

KA MATE KAAINGA TAHI, KA ORA KAAINGA RUA

The Ngaa Rauru Kiitahi Climate Change Strategy

‘Ko Pahitonoa te waka. Ko Rauru te tangata.
Ko Te Rangitohitu te hoe.’

DISCLAIMER

The information in this document has been developed and is co-authored by Te Kaahui o Rauru representatives and a team within Ministry for the Environment. The Ministry for the Environment is not responsible for ensuring that the information contained in the document is up-to-date and accurate. This document may be deleted, added to, or otherwise amended without notice.

The information provided does not alter the laws of New Zealand and other official guidelines or requirements.

Information contained in this publication is not professional advice. Readers of this publication should take specific advice from qualified professional people before undertaking any action following information contained in this publication.

The Ministry for the Environment does not accept or liability whether in contract, tort, equity or otherwise, for any action taken as a result of reading, or reliance placed on the Ministry for the Environment because of having read any part, or all, of the information in this publication or for any error, or inadequacy, deficiency, flaw in or omission from the information provided in this publication.

ACKNOWLEDGEMENTS

A co-partnership project between Te Kaahui o Rauru representatives and the Ministry for the Environment.





‘Ka mate kaainga tahi, ka ora kaainga rua’

‘When place of abode retires, another as prepared, emerges’

In the context of climate change this whakatauaakii refers to notions of preparedness, agility, resilience and forward thinking. Te Kaahui Rere is one of the earliest examples of ‘kaainga rua’, where our tuupuna flew from place to place, sometimes alighting on the tops of mountains and other times moving to islands at sea (Kingi, 2005).

Within the environment there are many examples of ‘kaainga tahi, kaainga rua’. From the migratory patterns of certain birds, tuna and fish species that move between countries and regions depending on the weather conditions to our tuupuna who were also agile and often had more than one place of abode, moving according to food sources and weather patterns.

Within the current and future climate context the notion of kaainga rua is represented in the way our current environment will change, to present a new working environment, represented by different environmental conditions – kaainga rua. Some of our communities will need to be relocated due to flooding, this includes marae. Under Taane-mahuta some forms of flora, fauna and species will no longer suit the projected climate patterns and will potentially require a kaainga rua. Fish species will move from warming oceans to cooler southern waters. Our freshwater supplies and those species that we harvest will also be disrupted requiring new pathways.

Preparing our ‘kaainga rua’ means (re)aligning our people to embrace change, adopt forms of adaptation and lower emissions to forge those pathways necessary for our Ngaa Rauru future.

CONTENTS

AN OVERVIEW	3	WATER	36
TE KAWA ORA	4	Strategic Goal	36
Te Kawa Ora: Our Framework	8	Risk Statement	36
Te Kawa Ora: Components	9	MANAGED RETREAT	41
Our Vision	12	Strategic Goal	41
Our Mission Statement	12	Risk Statement	42
Ngaa Maataapono: Te Kaahui o Rauru	13	ENERGY	46
Ngaa Maataapono: Te Kawa Ora	14	Strategic Goal	46
Our Ideal	16	Risk Statement	46
Whakapapa/Historical Context	17	INFRASTRUCTURE	49
THE THREAT	20	Strategic Goal	49
Global Context	20	Risk Statement	49
National Context	21	WHENUA	52
OUR IWI PROFILE	22	Strategic Goal	52
Climate Impacts: Our Rohe	23	Risk Statement	52
What are we doing?	24	HAUORA	55
TE KAWA ORA: KAUPEKA ME NGAA PEKA	25	Strategic Goal	55
KAUPEKA ME NGAA PEKA	26	Risk Statement	55
NGAA KAUPEKA ME NGAA PEKA	27	NGAA MIHI	59
Common Actions Across Peka	27	REFERENCES	60
BIODIVERSITY	28		
Strategic Goal	28		
Risk Statement	28		
FOOD SECURITY	32		
Strategic Goal	32		
Risk Statement	32		



AN OVERVIEW

Climate change is one of the most pressing contemporary issues facing Aotearoa and the world. Locally, the challenges will be significant for Ngaa Rauru Kiitahi iwi. We previously lived in balance with and within the environment, and we are promoting a return to that state. From this perspective, there is a need to (re) harness, (re) learn, reflect and (re) adopt the teachings from our tuupuna to restore, regenerate and protect the future of our environment.

This strategy will enable us to build on the climate actions we have already taken, to gather the necessary data and information to make informed decisions, and to support new developments that will prepare our iwi for the future. The specific goals of this strategy are to promote and implement climate actions through our cultural mechanisms, which guide us back to a process of cultural reclamation and (re) alignment with ourselves and the environment.

Our vision for the iwi is *Whakatipungia Ngaa Raurutanga – The revitalisation of Ngaa Raurutanga*. The mission statement '*Kia rangatira te whakaaro, kia rangatira te tuu*' refers to growing and fostering our people to stand as leaders. The principle of balance is supported by an understanding of our holistic existence, of working together, '*Kia ngaatahi te hoe*' and (re)harnessing those teachings of our tuupuna- '*Kei tupua kawa, kei tawhito kawa te maataapuna o te ora*'. We are reminded that we extend from the sky to the earth, from the hinterlands to the ocean- '*mai te rangi ki te whenua, mai uta ki tai, te takiwaa o Rauru Kiitahi*', and that our mouri is interconnected- '*Ko te mouri moana, ko te mouri whenua, ko te mouri wai, ko te mouri ora o Rauru*'. This strategy will guide whaanau, hapuu and the iwi to respond to projected climate-change impacts, while acknowledging opportunities to capitalise on. The overarching goal is to ensure that Ngaa Rauru Kiitahi descendants have every chance to thrive, even in the most extreme scenarios. This strategy seeks to strengthen the iwi across all facets of our lives, to be prepared for climate change and to establish measures to enable climate action.

We have positioned climate-change action within a Ngaa Rauru Kiitahi framework called Te Kawa Ora. The framework seeks to separate the attainment of our iwi goals from the overwhelming barrage of potential problems we may face, to that of repositioning for a strength-based future, where our own taonga tuku iho is fundamental to pathways forward and to our survival.

We want our people to see our own maatauranga-aa-iwi, maataapono and kawa as the foundation of our response to the mammoth task ahead. From this foundation, we will also draw on those western tools that are useful for our future. We also acknowledge that other indigenous nations potentially have learnings that are relevant.

This climate-change strategy will be advanced through Te Kura-i-Huna (Digital School) and Kaakano (Innovation Hub) as one of the key Pou. We have developed eight priority areas which inform our direction: biodiversity, food security, water, managed retreat, energy, infrastructure, whenua and hauora. These key strategic areas are supported by iwi video narratives that illustrate our Ngaa Raurutanga as a contributing collection of our story and our direction.

TOHU



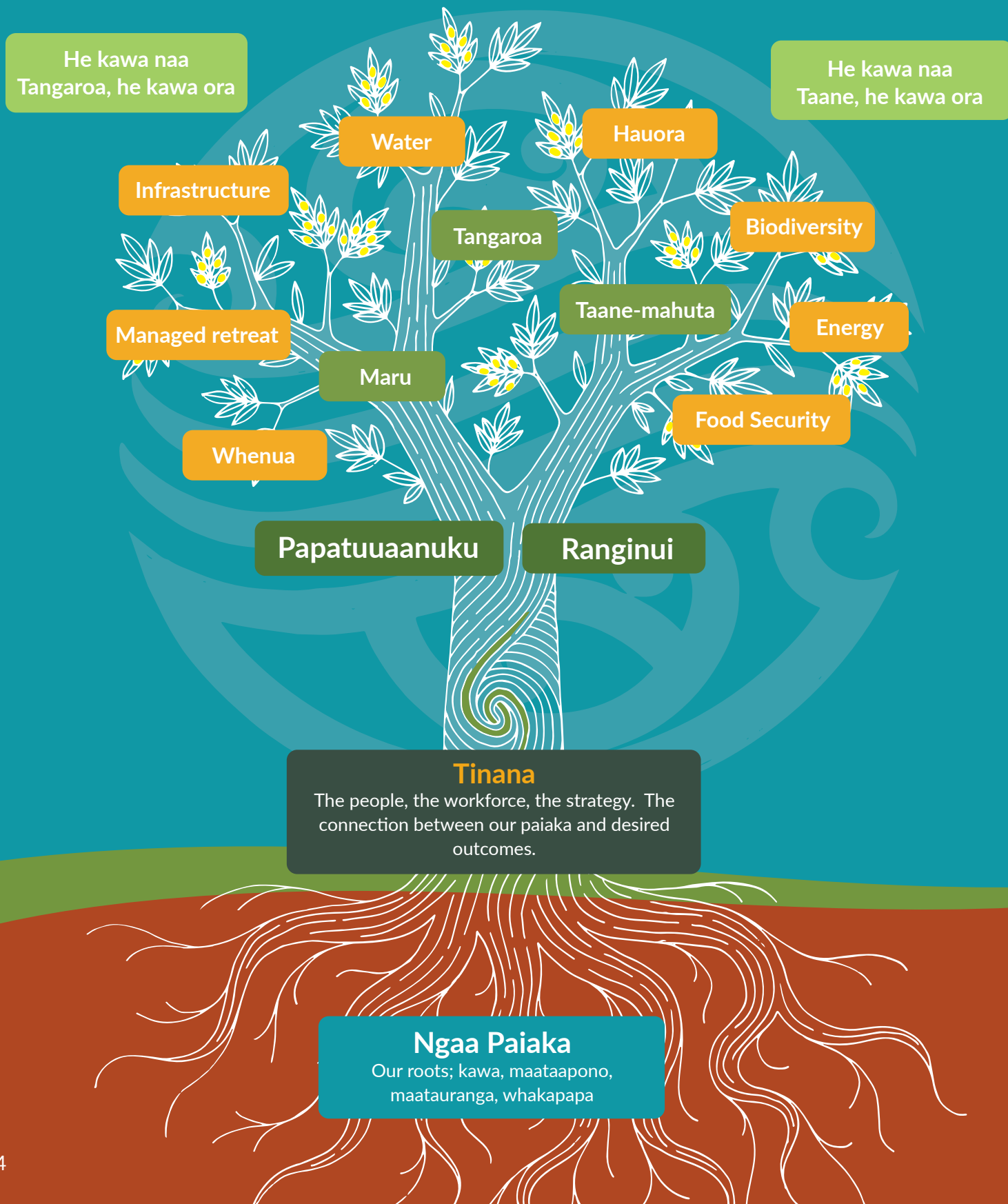
The two blue centre lines represent Tangagroa and Maru. The space between these lines depict the separation of Ranginui and Papatuuuanuku. Ranginui and Papatuuuanuku are represented by the two larger koru above and below. These large koru embrace the inner koru which serve to illustrate both the male and female elements, with the male represented on top and the female on the bottom. These inner koru refer to the growth of the next generation.

The circular shape of the design is synonymous to that of a seed and is also the shape of the world, sun and moon. The inter-connectedness between these elements is represented in the circular design, illustrating the connection between all things. The colour green symbolises the ngahere and whenua, whilst the blue depicts the sky, water, rain and moana.

TE KAWA ORA

Ko tupua kawa, ko tawhito kawa, ko te matoe o te rangi, teenei hoki raa te taketake rongu ... Whakatupuria te kawa ora!

The principle of ancient law in the openness of space is the taproot of peace and equilibrium... Maintain the equilibrium of the sacred order of creation!





The framework Te Kawa Ora was developed to respond to our projected climate future (Hawira, 2021; Pokai, T, 2021; Waitai, 2021). We use the analogy of the Sacred Tree of Creation – Te Kawa Ora to illustrate the key elements of this Climate Change Strategy. Te Kawa Ora is based on our cultural understandings of balance, whakapapa, relativity, interconnectedness, and collectivism. The foundational principle is balance – achieving *balance within us, among us and with the environment as an extension of who we are*. This understanding acknowledges the whakapapa links that we have as an iwi to each other and to the environment. We promote the need to (re) harness, (re) learn, reflect and (re) adopt the teachings from our tuupuna to achieve realignment with a balanced environment, achieved through restorative, regenerative and protective practices.

The principle of relativity acknowledges that our actions in one space will impact another space. Within our culture this principle is fundamental to our understanding, where the interconnectedness between all realms is based on whakapapa. We also understand how our actions are only one part of a broader response and working together achieves greater outcomes than working on our own. We are both interdependent and intra-dependent as members of a wider culture and as global citizens.

We also practice manaakitanga and reciprocity in our lives. These foundational everyday practices are culturally embedded in our ways of being and need to be reaffirmed in how we live with and treat the environment as part of our whakapapa.

In this way, we acknowledge that our environmental actions are part of who we are. In our daily practices, for example, we understand the importance of collectivism expressed through whanaungatanga and the support provided for the cultural, environmental, social, spiritual, and economic functions of the iwi. We also practice manaakitanga and reciprocity in our lives. These foundational everyday practices are culturally embedded in our ways of being and need to be reaffirmed in how we live with and treat the environment as part of our whakapapa.



We promote the importance of (re)assuming our cultural roles as kaitiaki and what this means for restoring, regenerating, and protecting te taiao. We also understand that in addition to (re) harnessing our tuupuna teachings, there are western and other indigenous knowledge systems that can inform our future planning. We advance the view of multiple knowledge systems drawing primarily from our own Ngaa Raurutanga and, where relevant and appropriate, other knowledge bases.

The goals of this strategy are to reinforce the principles and practices of equilibrium with the environment. Climate change is a symptom of the state of imbalance between people and the environment. This imbalance is represented by pollution of the domains of Papatuuuanuku and Ranginui and manifested in changing climate conditions causing cyclones, erosion, fire, flooding, and higher rates of sea-level rise.

Te Kawa Ora is represented in the form of a sacred tree. The elements of the tree illustrate our philosophical and metaphorical approach to our Climate Change Strategy and are central to reclaiming a state of balance.

These climate impacts subsequently threaten our ways of living and being and require us to:



SECURE OUR FOOD SOURCES



CONSIDER MOVING MARAE, URUPAA, COMMUNITIES AND CULTURAL SITES



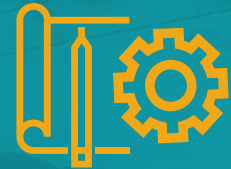
RESTORE, REGENERATE, AND PROTECT BIODIVERSITY



PLAN FOR ALTERNATIVE CROPS AND LAND RESTORATION



NEGOTIATE NEW ENERGY SOURCES



PLAN FOR INFRASTRUCTURE WEAKNESS



PLAN FOR POTENTIAL SALINATION OF DRINKING WATER AND OTHER FRESHWATER SOURCES



RENEGOTIATE LAND USE



MAP OUR UNDERGROUND WATER SYSTEMS



ENVISION HOW WE BRING THE ENTIRE IWI ON THIS NEW JOURNEY.

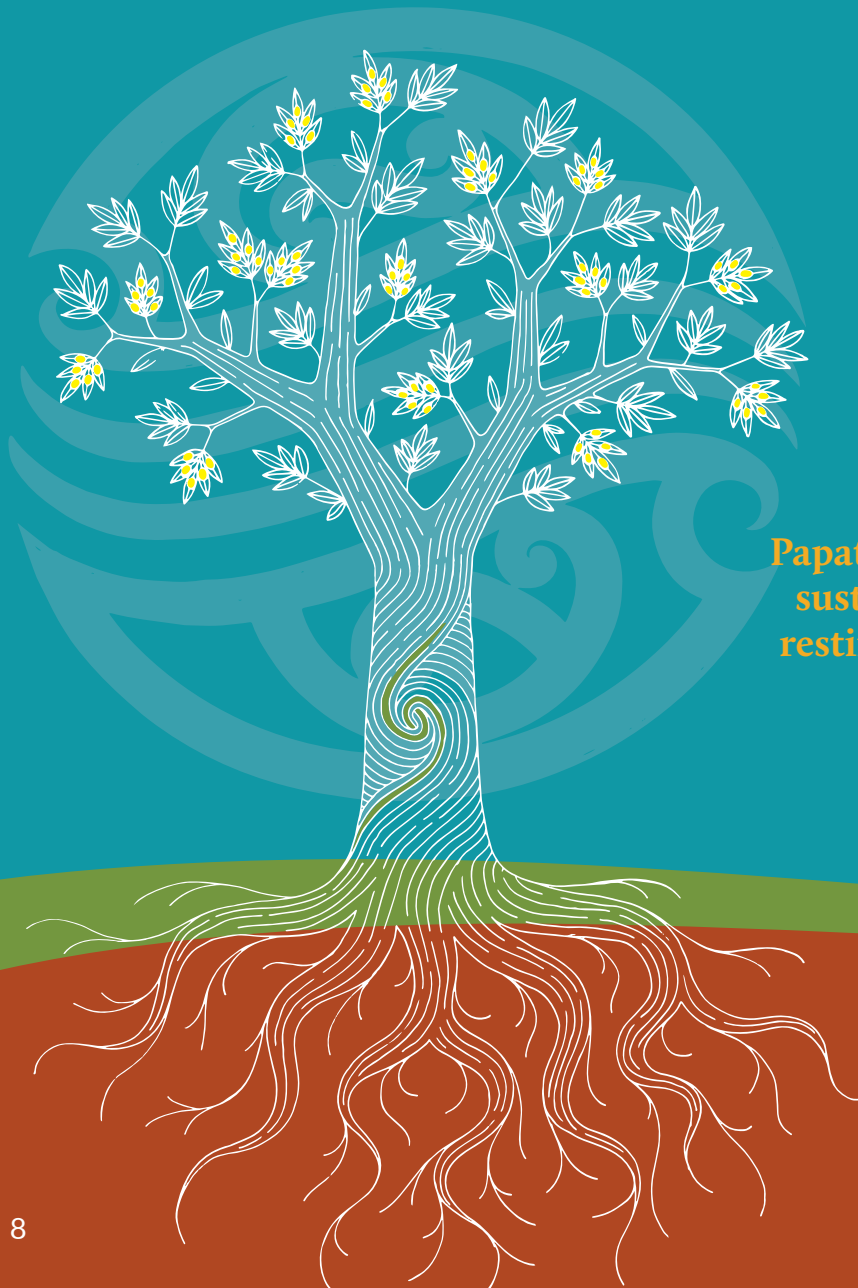
We are promoting the need to adopt adaptative actions and reduce our carbon emissions. Our iwi's climate-action efforts are part of a wider global effort, characterised in this case by an indigenous Ngaa Rauru Kiitahi view of positioning based on our traditional teachings.

TE KAWA ORA: OUR FRAMEWORK

Te Kawa Ora is represented in the form of a sacred tree. The elements of the tree illustrate our philosophical and metaphorical approach to our Climate Change Strategy and are central to reclaiming a state of balance.

In the domain of Ranginui we rely on the sun to conduct the seasons, Taawhirimaatea, the winds, who influence our weather patterns and climate conditions, and the moon and stars who guide the patterns of all living things. Papatuuaanuku grows the life that sustains us and becomes the final resting place of our physical form. From her grow the forests of Taane-mahuta, which are home to our manu and other taonga and provide resources for our marae, our homes, and our waka. Through Papatuuaanuku the waters of Maru flow, in which we drink and swim, and rely on, for physical and

spiritual sustenance before they eventually meet the realm of Tangaroa. Within the dominion of Tangaroa and Hinemoana live the kaimoana which sustain us. This realm plays a critical role in keeping the temperature of Papatuuaanuku balanced. The sea, traversed by our tuupuna to reach Aotearoa, is also the connecting point to the whenua. Significantly, we acknowledge the domains of our atua as intricate and interconnected through whakapapa. To this end, a whole-system approach acknowledges our links and connections between and beyond.



Papatuuaanuku grows the life that sustains us and becomes the final resting place of our physical form.

TE KAWA ORA: COMPONENTS



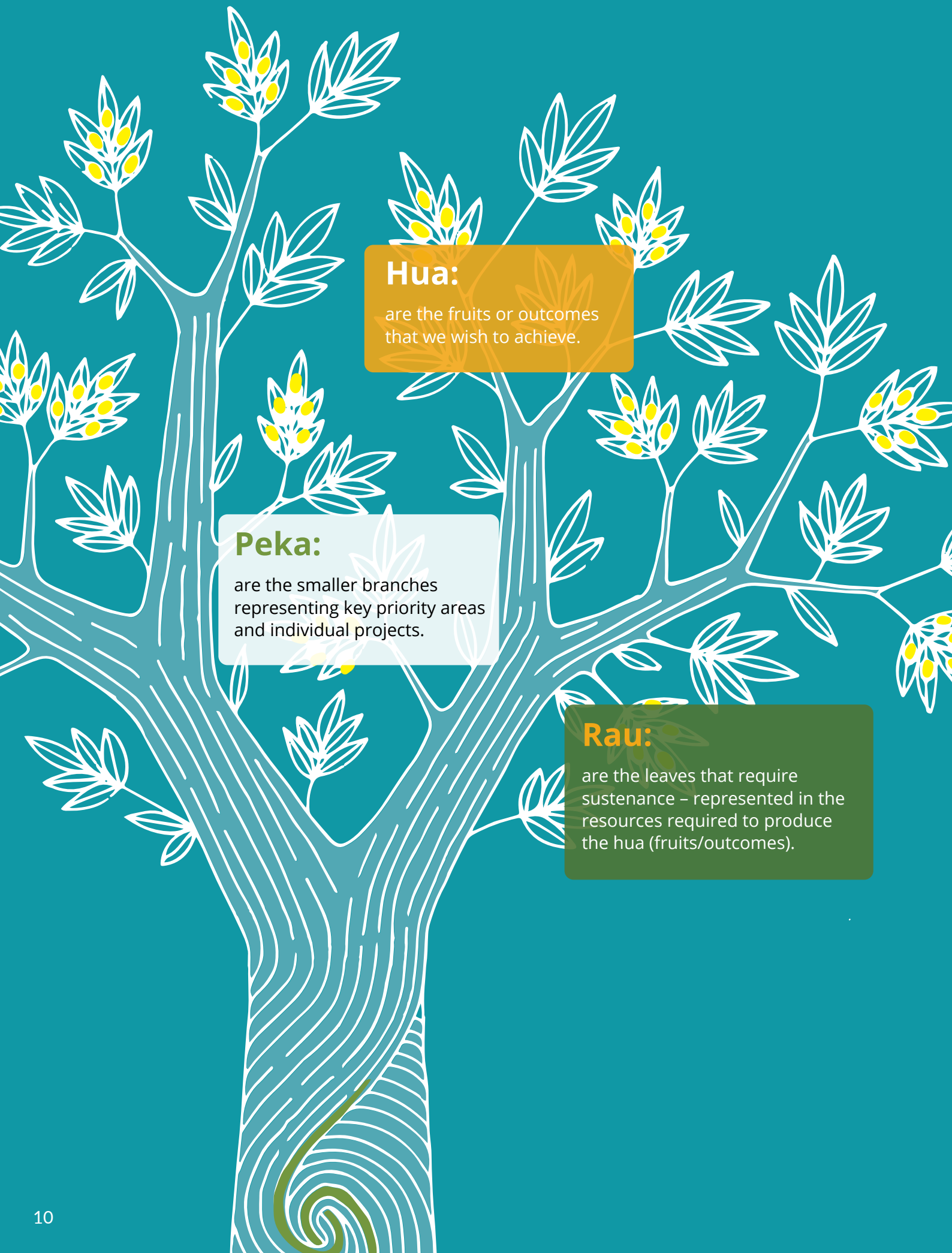
Te Kawa Ora:

the overarching canopy of the tree is Te Kawa Ora – the sacred order of creation. This order acknowledges a view of creation based on relativity, interconnectedness, collectivism, and balance.

Kaupeka:

the larger branches represent atua domains. Acknowledging that many atua domains are embraced by Papatuaanuku and Ranginui, for the purposes of this strategy the following have been emphasised:

- Papatuaanuku is Earth Mother and includes climate issues such as land-use change, soil health and erosion.
- Ranginui is Sky Father and includes all facets associated with the weather, the sun, and associated energies.
- Tangaroa encompasses all matters regarding the ocean.
- Maru is the domain of freshwater.
- Taane-mahuta is the guardian of the forests.



Hua:

are the fruits or outcomes that we wish to achieve.

Peka:

are the smaller branches representing key priority areas and individual projects.

Rau:

are the leaves that require sustenance - represented in the resources required to produce the hua (fruits/outcomes).



Tinana:

the main trunk provides the people, the workforce, the support, the strategy, and the connection between our paiaka (roots) and our hua (desired outcomes).

Paiaka:

our roots refer to our kawa, our maataapono, our maatauranga and our whakapapa. The paiaka must be strong and deep enough to withstand time, and to ground us through storms and other challenges. This component is the foundation of the strategy that sets our approaches and understandings as Ngaa Rauru Kiitahi iwi apart from others.



OUR VISION

Whakatipungia Ngaa Raurutanga – The revitalisation of Ngaa Raurutanga

OUR MISSION STATEMENT

Kia rangatira te whakaaro, kia rangatira te tuu

- Provide political and strategic leadership.
- Deliver sustainable benefits to our whaanau, hapuu and iwi through development.
- Foster unity and enable our people to embrace Ngaa Raurutanga.

For climate change:

- Political and strategic leadership that guides whaanau, hapuu and iwi to adaptive action and emissions-reduction pathways.
- Assist climate action that delivers sustainable benefits to whaanau, hapuu and iwi.
- Prepare whaanau, hapuu and iwi to respond effectively and safely to climate-change impacts.
- Foster unity and enable our people to embrace Ngaa Raurutanga as foundational to facilitating climate action and understanding that we support the continuity of whakapapa through environmental restorative, regenerative and protective processes grounded in Te Kawa Ora principles.



NGAA MAATAAPONO: TE KAAHUI O RAURU

Kia Maraetia

The marae is our principal home.

Mana Whenua

Our rohe is our geographical inheritance. It must be protected.

Mana Tangata

The people are our wealth.

Mana Motuhake

We must continually strive to reclaim self-determination.

Taonga Tuku Iho

Our reo, tikanga and koorero tuupuna are to be treasured.

NGAA MAATAAPONO: TE KAWA ORA

Whakatupuria te Kawa Ora

Maintain the sacred lores of creation

This maataapono acknowledges our cultural values embedded in our ancient teaching as a way forward into the anticipated climate future.

He kawa naa Tangaroa; he kawa ora. He kawa naa Taane; he kawa ora

The sacred order of Tangaroa; the sacred order of life. The sacred order of Taane; the sacred order of life

We are at the mercy of Taane (and the connection to the whenua) and Tangaroa (matters of the ocean). Both are central to the oxygen we breathe; without them we cannot exist.

Kei tupua kawa, kei tawhito kawa te maataapuna o te ora

The source of spiritual and physical sustenance is found within our own ancient lores of creation

The spiritual and physical wellbeing of all life forms is interdependent upon upholding our lores. These teachings remind us that all elements are related, and whaanau, hapuu and iwi are only one aspect of creation. The kawa promotes the adoption of a state of balance within which all may live in a state of wellbeing. When Te Kawa Ora is not in a state of equilibrium, we see changes in the wellbeing of the planet, such as marked changes to temperature, weather patterns and sea levels.



Mai te rangi ki te whenua, mai uta ki tai, te takiwaa o Rauru Kiitahi

The domain of Rauru Kiitahi extends from the sky above to the earth below, from the hinterlands to the ocean

Our takiwaa/domain is a living, indivisible whole that extends from outer space to Earth, from the mountains to the oceans, incorporating both physical and metaphysical elements.

Ko te mouri moana, ko te mouri whenua, ko te mouri wai, ko te mouri ora o Rauru

The life force of the iwi is inextricably linked to the life force of the ocean, the land and water

The whaanau, hapuu and iwi of Ngaa Rauru Kiitahi have an inalienable connection and intergenerational responsibility to the ocean, land, and water. This connection facilitates and promotes our health and wellbeing. If the ocean is well, we are well. If the land is well, we are well. If the water is well, we are well. If any of these are unwell, so too are we.

Kia ngaatahi te hoe:

The need to paddle as one, to act in unison

Te Kawa Ora is a single entity comprised of many elements and communities who must work collaboratively to achieve health and wellbeing through climate action. This component speaks to the partnerships that require creating, strengthening, and maintaining. We promote collaboration as a necessary way forward.





OUR IDEAL

Our ideal pictures the future we are heading towards, as a path for uri to follow in future years. This document is a demonstration of kaitiakitanga, as reflected in the development of a strategy and planned actions. Mana motuhake, whakapapa and Ngaa Raurutanga are the key concepts underpinning how we enact kaitiakitanga within our rohe. We do so with the aspiration that our tamariki and mokopuna will:

- understand their place and responsibilities in the web of creation
- understand their Ngaa Raurutanga (including reo me oona tikanga) and harness this understanding for the future of whaanau, hapuu and iwi
- continue the role of kaitiaki to ensure that the mouri of the environment is enhanced for spiritual and physical sustenance
- strengthen and support the cultural infrastructure of Ngaa Rauru Kaitahi as one of the cultural signifiers of who we are
- work in harmony with te taiao – be connected
- use our teachings, such as the maramataka, the moon and stars, in all aspects of life
- live in ways that enable abundance within the domains of the atua
- safely swim in and drink from our awa
- grow and collect unpolluted kai
- have an abundance of rongoaa to use
- have homes, buildings and marae across the iwi that are climate compatible
- live in places that are safe from flooding, sea-level rise and high-impact weather
- have a stable infrastructure system that does not place us at risk
- have healthy lifestyles that are compatible and respectful of Ranginui and Papaatuaanuku and their children
- enjoy their future knowing that whaanau, hapuu and iwi are prepared for climate change
- have developed businesses and a technological future that works in harmony with the environment
- have solutions for our iwi that are in harmony with Te Kawa Ora.

WHAKAPAPA/HISTORICAL CONTEXT



Nгаа Rauru Kiitahi emanated from the celestial and spiritual trees of the gods, down from the legion of spirits who were not seen but heard, through the generations of Te Kaahui Rere, eventually intertwining with the genealogies of Aotea waka.

‘KO PAHITONOA TE WAKA. KO RAURU TE TANGATA. KO TE RANGITOHITU TE HOE.’

Pahitonoa is the waka. Rauru is the man.
Te Rangitohitu is the paddle.

Rauru is the eponymous ancestor of Ngaa Rauru Kiitahi. He was known to be a man of his word; hence he was called Rauru Kiitahi (Rauru of the one word). From Rauru, descended the many hapuu of Te Kaahui Rere, our ancestors who possessed the taonga of flight.

Ngaa Rauru Kiitahi are iwi taketake – original inhabitants – of this whenua who existed well before the arrival of the Aotea waka. Some of the places and hapuu names given by Te Kaahui Rere are still in existence today, they include – Te Ihonga, Tieke, Tapuarau, Potiki-a-Rehua, Oturooriki, Te Kiri-o-Rauru, Moerangi, Ngaa Ariki and Te Ihupuku.

KO AOTEA TE WAKA, KO TURI TE TANGATA KI RUNGA.

Aotea is the waka, Turi is the commander.

When Turi arrived in Paatea, Taikehu was the prominent man who belonged to Te Kaahui Maunga, of the Te Kaahui Rere people. The Paatea River at the time was called Te Awanui-a-Taikehu (the great river of Taikehu). Turi and his wife, Rongorongo, had four children, Tuuranga-i-mua (a son), the eldest, Taaneroa (a daughter), Tuutawa-whaanau-moana (a son born at sea), and the youngest, Tongapootiki (who was born in Paatea). In time the family grew prompting them to move out in different directions within Ngaa Rauru Kiitahi. As a result of population growth Tuuranga-i-mua’s descendants moved south of Paatea. Tuutawa and Tongapootiki’s issue moved to Whenuakura and Waitootara. Taaneroa’s issue moved northwest.

It was during this time that whakapapa of Te Kaahui Rere and Aotea waka became intertwined. Generations grew into many hapuu, of which 15 hapuu and 12 marae remain active today¹. Today the descendants of Rauru the eponymous ancestor are spread across 12 marae in the Paahuki (tribal boundaries) (Ngaa Rauru Kiitahi Deed of Settlement, 2003; Waitai, 2021).

¹ Pokai, T.2021. oral communications, retrieved 14 December, 2021

NGAA RAURU KIITAHI ROHE

The rohe of Ngaa Rauru Kiitahi in 1840 began at Te Kaihau-a-Kupe / Ookupe (the mouth of the Whanganui River). The kaainga or occupied sites at Te Kaihau-a-Kupe included Kaihokahoka (ki tai), Kokohuia (the swampy area at Castlecliff), Te Whare Kakaho (the Wordsworth Street area), Pungarehu/Te Ahi Tuatini (Cobham Bridge), Te Oneheke (between Karamu Stream and Churton Creek), Patupuhou, Nukuiro, and Kaieerau (St Johns Hill). The rohe then extended from Kaieerau along the watershed to Motuhou, Kaihokahoka (ki uta), Taurangapiopio, Taumatarata, Mataimoana, Taurangakawa and north into the Matemateaonga Ranges and the area known as Tawhiwhi.

After the Matemateaonga Ranges, is the Mangaehu Stream where the Mangaehu Paa was situated, near the source of Te Awanui-a-Taikehu (Paatea River). Between Te Awanui-a-Taikehu and Whenuakura Rivers (Te Arei o Rauru) were the pa of Maipu and Hawaiki. Many Ngaa Rauru Kiitahi paa and kaainga were also situated along Te Awanui-a-Taikehu,

such as Oowhio, Kaiwaka, Arakirikiri, Ngaa-papa-tara-iwi, Tutumaahoe and Parikaarangeranga. At the mouth of the river sat the kaainga and marae of Rangitaawhi and Wai-o-Turi which remain today. Along the shoreline between Rangitaawhi and Tuaropaki lies Te Kiri o Rauru. Between Rangitaawhi and the mouth of the Whenuakura River stood Tihoi Paa (where Te Rauparaha rested). From Tihoi the rohe extends to Waipipi, Tapuarau, Waitootara River, Waiinu, Waikaramihi and Te Wai-o-Mahuki (near Te Ihonga). It continues past the Oototoka Stream to Pooipoia (the marae of Aokehu at the mouth of the Ookehu Stream), and then continues onwards to the mouth of the Kai iwi Stream near the marae of Taipake Tuuturu. From here the rohe stretches past Tutaramoana (he kaitiaki moana) back to Te Kaihau-a-Kupe. The area of the Ngaa Rauru Kiitahi rohe in 1840, as described above, was approximately 210,000 hectares (520,000 acres) according to a digital map calculation in 2003 (Te Kahui o Rauru, 2003; Te Kahui o Rauru, 2021)

The area of the Ngaa Rauru Kiitahi rohe in 1840, as described above, was approximately 210,000 hectares (520,000 acres) according to a digital map calculation in 2003

OUR ROHE

Disclaimer: The Whakapapa/Historical Context part of the strategy provides background information to help you understand our whakapapa, and our whenua. The information above is not extensive and is intended as a guide only. If you would like to learn more about these matters, please contact Te Kahui o Rauru (TKOR).

THE THREAT

Global Context

Since the 18th century there have been rapid shifts in our lifestyles and the way we view the environment. We know these shifts have caused disconnection and misalignment between our cultural understandings and our actions. We are connected to the global environment as one part of a bigger whole. We know that an excess of greenhouse gas emissions did not occur through the actions of one generation but has occurred since the period known as the industrial revolution. These actions have caused our atmosphere to warm, increasing the temperature of the earth, which has subsequently impacted te taiao.

Colonisation has significantly disrupted our existence as tangata whenua. As an iwi, we have endured land wars, the taking of our lands through legislation and raupatu, pandemics and the disestablishment of our cultural institutions. Within the current climate context, we know that those who have contributed the least amount to the current climate state are the ones who will be most impacted. We have already experienced the impacts of imbalance within the environment, and we know that these challenges will compound and intensify, affecting the way we live as whaanau, hapuu and iwi. We can expect:

- intensified water cycles (extremes of wet and dry)
- extreme weather conditions
- increased rainfall contributing to high sea-level rise causing increased frequency and severity of coastal flooding and erosion and extreme sea-level events
- changes to the ocean, including warming, more frequent marine heatwaves, ocean acidification and reduced oxygen levels
- amplification of permafrost thawing, loss of seasonal snow cover, melting of glaciers and ice sheets, and loss of summer
- rapid and intensified biodiversity loss and extinction
- affects to ocean ecosystems and people that rely on them
- amplified impacts for cities, including heat, flooding, and sea-level rise (Ministry for the Environment, 2018).

We have already experienced the impacts of imbalance within the environment, and we know that these challenges will compound and intensify, affecting the way we live as whaanau, hapuu and iwi.



National Context

Aotearoa New Zealand adopted the Paris Agreement in 2015, a legally binding international treaty committing all countries to act on climate change as part of a global community. Aotearoa has committed to reaching net zero emissions of long-lived greenhouse gases and reducing biogenic methane emissions between 24–47 percent by 2050 (Climate Change Commission, 2021). However, urgent and collective action across government, industry and communities is required to reach net zero carbon emissions over the next 30 years to have a chance at the best-case scenario.

Throughout the past century, temperatures have increased, glaciers have melted, and sea levels have risen. These changes will continue, and their impacts will increase (NZ Government, 2019a). Projected future impacts include more droughts and more floods, particularly on the West Coast. This will cause increased erosion and inundation of coastal areas, and the introduction of new pests and diseases, affecting health and agriculture. It is likely that our lives and livelihoods will be significantly affected by global impacts evident in numerous ways, including bird migration patterns, food shortages and political instability. (World Wild Fund for Nature, 2021)

We also know the National Climate Change Risk Assessment (Ministry for the Environment, 2019a) has identified 43 major risks facing Aotearoa. Of these risks, we understand that all will impact Maaori, however, there are 14 specified risks that have specific significance for Maaori. There are projected risks to our cultural, environmental, social, spiritual, and economic wellbeing through loss and degradation of lands, water, forests, seas, indigenous species, indigenous flora and fauna, healing places, rongoa, cultural assets, environmental places of learning, mahinga kai, drinking water and businesses. There is also risk to the exacerbating current inequalities that exist for Maaori. Notably, the Government also outlines that there is a risk of breaching the Treaty of Waitangi obligations (Ministry for the Environment, 2019a).

Projections

- our climate has warmed by 1°C in the past 100 years. If global emissions remain high, temperatures will increase by a further 1°C by 2040 and 3°C by 2090, with the greatest warming likely to be in the north-east
- sea levels have risen by 2.44 mm per year over the past 60 years. If global emissions remain high, sea levels will increase by a further 0.21 m by 2040 and 0.67 m by 2090
- extreme weather events, such as storms, heatwaves, and heavy rainfall, are likely to be more frequent and intense. Large increases in extreme rainfall are expected everywhere in the country
- winter decreases in some regions such as Gisborne, Hawkes Bay and Canterbury and winter increases in Nelson, West Coast, Otago and Southland
- the number of frost and snow days are projected to decrease
- drought is predicted to increase in frequency and severity, particularly along the east side of the Southern Alps
- wildfire risk is expected to increase (Ministry for the Environment, 2018).

Extreme weather events, such as storms, heatwaves, and heavy rainfall, are likely to be more frequent and intense. Large increases in extreme rainfall are expected everywhere in the country

OUR IWI PROFILE



12 marae
15 hapuu
5,568 people
 reported affiliating to
 Ngaa Rauru



61.4%
 engaged in Te Reo Learning



30.6% live within
 Manawatū-Whanganui
 Region



48.2%
 Rangatahi



17.2% live within
 Taranaki Region



38.6%
 Home ownership



63.5% Employment

*Statistics NZ Unofficial Report (2018).

OUR ROHE

Rivers/waterways

- Kai Iwi Stream
- Whenuakura River
- Te Awanui a Taikehu (Paatea)
- Waitootara River
- Whanganui River

Sites of Significance

- Pootiki a Rehua Maunga
- Mangaehu Paa
- Maipuu Paa
- Hawaiki Paa
- Tutumahoe Paa
- Maipu Paa
- Owhio kainga
- Kiawaka kainga
- Nga-papa-tara-iwi Kainga

*See Ngaa Rauru Kaitahi Puutaiao Management Plan for further information

OUR KEY FOCUS AREAS

- Biodiversity
- Food Security
- Water
- Managed Retreat
- Whenua
- Infrastructure
- Energy
- Hauora

OUR APPROACH:

- 1 Preparing the Ground
- 2 Assessing the current baseline on past events
- 3 Identifying future climate impacts, vulnerabilities and risk
- 4 Identifying, assessing and prioritising climate actions
- 5 Implementing, reviewing and monitoring the strategy



CLIMATE IMPACTS: OUR ROHE

Flooding has been a major issue within our rohe, in the Waitootara area, with the earliest recorded account occurring in 1869 and the most recent in 2015. The most significant flood was in 2004, when we experienced major damage to homes and roads and a breakdown of all utilities and related services. We also experienced the washout of farmland, bridges, culverts, fences, and tracks, which impacted on farm production levels and the wellbeing of the people. For our iwi, Waipapa marae and some of our whaanau were directly affected, which resulted in moving the marae and associated community.

In the future, we can expect to experience a range of climate-change impacts within our rohe including:

- increased flooding risk from increased high-intensity rainfall
- increased frequency of droughts as the Taranaki region becomes drier on average
- increased severity and frequency of high weather impact – storms and cyclones
- increased fire risk through extreme heat
- whenua loss through erosion and coastal inundation (note: some protection is provided by coastal cliffs)
- increase in climate refugees – people from other countries needing resettlement support
- increase in the number of Ngaa Rauru Kiitahi descendants returning to the rohe as urban spaces become denser and more expensive
- more Civil Defence emergencies requiring our marae to cater for more people, for longer periods of time
- infrastructure failure resulting in isolation due to weather-sensitive roads, power outages and a breakdown of digital services
- loss to mahinga kai and hunting due to warmer conditions and changing nature of the ecosystem. This includes whitebait, tuna and kai from Tangaroa
- increased loss of rongoa
- increased loss to maatauranga-aa-iwi, such as maramataka, whakatauaakii, patterns, puuraakau, history, mooteatea and waiata tawhito when communities move due to flooding
- risk to drinking water and other water resources through contamination and salination
- loss of jobs and threats to the economic stability of businesses
- health risks due to airborne diseases
- risk to housing conditions if homes are not climate ready
- potential increase in homelessness
- degradation of the environment causing further disruption to biodiversity (National Institute of Water and Atmospheric Research, 2008)

We already understand the need to be prepared. We are concerned with the disproportionate ways in which our iwi/hapuu will experience such events and the extent to which current inequities may be worsened. We acknowledge that the playing field for our people is uneven when considering iwi statistics in, for example, housing, employment, education, and health. These concerns are the impetus for this strategy.



WHAT ARE WE DOING?

Within our rohe there are examples of climate action across whaanau, hapuu and iwi. This strategy intends to support and strengthen current actions and propose additional actions. Through these ongoing streams of work, we will continue to increase our capability and capacity to create economic opportunities and to improve the health and wellbeing of our people and te taiao. Our current progress includes:

- increased planning and development of papakaainga
- exploration and expansion of partnerships and operations in the energy sector
- planning relocation of marae and urupaa
- expansion of alternative food sources through iwi businesses
- land purchased for (re) development – land-use change
- exploration of carbon-neutral businesses
- developed businesses that support an environmental iwi approach – Kai Tahī
- negotiations with energy companies to ensure a Ngaa Rauru Kiihahi future
- a partner programme with Te Āti Awa – the whaangai/translocation of birds from Te Āti Awa to regenerate in our bush area given that their ecosystem is no longer suitable
- Waitootara Awa Hikoi Waananga focusing on maatauranga-aa-iwi
- opportunities to create income through carbon crediting
- capability and capacity-building through Te Mana o te Wai and Kaimahi 4 Nature, which includes riparian planting and restoring the health of waterways
- online workshops and discussion on maara kai and restorative approaches, achieved through an uri's online following
- building key partnerships with local/central government, research institutes, businesses, and industry to advance climate action.

TE KAWA ORA: KAUPEKA ME NGAA PEKA



BIODIVERSITY



FOOD SECURITY



WATER



MANAGED RETREAT



WHENUA



INFRASTRUCTURE



ENERGY



HAUORA

KAUPEKA ME NGAA PEKA

**E kore e piri te uku ki te rino, ka whitia e te ra.
Clay will not cling to iron when the sun shines.**

The above whakatauaakii refers to drawing on our cultural strengths and mechanisms. The clay and the iron are symbolic of unmatched systems, which once dried and/or matured remain distinct.

The distinctiveness of our cultural systems is represented in Te Kawa Ora framework. The peka refers to the outer branches that stem from the kaupeka (main branches). The main branches represent the atua domains within which the key priority areas reside.

We acknowledge the primordial parentage as represented in Ranginui and Papatuaanuku. Their descendants are the guardians of various facets of the environment. While acknowledging that all the children born through their union are significant, for the purposes of this strategy, however, Tangaroa, Taane-mahuta and Maru are the primary foci.

Within this strategy there are eight key peka – prioritised climate-action areas. The tinana (body of the tree) refers to the workforce, the people, and the strategy, which are all central to achieving what we intend – the planned advancement of climate action. Our proposed actions are guided by our Ngaa Rauru Kiitahi kawa, tikanga, whakapapa, maataapono and maatauranga-aa-iwi, which form the root system of the tree.

The symbolism of the tree refers to the feats of Taane-mahuta, who was responsible for separating

the parental bodies, represented as the sky and the earth, to allow the light to come in. Taane-mahuta, or Taane-aa-rangi as he was also known, ascended to the highest realms upon the separation of Papatuaanuku and Ranginui. There he gathered various forest species to bring to this world. In our narrative Taane-mahuta is the guardian of the birds and forest.

Tangaroa is the domain of the sea. This domain is larger than the global land mass and plays a significant role in sequestering carbon. The whales, the coral reefs and the various species of this domain will be impacted by climate change. We know that the ice in the Arctic and Antarctic circles is melting due to warmer temperatures, which is causing sea-level rises and release of pollutants back to Ranginui.

Maru is known as the guardian of wai Maaori – freshwater. Degradation to Maru is self-degradation, particularly through purposeful pollution. The rivers and waterways are places where our mokoupuna swim and where we gather food. Old narratives from our Kuia speak of how there was an abundance of whitebait, tuna, water, freshwater koura, and watercress in our waterways. She retells how whanaau from up the river used to frequent the rohe to fill their kete. Abundance is her childhood memory – always having access to kai in the waterways, rivers and beyond, in ways where there was plenty for all.

As Ngaa Rauru Kiitahi we are seeking a return to an abundance, where greed and unwarranted behaviours and practices that destroy our environment give way to a greater need to work in harmony and to be in balance through restorative, regenerative and protective practices within ourselves and within the dominion that we have as an iwi. We choose to have a safe place for our mokopuna, our future.



NGAA KAUPEKA ME NGAA PEKA

Common Actions Across Peka

- Climate change is one of the key pou for our iwi.
- Te Kawa Ora is centralised, adopted, and promoted in all iwi businesses.
- A series of implementation plans are developed for each peka.
- Our iwi's capacity and capability plans are strengthened through targeted climate programmes.
- Investments in leadership capacity and capability development for rangatahi are prioritised.
- Ongoing strengthening of internal/external relationships and alliances.
- New relationships and alliances in the climate field will continue to be developed.
- A comprehensive research, monitoring and evaluation strategy is promoted through Kaakano (Innovation Hub).
- Research/innovation to inform our own climate decisions is integrated across all iwi business
- Access and/or co-develop relevant climate data and information that are specific to Ngaa Rauru Kiitahi is utilised across the iwi
- Developed programmes that upskill and advance the knowledge base of our iwi to understand climate change, particularly, what this means for our future are developed, promoted, and run.
- Localised climate action that strengthens our iwi across all facets of our lives, including culturally, environmentally, ecologically, socially, and economically is promoted to the extent that we are adapting and reducing our emissions.



BIODIVERSITY

Strategic Goal

Our ecosystems and biodiversity are thriving, healthy and self-sustaining, and can support all living species, particularly our taonga. Maatauranga-aa-iwi is used to support the restoration, regeneration and protect our biodiversity interests.

Risk Statement

Climate change and biodiversity are often addressed as two distinct challenges but are in fact inextricably linked. The rapid decline of biodiversity, resulting in habitat loss across all landscapes, threatens not only people's holistic wellbeing but also their existence. The decline of biodiversity is a fundamental contributor to the acceleration of climate change. We acknowledge that there has been a lack of urgency in addressing the threats. We understand the relationships between the different domains and the direct impact these have on Ranginui and Papatuaanuku as carbon fills the atmosphere and needs to be sequestered through Papatuaanuku. The key risks are as follows:

- Neglecting to adopt Te Kawa Ora principle of balance and/or equilibrium means that we will continue to experience the impacts of declining biodiversity within our environment, which could affect what can be grown, a loss of bird life and other species (including indigenous species), and ecosystems.
- Neglecting to foster and strengthen our kaitiaki status among our own will mean that we will potentially lose the opportunity to contribute to our health and wellbeing in ways that are aligned with our cultural understandings – Te Kawa Ora.
- There is risk to our environmental management processes and programmes due to a dominant western view that limits our capacity and capability.
- Cultural identity – coupled with health and wellbeing of our iwi as attained through the processes of Taane-mahuta, Maru and Tangaroa and as linked to Papatuaanuku and Ranginui – is at risk when restorative, regenerative and protective processes are neglected.
- We lack the capacity and capability to advance at speed according to our own Te Kawa Ora processes, placing our environment and our iwi at risk.

BIODIVERSITY

RISK STATEMENTS	ACTIONS	
<p>We are dependent on strengthened partnerships, alliances and relationships to forge effective pathways for our iwi to navigate climate action. An innovative approach to partnerships and alliances with external bodies, where our mana is kept intact, will be pivotal to an effective biodiversity restorative, regenerative and protection programme.</p>	<p>Develop a relationship model based on Te Kawa Ora that reflects the notion of partnership, inclusion and protection as defined by our iwi.</p>	<p>Governance</p>
	<p>Strengthen current relationships and forge new relationships to advance iwi aspirations. This will be underpinned by Te Kawa Ora. Key relationships and alliances include:</p> <ul style="list-style-type: none"> a. councils/local government b. Department of Conservation c. Predator Free 2050 d. Key Crown agencies, such as Ministry for the Environment and the Ministry for Business, Innovation and Employment e. Non-government organisations f. Businesses g. CRIs and research institutes h. Communities i. Other iwi j. Other indigenous nations, particularly within Oceania, where we have whakapapa links k. Other interest groups. 	<p>Operational</p>
	<p>Strengthen our relationships and alliances with western research institutes to advance the co-development of data and information for the iwi.</p>	<p>Operational</p>
<p>Government policies and decision-making processes are misaligned with Te Kawa Ora, limiting our ability to exercise our own iwi approaches to the restoration, regeneration, and protection of Papatuuuanuku, Ranginui, Taane-mahuta, Maru and Tangaroa as linked domains.</p>	<p>Advocate for Maaori governance participation in all areas of climate change that impact Ngaa Rauru Kiiitahi so that we have a representative voice at the table.</p>	<p>Operational</p>
<p>Inter-dependencies on government funding coupled with fast-paced policy changes, place the iwi in a vulnerable position, particularly when iwi capacity and capability to have representation at key decision-making tables is limited.</p>	<p>Seek external opportunities to further develop Ngaa Rauru Kiiitahi climate leaders and kaitiaki who can successfully navigate maatauranga-aa-iwi and western climate science to build leadership pathways.</p>	<p>Operational</p>
	<p>Strengthen our position through governance membership and participation at key decision-making tables.</p>	<p>Governance</p>
	<p>Investigate information and resources available through Predator free 2050, accessing and disseminating to uri.</p>	<p>Tactical</p>

RELATIONSHIPS AND ALLIANCES

BIODIVERSITY

	RISK STATEMENTS	ACTIONS	
PLANNING, IMPLEMENTATION RESEARCH AND EVALUATING	Lack of developed iwi research, data sets, evaluations, and monitoring mechanisms, and/or difficulty in accessing, means that we do not have a comprehensive overview of the ongoing effects of decline and cannot make informed decisions for the future.	Promote Ngaa Rauru Kiitahi as a biodiversity case study within research and central government spaces providing clear partnership parameters to co-develop the processes, outputs, methods, and access to and retention of data/information where our integrity and knowledge are respected and safeguarded.	Operational
		Seek funding and partnerships that have high-level science knowledge and information, including climate-impact studies to assess risk and vulnerability data/information pertaining to critical systems in our paahuki, with links to neighbouring systems. These include natural ecosystems and identification of thresholds, including rates at which autonomous adaptation is possible.	Operational
		Investigate restoration, regeneration and protection projects to support tuna and other species that are at risk (biodiversity).	Operational
	The cost of engaging in high-level research and the lack of technicians with the ability to engage in this field is a barrier to developing effective data.	Explore research funding to advance iwi partnerships to restore, regenerate and protect maatauranga-aa-iwi-based methods for restorative, regenerative and protection projects.	Operational
	The decline of archived maatauranga-aa-iwi means that our mokopuna will have limited access to our cultural understandings, causing a disruption to our direction.	Develop research projects and archival protocols to record maatauranga-aa-iwi in moving image, digital and written form for future generations.	Operational
CAPACITY AND CAPABILITY	A lack of awareness and understanding of Te Kawa Ora among our own, specifically relating to whakapapa, relationships, values, and the connectedness between the life-sustaining functions that ecosystems provide, coupled with a lack of understanding of climate issues, means that we must implement a model that simultaneously attends to the impacts and educates our own.	Develop Te Kawa Ora waananga to educate our own to increase awareness, nurture aspirations and spur momentum to adopt kaitiaki and leadership roles.	Operational
		Make application to the Regional Growth Fund and other funding bodies for the restoration and re-establishment of trees as a mechanism to build capacity and capability.	Operational
	Lack of capacity and capability to broker high-level science knowledge for decision-making purposes places future planning and implementation measures at risk.	Develop rangatahi-targeted programmes in partnership with industry, university sector and businesses to build academic leadership in the field of biodiversity for our iwi.	Operational
		Access funding via Te Paepae Rangatira framework and government research funding streams to assist in the development of uri-led (particularly rangatahi) projects and programmes, which restore, regenerate, protect, enhance, connect and/or promote the wellbeing of life-giving ecosystems.	Governance
		Establish internal Te Kaahui o Rauru governance to provide iwi direction pertaining to te taiao, specifically biodiversity-related actions.	Operational

BIODIVERSITY

RISK STATEMENTS	ACTIONS	
<p>GROWING ECONOMIC BASE</p> <p>Our economic base needs strengthening to respond to the rapid decline of biodiversity, which is likely to increase with the added pressures of climate change.</p>	<p>Investigate environmental restoration, regeneration and protection projects that provide the opportunity to build our financial base. For example, protecting taonga species through commercial avenues while creating a resource opportunity to contribute to wider ecosystem health.</p>	<p>Operational</p>
	<p>Explore business opportunities that restore, regenerate and protect the biodiversity base of our iwi to reflect Te Kawa Ora principles, provide jobs for our people, and significantly build our economic base.</p>	<p>Operational</p>
	<p>Investigate and secure funding opportunities with the Department of Conservation for the development of coastal wetlands.</p>	<p>Operational</p>
	<p>Initiate discussions to reach an agreement with iwi on afforestation.</p>	<p>Operational</p>
	<p>Investigate a joint venture for the planting of maanuka to increase the production of honey.</p>	<p>Operational</p>
	<p>Explore the Regional Growth Fund for the restoration and re-establishment of trees in the rohe.</p>	<p>Tactical</p>
<p>The privatisation of water in our paahuki will impact on the essential functions and capacity of our waterways to support biodiversity and our economic capacity.</p>	<p>Investigate the business implications of water privatisation with developed key business actions for the iwi.</p>	<p>Operational</p>
<p>Neglecting to adopt Te Kawa Ora principles in our business ventures brings our integrity and principles into question with our own.</p>	<p>Review business interests that reflect Te Kawa Ora principles and values.</p>	<p>Governance</p>
	<p>Develop and adopt a Te Kawa Ora approach to old, current, and new business.</p>	<p>Governance</p>



FOOD SECURITY

Strategic Goal

Highly efficient and organised systems are in place to ensure that we have an abundance of food and fresh water readily available for all climate conditions, whether in accumulative and/or incremental form. This approach is in response to predicted climate-change impacts and to the significant numbers of low-income households, instances of poor health and elevated levels of unemployment among our uri.

- We exercise kaitiakitanga to advance, restore, regenerate, and protect the mouri of te taiao, and to ensure ongoing food supply.
- We have adopted and promoted Te Kawa Ora values, principles, and practices as fundamental to advancing food security for the iwi.
- We have set in place appropriate ways of capturing and teaching those parts of our maatauranga-aa-iwi that are at risk of being lost because of climate change. This includes, for example, mahinga kai methods and associated puuraakau, whakatauaakii, traditional patterns, waiata tawhito, mooteatea, carvings and other culturally significant forms of knowledge.
- We have the necessary research and information developed through partnership models where co-developed research is adopted and advanced.
- We have strengthened alliances and relationships leading to our cultural, environmental, social, and economic health and wellbeing.
- Our economic capacity and capability have significantly increased through business ventures that have adopted Te Kawa Ora principles.

Risk Statement

We are not completely prepared for climate- change conditions and cascading impacts. This will place risk on current food crop regimes and access to food supplies for hau kaainga and iwi members who may return and others who arrive. Neglecting to focus on our whaanau, hapuu, marae and iwi returning to self-sufficient food measures, places us at risk, given the reliance on supermarkets and other food distributors. Significantly, this is likely to be a key issue in disaster situations.

The already degraded state of our environment and its resources are barriers to self-sustaining food systems. These impacts are likely to be worsened through climate change, for example, low water quality and poor soil health, and sensitivities of the infrastructure systems.

FOOD SECURITY

RELATIONSHIPS AND ALLIANCES

RISK STATEMENTS	ACTIONS	
<p>In absence of strengthened and new relationships and alliances within research, industry, businesses, local and central government, we will struggle to develop future pathways.</p>	Support the further development of climate-change action through Kaakano (Innovation Hub).	Operational
	Investigate and seek funding for several workstreams to support our food security aspirations.	Operational
	<p>Identify the new relationships needed and strengthen existing relationships to ensure robust food systems and a supply of food. These include:</p> <ul style="list-style-type: none"> a. Maintain and strengthen our relationships with other Taranaki and Whanganui iwi to enable coordinated responses to the sourcing and distribution of food. b. Initiate strong relationships with commercial food supply chains, farms and produce growers to ensure a secure food supply for our uri. c. Initiate strong relationships with key stakeholders within the fishing industry to ensure our ongoing right to access uukaipoo sites and kaimoana is protected through regulatory changes. 	Operational
	Create a network of external food suppliers to maximise our chances of a secure supply in times of extreme events.	Operational
	Develop a digital food network of iwi and the wider community that integrates tikanga values, such as manaakitanga and whanaungatanga, and expressed as food-sharing and swapping of excess fruit and vegetables.	Operational
	Continue to support relationships and alliances central to Kaitahi to grow the business to a level where we can employ our own.	Operational
	Connect and create partnerships with existing research institutes/organisations to advance climate impact research through the ongoing monitoring and evaluation of vulnerability and risk levels of plants, trees, kaimoana and other food in a changing environment.	Operational

FOOD SECURITY

	RISK STATEMENTS	ACTIONS	
PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION	<p>A lack of iwi climate-change research, monitoring and evaluation programmes means we do not know what the potential food security risks are and what impact they will have.</p>	<p>Support Kaakano (Innovation Hub) to advance research for Ngaa Rauru Kaitahi in the areas such as:</p> <ul style="list-style-type: none"> a. soil health and ecosystem changes that impact the growing of food b. heritage seed collection and storage for the future c. restoration of traditional plants and trees and new varieties that will suit the region d. water health e. increased production of kai and rongoaa for Kaitahi products f. Maatauranga-aa-iwi g. methods and processes to facilitate iwi food security h. establishment and restoration of food forests and marae orchards for distribution i. identifying adaptative food staples suitable for the rohe j. impacts of significant climate events on food supply and distribution under changing climate conditions, ascertaining potential strains on the systems to understand implications for whaanau, hapuu, marae and iwi, and our current and future business ventures. k. new business ventures in the food industry l. health and wellbeing of wetland habitats as a source of food m. land-use change for food security protection n. out-of-stream tuna/fish farming as a kai resource o. multi-purpose planting regimes p. carbon sequestration. 	<p>Operational</p>
CAPACITY AND CAPABILITY	<p>A lack of capacity or capability development leaves the iwi in a position where we cannot respond effectively to the impacts that climate change will have on our food systems.</p>	<p>Integrate whaanau, hapuu, iwi capacity and capability development into research partnership programmes.</p>	<p>Operational</p>
		<p>Develop capacity and capability through the expansion of current and future businesses in the food sector, including Kaitahi nursery.</p>	<p>Operational</p>
		<p>Develop capacity and capability through wetland restoration programmes (food source).</p>	<p>Operational</p>
		<p>Invest in rangatahi as central to succession planning and business development through the development of targeted programmes in the food security sector.</p>	<p>Operational</p>
	<p>A lack of awareness among uri of risks to food-supply chains and low readiness for a lifestyle shift means that our iwi will remain unprepared.</p>	<p>Undertake waananga to increase food security awareness among uri and promote a value shift to support a new way of living that restores, regenerates, protects and enhances our environment and its resources.</p>	<p>Operational</p>
		<p>Develop a series of waananga (face-to-face and online) to explore practical approaches to food security through Te Kawa Ora teachings. This would include future suitability of land for food production, the collection of heritage seeds and regeneration of rongoaa.</p>	<p>Tactical</p>
<p>Produce digital educational resources on food security for circulation through Te Kura i Huna (Digital School) to support kai-growing activities.</p>		<p>Tactical</p>	

FOOD SECURITY

GROWING ECONOMIC BASE

Our economic base has not sufficiently grown to be able to respond to the demands, risks and opportunities climate change brings to the marketplace.

RISK STATEMENTS	ACTIONS	
	Expand markets for Kaitahi revegetation programmes and mass plantings, ensuring that key climate data and information informs decision-making.	Operational
	Explore future markets that capitalise on climate-change opportunities in the food security field.	Operational
	Continue soil improvement and seed-collection operations through Kaitahi to ensure our ongoing ability to produce kai in a changing environment.	Tactical
	Advancing preparations for land-use change, including reduction in dairy production.	Operational
	Explore the development of seed banks to ensure adequate supply of quality seed for business development purposes.	Operational
	Investigate initiatives to restore, regenerate and protect, and enhance taonga species for market sale (eg, maanuka for honey, puha and medicinal plants for Kaitahi and other valuable crops).	Operational
	Secure and allocate consolidated funds dedicated to ensuring our ability to resource and distribute kai to our uri through climate-change-induced situations.	Tactical
	Explore whenua Maaori options to enable the expansion of our food production.	Operational
	Investigate and plan for the implementation of Multi-Strata Agroforestry (MSA)/Tree Intercropping.	Operational
	Explore through Multi Strata Agroforestry arrangements, the potential to increase income sources related to carbon sequestering and potential food production.	Operational
	Invest in multi-purpose functioning trees and plants that include supporting kai production, erosion prevention, rongooa, and future iwi businesses.	Operational
	Investigate and plan for the implementation of biochar method to enhance soil fertility.	Operational
	Investigate an out-of-stream fish and tuna farming venture through a co-developed feasibility study with business partners.	Operational



WATER

Strategic Goal

To ensure that as an iwi we have control of our waters for our own use. This includes:

- maximum access to freshwater supply for drinking in face of climate change
- mapping underground water supplies and ensuring access to these supplies
- developing raahui for our resources associated with Tangaroa
- advocating and ensuring representation at key decision-making tables
- restoring, regenerating, and protecting the mouri of the water
- educating our people in Te Kawa Ora principles and practices to advance restoration, regeneration, and protection of our waterways and moana
- developing and exercising our kaitiakitanga rights over our waterways and moana in a rapidly changing physical and political landscape
- extending our networks and forms of advocacy to advance our rights and interests
- advancing alliances and partnerships that reflect Te Kawa Ora principles and values
- ensuring open and free access to data and information so we can plan and keep our iwi updated
- an in-depth understanding of flooding relating to high sea-level rise within the rohe.

Risk Statement

The domain of Maru includes negotiating access to freshwater supply due to increased drought and likelihood of saltwater incursions. We acknowledge the marginalisation of iwi rights and access to freshwater will mean that we will need to proactively plan and continue to advocate for our rights. Tangaroa, the domain of the sea, plays a significant role globally as the supplier of food and through the sequestering of carbon. We need to support the restorative and regenerative practices required for these essential functions to be optimised. This would include, for example, ensuring that as an iwi we are not contributing to the pollution of the ocean and waterways, that we advance raahui measures when food stocks are depleted, and that we will adopt those practices required to work in harmony with these domains. Risks include:

- compromising the mouri of the water through practices and measures that cause a decline in the health and wellbeing of our waterways and our oceans
- further health and wellbeing issues for our people as food supplies from our waterways and oceans become contaminated and/or are depleted
- excessive flooding caused by high sea-level rise in unprotected areas and the need for marae, homes, and buildings to be relocated
- without education, our people we will lack the capacity, capability and understanding to restore, regenerate and protect our waterways and moana interests, leading to a situation where we do not have leaders and/or future uri who support our iwi kaupapa
- limited data and information on our waterways and moana mean we cannot make fully informed decisions
- a limited network and a lack of capacity and capability to advocate for our water rights places our iwi at risk of compromising our mana motuhake.

WATER

RELATIONSHIPS AND ALLIANCES	RISK STATEMENTS	ACTIONS	
	Marginalisation of iwi rights and access to freshwater as supplies change and/or diminish	Advance Ngaa Rauru Kiitahi rights and interests within local/central government to ensure iwi water management systems and considerations are included in policies and processes.	Governance
		Through our relationships and alliances, advocate for water users and decision-makers to work collaboratively to develop sustainable solutions to water management, access, allocation, decision-making, and monitoring (Ngaa Rauru Kiitahi Environmental Plan - PMP policy 3.1).	Governance
	Without having water/marine data sets integrated into comprehensible forms for iwi decision-makers, our capacity and capability to make informed decisions is limited.	From partnerships with research institutes, we have developed specific water/marine data sets for key iwi decision-making and planning purposes.	Operational
	Developing solutions could be siloed and/or restricted if Te Kaahui o Rauru is not kept up to date with trends and directions in a fast-changing environment.	Invest in climate forums, consortiums and conferences that keep our iwi up to date with national and global trends in the water/climate change fields.	Operational
	In the absence of strengthened external partnerships and new alliances our iwi will not be strongly placed to negotiate minor and major climate events that require infrastructure services and emergency management services that impact on drinking water.	Identify new relationships to advance our drinking water/marine-based rights and interests and strengthen current relationships to influence outcomes for our whaanau, hapuu and iwi.	Governance
		Advance relationships and alliances for marine-based issues related to restorative, regenerative and protection processes.	Operational

WATER

RISK STATEMENTS	ACTIONS	
<p>A lack of data and information coupled with an uncertain climate future means that we do not yet know the extent to which our waterways and supply will be affected. Specifically, in the absence of a clear and comprehensive understanding of the geomorphology of our rohe, particularly of the groundwater resource, we cannot make informed decisions.</p>	<p>Through the Kaakano (Innovation Hub) investigate research partnerships to undertake co-developed research:</p> <ol style="list-style-type: none"> Collect data and information to illustrate the correlation between freshwater (supply and health) and marine science to ascertain the multiple impacts, risks and vulnerabilities to our lands, marae, homes, businesses, capacity to grow food and general wellbeing. Map underground freshwater system/s, to inform future decision-making, with a specific interest in ascertaining new locations for marae and papakainga that will be impacted by predicted flooding and high sea-level rise (see also Managed Retreat). Record and archive our maatauranga-aa-iwi, particularly for those hapuu that will need to re-establish in other areas due to flooding and high sea-level rise. Legalities associated with freshwater rights and marine-based rights under climate change scenarios Threat to our land, food chains, resilience, and security Economic impact studies related to flooding and high sea-level rise Develop and centralise maatauranga-aa-iwi-based methods of environmental evaluation and monitoring. Review water management plan to reflect developing policies. Continue riparian planting across the rohe to support waterway health and wellbeing. 	<p>Operational</p>
<p>Maatauranga Maaori-based methods of monitoring are not widely adopted, so a more adequate picture of the mauri of our waterways is not incorporated as a risk.</p>	<p>Develop Maatauranga Maaori indicators with local experts for monitoring of the environment Advocate within local government for the adoption of iwi developed indicators to be included in future Risk Assessments</p>	<p>Operational</p>
<p>The lack of maatauranga-aa-iwi represented in local government policies and processes means that our worldview is marginalised under Te Kawa Ora constructs.</p>	<p>Advocate for Te Kawa Ora understandings to be adopted by local/central government.</p>	<p>Governance</p>

WATER

CAPACITY AND CAPABILITY	RISK STATEMENTS	ACTIONS	
	A lack of capacity and capability-building within the iwi means:	Source funding to develop and implement whaanau, hapuu and marae led methods of maatauranga-aa-iwi based monitoring.	Operational
	a. We are not in the position to respond effectively to the threats that climate change poses to our water supply and marine-based issues.	Locate funding to continue to develop internal business capacity and capability to engage in the reforms space.	Operational
	b. We cannot engage swiftly in the fast-paced reforms space, developing management structures and on-going conversations that influence how drinking water/marine-based resources and other water supplies will be used, managed, and allocated in the future. This places our whaanau, hapuu and iwi at risk.	Develop data/mapping capability for future map development and interpretations.	Operational
		Develop new relationships in the waananga, university and research sectors to open science pathways for Ngaa Rauru Kiiitahi students and future researchers.	Operational
		Develop, through Te Kawa Ora mentorship programmes, a group of water ambassadors for Ngaa Rauru Kiiitahi, seeking particularly to advance the capability of rangatahi.	Operational
	A failure to draw on our cultural knowledge, as represented in Te Kawa Ora, disadvantages our decision-making processes.	Facilitate and support upskilling and information-sharing among our communities around Te Kawa Ora tikanga, water quality and other water management issues (links to Ngaa Rauru Kiiitahi Environmental Plan -PMP Policy 3.4).	
Freshwater and marine-based rights and interests for iwi requires a separate internal governance model to support the fast-paced environment, as generated through government policy changes, to ensure our rights and interests are negotiated in an effective manner.	Review/strengthen the current governance model (internal) to be more ready to respond to the fast-moving pace of water reforms and water privatisation.		

WATER

GROWING ECONOMIC BASE	RISK STATEMENTS	ACTIONS	
	We have not yet grown our economic base sufficiently to access resources to address issues within our catchments.	Locate funding to increase the capacity and capability of selected iwi members to improve responsiveness to water and marine-based rights and interests, particularly related to high sea-level rise and flooding.	Operational
	Economic viability of Te Kaahui o Rauru businesses, including the cascading impacts on whaanau, hapuu and iwi, is threatened if drinking water, other water, and marine-based issues are left unaddressed.	Investigate alternative methods of income generation that have less direct reliance on water stability.	Operational
		Reassess future business direction through a climate-change audit process using the most up-to-date climate data and information.	Governance
		Develop business mechanisms that proactively and retrospectively respond to climate change across the iwi portfolio. This could include waste management, water management, alternative energy, and the circular economy.	Governance
	Intensive agricultural practices, such as hydroponics, dairy and certain crops, may struggle to remain viable, placing businesses at risk.	Undertake an audit of current business ventures that have a direct reliance on water.	Operational
	Traditional and/or commercial harvesting of fish may be drastically affected by the change in numbers and distribution of fish species eg, whitebait, koura and paaua, placing business investments at risk.	Undertake an audit to ascertain projected fish numbers as related to quotes, fish-migration shifts with changing sea temperatures and potential changes to government marine policies.	Operational



MANAGED RETREAT

Strategic Goal

Ngaa Rauru Kiitahi are prepared and have in place a Managed Retreat Action and Implementation Plan that ensures the resilience and protection of our cultural, environmental, ecological, social, and economic wellbeing. We need to ensure:

- the adoption of and application of Te Kawa Ora principles and practices in Managed Retreat processes
- well-developed and protected social relations among whaanau and hapuu leading to consensus on future arrangements for cultural infrastructure, including papakaainga, urupaa and marae
- our Te Kaahui o Rauru economic base is strengthened and resilient to build Managed Retreat pathways, for example, businesses, workforce, and outlay to move community and cultural assets
- the economic position of whaanau, hapuu and iwi is strengthened to manage pressures of costs associated with re-establishing
- improved spiritual infrastructure in the relocation of marae, urupaa and other waahi tapu
- strengthened socio-cultural relations with the new location
- unlimited access to essential services
- an adapted iwi, who are resourced to re-establish climate-ready homes and buildings
- solutions for water supplies that are likely to be contaminated through salination, which will impact businesses and households (see Water Peka)
- developed iwi climate data and information related to vulnerabilities, risk, and opportunities
- uukaipoo sites as a resource for the marae and, in some cases, as a supplement to the whaanau food pantry
- rongoaa supplies on which whaanau depend on for healing
- health and wellbeing accrued through a healthy environment.

Risk Statement

Projected flooding and high sea-level rise will cause the iwi to consider relocating whaanau, hapuu, marae, urupaa, homes, buildings, gardens, and related services to safer spaces. Risks include every facet of our lives.

Our Ngaa Rauru Kiitahi cultural, environmental, social, and economic structures will be disrupted and potentially severed when whaanau and hapuu are split and/or detached from traditional whenua, their papakaainga, marae, urupaa, services, established food sources and more. This specifically includes risks to:

- social relations among whaanau, hapuu and marae in reaching consensus on future arrangements for cultural infrastructure, including papakaainga, urupaa and marae
- our economic base through disruption to businesses and workforce, and the outlay needed to move community and cultural assets. The socio-economic position of whaanau, hapuu and iwi is further compromised due to:
 - pressures of costs associated with re-establishing
 - non-consideration of our spiritual infrastructure associated with marae, urupaa and other waahi tapu
 - limited access to underground water supplies
 - a non-educative approach to understanding climate change and the reasons associated with change, which creates forms of social conflict among our own
- limited access to essential services for those relocating in an already limited-service environment
- economic constraints of whaanau members resulting in the establishment of homes and buildings that are not climate ready
- limited underground water and/or drinking water supplies, which will impact businesses and households
- uninformed whaanau, hapuu and iwi decision-making processes that lack relevant and Ngaa Rauru Kiitahi climate data and information related to vulnerabilities, risk, and opportunities
- distance from uukaipoo sites, which are a resource for the marae and, in some cases, a supplement to the whaanau food pantry
- degradation of rongoaa supplies on which whaanau, hapuu and iwi depend for healing
- Unprepared locations that neglect the socio-cultural history of the land and people.



MANAGED RETREAT

RELATIONSHIPS AND ALLIANCES	RISK STATEMENTS	ACTIONS	
	In the absence of well-established relationships and external alliances we may not be able to influence access to essential services, information, tools, data, business opportunities and policy.	Strengthen our relationships so that the perspectives of Te Kaahui o Rauru, as a smaller iwi, are considered in the development of government policy and implementation strategies, with the aim of having reliable communication loops established and actively influencing policy.	Governance
		Identify the new relationships needed to advance managed retreat so that Te Kaahui o Rauru can influence outcomes for whaanau, hapuu, marae and the iwi. These relationships may include insurance companies, global partners, innovation consortiums and the like.	Governance
		Explore managed-retreat issues and opportunities with neighbouring iwi.	Governance
		Strengthen current relations and develop new relations/ partnerships with industry, universities, Crown Research Institutes, and businesses to secure opportunities for rangatahi leadership, our decision-makers, and future businesses.	Governance



MANAGED RETREAT

RISK STATEMENTS	ACTIONS	
<p>An unplanned iwi response to managed retreat will lead to worse risks for our whaanau, hapuu, marae and iwi.</p>	<p>Explore, develop, and implement a detailed Ngaa Rauru Kiiitahi Managed Retreat Plan.</p>	<p>Governance</p>
	<p>Initiate discussions at the National Iwi Chairs Forum to develop a position in relation to managed retreat, including engagement with iwi, shaping of policy, insurance implications, relocation, and funding options.</p>	<p>Governance</p>
	<p>Develop marae strategy and guidelines that offer step-by-step mechanisms for adapting to change appropriate to marae locations – that is, flood protection, relocation, and establishing alternative power. Specific focus would include managed retreat upland from Tahaora and all awa, marae and affected urupaa.</p>	<p>Operational</p>
<p>A lack of data, knowledge, and tools and/or access to them, and/or the capability to fully use these mechanisms will impact the extent to which we can plan and implement actions for managed retreat.</p>	<p>Partner with researchers and data experts to understand all the potential risks, vulnerabilities and opportunities associated with the Ngaa Rauru Kiiitahi Managed Retreat Plan. Specifically:</p> <ol style="list-style-type: none"> a. Complete a gap analysis for the Ngaa Rauru Kiiitahi Managed Retreat Plan to identify barriers, opportunities and gaps in data and information. This would include, for example, flooding, erosion, water, infrastructure, housing, crops, taonga species and waahi tapu. b. Investigate suitable land for relocation, with procurement options for the iwi. c. investigate zone changes to encourage managed retreat on both sides of the Whanganui River, including at Fordell and Marybank, north of Otamatea West to Taylors Road, Marybank, Whanganui East to Matemateaonga Stream and south along No 3 Line Road. d. Develop, collate, and distribute managed retreat data and information through appropriate tools and platforms to iwi decision makers. e. Develop data that illustrates 1:500-year event thresholds as related to our paahuki. f. Investigate socio-cultural systems through a western science and maatauranga-aa-iwi lens to provide a detailed vulnerability risk assessment. g. Assess funding options and the economic capacity and capability of communities to relocate, including their cultural sites and all costs associated with re-establishing. h. Investigate future alternative cost-effective, climate-ready options for those re-establishing. This would include energy, infrastructure, housing, service provision and water access. i. Carry out a cultural investigation that draws on maatauranga-aa-iwi to explore the history of potential sites for re-establishment. i. Carry out an impact study of essential services and potential barriers to accessing services in new locations under extreme weather conditions. j. Investigate the re-establishment of ecosystems in new community locations. Including replanting, water supply, and suitable species suitable to the landscape and changing conditions. 	<p>Governance</p>

PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION

MANAGED RETREAT

	RISK STATEMENTS	ACTIONS	
CAPACITY AND CAPABILITY	Without capacity and capability-building the iwi will not be able to fully participate in managed retreat forums (including central and local government) and negotiate the alliances and relationships important to our future.	Develop an iwi capacity and capability-building plan to grow leadership in this area.	Governance
	Our whaanau and hapuu have low readiness levels and understanding of climate-change risks. This could lead to maladaptation and low uptake on emissions reduction, particularly in relation to managed retreat.	Develop and implement a climate education training strategy to increase the capacity and capability of Ngaa Rauru Kiitahi uri to understand the complexities of managed retreat. This would include: wananga/ hui outlining details of relocation; creating new connections to places; bridging between old locations and new; preserving Ngaa Raurutanga; history of sites and relevance to Ngaa Rauru Kiitahi; whakapapa; and traditional boundaries.	Governance
	Our relationships with our marae, whenua, waahi tapu and taonga will be disrupted, causing risks to those components of Ngaa Raurutanga that are unique to who we are.	Waananga to strengthen knowledge around whakapapa, Ngaa Raurutanga, and connections across the rohe.	Governance
		Strengthen internal relations (whaanau and hapuu) to mitigate potential social and/or cultural conflict through waananga and hui.	Governance
Without a comprehensive Te Kawa Ora Managed Retreat: Rangatahi Leadership Plan we will lack leadership.	Develop a comprehensive Te Kawa Ora Managed Retreat: Rangatahi Leadership Plan to upskill and grow capacity and capability.	Operational	

	RISK STATEMENTS	ACTIONS	
GROWING ECONOMIC BASE	Our economic base has not sufficiently grown to be able to respond to the demands and risks climate change poses to Ngaa Rauru Kiitahi. This limits our ability to resource and implement the strategy for the retreat plan.	Explore and develop an economic plan with detailed costs of managed retreat, capacity and capability development, strategy and implementation, funding, and business risks and opportunities. This includes risks associated with insurance, developing government policy, and review of current and future businesses.	Operational
		Business cases have been explored with detailed actions for the relocation of our communities and cultural assets.	Operational



ENERGY

Strategic Goal

We promote energy freedom for Ngaa Rauru Kiiitahi. In a region where there are high winds, predicted extreme weather conditions and a turbulent west coast sea we will use the opportunities available to capitalise on alternative energy options (solar, water and wind). We aim to produce renewable energy for distribution to our iwi and for market sale. Specifically:

- Our whaanau, hapuu, marae and businesses have the knowledge and resources to ensure their needs are provided for, while using best-practice energy-efficient options that are affordable.
- To ensure that our rights and interests are recognised through developed and strengthened relations in the energy sector.
- We have developed our capacity and capability in this field through targeted leadership development programmes.
- We have developed our businesses in ways that capitalise on alternative energy options (solar, water and wind).
- We have developed relations with key research bodies to build research pathways to assist us with our decision-making processes.

Risk Statement

As an iwi we need to create affordable energy-efficient pathways for our people, marae, buildings, and businesses. If we neglect to do so we will place our own at further risk of being unable to adapt and to reduce emissions. We understand the links between affordability, socio-economic and socio-cultural wellbeing. Without alternative options for our whaanau, hapuu and iwi we are limiting our capacity and capability. Our immediate risks include:

- Without affordable energy-efficient options our whaanau, hapuu and iwi interests may be compromised due to economic pressures.
- Affordability constraints will impact on our participation as iwi members and affect our ability to uphold our cultural commitments to the whaanau, hapuu and iwi. This could include keeping connected through digital services, attending tangihanga and attending to marae business.
- Affordability constraints will impact on our ability to participate in the broader local, regional, and global communities.
- Under-developed relations with energy companies will cause developments to occur that neglect our rights and interests.
- Slow responses to business opportunities in the energy sector will compromise our ability to create successful business pathways.
- Weak relations with research and innovation bodies will result in uninformed decision-making processes.
- An under-developed capacity and capability plan will result in a lack of iwi leadership in the future.

ENERGY

RELATIONSHIPS AND ALLIANCES	RISK STATEMENTS	ACTIONS	
	<p>In the absence of well-established relationships and external alliances we may lack the ability to influence access to essential services, information, tools, data, business opportunities and policy.</p>	<p>Identify new relationships and strengthen existing relationships to increase energy freedom and to provide education, workforce, and capability opportunities to our uri.</p> <ul style="list-style-type: none"> a. Continue engagement with energy companies to explore solar, wind turbine and offshore energy production opportunities. Current engagement includes Meridian, Zealandia, and Elemental. b. Continue work with Elemental Group to assess energy efficiency and ensure best practice across our marae, haapori and businesses. c. Initiate a relationship with Energy Efficiency and Conservation Authority (EECA) to take advantage of the partnerships and subsidies being offered. d. Explore opportunities to procure kaimahi for energy efficiency to contribute to building understanding and capability across Ngaa Rauru Kiitahi iwi and businesses. e. Leverage partnerships and advance new energy alliances. f. Develop memoranda of understanding with energy companies to leverage capacity and capability, grow internal talent and advance opportunities to develop our people. <p>Strengthen our relationships with local and central government to work in partnership to achieve our aspirations in the energy sector.</p>	<p>Operational</p>

PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION	RISK STATEMENTS	ACTIONS	
	<p>A lack of iwi climate-change research, monitoring and evaluation work means that we do not have a full picture of the risks and opportunities that a changing environmental and political landscape brings to the energy sector.</p>	<p>Through Kaakano (Innovation Hub), investigate solar systems and wind generation for marae and papakainga to explore the potential of becoming a network utility operator.</p>	<p>Operational</p>
	<p>Failure to draw on our own maatauranga-aa-iwi denies our cultural capacity and capability to be responsive to ways of doing and knowing that are right for our iwi and rohe.</p>	<p>Initiate research and gain access to ongoing research to inform our workstreams and to ensure that we stay up to date in our methods.</p>	<p>Operational</p>
<p>Failure to draw on our own maatauranga-aa-iwi denies our cultural capacity and capability to be responsive to ways of doing and knowing that are right for our iwi and rohe.</p>	<p>Reharness our maatauranga-aa-iwi to inform future energy options in combination with western science. This includes the development of cultural indicators for evaluation and monitoring purposes.</p>	<p>Operational</p>	

ENERGY

	RISK STATEMENTS	ACTIONS	
CAPACITY AND CAPABILITY	Lack of capacity and capability development work leaves Te Kaahui o Rauru with limited resources to fulfil our aspirations within the energy and maatauranga-aa-iwi space	Review human resources growth model to ensure that we have the talent and resources to take care of our community.	Operational
		Through key relationships and alliances, investigate and plan opportunities to build capacity and capability among uri in energy and related maatauranga-aa-iwi eg, setting up cadetships/workforce opportunities with energy companies.	Governance
	An information and knowledge gap among our communities means that our whaanau, hapuu, marae and businesses need upskilling to operate in an optimal energy-efficient way.	Develop and implement a series of wananga to upskill our communities and develop understanding related to energy-efficiency options in relation to adaptation and emissions reduction.	Operational
		Develop Te Kawa Ora wananga to educate and encourage changes towards energy efficiency for homes, buildings, and marae.	Operational
	RISK STATEMENTS	ACTIONS	
GROWING ECONOMIC BASE	Our economic base has not sufficiently grown to respond to the demands, risks and opportunities climate change brings to the renewable energy sector, placing our iwi resources, including people, at risk.	Investigate using carbon credits for Te Kaahui o Rauru businesses as a tool for growing our economic base, enabling better engagement and opportunities.	Governance
		In alignment with Te Kaahui o Rauru Energy Plan Year 2021–2022 prepare our energy infrastructure (solar and wind) to provide for marae, and businesses.	Operational
		Investigate the creation of long-term energy credits for our marae and papakaainga.	Operational
		Investigate through Te Paepae Kookiri , the installation of solar, wind and hydro electricity generation over a larger scale to sell energy to network distributors, such as Genesis.	Governance
		Investigate business options for a hydro plant on Waitootara, Paatea and Whenuakura rivers.	Operational



INFRASTRUCTURE

Strategic Goal

Our infrastructure is prepared for the risks associated with climate change to develop forms of resilience.

Through advocacy and strengthened relations, we will ensure optimum roads, strengthened wastewater and sewage systems, transport access, ongoing access to drinking water, access to electricity supplies, digital coverage, and access to facilities such as schools, hospitals, and services.

Risk Statement

Our infrastructure is climate sensitive. Our communities, marae and businesses are reliant on the mainstream supply of water, power, digital services, and social infrastructure services, which places our iwi at risk of being unconnected during outages and/or a major disaster.

Our infrastructure needs to be strengthened for changing climate conditions. Key risks include:

- weakened infrastructure systems, including roads, bridges, transport access, drinking water systems, electricity, digital coverage, and access to services such as schools and hospitals
- weakened social and cultural infrastructure in a major disaster, resulting in communication issues, potentially leading to delayed access to health and social services, food, drinking water and disaster supplies
- impact on health and wellbeing, due to some marae, homes and buildings not meeting climate-ready standards
- disruption to the supply of food and other resources to the region
- failure to meet our cultural responsibilities when roads, bridges and transport are impacted by a weakened infrastructure
- communications reliant on digital services, which will cause isolation when they break down
- affordable energy sources affecting our ability to stay warm and safe in our homes
- vulnerability of businesses to infrastructure weaknesses
- access to useable underground water when infrastructure weaknesses cause contamination and disruption
- a lack of specific Ngaa Rauru Kiiitahi data and information limiting our decision-making capacity
- a lack of capacity and capability to create pathways places our iwi at a disadvantage.

INFRASTRUCTURE

RELATIONSHIPS AND ALLIANCES	RISK STATEMENTS	ACTIONS	
	Without continued advocacy and participation in decision-making processes, the iwi will be placed at further risk with infrastructure limitations.	<ul style="list-style-type: none"> a. roads b. wastewater and sewage systems c. transport access d. optimal access to drinking water e. electricity supply f. digital coverage g. access to facilities such as schools, hospitals, and social services. 	
Without co-developed plans with energy companies, there is a high likelihood that energy companies will be established in our region that neglect Ngaa Rauru Kiitahi rights and interests.	Strengthen capacity and capability to advance Ngaa Rauru Kiitahi rights and interests, including the co-opting of legal advisors, maatauranga-aa-iwi experts, and rights and interests advocates to advance co-developed plans.		Governance

PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION	RISK STATEMENTS	ACTIONS		
	Lack of iwi-specific research, monitoring and evaluation means that we are not fully informed of the key infrastructure changes required to respond to the risks of climate change and the impacts on our health and wellbeing. This limits our capacity and capability to be prepared and responsive in a fast-paced environment.	<ul style="list-style-type: none"> a. Through Kaakano (Information Hub) co-develop research, data and information needed to plan for infrastructure risks and vulnerabilities. This includes: b. mapping and research to assess infrastructure sites within our rohe, which may be particularly at risk c. access to hazard-mapping to assess vulnerability and to prioritise key risk areas within our rohe d. cultural infrastructure mapping e. mapping of underground water and terrain f. water treatment and emergency supply options g. continue audits of marae, papakaainga and businesses through Elemental h. assess best energy options (see also Energy) with Elemental i. develop Te Kawa Ora (maatauranga-aa-iwi) and assess infrastructure linked to te taiao. 		Operational
		Develop an emergency management plan for Ngaa Rauru Kiitahi/Te Kaahui o Rauru operations.		Operational
Explore resource opportunities available through Kaainga Ora and other government schemes.			Tactical	

INFRASTRUCTURE

	RISK STATEMENTS	ACTIONS	
CAPACITY AND CAPABILITY	A lack of capacity and capability means that we cannot respond to the rapid pace of the changing policy environment and/or are losing business opportunities.	Work with marae to encourage and support upgrades to cultural infrastructure so that our marae are climate ready and able to cater for increased numbers in times of disaster.	Operational
		Develop and implement cultural infrastructure waananga where maatauranga-aa-iwi is reinforced with the view that we are culturally stable and operating in ways where Te Kawa Ora is an integral part of life.	Operational
		Develop a network of key Ngaa Rauru Kiitahi uri living outside the rohe, assigning key roles and responsibilities to ensure the provision of support and accessibility to services for iwi when there is an infrastructure failure in extreme events.	Operational
GROWING ECONOMIC BASE	Our economic base needs strengthening to resource the infrastructure changes and upgrades required for our marae and iwi buildings.	Investigate the business and investment opportunities in the energy sector that have multiple benefits and advance energy efficiency for the iwi.	Governance
		Review and scope business opportunities to produce and supply alternative building materials.	Operational
		Investigate a business plan for building sustainable off-grid and self-sufficient communities and papakainga.	Operational
		Create opportunities through partnerships and business ventures to support a shift towards electric transport.	Operational
	A major climate event will disrupt the infrastructure and our businesses and communities.	Secure a consolidated fund dedicated to disaster response (Te Paepae Kookiri).	Governance
		Include in the Disaster Management Plan detailed actions for our investments and businesses to ensure informed decisions are made.	Operational
	Limited whenua reduces our capacity and capability as an iwi to provide energy infrastructure options (solar, water and wind) for whaanau, hapuu, marae and iwi.	Explore options to purchase whenua for business growth and expansion in the energy sector.	Operational



WHENUA

Strategic Goal

Our use of whenua and natural resources is guided by our kawa, tikanga and maatauranga and, where relevant, other indigenous nations and western knowledge systems to engage restorative, regenerative and protective practices. We seek to be connected back to the land as tangata whenua and have developed the programmes, partnerships, and alliances to help us create future pathways. We are working to support the connections between Papatuaanuku and all other atua domains, and we seek to be in balance with the whenua in a restored, regenerative, and protected state. Specifically:

- Change land-use operations to include the adoption of Te Kawa Ora principles and values that promote a shift towards low-emissions economy and adaptive measures.
- Increase soil health to grow all that is needed to ensure a healthy ecosystem.
- The mouri of the whenua is restored, regenerated and protected by our own kaitiaki.
- Our iwi is continuing to adapt in a changing whenua environment.
- Partnerships across the rohe, including businesses, industry, land trusts and the like, have adopted principles and practices that are aligned with Te Kawa Ora.
- Our taonga species are restored, regenerated, and protected through our nursery.
- We have forged research partnerships to develop the data and information we require to plan and make decisions.

Risk Statement

If we fail to restore, regenerate, and protect our whenua our health and wellbeing will be impacted. This includes risks associated with:

- Climate-change adaptation and emissions reduction requires a shift in values and behaviour in relation to our whenua, including the way in which we use the land.
- Climate change will change the temperatures in our regions to be warmer in summer and colder in winter. Without planning we will confront unsustainable means of production.
- Our soil health, if not managed, will be unfit for crops, trees, and associated ecosystems, and will subsequently impact the health and wellbeing of whanau, hapuu and iwi.
- Worsening of the already degraded state of our whenua will result in further risk to our health and wellbeing.
- Erosion has occurred in some places causing disruptions to the land and some of our cultural sites.
- A failure to change land-use practices will place businesses and our health at risk.
- Neglecting to change our practices and methods will impact taonga species.
- A lack of specific climate data and information on which to make decisions is limiting our ability to implement plans related to the whenua.

WHENUA

	RISK STATEMENTS	ACTIONS	
RELATIONSHIPS AND ALLIANCES	Without strengthened relationships and the development of new relationships and alliances our capacity and capability to influence our direction concerning the whenua is limited. This includes the primary sector, soil health, erosion, land-use change and business.	<p>Identify new relationships and strengthen existing relationships to influence land-use change within our rohe.</p> <ol style="list-style-type: none"> Strengthen relationships to ensure inclusion in land-use change forums (local/central government and industry) to advocate for Ngaa Rauru Kiitahi rights and interests. Unite small iwi groups to ensure that issues unique to smaller iwi are elevated to key decision-making bodies. Strengthen relationships within the agricultural and horticultural industries to promote diversification and shift towards adaptation and lower-emission practices. Identify resource and funding opportunities through our relationships. Develop stronger advocacy avenues coupled with a mentorship programme for climate leadership. 	Operational

	RISK STATEMENTS	ACTIONS	
PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION	We do not yet have a comprehensive understanding of our environmental baselines to plan for land-use change.	<p>Co-develop with research institutes a comprehensive investigation leading to the establishment of environmental baselines to inform planning around land-use change. This includes:</p> <ol style="list-style-type: none"> a comprehensive understanding of suitable crops, soil composition and health, understanding the impacts on current land-based businesses, understanding the state of our taonga species and the risks/opportunities a study that investigates land-use options for whenua under Maaori multiple-ownership regimes <p>investigation into carbon sinks and carbon sequestering mechanisms for iwi land (See also Biodiversity, Food Security and Water).</p>	Operational
	A dominant western view in key government policies and processes restricts our ability to forge restorative, regenerative and protective practices aligned with Te Kawa Ora.	Develop a detailed land-use change plan to advance climate action. This would be developed in conjunction with key landowners, trusts and businesses to inform future decisions, and would reflect Te Kawa Ora principles and relevant western science, data, and information.	Operational
		Advance the Te Kawa Ora framework in local and central government forums.	Operational
	Ensure representation of Ngaa Rauru Kiitahi and/or the elevation of our views concerning land-use change.	Operational	

WHENUA

	RISK STATEMENTS	ACTIONS	
CAPACITY AND CAPABILITY	A lack of understanding of land-use changes and implications for the iwi affects our ability to facilitate change quickly.	Develop partnerships to build understanding and promote a value shift towards restorative, regenerative and protective land use practices for the iwi.	Operational
	A lack of iwi researchers leaves us reliant on outside researchers to engage in iwi projects.	Form alliances with research institutes to develop opportunities to build a critical mass of Ngaa Rauru Kiitahi researchers in maatauranga-aa-iwi and environmental science focused on the land.	Operational
		Co-opt capacity and capability through central government, industry, businesses, and research institutes to advance Ngaa Rauru Kiitahi's interests (eg, Vision Maatauranga Fund, internships, and central government secondments).	Operational
	A lack of Ngaa Rauru Kiitahi leaders in the land-use change and other environmental domains results in overburdening those currently employed.	Develop a Ngaa Rauru Kiitahi environmental leadership programme based on Te Kawa Ora.	Operational
		Develop pathways for leadership development of rangatahi, including links into the tertiary sector, industry, businesses, and research institutes.	Operational
	GROWING ECONOMIC BASE	High emissions from intensive agriculture in Taranaki, including investment in dairy and horticulture, are no longer economically or environmentally sustainable. This requires a change in our iwi's direction.	Develop business plans to diversify and shift away from intensive agricultural farming that produces high emissions. This would include horticultural practices that harm the ecosystem.
Explore new business opportunities and plan for expansion into economically viable markets as conditions change. For example, exploration of expansion into kiwifruit, honey and crops that can be used sustainably in multiple ways.			Operational
A lack of iwi resources to facilitate land-use change means that we need to find other funding sources, grow our current businesses, and develop new business ventures.		Locate and secure business partnerships and funding arrangements that help us respond to high emissions through land-use change.	Operational
		Investigate the strengthening of seed libraries and seedbank concepts for business purposes (see also Biodiversity, and Food Security).	Operational



Strategic Goal

Health and wellbeing will be enhanced through progressive changes in all peka areas. We will provide opportunities to support the enhancement of our people's holistic wellbeing through our extended relationships, in-house initiatives and developing initiatives. The health of the environment, our cultural infrastructure and our people will be ensured through increasing restorative, regenerative and protective environmental practices. When the environment is healthy so too are we.

Risk Statement

Māori have disproportionately poorer health outcomes and are more at risk of the health impacts of changing climate conditions. Climate change brings increased risk of pests, airborne diseases, and extreme temperatures, which will impact our people, particularly, our peepi and our kaumaatua. We have low health thresholds within our communities; a concerted focus on improved health systems and access to these systems is critical for our iwi. Poor health and wellbeing will be worsened by climate-change conditions. This includes:

- Unfit housing that is not climate ready will lessen our people's chances of adapting.
- Poor access to services is heightened under climate-change conditions, particularly extreme events.
- A tightening economic market will affect our ability to advance health and wellbeing in an already strained environment.
- Our reliance on food and rongoaa sources from Papatuuānuku, Taane-mahuta, Tangaroa and Maru will be threatened and will have a cascading impact on our physical and spiritual health and wellbeing.
- Failing to readily restore, regenerate and protect our environment affects our health and wellbeing across all facets of our lives, including cultural, social, environmental, ecological, and economic domains.
- Poor knowledge by rangatahi of traditional practices associated with, for example, mara kai, raahui, and restorative, regenerative and protective systems, places a barrier in the way of our people adapting and lowering emissions.
- Neglecting our spiritual health and wellbeing, as attained through knowledge, practice and conviction, will impact our cultural space as whanau, hapuu and iwi.
- Neglecting issues associated with drinkable water, including access and supply, will impact on iwi capacity across all facets of our lives, including the marae, our households, and our businesses.
- A lack of reliable and relevant data on changing climate conditions places our iwi at risk of failing to adapt speedily and lower emissions.
- Weakened infrastructure systems will impact on our ability to access services, including digital, hospitals, transport, and the like, and will cause disruption to our systems.
- Extensive and continued flooding in certain areas will affect where we can safely live and our reliance on current ecosystems.
- Poor diversity in certain areas will impact on our everyday living, causing cascading effects on what we do and how we do.

HAUORA

RELATIONSHIPS AND ALLIANCES

RISK STATEMENTS	ACTIONS	
<p>We have not yet developed our relationships with the proposed new Maaori Health Authority to provide improved health outcomes for our people.</p> <p>Failure to strengthen current iwi systems established through covid19 response mechanism will be lost opportunity to springboard from for climate action</p>	<p>Strengthen existing relationships and identify new relationships to provide opportunities to support the health of our uri.</p> <ul style="list-style-type: none"> a. Strengthen relationships with health service providers to allow regional and national collaboration. b. Build relationships with key research institutes to co-develop data, information and provide capacity and capability-building opportunities. c. Work with the regional health authority to create a campaign to promote healthier lifestyles. d. Continue engagement with the National Iwi Chairs Forum to share COVID-19 information and experiences and to form a joint-response framework. e. Strengthen relationships within Te Ranga Tupua and other Taranaki iwi to form a joint iwi health response to developing policies relating to inequities and health statistics for the region. f. Create alliances within the mental health sector to provide improved mental health outcomes for our uri. 	<p>Operational</p>
	<p>Investigate and establish an international indigenous network focused on indigenous health risks and solutions.</p>	<p>Governance</p>
	<p>Develop through Maatauranga Maaori Fund (Ministry for Culture and Heritage) an indigenous digital network to share learnings and aligned global action (health/climate change).</p>	<p>Governance</p>
	<p>Ensure the development of relationships with the new Maaori Health Authority.</p>	<p>Governance</p>
<p>Maatauranga-aa-iwi and tikanga-based health assessments are not widely recognised or adopted, resulting in health-assessment processes that neglect the impact of spiritual health and wellbeing on physical health.</p>	<p>Create partnerships for the development and integration of maatauranga-aa-iwi and tikanga-based health assessments.</p>	<p>Operational</p>

HAUORA

PLANNING, IMPLEMENTATION, RESEARCH AND EVALUATION	RISK STATEMENTS	ACTIONS	
	We do not yet have a full understanding of the widespread health implications that climate change will have on our people.	Co-develop with other local iwi a maatauranga-aa-iwi health-assessment process that integrates the spiritual wellness of the whaanau with climate-change impacts on land, water, energy sources, food, socio-cultural systems, and cultural sites of significance.	Operational
		Co-develop with research institutes a series of research programmes that investigates potential Ngaa Rauru Kiitahi health risks associated with climate change, creating baselines and projections for future planning.	Operational
		Develop strong relationships with data developers and providers with the view that current data is a prerequisite to good decision-making.	Operational
		Investigate a circular economy model and potential barriers and opportunities for implementation within the Ngaa Rauru Kiitahi paahuki.	Operational
		Co-develop with research institutes an investigation into the intersections between rangatahi, hauora and climate change as linked to mental health, identity, whanaungatanga and technology.	Operational

HAUORA

	RISK STATEMENTS	ACTIONS	
CAPACITY AND CAPABILITY	A lack of capacity and capability development means we do not have the resources to provide uri-led health improvement initiatives.	Develop improved waste-management marae systems through Para Kore programmes and Zero Waste facilities through capacity and capability development programmes (waananga/hui).	Operational
		Develop education and training opportunities through external partnership programmes and internally through Te Kura Huna (Digital School).	Operational
	A lack of health education and awareness means that our uri are likely to face further disproportionate health problems.	Continue with work to revitalise maatauranga-aa-iwi to support and improve the health of uri, including kai-gathering practices, mara kai, and restorative and regenerative environmental practices.	Operational
		Plan and implement waananga to develop tikanga protocols covering digital security/sovereignty.	Operational
	A decline in knowledge and practice of rongoaa may mean the loss of this form of healing.	Continue with work to revitalise maatauranga-aa-iwi to support and improve the health of uri, including kai-gathering practices, mara kai, and restorative and regenerative environmental practices.	Operational
		Plan and implement waananga to develop tikanga protocols covering digital security/sovereignty.	Operational
	A decline in knowledge and practice of rongoaa may mean the loss of this form of healing.	Investigate and implement projects to revitalise the use of rongoaa with a specific focus on practices unique to Ngaa Rauru Kiihahi.	Operational
		Support and grow the Waitootara Rangatahi Hikoi and develop other waananga programmes that centre on Te Kawa Ora and hauora.	Operational
	Cultural alienation and disconnection to whaanau, hapu, marae and iwi are barriers to mental wellness, particularly among rangatahi.	Investigate and implement maatauranga-aa-iwi-based initiatives to support and improve mental health.	Operational
GROWING ECONOMIC BASE	RISK STATEMENTS	ACTIONS	
	We have not yet grown our economic base to be able to provide iwi-led health services and to support health-improvement projects.	Investigate avenues to secure consolidated health funds to advance iwi-led health services given predicted impacts of climate change.	Governance
The poor health of our iwi will have an impact on the future of our whaanau, hapuu and iwi, limiting their capacity and capability to provide for their whaanau and contribute to the hapuu, marae and iwi.	Invest in activities that lead to the improved health of our iwi as a prerequisite for a sustained and improved iwi future under predicted climate-change conditions.	Operational	



NGAA MIHI

Te Kaahui o Rauru

Danny Broughton (Kaiaarahi Iwi Development)

Fiona Shaw (Kaitohutohu Taiao)

In consultation with

Mike Noho (Tumu Whakarae - Te Paepae Kookiri)

Tama Pokai (Kaihaapai Iwi Development)

Patrick Woon (GIS Operator)

Naani Waitai (Kaitohutohu - Te Kawa Ora Framework)

Turama Hawira (Kaitohutohu - Te Kawa Ora Framework)

Ministry for the Environment

Anne Haira (Deputy Secretary)

Marianna Tyler (Chief Advisor, Policy)

Marie McCarthy (Project Lead)

Joanne Waitoa (Senior Analyst)

Rebekah Hill (Graduate Policy Analyst)

Macy Duxfield (Graduate Policy Analyst)

Alexander Barass (Digital Advisor)

Alicia Collier (Senior Digital Advisor)

Kate Lancaster (Senior Advisor - Communications and Engagement)

Katrina Walsh (Senior Advisor - Brand and Experience)

Designers

Zeus Te Ahuru (Tahi Design)

Tokarārangi Poa

Uri Interviewees

Danny Broughton

Macy Duxfield

George Matthews

Kirstin McDonald

Mike Noho

Potonga Neilson

Te Ururangi Rowe

Merehinepua Wakefield

REFERENCES

- Kingi, T, 'Ngā Rauru Kītahi - Early history', *Te Ara - the Encyclopedia of New Zealand*. Retrieved from <http://www.TeAra.govt.nz/en/photograph/4198/nga-rauru-ancestors> (20 December 2021).
- Ministry for the Environment. 2018. *Climate Change Projections for New Zealand: Atmosphere Projections Based on Simulations from IPCC Fifth Assessment*, 2nd Edition. Wellington: Ministry for the Environment.
- Ministry for the Environment. 2019a. *Arotakenga Huringa Āhuarangi A Framework for the National Climate Change Risk Assessment for Aotearoa New Zealand*. Retrieved from <https://environment.govt.nz/publications/arotakenga-huringa-ahuarangi-a-framework-for-the-national-climate-change-risk-assessment-for-aotearoa-new-zealand/> (15 October 2021).
- National Institute of Water & Atmospheric Research. 2008. *Climate Trends, Hazards and Extremes - Taranaki: Synthesis Report*. Retrieved from <https://www.trc.govt.nz/assets/Documents/Research-reviews/Climate/climate+trends.pdf> (20 August 2021).
- New Zealand Climate Change Commission. 2021. *Ināia Tonu Nei: a low emissions future for Aotearoa*, Climate Change Commission. Wellington: New Zealand Climate Change Commission.
- Statistics NZ Unofficial Report. 2018. *Ngā Rauru*. Retrieved from <https://tewhata.io/nga-rauru/> (1 October 2021).
- Te Kaahui o Rauru. 2003. *Deed of Settlement of The Historical Claims of Ngāa Rauru Kīitahi*. Retrieved from <https://www.govt.nz/browse/history-culture-and-heritage/treaty-settlements/find-a-treaty-settlement/nga-rauru-kiitahi/nga-rauru-kiitahi-deed-of-settlement-documents/> (15 October 2021).
- Te Kahui o Rauru. *Putaiiao Management Plan*. Retrieved from <http://www.rauru.iwi.nz/> (1 October 2021).
- World Wildlife Fund NZ. *New Zealand Won't Dodge Climate Impacts*. Retrieved from https://www.wwf.org.nz/what_we_do/climateaction/new_zealand_impacts/ (15 October 2021).
- Oral Communications*
- Hawira, T. 2021. Oral communications (27 July, 2021).
- Pokai, T. 2021. Oral communications (27 July 2021; 14 December 2021).
- Waitai, N. 2021. Oral communication (25 May 2021; 1 November 2021; 19 December, 2021).

