plains were drained 100 years ago.**
- **The dairy factory in Edgecumbe has been operating for 90 years.**
- **The Kaingaroa Plateau was planted with exotic trees 80 years ago.**
- **Some mature female tuna in the Rangitāiki River were born more than 60 years ago.**
- **The Rangitāiki River has been providing electricity services for more than 50 years.**
- **The stopbanks along the Rangitāiki River have been in place for more than 40 years.**

*Galatea Plains, Horomanga River, 1967.*

## Rangitāiki River Document – Influence on policy and operations




*This document can influence a range of policy and operational activities. The above diagram shows an overview of some of the relationships Te Ara Whānui o Rangitaiki has with the work of local authorities and the Department of Conservation that points towards the outcome of improved water quality.*

## Ka pēhea te whakamahi i tēnei rautaki? How will this document be used?

The Forum acknowledges that it will take the whole community to deliver the vision for the Rangitāiki River. Implementing this document could take various paths. While this document reflects the Forum's aspirations for the Rangitāiki River, specific planning and regulatory documents (such as the Regional Policy Statement, Regional and District Plans) and organisation and community initiatives will be important for achieving its vision.

This document will be used by the Forum, partner agencies and the community as a guide for looking after the river. Importantly, the Bay of Plenty Regional Policy Statement must recognise and provide for the vision, desired outcomes and objectives contained within this document, to the extent that it relates to resource management issues.

How this document can influence policy and operations towards water quality outcomes is presented in the diagram above.

The Forum will work with partner agencies to take a practical and affordable approach to achieve its purpose. Funding for local government and iwi authority programmes, projects and assets is set through their long-term and annual financial plans. Some actions may be achieved through Forum and community submissions to local authority Annual Plans and Long-Term Plans, and through input into the processes and systems that govern development. Other projects may be delivered in partnership with research institutes.

The Forum anticipates that partners will use this document when:

- planning activities relating to the well-being of the Rangitāiki River
- reviewing delivery of work relating to the river and seeking potential for improvement
- looking for opportunities to collaborate while prioritising resources and effort.

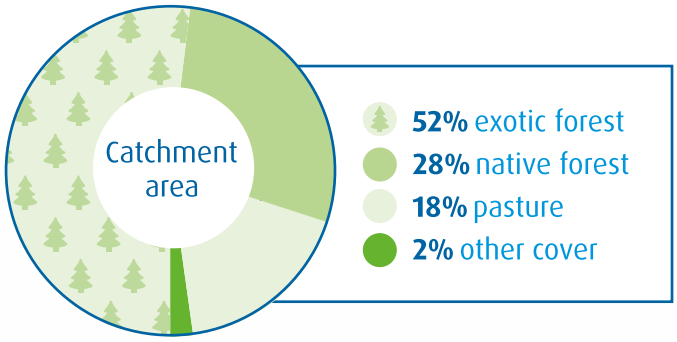
Progress on delivering the Forum's vision for the river, desired outcomes and objectives will be assessed annually and reported to partner agencies through the Rangitāiki River Forum.

# Rangitāiki me ōna takiwā
## Rangitāiki River Catchment

The Rangitāiki River catchment is

**2,987 km²**

(298,705 ha) and is made up of...




Rangitāiki headwaters begin near the Napier/ Taupo highway and run to the sea at Thornton.

**155 km**

The Rangitāiki River is the longest river in the Bay of Plenty

The river runs

**139 km**

from its source. It is

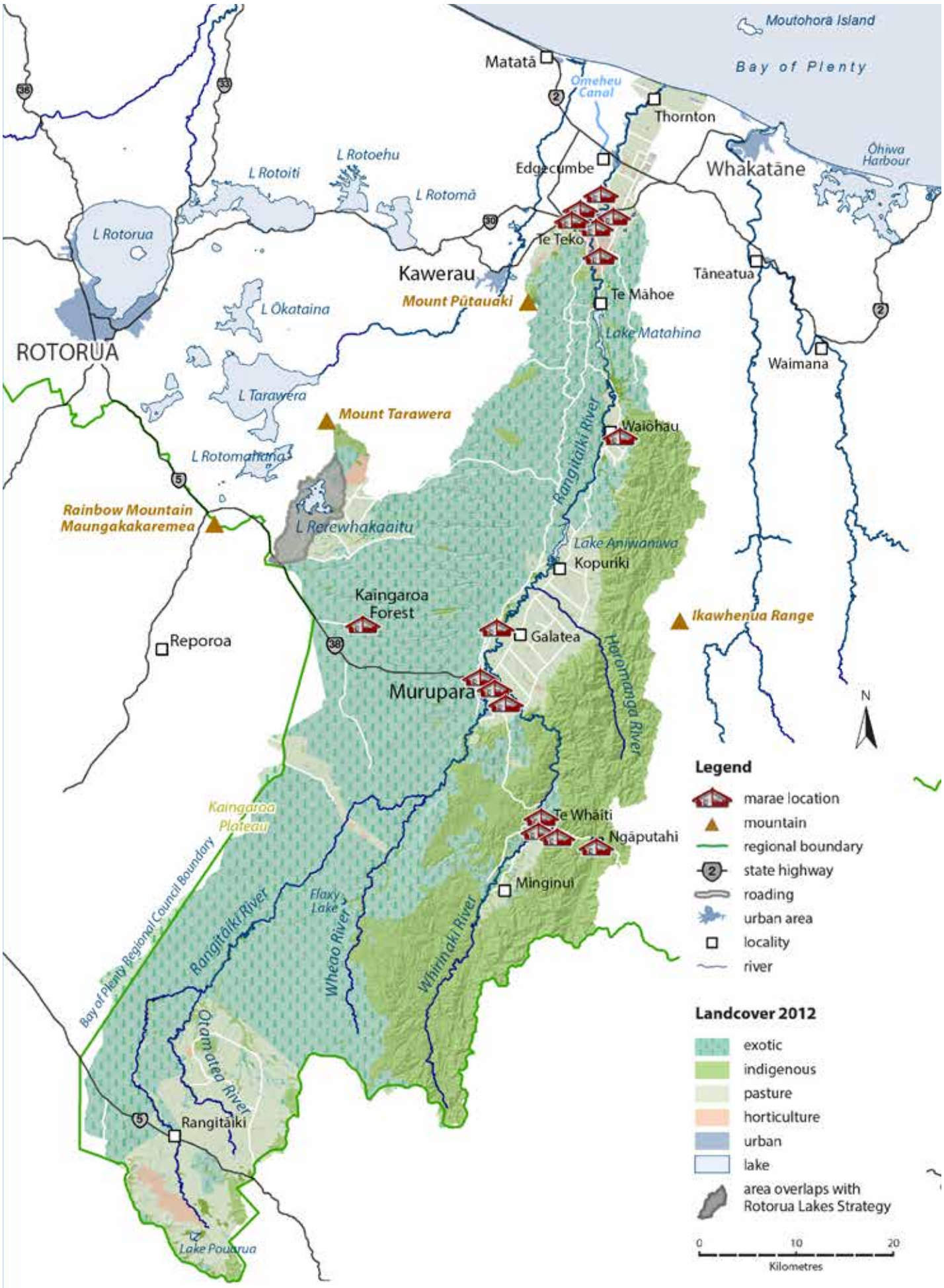
**740 m**

above sea level

**4,500 km**

of waterways in the catchment, including the Wheao, Whirinaki and Horomanga rivers

*The view of the Rangitāiki River between Lake Matahina and Āniwaniwa.*




# Rangitāiki River Catchment

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# Ngā iwi me ōna kōrero
## Traditional associations with the Rangitāiki River

Many people have a close relationship with the Rangitāiki catchment. Some of the traditional values have been recognised in legislation. These specific associations are summarised here.

### Ngāti Manawa

**Ko Tawhiuau te maunga**
**Ko Rangitāiki te awa**
**Ko Rangipo te wehenga o te tuna**
**Ko Ngāti Manawa te iwi**
**Ko Tangiharuru te tangata**

Ngāti Manawa[2] are the descendants of Apa-Hapai-Taketake and Tangiharuru, with whakapapa connections to each of the Tainui, Te Arawa and Mataatua waka. The name (Ngāti) Manawa is derived from the tipuna Manawatu Manawaoho

Tangiharuru (the eponymous ancestor of Ngāti Manawa) journeyed from the Waikato to the Bay of Plenty with his uncle Wharepakau. There they fought and defeated the Marangaranga, the original people of the Rangitāiki valley. Ngāti Manawa subsequently settled in this area and established many kāinga along the middle and upper reaches of the Rangitāiki River. They moved seasonally within their rohe to use the resources of the Kuhawaea plains to sustain their people. The Ngāti Manawa customary rohe is a vast geographical area bounded by the Ika Whenua ranges in the east, the Taupo/Napier highway to the south, the western edge of the Kaingaroa plains and the southern edge of Rerewhakaaitu to the north.

The Ngāti Manawa rohe encompasses the bed and waters of the upper Rangitāiki River, Ngāti Manawa's tipuna awa, and its tributaries, including the Wheao and Whirinaki Rivers. They are a living taonga that provided Ngāti Manawa with a valuable transport and trading route, and an eel fishery, which for generations has sustained the Ngati Manawa way of life and remains vital to their traditional economy. Other important tributaries for eels and fishing places were the Pokairoa, Kopuriki, Horomanga and Mangamate Rivers and Streams. Collectively, these waterways are taonga that are critical to Ngāti Manawa's spiritual sustenance and wellbeing.

The relationship of Ngāti Manawa, and their respect for the Rangitāiki River and its tributaries, gives rise to their responsibilities to protect the mana and mauri of the river and to exercise their mana whakahaere in accordance with their long-established tikanga. This lies at the heart of their spiritual and physical wellbeing, tribal identity and culture. According to Ngāti Manawa tikanga, the Rangitāiki River and its tributaries were part of the environment of successive generations of their ancestors and represent their link with the past and the future.

To Ngāti Manawa, the Rangitāiki River is a tipuna which has mana, and in turn represents the mana and mauri of Ngāti Manawa, as encapsulated in the waiata below:

E tere rā te awa Rangitāiki,
Ka tae koe ki te putahitanga ki Whirinaki,
Riporipo atu rā ki te Moana-nui-a-kiwa,
Tū tonu mai Tawhiuau i ngā tihi tapu,
Kei ngā taumata korero a ngā tipuna.
I reira tiro iho ai ki te Mania Kuhawaea,
Te nohanga o ngā uri a Ngāti Manawa.

## Ngāti Whare

**Ko Tuwatawata te maunga**
**Ko Whirinaki te awa**
**Ko Mataatua te waka**
**Ko Ngāti Whare te iwi**
**Ko Wharepakau te tangata**

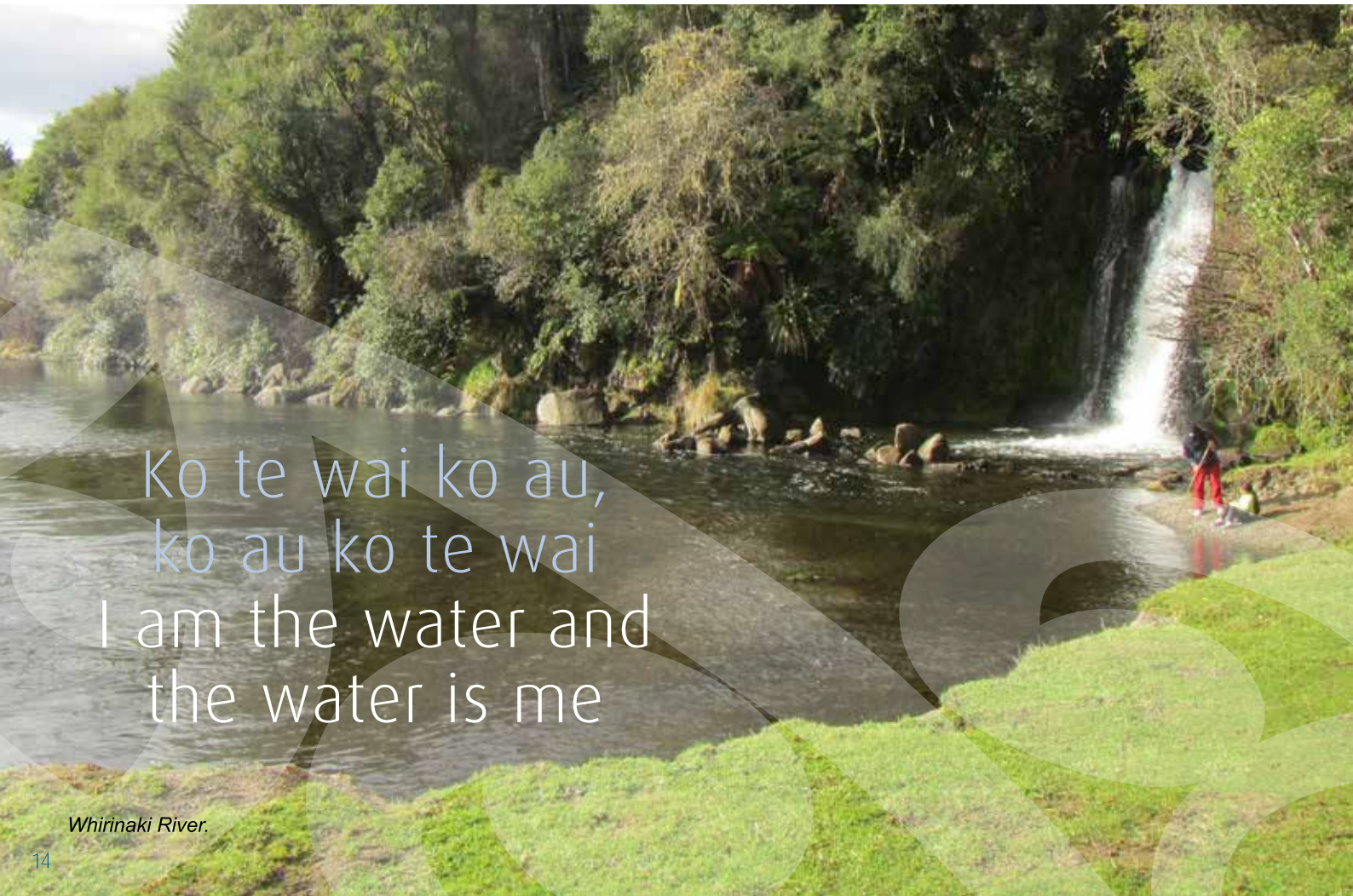
Ngāti Whare[3] are the descendants of Toi Te Huatahi. Ngāti Whare take their name from their most prominent ancestor, Wharepakau-Tao-Tao-Ki-Te-Kapua (Wharepakau) of the ancient Tini-o-Toi, who settled around the Bay of Plenty. After a series of heke, Wharepakau and his whānau migrated to the Rangitāiki and Te Whāiti-Nui-a-Toi area. Together Wharepakau and his nephew Tangiharuru fought and defeated Te Marangaranga, the original occupants of the land. When the fighting ceased, Wharepakau and his whānau took up residence with Te Marangaranga on lands along the Whirinaki River, bordered by a great expanse of ancient forest rich in resources. From that time, the descendants of Wharepakau and Te Marangaranga adopted the name 'Ngāti Whare' in recognition of their common ancestor[4].

The rohe (customary territory) of Ngāti Whare runs through the southwest Urewera and parts of the Kaingaroa region, including the area known as Te Whaiti-nui-a-Toi.

Ngāti Whare have continued their occupation of those lands from the time of Wharepakau through to today.

The hapū of Ngāti Whare established many papakāinga throughout the rohe and alongside the Wheao and Whirinaki rivers, which were a major resource and played a pivotal role in the prosperity of those communities. Ngā wai o te awa (the waters of the river) ensured a secure supply of kai including tuna, koura (freshwater crayfish) and kokopu (fish), and helped the surrounding environment to flourish, which in turn provided other food sources such as aruhe (fern root), pikopiko (fern fronds), puha, pekapeka (native bat) and kereru (wood pigeon).

The middle reaches of the Rangitāiki, Whirinaki and Wheao Rivers were a taonga over which Ngāti Whare and other iwi of Te Ika Whenua held mana and rangatiratanga. They were a vitally important food source and means of transport and communication, and essential for spiritual and cultural wellbeing. From the Te Ika Whenua perspective, the people belong to the rivers and the rivers belong to them. For Ngāti Whare, this relationship is embodied by the whakatauki - "Ko te wai ko au, ko au ko te wai - "I am the water and the water is me."




*Whirinaki River.*

*Rangitāiki River at Te Teko, circa 1920[6].*

## Ngāti Awa

**Ko Pūtauaki te maunga**
**Ko Rangitāiki te awa**
**Ko Ngāti Awa te iwi**

The traditions of Ngāti Awa[5] illustrate the cultural, historical, and spiritual association of Ngāti Awa to the Rangitāiki River. For Ngāti Awa, traditions associated with the river represent the links between the world of the gods and present generations. These histories reinforce tribal identity, connection, and continuity between generations and confirm the importance of the Rangitāiki River to Ngāti Awa.

The Rangitāiki River has been a treasured taonga and resource for Ngāti Awa. Traditionally, the Rangitāiki River and, in times past, the associated swamp area have been sources of food as well as communication waterways. Te Marangaranga was one group that held primacy during the pre-migration period.

They were principally located in the Rangitāiki valleys of Te Houhi and Te Whāiti. Upon the arrival of the waka Mataatua, this group inter-married with the new arrivals. In time, the Warahoe hapū of Ngāti Awa, also descendants of Te Marangaranga, occupied the lands along the Rangitāiki River. Warahoe was also the old name of the Ōrini Stream that connects the Rangitāiki and Whakatāne Rivers. The resources of the Rangitāiki River and swamp area were shared by the hapū of Ngāti Awa living in the area.

The Ngāti Awa hapū of Ngāti Pūkeko, Ngāti Hokopū and Te Patutātahi occupied the eastern bank of the Rangitāiki River. Te Pahipoto, Ngā Maihi and Te Patutātahi occupied the upper (southern) portion of the river around Te Teko. Te Tāwera, Ngāi Te Rangihouhiri II and Ngāti Hikakino occupied the western edge of the river. Te Patutātahi had a large grouping of hapū that included Ngāti Hinanoa, Ngāti Kama, Ngāti Hina, Ngai Tāpiki and Te Whānau a Taiwhakaea II. This group occupied the important central reaches of the Rangitāiki River. Te Patutātahi are today known as Ngāi Taiwhakaea II. The Rangitāiki River was an essential resource and taonga for those hapū communities from the Ngātamawahine, Pōkairoa, Pāhekeheke and Waikōwhewhe Streams to the original outlet of the river at Mātata, where it once converged with the Tarawera River.

A number of settlements were established by the hapū of Ngāti Awa along the Rangitāiki River. Such settlements highlight the connections of Ngāti Awa with the Rangitāiki River and their occupation of the river's catchment. One such settlement was Te Pūtere, located on the coast between the Tarawera and Rangitāiki Rivers. Te Pūtere was a block of land slightly higher than the surrounding swamp area, originally inhabited by Ngāti Patuwai and later Te Patutātahi, Te Pahipoto and Te Patuwai. Inland hapū used Te Pūtere as a fishing nohoanga (place), allowing them access to the resources of the lower reaches of the Rangitāiki River and the sea.

Further inland along the Rangitāiki River were the Ngāti Awa settlements of Te Kupenga and Te Teko, which remains one of the principal Ngāti Awa settlements along the river. Kōkōhinau Marae is another important Ngāti Awa settlement located in the Te Teko area along the bank of the Rangitāiki River.

Te Pahipoto are the hapū of Kōkōhinau. Ngā Maihi, Ngāti Tamawera and Ngai Tamaoki also had villages along the river. Ngāti Hāmua also have their kāinga and marae on the banks of the Rangitāiki River. Ōtipa Pā, occupied at different times by Ngā Maihi, Warahoe and Ngāti Hāmua, is another Ngāti Awa kāinga located along the Rangitāiki River.

The Rangitāiki River provided the hapū of Ngāti Awa, particularly people living in pā along the river, with abundant food and material resources. Water from the river was used by Ngāti Awa to irrigate crops along the riverbanks. Flax and raupō grew well along the river and, in times past, in the swamp ground. These provided materials for clothing, building and trade for the Ngāti Awa hapū. Fish, eels and birds were also in plentiful supply. The Rangitāiki River provided the Ngāti Awa hapū with food, trade and building materials and allowed easy internal movement for the hapū of Ngāti Awa from one end of the rohe to the other. It provided refuge in times of danger.

The tipuna of Ngāti Awa had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga. Their knowledge of the resources of the Rangitāiki River, the relationship of people with the river and their dependence on it, and tikanga ensured the proper and sustainable utilisation of resources. All of these values remain important to the people of Ngāti Awa. Today, many Ngāti Awa descendants continue to live alongside the Rangitāiki River and play an active role in its care through Te Rūnanga Ngāti Awa at a broad level and at a local level, through their hapū directly or other local entities such as the Rangitāiki Hapū Coalition.

The Rangitāiki River has always been an integral part of the social, spiritual, and physical lifestyle of the Ngāti Awa people.

All elements of the natural environment possess a life force and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāti Awa whānui to the Rangitāiki River.

The Rangitāiki River has always been an integral part of the social, spiritual, and physical lifestyle of the Ngāti Awa people.

## Ngāti Tuwharetoa (Bay of Plenty)

### A great river, like a full tide.

The Rangitāiki River was the traditional eastern boundary of Ngāti Tuwharetoa (Bay of Plenty)[7]. The river has changed course a number of times. Once it flowed through the great swamps that formerly existed in the area. Vegetation along the river was raupō, flax and rushes with mānuka and tī kōuka (cabbage trees) on the higher ground.

Ngāti Tuwharetoa (Bay of Plenty) people relied on the Rangitāiki River for food, in particular eels, fish and birds. The higher ground along the river banks provided places for cultivating kūmara (sweet potato) and rīwai (potato). They also gathered many resources from the river. Raupō, which was plentiful, was gathered for the thatching of houses. Flax was used for weaving and making ropes. There was also a specific area on the riverbank that was set aside for the dyeing of flax. Tī whanake (cabbage tree) leaves were used for cooking baskets as they did not deteriorate in the boiling water pools that the people used for cooking.

Along the river, Ngāti Tuwharetoa (Bay of Plenty) people made use of the geothermal resources. Sulphur was burned for long periods in sleeping houses to control mites and bugs. A small amount combined with wild honey was taken as rongoā (medicine). It was also rubbed into hakihaki (sores). Children with hakihaki were made to sit or lie covered in warm mud for half an hour or more as a cure. Hot pools along the river were used for bathing and general hygiene.

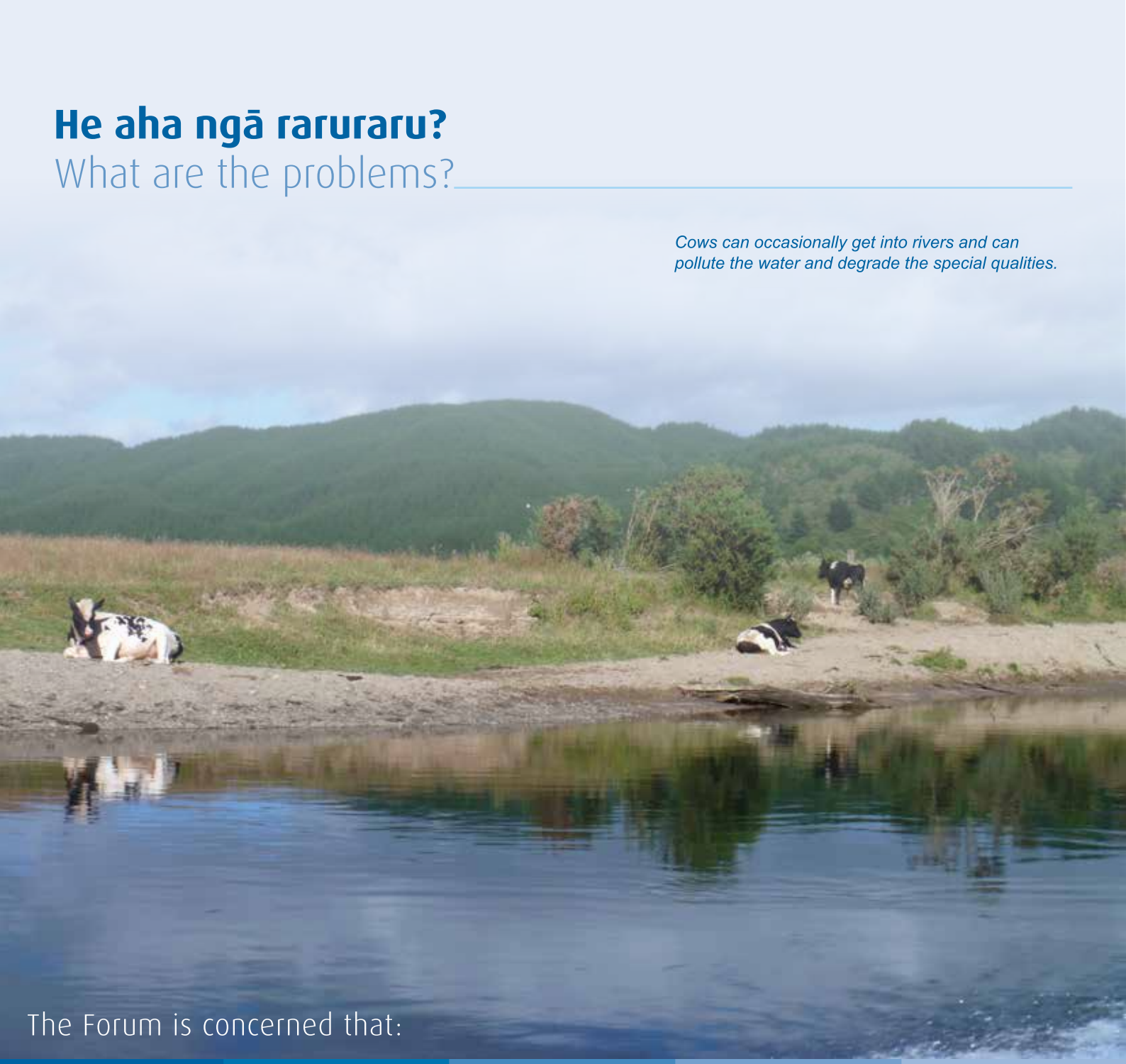
When Mātāriki (the Pleiades constellation) was first seen, usually before sunrise in the middle of winter, the people would set kūmara in beds in the warm earth and for two to three weeks tubers would sprout. This was the nursery from which the main crops would be planted. These were the resources that provided sustenance for the many hapū who lived up and down the banks of the Rangitāiki River.

The people travelled along the river by canoe, often to visit relatives, to the upper reaches and downstream to the sea where mullet, herring, and whitebait were caught. Specially made canoes were used for reclamation work.

*Te Awa o te Atua - where the Rangitāiki and Tarawera rivers once converged.*

# He aha ngā raruraru?
## What are the problems?

*Cows can occasionally get into rivers and can pollute the water and degrade the special qualities.*



The Forum is concerned that:

The Rangitāiki River is no longer providing an abundance of food

Water quality is not always good enough for swimming or drinking

Young people no longer have strong ties with the river

The river is losing its special qualities and liveliness, becoming unfit for holding rituals and ceremonies

The river has not been looked after and its water is unsatisfactory to those who hold mana whenua (authority over the land)[8].

# Kia kotahi te papaki o ngā hoe o te waka.

# Let the paddles of the vessel strike in unison

A call to navigate the issues together.

*At Matahina dam, eels rely on being manually trapped and transferred for two migration stages of their life cycle.*

# He taonga tuku iho
## Desired outcomes

### What do we want for the Rangitāiki River for our mokopuna (future generations)?

**Mauri:** Mauri of the water is protected.

**He Taiao:** We want bountiful rivers that people cherish, where native habitats and customary harvesting practices sustain people, and where native species, including whitebait and tuna (eels), abound.

**He Tangata:** We want a balanced, connected and respectful relationship with the rivers and resources, which will be the foundation for resilient, sustainable and thriving communities in the Rangitāiki.

**He Awa:** We want a clean and healthy environment, characterised by clean water, healthy ecosystems and the return of some threatened species. We want to see people use and enjoy this environment for their spiritual, cultural and recreational needs and to celebrate its heritage with pride.

"Our river is a taonga tuku iho, a treasure handed down from our ancestors that we must and will fight to protect for our tamariki."

Tania Waikato
Quoted in Te Teko Times

*Artwork by nine-year-old Uenuku of Te Whata Tau ō Putauaki.*

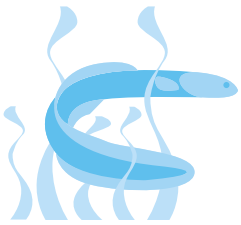
# Te Huarahi
## Objectives

**1** **Tuna within the Rangitāiki catchment are protected, through measures including enhancement and restoration of their habitat and migration paths.**

Eels have a unique and important customary fishery status in the Rangitāiki, representing the wealth of the people. Long-finned eels feature in local legends as the guardian of the resource and of its people. Providing for their natural life-cycle, including migration, is crucial for their protection.

**2** **The habitats that support indigenous species and linkages between ecosystems within the Rangitāiki River catchment are created, protected and enhanced.**

Some of New Zealand's indigenous biota is highly threatened, with some sensitive freshwater and reptile species at risk of disappearing. The native ecosystems in the Rangitāiki catchment support these species, reduce rainfall run-off and provide for carbon sinks. While some introduced species are valued by the community and are protected, they can be detrimental to some native species.



**... so the tuna (eels) are fat and plentiful in the Rangitāiki River waterways.**

**3** **Water quality is restored in the Rangitāiki catchment.**

Rangitāiki communities have seen a continuous decline in water quality and fear further decline. The Forum and the community have strong values and expectations for the water to be swimmable, abundant, suitable for ceremonies at places, and able to sustain customary food sources. The ability to source safe drinking water in as many places as possible within the catchment is important to the community.

**4** **Prosperity in the Rangitāiki catchment is enabled within the sustainable limits of the rivers and receiving environment.**

A healthy catchment that supports cultural, environmental and spiritual wellbeing is needed for healthy and sustainable communities. Agreed limits on how water is used can ensure the needs of the community are met longterm.

**... so it is safe for people to swim in, take food from, and find drinking water in as many places as possible.**

**5** **The relationship between communities and the Rangitāiki catchment is recognised and encouraged.**

Rangitāiki communities have seen an increasingly distant relationship between the people and the river, despite the fact that the river is one of the greatest taonga in the community. Much of the rich knowledge and history about the river is gradually being lost to its people.

**6** **The practice of kaitiakitanga in decision-making for managing the resources of the Rangitāiki catchment is recognised and provided for.**

The Crown acknowledges the historical and enduring relationship between iwi and the Rangitāiki River. Iwi and others are committed to protecting and enhancing the river while restoring and protecting their relationship with the river according to their tikanga and values.

**7** **Naturalness of the river and the landscape of the Rangitāiki catchment is respected**

Existing infrastructure and modifications have harnessed the river. This came at a cost to the local communities' heritage, their special relationship with the river and the river's ability to provide for future generations.

**8** **Access to the Rangitāiki River and its tributaries is maintained and enhanced.**

Access to the Rangitāiki River and public areas alongside its waterways promotes outdoor recreation and enables people to maintain cultural and spiritual connections by visiting significant sites.

**... so the Rangitāiki River and its waterways stay special.**

# Action Plan

This plan indicates the actions that the Forum anticipates will make the vision and objectives more tangible, promote coordinated management, and strengthen the influence of "Te Ara Whānui o Rangitāiki – Pathways of the Rangitāiki".

Actions listed here remain subject to each organisation's decision-making processes. This plan indicates the likely lead agencies for these actions, while recognising most actions require joint effort. The Forum encourages councils, rūnanga, agencies, researchers, businesses, the community and individuals to undertake actions or initiatives.

The timeframes are dependent on funding, practicality, and other factors. Leading agencies are expected to assess the practicality and affordability as they consider and plan for implementation. This plan should not be considered as absolute, as the actions will evolve and need to be responsive to change.

| The Action Plan for the Rangitāiki | | Indicative lead organisation |
|---|---|---|
| **Objective 1** | **Tuna within the Rangitāiki catchment are protected, through measures including enhancement and restoration of their habitat and migration paths.** | |
| Strategic Action A | 1.1. Develop a plan and solutions to provide access for migrating tuna in Rangitāiki waterways. This Strategic Action covers:<br>1.1a Work with hydro-generation companies and researchers on tuna access projects.<br>1.1b Analyse research and make recommendations on tuna restoration programmes.<br>1.1c Develop a plan in conjunction with river users to address tuna access up the rivers and streams to the sea. | Iwi |
| Contributing actions | 1.2 Recognise and encourage the use of rāhui as a mechanism to support the protection of tuna. | Iwi |
| | 1.3 Advise Crown agencies to work with communities to protect, monitor, and promote a better understanding of tuna in the Rangitāiki catchment, including potentially ceasing long-finned eel commercial take in the Rangitāiki catchment. | Iwi |
| **Objective 2** | **The habitats that support indigenous species and links between ecosystems within the Rangitāiki catchment are created, protected and enhanced.** | |
| Contributing actions | 2.1 Implement projects in the Rangitāiki catchment with the local community to protect and restore wetlands and habitats. | Regional Council |
| | 2.2 Encourage restoration with appropriate vegetation along waterways, where suitable. | Regional Council |
| | 2.3 Work with industries, landowners and agencies to support protection and enhancement of biodiversity in habitats in the catchment. The use of native plants is encouraged where practical. | Regional Council |
| | 2.4 Implement a coordinated programme to identify, prioritise, protect and enhance the existing ecosystems, significant sites and connections in the Rangitāiki catchment. | Regional Council and Department of Conservation |
| | 2.5 Industries use best practice in their operation to provide for indigenous species habitat and links between ecosystems. | Industry sectors |
| | 2.6 Work with industries, landowners and agencies to seek opportunities to regenerate indigenous cover in the catchment. | Regional Council and Department of Conservation |

| The Action Plan for the Rangitāiki | | Indicative lead organisation |
|---|---|---|
| **Objective 3** | **Water quality is restored in the Rangitāiki catchment.** | |
| Strategic Action B | 3.1 Develop sustainable environmental flow and Rangitāiki catchment load limits (eg. nutrients, sediments and bacteria) through the Freshwater National Policy Statement framework, including establishing:<br>▪ the current state and anticipated future state<br>▪ freshwater objectives<br>▪ limits for meeting freshwater objectives. | Regional Council |
| Contributing actions | 3.2 Initiate strategies for managing water, wastewater and stormwater in the district, in consultation with the community and tangata whenua, including investigations into treatment and discharge options. | District Council |
| | 3.3 Identify, forecast and assess emerging pressures on the resources in the Rangitāiki catchment and likely opportunities and targets for restoring water quality. | Regional Council |
| **Objective 4** | **Prosperity in the Rangitāiki catchment is enabled within the sustainable limits of the rivers and receiving environment.** | |
| Contributing actions | 4.1 Work with rural industries, iwi, landowners, the community and other willing stakeholders in the Rangitāiki catchment to articulate their aspirations for prosperity and values for freshwater through the Freshwater National Policy Statement framework. | Regional Council |
| | 4.2 Understand the status of water allocation and efficiency of use (including irrigation). | Regional Council |
| | 4.3 Work with landowners to complement best management practice as proposed by their industries and other authorities. | Industry sectors |
| | 4.4 Engage in Rangitāiki catchment freshwater debates and issues. | Forum partners |
| | 4.5 Work with hydroelectric power companies and other commercial and industrial sectors on actions designed to achieve a healthy Rangitāiki River. | Forum partners |
| | 4.6 Put in place a programme to understand the physical resources of individual farms within the Rangitāiki catchment and drive toward a more planned farm system and awareness approach. | Regional Council |
| | 4.7 Encourage businesses to engage in sustainable business practices and a restorative economy (moving away from a “take, waste, pollution” economy). | Industry sectors |
| | 4.8 Promote opportunities that enable economic development in the Rangitāiki catchment within sustainable limits (for example new technologies). | All |

| The Action Plan for the Rangitāiki | | Indicative lead organisation |
|---|---|---|
| **Objective 5** | **The relationships between communities and the Rangitāiki catchment is recognised and encouraged.** | |
| Contributing actions | 5.1 Develop and implement a Cultural Health Index (CHI) for the Rangitāiki, Whirinaki, Wheao and Horomanga Rivers, which incorporates mātauranga Māori methods. | Iwi, Regional Council |
| | 5.2 Identify where and how rubbish is entering waterways, and then prevent it by promoting better waste/pollution management with industries and communities. | Community, District Councils |
| | 5.3 Support children and young people in the Rangitāiki catchment to learn and participate in ecological regeneration and environmental sustainability. | Local authorities, Iwi |
| | 5.4 Support schools in the Rangitāiki catchment through funding environmental projects. | Regional Council, Iwi |
| | 5.5 Support community-based projects that improve the Rangitāiki catchment environment, raise environmental awareness and use the enthusiasm and skills of the local communities through funding, education and advice. | Local authorities |
| | 5.6 Monitor and report progress on protecting and enhancing the environmental, cultural and spiritual health and wellbeing of the Rangitāiki River and its resources for the benefit of present and future generations. | Forum partners |
| **Objective 6** | **The practice of kaitiakitanga in decision-making for managing the resources of the Rangitāiki catchment is recognised and provided for.** | |
| Contributing actions | 6.1 Develop protocols for recognising and exercising iwi and hapū mana including kaitiakitanga in identified resource management decision-making processes. | Iwi, consent authorities |
| | 6.2 Collect an inventory of wāhi tapu in the Rangitāiki catchment. | Iwi |
| | 6.3 Develop a protocol for accessing, holding and using the wāhi tapu information. | Iwi, consent authorities |
| | 6.4 Conduct a survey to collect information on tikanga associated with the rivers of the Rangitāiki catchment. | Iwi |
| | 6.5 Encourage the industry sector to actively inform iwi and local communities about their environmental and social performance in the Rangitāiki catchment. | Industry sectors |

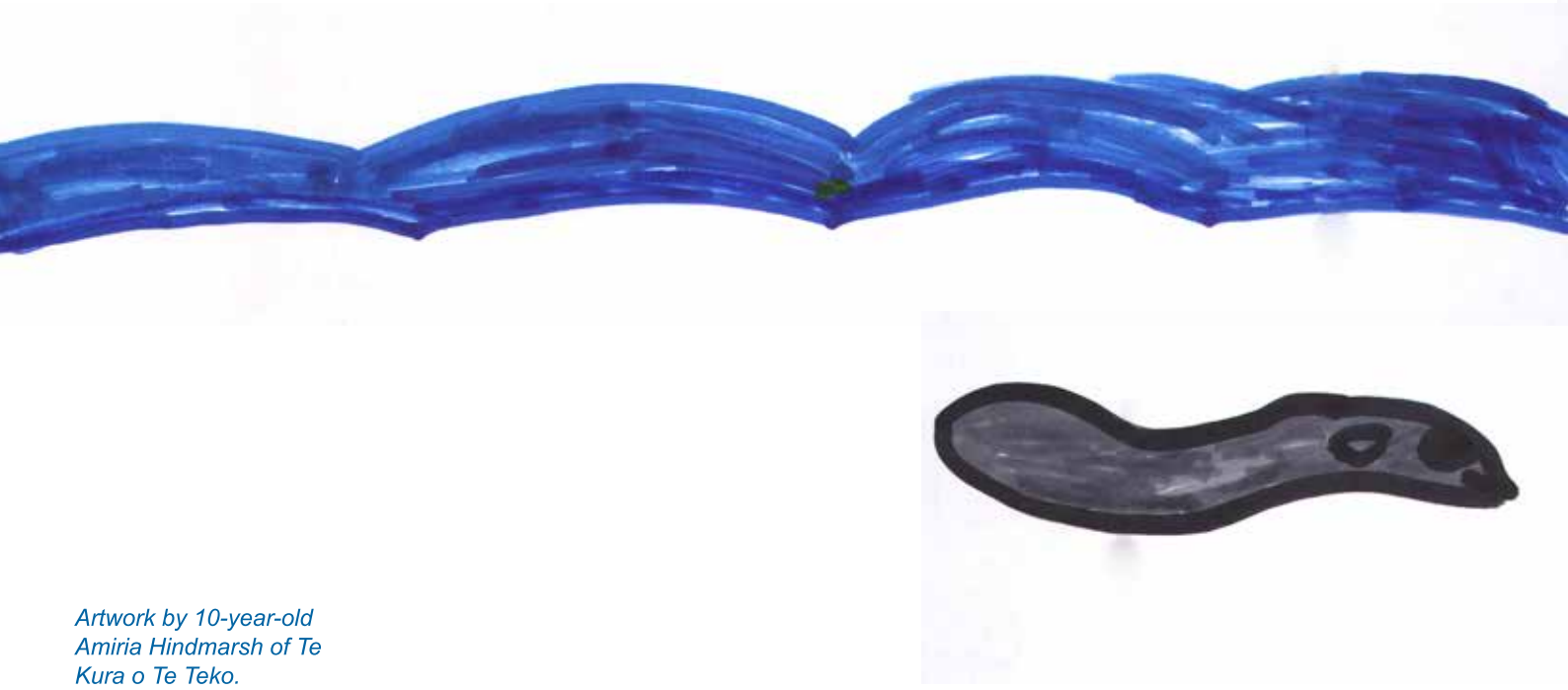
| The Action Plan for the Rangitāiki | | Indicative lead organisation |
|---|---|---|
| **Objective 7** | **Naturalness of the river and the landscape of the Rangitāiki catchment is respected.** | |
| Contributing actions | 7.1 Develop a river sustainability 100-year strategy to outline how the rivers and drainage schemes in the Rangitāiki catchment can be sustainably managed. | Regional Council |
| | 7.2 Develop a strategy to manage flood risk. | Regional Council |
| | 7.3 Explore alternative options for riverbank management and protection on a case-by-case basis. | Regional Council |
| | 7.4 Install eco-passages where structures (such as culverts) impede the lifecycle of fish in the river. | Regional Council |
| | 7.5 Survey and map the status of river and other habitats and then enhance the biodiversity where possible. | Regional Council |
| | 7.6 Progressively remove structures that impede cultural and recreational access where appropriate, and remedy or adapt structures to minimise effects. | Regional Council |
| **Objective 8** | **Access to the Rangitāiki River and its tributaries is maintained and enhanced.** | |
| Contributing actions | 8.1 Survey and map existing access points, esplanade strip/reserves and marginal strips for recreation opportunities. | Local authorities |
| | 8.2 Identify existing and new priority public access points linkages, as well as areas and time periods where public access should be restricted. | Local authorities |
| | 8.3 Provide and maintain safe and identifiable public access points along the margins of the rivers in the Rangitāiki catchment, where appropriate. | Local authorities, Department of Conservation |
| | 8.4 The Whakatāne District Plan continues to manage the acquisition of esplanade reserves/strips and access strips for public access, recreation and conservation purposes. | Whakatāne District Council |
| | 8.5 Support appropriate amenities (signage, interpretation, education and rubbish disposal). | Local authorities, Department of Conservation |
| | 8.6 Work with communities, landowners and industries to consider opportunities to create appropriate access, including vehicle, walking, bicycle and waka access to the river. | Local authorities |

# Ngā kōrero onamata
## Traditional stories

In Māori mythology, taniwha are beings that live in deep pools in rivers, dark caves, or in the sea, especially in places with dangerous currents or deceptive breakers. Taniwha were often considered as omens of uncertain times ahead and were therefore highly respected as kaitiaki (protective guardians) of people and places, or in some traditions as dangerous, predatory beings[9]. There were a number of taniwha and tipua (guardian spirits) associated with the Rangitāiki River.

**Hākai Atua** was a taniwha of the Ngāti Awa hapū of Ngai Tamaoki and resided close to their kāinga (village)[10]. Hākai Atua travelled the river and was a kaitiaki who protected the Ngai Tamaoki people.

**Hine-i-Whāroa** was a tipua in the form of a white eel that lived in the Rangitāiki River[11]. Hine-i-Whāroa was the kaitiaki of all the other eels that lived in the river. Hine-i-Whāroa became the kaitiaki that limited the number of eels that could be caught by the people thereby ensuring that the fishery would survive. No matter how hard the people tried to catch Hine-i-Whāroa to clear the way so they would have unrestricted access to all eels, they could never do so.



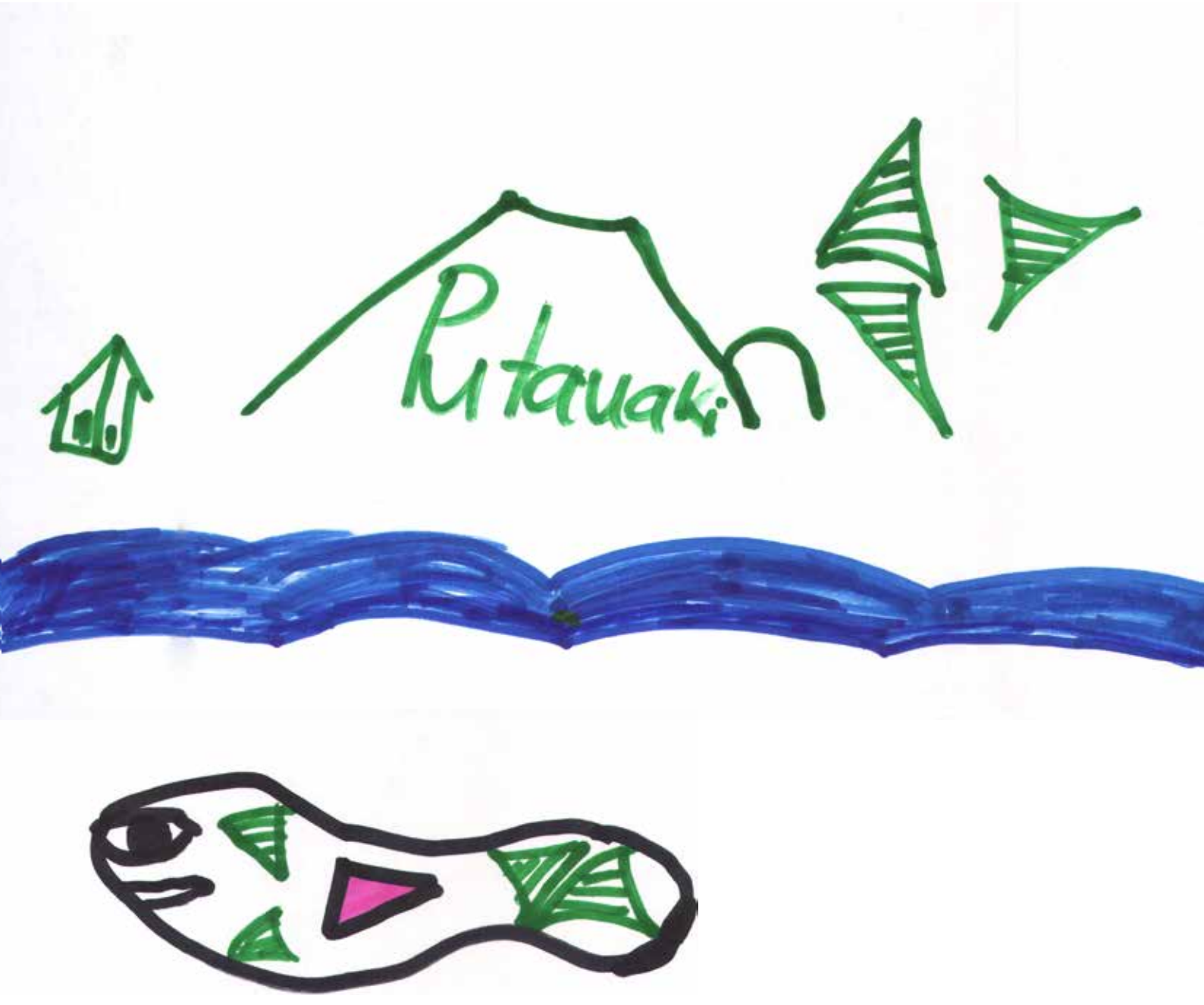
*Artwork by 10-year-old Amiria Hindmarsh of Te Kura o Te Teko.*

**Hotupuku** was a taniwha that once lived on the Kaingaroa Plains[12]. It was a cannibalistic, legged and tailed taniwha that was slain by warriors.

**Murupara** was a friendly gigantic eel-like taniwha with no scales[13]. Its name meant “to wipe off the mud”. Murupara dwelt in a cave below the old Kiorenui River[14].

**Raukawarua** was a taniwha who lived at Kōkōhinau[15]. To the people of Pahipoto, Raukawarua was supposed to be a kaitiaki of other taniwha that lived in the river. Raukawarua became known as the rangatira of Ngāti Awa, the chief of the river tribe and of all other river creatures.

**Rimurimu** was a tipuna (ancestor) of the Ngāti Awa hapū of Warahoe and Ngā Maihi who lived along the Rangitāiki River between Te Teko and Matahina[16]. Rimurimu was only recognisable to the Warahoe hapū and only revealed itself to warn the people of danger. Rimurimu came about after Miro, daughter of Hikareia (a chief of Warahoe), drowned herself after her plan to be with her lover was thwarted. Miro chanted Te Punga i Orohia. A line in the chant refers to her being a rimu. Miro then took the form of Rimurimu (seaweed/aquatic plant).



# He puna kōrero
## Overview

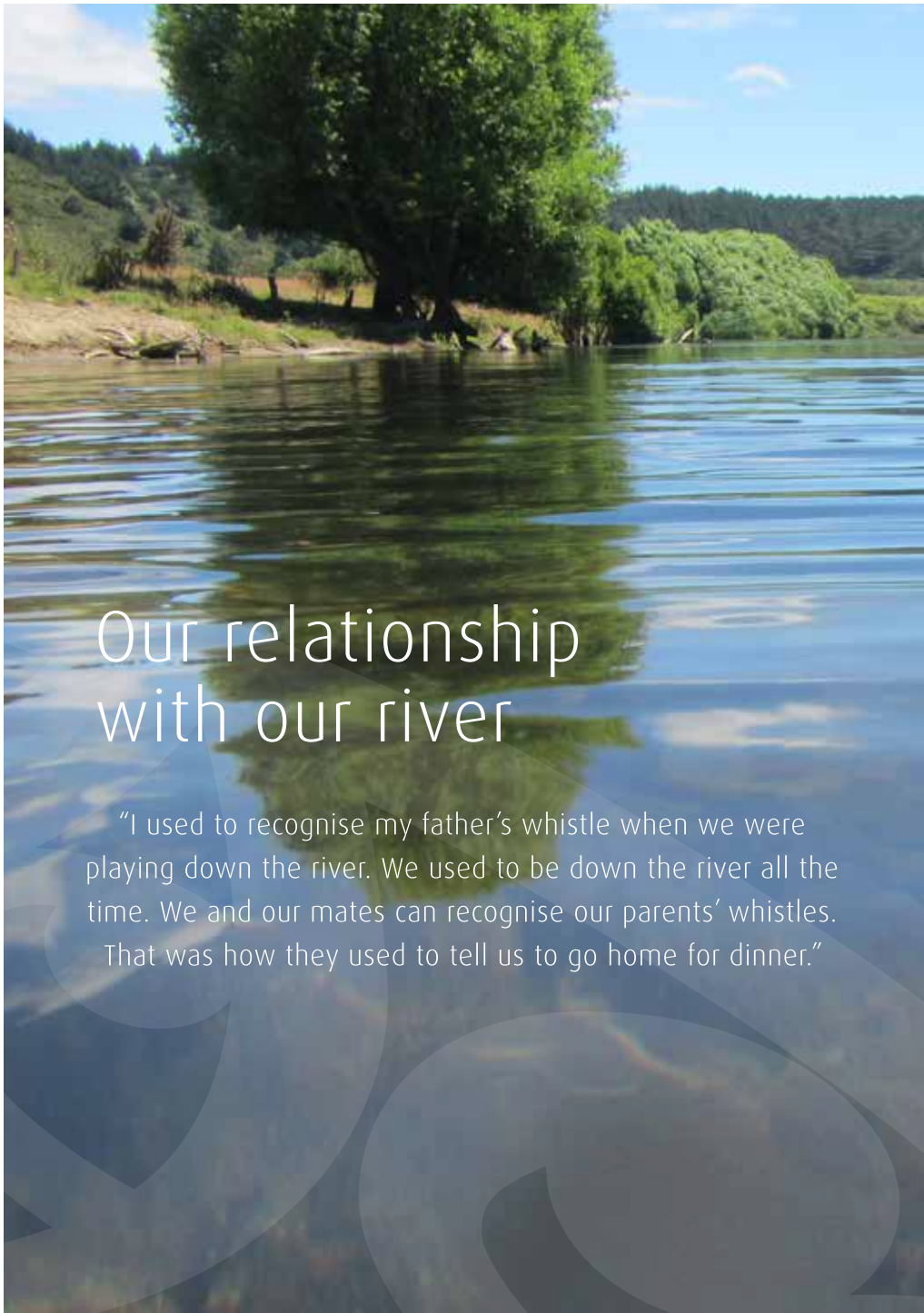
Stories that have been passed down through generations tell us that Tīwakawaka was the first to explore the Bay of Plenty, later followed by Toi Te Huatahi, the founding ancestor of many tribes who lived around the Rangitāiki River. The upper reaches of the Rangitāiki Valley were first settled by the Marangaranga, the descendants of Toi. Back then, volcanic eruptions and floods were the only major factors that changed the physical landscape of the Rangitāiki River.

Many years later, the Mataatua waka brought more people to the Bay of Plenty. The river provided their iwi with a rich source of food. The rhythm, pattern and continuity of the Rangitāiki River shaped and created the culture of the people who lived there over generations.

This has changed dramatically as people have adopted ways of cultivating the land more effectively. In the 20th century, engineering and technology solutions altered the Rangitāiki River catchment landscape to what we see today. A law passed in 1910 allowed 40,000 hectares of Rangitāiki wetland to be drained and converted into fertile grazing land. Later in the 1930s, people discovered applying cobaltised super phosphate to previously barren areas made them suitable for farmland and large scale forestry. Soil became richer and more fertile in areas previously incapable of supporting farming or planting pines.

Changes to the Rangitāiki River catchment landscape accelerated drastically after the World Wars and the depression. Poverty limited the ability of people to look after their resources for future generations. Virgin land was divided up and sold for farming. Land that was not suitable for farming was planted with fast-growing pine for a good economic return. Meanwhile, tangata whenua became restricted in accessing traditional food sources along the Rangitāiki River. Eel weirs were taken off to make way for logs being carried down the river. Later, in the 1960s, 1970s and 1980s, the Government carried out large-scale infrastructure projects - constructing hydro-electricity schemes, piping sewerage, and building stopbanks and culverts and then planting willow to protect surrounding farmland from floods.

The combination of hydro-electricity, forestry and pasture land makes the Rangitāiki River catchment a rural production engine room for New Zealand. Forestry and dairy industries have boomed in the Rangitāiki catchment, which has become one of the country's primary producing areas with a strong export focus. In the process of making the Rangitāiki catchment profitable, many activities have changed the natural pattern of the Rangitāiki River and diminished its natural features and characteristics. In the 1960s, the local community underwent rapid change; their livelihood shifted from an eel culture to a forestry culture in one generation. When the forestry sector reduced hiring in the 1980s, many



### Our relationship with our river

"I used to recognise my father's whistle when we were playing down the river. We used to be down the river all the time. We and our mates can recognise our parents' whistles. That was how they used to tell us to go home for dinner."

people had no choice but to move away or become unemployed.

Many of the natural resource benefits from the Rangitāiki River are exported, while the costs are borne within the catchment. The Rangitāiki catchment energises the nation and the region, but there are limited examples of wealth generated from the river being reinvested back into restoring and preserving its health and wellbeing.

The degradation of the Rangitāiki River has reduced its spiritual values and compromised the ability of iwi to exercise kaitiakitanga (stewardship) and conduct their tikanga (customs) and kawa (ceremonies).

The interactions between the river and its people have become restricted as the community aspirations for the Rangitāiki River have dwindled. People are spending less time learning how the river contributes to their environmental, cultural and spiritual wellbeing, and how to look after it.

It will take time, clear direction and smart thinking to restore and protect the health and wellbeing of the Rangitāiki River and its communities, and to reinvigorate the community's relationship with the river.

"When we were young our parents used to tell us kids to 'come back' [from playing outside]. Nowadays, parents are telling their kids to 'get out', because young kids are now staying home playing imported computer games."

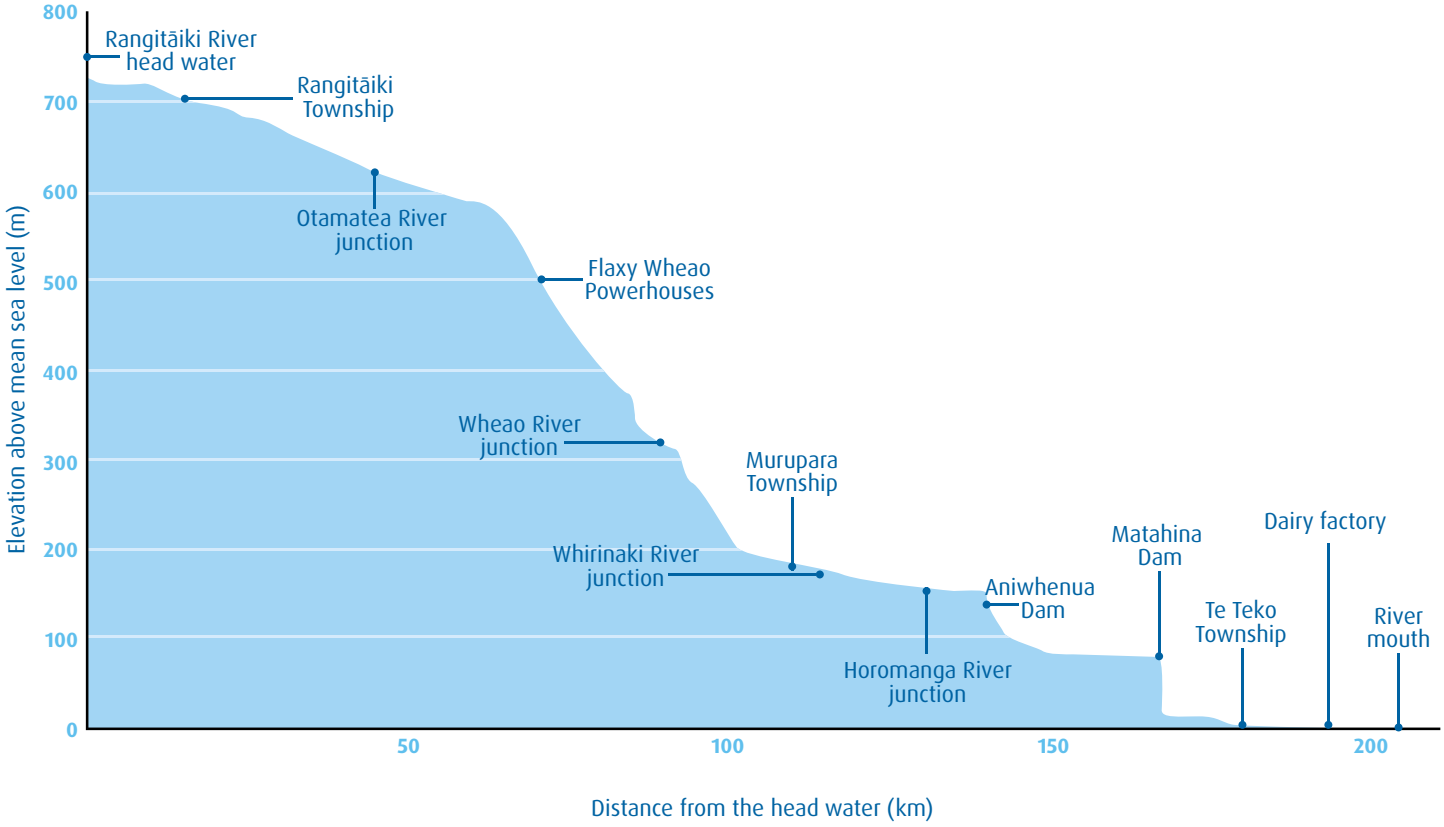
"The river used to be the meeting place for young people. When someone new comes, kids put their tails on, showing-off their diving skills and that."

"Kids at Murupara are still playing by the river and being outside. It is all part of growing up in the rural environment."

Forum members, Rangitāiki River Forum workshop, February 2013.

# Profile of the Rangitāiki River

## Rangitāiki River Elevation Profile along river




The overall health of waterways throughout the Rangitāiki catchment may be assessed by measuring different parameters such as:

1. Water quantity (including the flow, volume and its variability)
2. Water quality (including nutrients, sediment loads or turbidity, the amount of bacteria in the water, and conductivity or the presence of “salt” in water)
3. Ecology (including plants, invertebrates and fish).

By looking at these different parameters, we can assess the overall health of waterways throughout the Rangitāiki catchment. About half (47 percent) of the approximately 4,400 kilometres of waterways in the catchment are small headwater streams. The larger main stem rivers such as the Rangitāiki River and Whirinaki River contribute only 13 percent of the total waterway length. To simplify analysis, the main stem of the Rangitāiki catchment has been divided into five areas:

1. A lowland area downstream from Edgecumbe
2. A reach around Te Teko
3. A mid-reach in the Galatea Plains, including Lakes Āniwaniwa (Aniwhenua) and Matahina
4. The upper area upstream from Murupara
5. The Whirinaki catchment.

Many small headwater streams flow from native bush, pine forest or pasture into the larger rivers, potentially changing their condition downstream. By looking at these five areas in the Rangitāiki and the smaller headwater streams, a broad picture of the catchment’s overall health can be established.

## Water quantity

### The Te Teko reach

The Aniwhenua and Matahina Dams have greatly altered flows at Te Teko[17]. River flow increases in response to electrical generation and often peaks twice a day. Periods of low stable flow are also common.

### Upstream from Murupara

When it rains in the upper catchment, rainfall quickly soaks into the pumice soils. This means river flows upstream from Murupara are groundwater-dominated[18]. Large floods that rise and fall quickly are rare.

### The Whirinaki

The Whirinaki catchment is dominated by hard greywacke rock. Rainfall does not soak into this, but instead runs quickly off the catchment. River flows are rainfall-dominated, meaning large floods that rise and fall quickly are common[19].

### Overall Rangitāiki catchment

Irrigation is an important use of water in the Rangitāiki catchment. Limited water is available above the Matahina power scheme because the flow is maintained for generating electricity. Increased irrigation would support land use intensification but risks affecting water quality.

## Water quality

### Downstream from Edgecumbe

The Fonterra Dairy Factory and Edgecumbe's stormwater are the two main discharges to the river. Increasing trends in phosphorus and nitrate-nitrogen have been observed at the Rangitāiki River estuary, although there is no apparent increase in algal biomass.

### The Te Teko reach

Total nitrogen concentration has increased since 1999, while phosphorus concentrations have decreased slightly. Average water clarity (1.2 metres) is below the recommended national guideline for swimming (1.6 metres)[20]. This may be due to the large amounts of small algae (phytoplankton) found in Lake Matahina above the dam. Despite the low clarity, water quality exceeds national guidelines for bacteriological contamination for safe swimming most of the time.

### The Galatea mid-reach

The Murupara sewage treatment plant is one of two main points discharging treated contaminants into the Rangitāiki River[21]. Both Lakes Āniwaniwa (Aniwhenua) and Matahina have high to very high levels of nutrients or algal growth. Levels of nutrients such as nitrogen are high in Lake Āniwaniwa (Aniwhenua) but lower in Lake Matahina.

### Upstream from Murupara

Nutrients have been increasing steadily in the past 15 years[22], possibly reflecting land use intensification associated with dairy farming near State Highway 5. In many cases, high nitrogen concentration levels lead to excessive algal growth, which is bad for the more sensitive invertebrates in the water. The high concentration of nitrate in the Otamatea River and in Rangitāiki at State Highway 5 are enough to potentially affect river ecosystems. Average water clarity (2 metres) is greater than recommended national guidelines, but data suggests that clarity is decreasing over time. Bacteriological contamination is low most of the time, meaning the river is generally safe to swim in.

### The Whirinaki

Average clarity in the Whirinaki (1.8 metres) is above recommended guidelines for swimming. Nutrient levels (particularly phosphorus) are increasing[23], but levels of ammonia have decreased. As with other areas, it is generally safe to swim there.

### Overall Rangitāiki catchment

Water quality in the Rangitāiki River degrades progressively downstream[24]. Water quality (in terms of levels of nutrients, bacteria, and clarity) ranges from fair to excellent south of Murupara[25], to low to fair in downstream from Matahina. Nitrogen levels are increasing in the upper Rangitāiki catchment, but appear to be reduced in Lake Āniwaniwa due to uptake by the large amount of water weed. Levels of bacterial contamination in the Rangitāiki River are generally low enough to allow for swimming most of the time. However, more bacteria are washed into the rivers during times of rainfall and it is during these times that levels may exceed those that are safe for swimming. Bacterial levels are also generally higher in the lowland parts of the river.

Water quality in small streams shows a significant effect of land-use activities. Streams from pasture sites have higher nutrient levels and bacterial contamination, while streams from native forest have low nutrient and bacterial levels. Streams from pine forests have moderate nutrient and bacterial levels.

## Ecology

Stream health has been classified into “excellent”, “good”, “fair” or “poor” categories on the basis of their invertebrate communities. Of the 117 sites surveyed[26] throughout the Rangitāiki catchment, 102 streams (almost 90 percent) supported invertebrate communities indicative of excellent or good health. Only four streams were regarded as being in “poor” condition. Two of these streams drain pasture areas and two drain pine forests. Overall, streams draining native bush were in the best ecological condition, followed by streams in pine plantations and pasture.

### Downstream from Edgecumbe and the Te Teko reach

Ecological health of the Rangitāiki River downstream from Edgecumbe and in the Te Teko reach was in “fair” condition. The ecological health of the river here differs greatly from what could have been predicted in its natural state. It has been modified with land drainage, stopbanks and riprap to minimise bank erosion.

Exotic water weeds (macrophytes) are common in the channel. Water flows are controlled by the Matahina Dam.

All these pressures have reduced its overall health. A wide range of fish are found in the river, including whitebait, bullies, tuna (shortfin and longfin eels) and kōkopu. The Matahina Dam stops the successful migration of many of these fish, so a trap-and-transfer programme has been implemented.

### The Galatea mid-reach

The ecological health of the Rangitāiki River above the Matahina Dam was in “good” condition, while above Lake Āniwaniwa (Aniwhenua) it is regarded as being in “excellent” condition.

The shallow Lake Āniwaniwa supports dense growths of aquatic weed such as hornwort and curly oxygen weed. This impacts aquatic life and lake users. However, these plants may also be taking up nutrients from the water and improving water quality below the Aniwhenua Dam.

Large rainbow trout are common in the river and lakes behind the dams, as well as many of the small tributary streams.

The diversity of native fish decreases above the dams, so that above Lake Āniwaniwa, tuna and koaro are the only migratory fish found. Their presence above the dams reflects the success[27] of the trap-and-transfer programme run by Kōkopu Trust[28]. This programme may have increased the distribution and numbers of shortfin eels above Lake Āniwaniwa, although recent surveys have shown that the distribution of longfin eels may be increasing. While successful in allowing for the upstream movement of tuna, considerable challenges lie ahead to ensure that mature adult eels can still migrate downstream[29].

Populations of the non-migratory dwarf galaxias have also been found in small streams flowing from the Ikawhenua Ranges. These fish are found mainly in streams where there are no trout.

### Upstream from Murupara and the Whirinaki

Ecological health of waterways above Murupara is generally regarded as being “excellent” in the upper reaches of the Rangitāiki River and in the Whirinaki. The ecological health of waterways here is very similar to what was predicted in a natural state. While tuna are found at sites throughout the Whirinaki, their abundance decreases further inland.

Eels and eeling and the rivers have always been the life blood of the people of the Ika Whenua valley.

Quote from Waitangi Tribunal, 1998:12, Wai 212.

## Overall Rangitāiki catchment

Land use changes in the past have been quite dramatic as native vegetation was cleared for either pine plantation or pasture. These activities have impacted on stream health. However, the degree of land use change appears to have stabilised in the past 10-15 years[30]. This suggests that stream health may not have changed much in recent times. Comparison of invertebrate communities through repeated surveys confirms this, as the current ecological health of selected sites in the Rangitāiki catchment has remained similar to what it was in the 1970s and 1980s.

## Ngā ika wai maori – native freshwater fish

The Rangitāiki, Wheao and Whirinaki Rivers were taonga (treasure). For Māori, the rivers were steeped in tribal lore and history, as well as being a main source of material and spiritual sustenance and wellbeing. In the Rangitāiki River, eels were a secure food source available at any time.

Many native New Zealand freshwater fish (ikawai) are valued by Māori as mahinga kai (traditional food sources). Most of these fish, such as kōkopu and tuna, are night creatures. They like dark cool places and are active at night[31]. They don't come out during the day and don't live in freshwater fulltime; they migrate between rivers and the sea.

The native freshwater fish could live in rivers, lakes, wetlands and groundwaters. Over thousands of years, some of them have developed excellent skills of climbing steep waterfalls as they venture inland to spawn or to feed. Today, due to competition with other bigger, hungrier and equally athletic fish, most native fish are now living in small streams, many of which are less than a metre wide.

Unlike game fish, ikawai are not protected under New Zealand legislation. Although native fish are protected in Department of Conservation land, hydroelectric dams and large irrigation projects are turning running waters into lakes, changing the river flow and restricting fish movement along river systems. Pollution and aggressive animals and plants can also make life harder for native fish. The long-term decline of ikawai populations has impacts on our communities around the Rangitāiki.

## The hurdles for tuna

The Rangitāiki River is home to many paewai (also known as tuna kūwharuwharu or longfin eels), a fish unique to Aotearoa and the largest and longest-living of its kind. Tuna flourish in connected waterways with plenty of cover, food and resting pools along the way.

For tuna, life in the Rangitāiki River has become harder in recent decades. It is more difficult for tuna to find good food because of a variety of changes, including the reduced riparian area, declining water quality, increasing levels of nitrate in parts of the river (as a result of more fertiliser and manure in the water) and sediments. Blocked or concrete waterways (such as dams and culverts) mean that the tuna's vital journey from the sea to Rangitāiki River and back has become impossible without human help.

The future survival of paewai is threatened. It is possible that New Zealand could lose this special taonga tuku iho forever.

## Importance of tuna for Rangitāiki iwi

Hapū and iwi of the region are well known for the prized tuna from the Rangitāiki. As well as being a key food source, tuna were a vital part of traditional trade and economies and highly prized as koha in gift exchange. For this reason, tuna are regarded by many as a taonga and often feature in pūrākau (ancient legend), whakapapa, and depicted in whakairo (carving) that adorn many marae; a testament to their importance.

Many varieties of tuna were traditionally caught by people who lived along the Rangitāiki and its tributaries, including black eels (mataamoe), silver-bellied eels (paewai), blind eels (piharau), and yellow-bellied eels. In many instances, specific individuals and families had special knowledge of fishing methods and had the responsibility to pass their knowledge on to the next generation. Places where specific varieties of eels could be caught were well known and were often named and treated with great care. There were a number of traditional fishing methods, including hīnaki, retireti, rama tuna, fern beds or boxes and line fishing. Many iwi had their own maramataka (fishing calendar) and carefully managed their eel fishery in accordance with tikanga.

Crown control of the Rangitāiki and its tributaries from the late 19th century has had a huge impact on tuna and those that depended upon them. The eel fisheries and other resources that were traditionally relied upon for cultural and physical sustenance have been severely impacted. Specifically, the construction of the Matahina, Aniwhenua, and Wheao power schemes now inhibit the ability of both young elvers to travel upstream and the downstream journey of adult eels out to sea to spawn. Flood control measures that required the removal or changes to their habitat, together with commercial harvesting of tuna, has also contributed to their decline.

There are several contributing factors to rejuvenating tuna stocks in the Rangitāiki which lie beyond the immediate reach of this Forum. However, protecting and enhancing tuna habitat and migration paths form a key objective of this document and are a step towards that outcome.

Adapted from Ngāti Manawa Claims Settlement Act, Te Ika Whenua Energy Assets Report 1993 and Parliamentary Commissioner for the Environment “On a pathway to extinction? An investigation into the status and management of the longfin eel”, April 2013.

## Whitebait in the Rangitāiki

*Whitebaiting along the Rangitāiki River.*

The Rangitāiki River is home to three types of whitebait, which normally lay their eggs in freshwater. After the eggs hatch, they quickly migrate to sea before they come back to lay eggs[31]. Traditionally, the abundance of whitebait provided local iwi with essential food in a protein-limited world.

**Īnanga** (or whitebait or small fry) are common and they don't need to travel very far inland. They breed on seasonally flooding estuarine wetlands, and their life-cycle is dependent on the dynamic of freshwater and seawater exchange. The massive (40,000 hectare) Rangitāiki/Tarawera/Whakatāne saltmarsh wetland used to offer an ideal breeding ground for īnanga right in the middle of the Bay of Plenty. When īnanga go to sea all at once, they attract many other fish to feed on them. Today, we can find īnanga in the Rangitāiki River, Western Drain, Waikamihi Stream, Mangaone Stream, Reid's Central Canal and upstream of the Otarere Stream/Drain of the Rangitāiki Plains and the Whakatāne River.

**Banded kōkopu** (sometimes called kōkopu tawhara, moruru, para, kopu, korewhariwha, kōkōpuruau, koopakopako, ruao, ruwao, or Māori trout or native trout) are the travellers of the family. As part of the whitebait family, the junior banded kōkopu look the same as baby īnanga.

In the wild, banded kōkopu like to live in small boulder streams in native forest. Banded kōkopu are known to climb falls in a small forest stream and perpendicular rock faces. Māori traditionally harvested Banded kōkopu with rama (torches) at night. Today, the limited numbers may be too critical for feeding people. One common neighbour of the banded kōkopu – New Zealand grayling, was once common in New Zealand waters but now they're all gone. However, we can still find banded kōkopu in the Rangitāiki River, Lake Matahina, Otarere Stream/Drain, Ngakauroa Stream/Drain, Waikamihi Stream and Mangaone Stream of the Rangitāiki River.

**Giant kōkopu** (or kōkopu, raumahehe, kokopara, para, bull trout or like the banded kōkopu - Māori trout or native trout) are the agile giant, although they are the same size as other whitebait in the family when hatched. The giant kōkopu is special to the lower Rangitāiki. With some luck you may find the secretive giant kōkopu in the Rangitāiki River, Ngakauroa Stream/Drain, Western Drain, Awaiti Canal, Omeheu Canal, Waikamihi Stream, and Te Rahu Canal of the Rangitāiki River.

Besides whitebait, a science research project[32] recently discovered koaro in the Rangitāiki catchment. That research also found trout presence has diminished the habitat and survival of dwarf galaxiid.

# Statistics about local people

In 2011, an estimated 8,230 voters were registered in the Rangitāiki River area - about 52 percent of them are on the general roll and the other 48 percent are registered Māori voters. The high Māori population is also reflected in the 2013 Census.

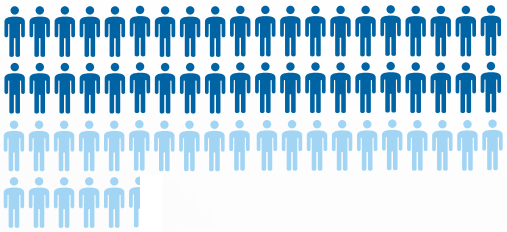
The 2013 Census shows in the Rangitāiki River catchment there were:

- 6,560 people usually living in the catchment in 2013.
- More than half of the population (61 percent) is Māori. This is a higher proportion compared to the region (31 percent) or the nation (17 percent).
- About 25 percent of the population are children (14 years old or under), but only 10 percent are elderly (65 years and over).
- About two-thirds of the families in the catchment have at least one child. This was a higher proportion compared to the region (56 percent) or the nation (59 percent).

The rural industries (including agriculture, forestry and fishing) are the dominant employment in the Rangitāiki catchment, with over a third of residents working in the rural sector. In comparison, less than one-tenth of people in the Bay of Plenty work in the rural sector. The Census also showed people in the Rangitāiki catchment are more likely to have physical jobs (41 percent), twice as likely to work from home (21 percent), more likely to work long hours, and less likely to hold a skilled or highly skilled job than the average residents of the Bay of Plenty. This could be partly because of the rural working-and-living environment and the jobs it has to offer. On the other hand, only a few residents in the Rangitāiki catchment population are employed in health care or social assistance.

**6,560** people live in the Rangitāiki catchment (approx)

= 100 people



**61%** of the Rangitāiki River catchment is represented by Māori

**25%** of the people in the Rangitāiki River catchment are children (14 years old and under)

**10%** of the people in the Rangitāiki River catchment are elderly (65 years and over)

*Rangitāiki River at Thornton is a popular swimming spot in summer.*

**Several Iwi**
have an interest in the Rangitāiki River catchment

There are
**16 Marae**
and **22 Hapū**
in the Rangitāiki catchment area

approximate

# Economic Activities


Direct economic benefits from natural resources in the Rangitāiki River catchment are simplistically estimated and presented here. The primary sector also brings social benefits to the rural communities.

## Economic overview

Growing trees on the Rangitāiki generates around $94 million GDP (gross domestic product) per year. Exotic forest covers about 156,600 hectares in the catchment. Forestry also provides a range of environmental benefits.

About 54,100 hectares of pastoral farm is located in the Rangitāiki catchment. Growing pasture animals on the Rangitāiki catchment generates somewhere between $37 million (if all in dry stock) and $107 million (if all in dairy) GDP per year.

Hydro-electricity generation from three hydropower schemes contribute significantly to New Zealand's ability to generate electricity from renewable sources. They provide more reliable electricity, water-based recreation opportunities, jobs and a means to manage flood events.

A conservative estimate of the wealth generated from the river and its land from the above sectors is somewhere between $169 and $239 million per year.

Recreation, tourism and other sectors contribute to the Rangitāiki catchment's economy, but it is difficult to translate into a dollar value. The Fish and Game Council estimates anglers spend between 15,000 to 25,000 days fishing in the Rangitāiki River catchment each trout season (see 'trout fishing'). Other than anglers, walkers and hunters, the Rangitāiki catchment is also frequented by campers, horseriders, jetboat riders, waterskiers, kayakers, rafters, free-floating tubers and people who simply come for a scenic picnic or a swim.

These industries also require goods and services, and so form a part of the Rangitāiki River community and support the economy of other sectors. The estimated collective incomes for the local people and households is somewhere around $93 to $121 million per year (an estimate from Census 2013 result). Investment in community initiatives for restoring waterways through the Environmental Enhancement Fund has an estimated value of $356,000 for the period between 2001 and 2013. While they have not been quantified in this document, we know that many individuals, businesses, hapū, organisations and government agencies have been looking after the Rangitāiki River.

## Kaingaroa Forest

Kaingaroa Forest is the largest exotic forest in the North Island and the largest softwood plantation in the Southern Hemisphere. It covers 150,000 hectares from northeast of Lake Taupō to south of Kawerau. It supplies logs domestically and internationally and provides a major source of trees for timber, pulp and paper industries in the region.

Before the 1950s, the only economical use for this vast area of land was to grow trees. It was uneconomical for pasture and grazing stock. Scientists later found its soil lacked the mineral cobalt, and this deficiency made stock ill with bush sickness.

During the 1923-1936 depression, the Government formed the New Zealand Forest Service to plant the Kaingaroa Plains as a ‘make-work’ project. The idea was to keep men employed and it was hoped it would also be an economical decision. Later this state-owned asset was sold to investors.

Today, these forestry assets are a distinct feature on an internationally competitive scale. This commercial plantation provides the logs for high-tech value-adding processing facilities within easy distance. This is a unique feature distinct from other forestry in New Zealand.

Kaingaroa Forest is one of the crown jewels of international forestry, being one of the oldest and largest softwood plantations in the world. It is an important consideration in the Rangitāiki catchment.

## Farming in Rangitāiki

### Dairy farmers work to the local conditions

Dairy farmers in the Rangitāiki catchment are working toward improving stream health. This includes better stock exclusion, effluent control and nitrogen management.

In 2003 the Dairying and Clean Streams Accord extended good practice beyond regulatory bottom lines. Fonterra engaged with stakeholders and took responsibility for improving dairy farming practices. In July 2013, the new Sustainable Dairy: Water Accord (SDWA) was signed by all dairy companies in New Zealand, along with DairyNZ and other interested organisations.

**Source:** Fonterra submission October 2014

Glen and wife Karen farm a 1,000-cow dairy unit at Rangitāiki near Taupō. For farmers, the high altitude and colder climate means a short growing season. It makes Rangitāiki a tough environment to farm, especially in comparison to their neighbours on the versatile Rangitāiki Flood Plain. Glen and Karen chose a grass variety that can handle the harder environment.

**Source:** PGG Wrightson Seed 2012

### Farmers on the Rangitāiki Station grow pasture and crops to sustain the land

The farming practices employed on the Rangitāiki Station focus on developing the top soil and managing pasture rejuvenation. Their success won two Bay of Plenty Ballance Farm Environment Awards in 2012, recognising their meticulously planned cropping programme, outstanding pasture management and livestock conditions.

Landcrop's Rangitāiki Station is a large-scale farm of almost 9,700 hectares, including 730 hectares of silage and some forestry. Rangitāiki Station's high altitude (range 700–800 metres above sea level) makes it tough country to farm, because of the short growing season and high wintering costs. On the farm, a team of 20 permanent staff manage 52,400 animals, comprising 19,090 deer, 28,600 sheep, 1,500 beef cattle and up to 2,300 dairy cows (including winter grazers).

**Source:** New Zealand Farm Environment Trust, 2012

"From a land point of view we have a responsibility to leave it better than we found it. A healthy planet is vital for life to prosper now and in the future. The land will still exist in some form long after ourselves and future generations have departed."

Ross Shepherd, Rangitāiki Station Farm Business Manager
Quoted in Beef + Lamb New Zealand website, 2012

## Trout fishing

The Rangitāiki River holds wild trout (introduced around the turn of the 20th century) and is recognised for providing great fishing waters by New Zealand freshwater anglers[33]. The trout habitats and fisheries in the Rangitāiki River, Lake Matahina, Lake Āniwaniwa, Wheao River and Lake Flaxy are significant for the Bay of Plenty region.

The lower and mid Rangitāiki River holds many trout in a variety of fast water and long run habitats. There are several cold water stream inflows that provide good summer fishing at their stream mouths when the river is warm and these tributaries also have spawning runs of trout that are targeted by anglers during the autumn.

Lake Āniwaniwa (previous name Lake Aniwhenua) was one of the North Island's most productive lakes, with many trophy fish caught. In more recent years, Āniwaniwa still provides good rainbow and brown trout to shoreline fly and spoon, or stalking from drifting boats. During summer the lake is affected by weed in the water, so the better fishing is in the spring and autumn.

The Wheao River and associated Flaxy hydro lakes and canals provide some large trout with mainly spring-fed flows so can be fished at times when other rivers and streams are flooded. It is also popular with anglers around the world and contains some trophy-sized fish that are keenly sought after by visiting fly fishers.

## Hydro electricity generation

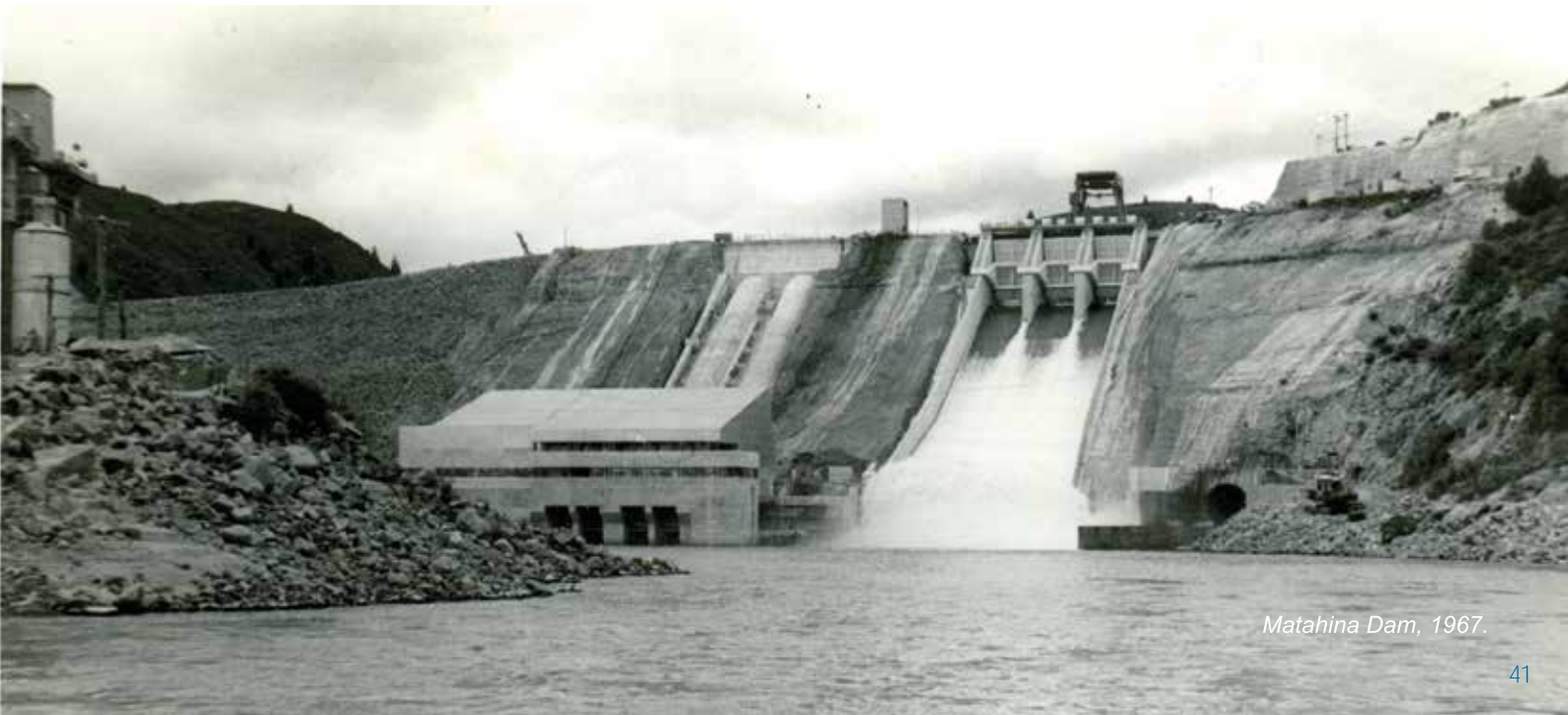
There are three major hydropower schemes on the Rangitāiki River; Matahina, Aniwhenua (at Āniwaniwa) and Flaxy-Wheao. Together they generate approximately 130 megawatts of renewable energy with an annual average of 540 gigawatt hours (GWh), which is equivalent to supporting roughly 70,000 average New Zealand households*, or supplying approximately 20 percent of the region's electricity demand without using fossil fuels. These schemes are important infrastructure in the region.

Matahina Dam was commissioned in 1967 and was the first hydro electricity dam built on the Rangitāiki River. This 86-metre high dam is the largest earth dam in the North Island. The Matahina Hydropower Scheme was granted a resource consent in 2013 to continue operating for a further 35 years.

Aniwhenua Dam was built on the Rangitāiki River in the late 1970s. The Aniwhenua system diverts water from the dammed Lake Āniwaniwa through a 2.2-kilometre canal and two generators, and then releases the water back to the Rangitāiki River. The resource consent for the Aniwhenua Dam system expires in 2026.

The Flaxy-Wheao Scheme was the third hydro electricity generation system commissioned. This scheme had its beginnings in 1974 and was commissioned in 1980. Water from the Flaxy Station is discharged into the 4.7 kilometre Rangitāiki canal which stretches from the intake of the Rangitāiki River to the Wheao Powerhouse. All of the water used in this scheme is then discharged to the Wheao River. The resource consent for the Flaxy-Wheao system expires in 2026.

**One gigawatt hour (GWh) is required to meet the average consumption of 131 residential connections. This Trustpower calculation is based on Ministry of Economic Development, New Zealand Energy Data File, 2010, Tables G.6a.*



*Matahina Dam, 1967.*

# Possible ways we can measure progress

We can measure our progress towards our vision through:

## Monitoring

- Natural environment regional monitoring network (NERMN) freshwater module
- National freshwater objective framework monitoring
- Water quality measurements (nutrients and bacteria)
- Environmental quality index
- Cultural health index
- Macro invertebrate community index.

## Observations of conditions

- Identified sites
- Wetland conditions
- Aquatic ecosystems.

## Size of areas and number of sites for

- Net amount of significant indigenous ecosystem.

## Surveys

- Community survey on relationships with the rivers
- Perception of rūnanga (iwi authority)
- Iwi/hapū community survey
- Census information associated with community prosperity of the Rangitāiki catchment.

## Reports

- Resource consent compliance in the catchment
- Section 32 analysis (efficiency and effectiveness) reports for the Regional Plans and District Plans and changes in relation to the implementation of the vision, objective and desired outcomes in this document.

# Te arotake
## Review

This document, Te Ara Whānui o Rangitāiki – Pathways of the Rangitāiki: River Document, will be reviewed at least every 10 years.

The review will look at progress, scientific information, observation, best-practice development and community and agency feedback. If necessary, the Forum may amend this document or part of it at any time in consultation with the community.

## Te aroturuki me te whakatakotoranga – Monitoring and reporting

Progress against this document will be monitored by the partner agencies and reported annually to the Rangitāiki River Forum. Monitoring and reporting will identify any areas for improvement.

The following have been identified as potential areas to be monitored against the document's vision, desired outcomes and objectives.

- Aquatic habitats are improved, ensuring young tuna (elvers) are able to reach the upper river and mature tuna are able to reach the sea to spawn
- Aquatic habitats (relative to their types and fish migration paths) are improved
- Ecosystems are healthy and fully functioning
- Significant indigenous biodiversity and natural characters are identified, preserved and protected
- Degraded ecosystems, habitats and biological communities are restored (if practical) and rehabilitated
- The extent of wetlands is maintained and enhanced
- Erosion, silt or sediment does not adversely affect the aquatic ecosystems
- The degree to which aquatic ecosystems are affected by the changed flow of the river is measured
- Water quality supports healthy aquatic ecosystems
- The water meets the reasonably foreseeable needs of future generations
- Values of water (ecological, cultural, recreational and amenity) are maintained
- Water quality in at-risk catchments is improved over time
- The state of degraded water quality is improved
- Land use impacts are within the sustainable limits of the river (receiving aquatic environment)
- Resources are used or allocated within their limits (design parameters or carrying capacity)
- Public health and safety (by providing potable water and managing sewage) is maintained
- Cultural and traditional relationships (including ancestral lands, water, sites, wāhi tapu and other taonga) are consistently recognised and provided for in resource management decisions
- Local government and iwi authorities are engaged consistently and positively
- Stakeholders and iwi authorities are satisfied with their involvement in resource management decision-making
- Decision-making takes kaitiakitanga and the Treaty of Waitangi into account
- Co-management arrangements agreed
- When subdividing, changing use and/or developing land, esplanade reserves or public rights are identified, acquired or enhanced
- Accumulative and existing effects on the environment are assessed when making decisions
- Adverse effects from infrastructure are avoided, remedied or mitigated
- Existing renewable electricity generation capacity and efficiency is increased
- Level of public access along rivers is maintained or improved.

# Glossary

| Māori | English translation |
|---|---|
| **Awa** | river/stream/creek |
| **Hapū** | sub-tribe |
| **Heke** | migration |
| **Iwi** | tribe |
| **Kai** | food |
| **Kaitiaki** | guardian |
| **Kaitiakitanga** | guardianship |
| **Kaumātua** | elder |
| **Kawa** | Marae protocol/traditional ceremonies |
| **Kōrero** | to speak, discussion or story |
| **Mana whenua** | authority or mana associated with possession and occupation of tribal lands |
| **Matauranga Māori** | traditional Māori knowledge |
| **Maunga** | Mountain |
| **Mauri** | life-force, life supporting capacity |
| **Mihi** | greeting/acknowledgement |
| **Mokopuna** | grandchild/grandchildren |
| **Nohoanga** | settlement, reserve |
| **Paewai** | Anguilla dieffenbachii (longfin eel) (Section 2.6 of Ngāti Manawa Deed of Settlement: Schedule) |
| **Taiao** | environment |
| **Tamariki** | children |
| **Tangata** | person |
| **Taniwha** | water spirit/guardian |
| **Taonga** | treasure or anything prized |
| **Taonga tuku iho** | heirloom/something handed down from another generation |
| **Tauranga waka** | landing place for vessels |
| **Tikanga** | customs or correct procedure/meaning |
| **Tipua** | guardian spirits |
| **Tipuna** | ancestor |
| **Tuku** | release/presentation or offering |
| **Tuna** | freshwater eels found in New Zealand rivers/streams |
| **Uri** | descendant(s)/someone's child or children |
| **Wāhi tapu** | sacred site(s) |
| **Waka** | canoe |
| **Whakapapa** | genealogy/descent |

## English terminology

**Created**
something having been brought into existence.

**Enhance**
the state of improving quality, value or status.

**Lead organisation**
lead organisations are the likely organisations which will drive or coordinate actions within the action plan. However, the actions listed remain subject to each organisation's individual decision-making process.

**Nutrient**
is a substance contributing to nourishment. Nutrients can be contaminants; for example, nitrates and phosphates can have adverse effects on water quality. (Regional Policy Statement of the Bay of Plenty, 2014)

**Prosperity**
a condition in which a person or community is doing well financially.

**Protected**
the state of not being harmed or damaged.

**Rangitāiki catchment**
means the area shown on OTS-076-034 and OTS-095-024 maps published by the Office of the Treaty Settlement; the area is indicated on the map in section 3 of this document. It generally shows the area from which rain flows into the Rangitāiki River.

**Restored**
the state of being returned to an original or former condition.

**Sustainable**
the use of natural resources is kept at a steady level that is not likely to damage the environment.

**Valued**
generally means to be held in regard, especially in respect of merit.

*Note: the above are based on relevant dictionary definitions, unless stated otherwise.*

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4 Section 6(2)-(3) *Ngāti Whare Claims Settlement Act 2012.*

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6 Image courtesy of http://mp.natlib.govt.nz/detail/?id=36933&l=mi.

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Eastern Fish and Game New Zealand.

## Rangitaiki River Forum Members

Te Runanga o Ngati Whare

Te Rūnanga o Ngāti Awa

Te Runanga O Ngati Manawa
Te Ohu Rere

NGATI TUWHARETOA (BOP) SETTLEMENT TRUST

WHAKATĀNE District Council

TOI MOANA BAY OF PLENTY REGIONAL COUNCIL

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