



He Whenua Rongo

Elevating Māori Soil and Kai Resiliency

Jessica Hutchings, Patina Edwards,
Hinerangi Edwards & Jo Smith.





*Photo credit:
Ehsan Hazaveh*

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Authors: *Jessica Hutchings, Patina Edwards, Hinerangi Edwards & Jo Smith.*

Partnerships

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Ehsan Hazaveh

He Karakia

Tuia te papa e hora ake nei
Tuia te rangi e iri mai nei
Mura mai te rā, tau mai te ngao
Whiti mai te hina, tō mai te ngoi
Mai i runga ki raro
Nō raro ki runga
I te ao ki te pō, i te pō ki te ao
Tuia ngā kāwai o ngā whakatipu
Tuia ngā aho o ngā whakaheke
He kano, he pihi, he tupu e
He uri, he uki, he tūpuna e
Mouri oho ka rapa ki wī, ki wā
Mouri tū ka hua ki te tī, ki te tā
Mouri ora whakaputa
ki te whai ao,
ki te ao mārama
He whenua rongo e
E Rongo whakairia ake ki runga
Tūturu whakamoua kia tina! Tina!
Hui e! Tāiki e!

*Lash together the ground lying here
Bind the sky suspended here
Sun ablaze, vigour come upon us
Moon traversing this way, energy be harnessed here
From above to below
From beneath to upper parts
From day to night, from darkness to light
Thread the lineage of generations
Fasten the lines of descent
Seed, shoot, seedling
Progeny, kin, forebears
Invigorated life force,
extending close by and distant
Established life force,
coming forth in fresh and in salt
Vital life force emanating
into the day and the realm of enlightenment,
Lands of peace,
Rongo be elevated and held fast
Fixed! Firm! Gathered! In agreement!*

He Mihi

Ko Ranginui ki runga, ko Papatūānuku ki raro, ko Rongo ka whakairihia ake, ka whakatōngia iho.

E ngā ringaringa e mirimiri ana i a Papatūānuku, e whātoro ana ki a Ranginui, e te hunga e ngākau whakapuke ana kia hua mai ngā nui o uta, o tai hei whakakī i ngā pātaka o tēnā whānau, o tēnā marae kāinga, o tēnā hapori, nei rā te mihi.

Ka rere te maioha ki ngā puna kura, ngā kaiurungi, tae ana ki ngā māngai o ngā kaupapa i horahia mai ētehi kōrero hei ārahi, hei whakatūpatō, hei akiaki i te iti, i te rahi. Tēna rawa atu koutou e whakapau werawera ana kia whakapiki ai te āheinga o ngāi Māori ki te whāngai i a tātou anō. Nō mātou, tae ana ki ngā tamariki mokopuna, te māringanui.

I wawatahia a He Whenua Rongo kia whakahuingia ai ngā kaupapa maha e aro ana ki a Hine-ahu-one, a Tānemahuta, rātou ko Rongo-mā-Tāne ki te whakarongo, ki te whakaaroaro, ā, ki te wānanga hoki i ngā āhuatanga maha o tēnei mea te noho ā-whānau, ā-hapū, ā-hapori ki te taiao, me te manaaki i a tātou te tangata. Taiohi mai, taipakeke mai; Māori mai, kāwanatanga mai, he mahi hei mahi mā tātou katoa. Nō reira, ko te tino whāinga, kia whai hua tēnei pūrongo—te whiringa whakaaro, te horanga taonga, me te whakawhitinga kōrero o roto nei—hei painga mō ngā uri whakaheke.

Mouriora ki a tātou!

Ranginui above, Papatūānuku below, Rongo raised aloft, embedded beneath.

The hands that soothe Papatūānuku, that reach for Ranginui; those who are eager for the produce of the earth and the waters to thrive and fill the storehouses of each whānau, marae, and community—greetings to you.

Acknowledgements to the deep wells of knowledge, the steerers, and the representatives of the kaupapa who shared their narratives and perspectives to guide, alert and urge the few and the multitudes. Many thanks to you who expend your energy to uplift the ability of Māori to sustain ourselves. We, including the coming generations, are so fortunate.

He Whenua Rongo was envisaged to gather many initiatives that focus on Hine-ahu-one, Tānemahuta, and Rongo-mā-Tāne to listen, consider, and discuss the numerous aspects of living in a whānau relationship with our environment, and to sustain us as people. Young and old, Māori and government—there are roles for all of us to fill.

Therefore, the primary purpose is that bringing together these ideas, cherished taonga and discussion will bear fruit for the benefit of all.



Ngā Ihirangi

Contents

Kōrero Matua

Executive Summary

- 03** He Whenua Rongo
- 10** Enablers, Barriers and Key Themes of Māori and Kai
- 16** Recommendations from He Whenua Rongo

He Kōrero Whakataki

Introduction

- 26** Research Questions
- 27** Key Terms and Definitions
- 28** Report structure
- 30** Whakaritenga rangahau | Kaupapa Māori Methodology
- 34** Phase 1 - Landscape mapping
- 35** Phase 2 - Engagement
- 36** Phase 3 - Analysis and write up
- 37** Kitenga | Findings - He Whenua Rongo National Wānanga
- 40** Wānanga Resolutions
- 41** Kitenga | Findings - He Whenua Rongo: Literature Review
- 43** Findings

- 44** Key themes: Diverse Māori Economies, Indigenous Place-making, Resource Management and Governance
- 45** Enabling Actions That Promote Māori Food Sovereignty
- 46** Ongoing Barriers and Challenges to Māori Food Sovereignty
- 47** Conclusions from the Literature Review

He Reo Kanorau, He Kōrero Matatini

Diverse Voices, Varied Narratives

- 52** He Pātai: He Tohutohu
- 58** Generational Shifts in Māori Kai Resilience and Security
- 70** Ngā mea whakakaha | Enablers of soil and kai resiliency
- 70** Mana Atua
- 71** Mana Whenua
- 77** Mana Tangata
- 83** Mana Rangatahi
- 89** Data and Research
- 92** Learnings from Indigenous Soil and Kai Sovereignty Initiatives - Hawai'i

93	MA'O Organic Farms – Wai'anae, Hawai'i
95	Māori-Crown Relationships
97	Resourcing kaupapa
99	Summary of Enablers
101	Ngā mea tāmi Barriers
101	Intergenerational impacts of colonisation influencing Māori kai insecurity
102	Environmental degradation
103	Health impacts
104	Climate change
106	Dependence on capitalist, industrial food systems
107	Apathy resulting from disconnection
109	High-tech extractive food production
110	Access to resource and information
115	Governance
116	Summary of Barriers
118	Kāwanatanga workshop
119	Kāwanatanga findings

He Kōrero Tūhura

Discussion and Next Steps

124	Key Themes
129	Ecosystem mapping
144	New technologies and soil and kai resilience
147	Recommendations
149	Specific recommendations for Kāwanatanga
151	Specific recommendations for funders to uplift Māori soil and kai resiliency

He ĀpitiHanga

Appendices

154	Appendix 1: Kuputaka Select Glossary
158	Appendix 2: He Whenua Rongo Wānanga Speakers and Mātanga Interviewees
159	Appendix 3: National Online Wānanga Programme
160	Appendix 4: List of figures
161	Appendix 5: Footnotes
165	Appendix 6: Selected Bibliography

Kupu Takamua

Foreword

After working on this project, He Whenua Rongo, for the last seven months I am convinced that I have been part of a mana motuhake movement for soil and kai resiliency, and this fills me with great hope for the future. This movement is being led by diverse Māori communities, whānau, hapū, Iwi, Māori food producers and businesses who are all playing an active role in reshaping our soil and food systems back into the loving hands of communities and away from corporations. Now is the time to continue this momentum so that we can secure more hopeful and flourishing futures for the generations to come.

It is clear that our food system is broken. In Aotearoa we produce enough food to feed 50 million people yet within our population of five million many go hungry and that is mainly Māori and Pacific peoples. There is huge money to be made in the broken food system, driven by free trade agreements, corporate interests and an intellectual property rights regime that sees nature as a commodity to be patented and exploited, thus denying nature's sacred rights as atua (deity) within an interconnected woven universe.

We have lost the essence of what it means to be a part of nature, not above it, living in harmony and balance. We are the only species that has systematically wiped out the ecosystems of other species leading to global biodiversity loss at an unprecedented rate. Scientists are warning of a sixth mass extinction event, an event caused by human activity and the unsustainable use of land, water and energy, and climate change. Modern farming practices have adversely impacted on global biodiversity loss and the emergence of regenerative farming is in part a recognition that farming practices need to change and biodiversity restoration enacted. But how far can that change go? Who should drive those changes? The global food system grows and concentrates corporate control and power through reducing the food system to a near monoculture that produces

nutritionally empty food, while at the same time this system displaces small-scale farmers and prevents Indigenous peoples from eating and cultivating our cultural landscapes as everyday acts of food and soil sovereignty. The diminishing of diversity from our diets and biodiversity from our landscapes is connected.

The kōrero from He Whenua Rongo tells us that Māori communities have diverse place-based solutions to our evolving food crisis drawn from mātauranga and tūpuna wisdom. Māori are working at different scales with diverse methods to rebuild resilient Māori soil and kai communities. These solutions include Māori making the changes they want to see across the food system and not waiting for governments or corporations to offer antidotes. As the kōrero gathered for this project demonstrates, our work is to rebuild the food system based on kaupapa Māori values and principles using methods that elevate the mana of Hine-ahu-one, Papatūānuku and ngā atua katoa.

This is the full version of the He Whenua Rongo Report. He Whenua Rongo is significant in that it is a for Māori, by Māori report on Māori soil and kai resiliency. Papawhakaritorito Trust is honoured to have helped to lead this work in collaboration with Aatea Solutions and Te Waka Kai Ora. We also share gratitude with all of those who shared kōrero and joined us for the two-day online national wānanga and those whose energy helped to make that event possible.

Dr Jessica Hutchings

Founding Trustee, Papawhakaritorito Trust



Kōrero Matua

Executive Summary



Under the realm of Rongo, this kaupapa Māori research project shines a light on the enablers and barriers to resilient Māori soil and kai systems. We wanted to understand the diverse realities of Māori in relation to Māori soil and kai resilient communities and highlight some successful approaches to Māori kai resilience and sustainability.

We have done this by bringing together a kaupapa-led community of interest connected to soil and kai resilience. We spoke to mātanga (experts) who work in the expansive space within which Māori kai systems operate.

Our approach encouraged the joining up of alliances across Māori spaces so that the silos that the current capitalist food system has created can be dismantled to make way for the potential of working together to secure soil and kai sovereignty for Māori.

Enablers, barriers and key themes of Māori soil and kai resilience



Ngā Mea Whakakaha Summary of Enablers

Informed by the diverse voices of Māori, He Whenua Rongo understands the enablers and barriers to Māori soil and kai resilience as follows:

Mana Atua

Strengthening connection to atua and honouring that whakapapa in how we use soil, and grow and gather kai.

Mana Whenua

Return land to Māori; using tikanga and other regenerative approaches that restore soil resiliency.

Mana Tangata

Foster Māori leadership and enable kai kōkiri (community champions).

Mana Rangatahi

Rangatahi are actively involved in developing and leading initiatives. Education pathways facilitate their soil and kai resiliency learning.

Data and Research

The benefits of Hua Parakore and other soil and kai resiliency approaches can be demonstrated and learnings shared.

Learnings from other Indigenous Initiatives

Soil and kai resiliency involves fully living kaitiaki values, as individuals and whānau. Whenua and awa need a stronger voice for their interests.

Māori-Kāwanatanga relationships

When Māori lead, Māori can determine a path forward with kāwanatanga. Kāwanatanga must develop strong Tiriti capability across agencies

working in the soil and kai sector; there must be provision for long-term planning; Iwi-kāwanatanga relationships must be mutually beneficial; as the national Māori authority on organics, Te Waka Kai Ora has a key role to play in any discussion of soil and kai resilience; long-term planning is needed, unrestricted by government timeframes and cycles and shaped by mokopuna decision-making processes; kāwanatanga to further enable Māori-led research in the sector; regional operations support iwi and local initiatives.

Resourcing kaupapa

Coordination and long-term funding that is directed by Māori can help the flow of resources where they are needed and effective.

Kāwanatanga-specific enablers

Kāwanatanga agencies understand government's role to support Māori aspirations for soil and kai resilience, sustainability and stewardship and they are working towards shared outcomes; have appropriate levels of Māori cultural and Tiriti capability and mātauranga; empower Māori to determine their own solutions; have a clear platform for sharing agencies' mahi on soil and kai systems so access to information easy for Māori to access.



Ngā Mea Tāmi

Summary of Barriers

Intergenerational impacts of colonisation

is one of the fundamental barriers for te ao Māori in rebuilding resilient soil and kai systems is the myriad of impacts from intergenerational colonial trauma and on-going disconnection from whenua and te taiao. As Māori continue to be alienated from ancestral whenua, awa and moana as pātaka kai, and as Māori are still unable to grow food, disconnection from te taiao persists.

Environmental degradation.

Rapid environmental degradation due to climate change, predators, invasive species, pollution, nitrogen-based fertilisers and conventional agriculture are impacting the mauri of te taiao. When the mauri of te taiao is depleted this in turn depletes the mana of the people further disconnecting Māori from their environments. There is a clear correlation between biodiversity loss and the loss of Indigenous knowledge.

Health impacts.

Toxins released into the environment by industry, agriculture and food production impact food quality, the health of the environment and local community. Such practices continue to impact some Māori land and Māori communities.

Climate change

will disproportionately impact Māori and Pacific Island peoples. Māori must be resourced to plan for crisis scenarios and food growing in adverse conditions, and to urgently shift from extractive to rauora/regenerative living.



Dependence on current capitalist, industrial food systems.

The lack of alternatives to capitalist, industrial food systems places many Māori in a position of dependency on foods those systems produce. The current food systems is an insidious form of colonisation that does not uphold a mana atua approach to soil and kai resiliency and thriving Māori food communities.

Disconnection resulting in apathy.

Lack of access to whenua, awa and moana as their pātaka kai and not being able to grow or gather food at those places, heightens the disconnection of Māori from ancestral lands and mahinga kai which can lead to apathy and reluctance to participate in mahi taiao.

High tech extractive food production.

New methods of producing food are constantly developing. Food produced these ways may not directly connect the people eating them to Rongo-mā-Tāne, Hine-ahu-one or Papatūānuku, (to māra, soil, or the earth) so whether the kai has mauri is debatable.

Lack of infrastructure and required funding.

Lack of infrastructure includes whenua, legislative barriers that perpetuate Māori disconnection from whenua, inadequate resources (e.g. seeds, clean water, mātauranga) to enable Māori access to and control of all stages of food growth/production and distribution—from māra or mahinga kai to the plate, to the compost, to the māra, whether on small- or large-scale—and without reliance on supermarkets and the like. Whether workers in these spaces are paid at least a living or in-kind wage is an important issue here too.

Lack of Tiriti partnership and Māori decision making.

There has been little work toward national

Tiriti partnership development between kāwanatanga and Iwi regarding Māori soil and kai resiliency. Also there is a lack of Tiriti partnership across the food systems. Māori are not at food governance tables as decision makers. Constraining legislation continues to be a barrier.

Kāwanatanga-specific barriers.

These barriers include: inadequate capacity and capability to work effectively with and for Māori aspirations for soil and kai resiliency; siloed activities within and between agencies; short term work planning cycles; lack of internal cohesion due to high staff turnover; too few Māori in senior kāwanatanga agency roles; siloed thinking, acting and resourcing for Māori soil and kai resiliency within and between agencies; funding of Māori initiatives not determined by Māori priorities and values.



Key Themes

Key themes to emerge across the project are:

The final part of this kaupapa Māori report presents the key values, principles and recommendations for building and sustaining Māori soil and kai resilience; we also make specific recommendations for Kāwanatanga and funders. These are presented below.



He Whenua Rongo

Values, Principles and Recommendations

The He Whenua Rongo recommendations are underpinned by the Hua Parakore values and principles as developed by Te Waka Kai Ora. These Hua Parakore values and principles uplift the mana of Ngā Atua and enhance Māori soil and kai resiliency. The Hua Parakore can be used across kaupapa movements to uplift kaupapa Māori practices and tikanga.



Hua Parakore Framework

WHAKAPAPA

Hua Parakore is a connection to the natural environment.

WAIKUA

Hua Parakore maintains peace & safety.

MANA

Hua Parakore is a vehicle for social justice.

MĀRAMATANGA

Hua Parakore is a source of knowing and enlightenment.

TE AO TŪROA

Hua Parakore maintains natural order.

MAURI

Hua Parakore maintains healthy soils, kai and people.

Recommendations from He Whenua Rongo



He Whenua Rongo recommendations are underpinned by the Hua Parakore values and principles as developed by Te Waka Kai Ora. They were formed from the national wānanga, the kāwanatanga workshop and expert interviews.

These recommendations are for everyone with an interest in uplifting soil and kai resilience for Māori.

Mana atua	Hua Parakore food farms and māra kai	Supporting Māori-led transitions to Rauora practices	
	Treaty partnership and food governance	Kaupapa-led movement to address the multiple emergencies	Upscale investment in success
Rangatahi leadership	Rauora education and learning	Grow and propagate strong governance	Establishing a for Māori, by Māori Seed Bank

Mana atua

All decisions and pathways forward in building soil and kai resilience honour and uplift the mana of Hine-ahu-one and other Atua Māori. This relationship with Ngā Atua is acknowledged as the spiritual source of life, tapu, mauri and mana and provides the balance between Te Ao Tūroa (the natural world) and Te Ao Wairua (the spiritual realm).

Hua Parakore food farms and māra kai

Scope work to fund, and undertake to establish Hua Parakore food farms at various scales and in diverse Māori settings and regions across Aotearoa, to contribute to Māori soil and kai resiliency. Potential sites and communities identified. Build Māori food systems infrastructure. Strategic investment required.

Supporting Māori-led transitions to Rauora practices

Establish a Māori transition fund that supports conventional Māori farmers and growers to transition to Rauora practices such as the Hua Parakore organic regenerative practices. Establish a cohort of Hua Parakore on-farm advisors to deliver Hua Parakore education and training. Strategic investment required.

Treaty partnership and food governance

Urgently increase Māori participation in food governance and decision making across Aotearoa by adopting Tiriti o Waitangi partnership approaches that align with the findings of the WAI 262 claim. Recommend Iwi Chairs prioritise soil and kai resilience.

Kaupapa-led movement to address the multiple emergencies

Strategise approaches and activities to join across kaupapa Māori movements that engage mana motuhake and rangatiratanga responses to climate change, soil and kai resiliency.

Upscale investment in success

Increase investment in Māori-led organisations and kaupapa that are successfully promoting and enabling Māori soil and kai resilience. Identify opportunities to scale up and transfer success across regions and communities.

Rangatahi leadership

Ensure that Rangatahi-led responses to the soil, kai and climate crisis are invested in and enabled. Rangatahi voices, participation, experiences and realities are at the forefront of solutions to the soil, kai and climate crisis.

Rauora education and learning

Develop Rauora and Hua Parakore curricula and bilingual education materials for teaching across all generations, in particular with whānau. Promote Rauora and Hua Parakore practices to support transitions in food production and agriculture.

Grow and propagate strong governance

Create ways to propagate excellent governance through fostering relationships with mātanga in this field, developing teina (associate) governance roles and enabling people to serve as secondees or advisors for short-term roles. Excellent Māori governance takes into account 'mokopuna' or intergenerational decision making, whakapapa based, collectively held taonga, and multiple priorities bottom lines.

Establishing a for Māori, by Māori Seed Bank

Support the development of a for Māori, by Māori seed bank that ensures both seed sovereignty and security of ngā rākau Māori as well as kai production crops. Enable the gifting of seeds (and therefore kai) as the ultimate expression of tino rangatiratanga and mana motuhake.

Recommendations for Kāwanatanga



While the focus of this research is to elevate for Māori, by Māori solutions, we make the following recommendations for Kāwanatanga that will assist in supporting and enabling Māori-led solutions for soil and kai resiliency.

Engaging with Māori

- Develop Tiriti partnerships for soil and kai resiliency. Privilege Māori voices in established and new Tiriti partnerships for soil and kai resiliency.
- Resource Māori to engage with Kāwanatanga on soil and kai resiliency kaupapa.

New authorising environment

- Create space and enabling environments for Māori as decision makers within food governance in Aotearoa.
- Ensure Māori are at the decision making table and decisions are not being made in our absence.

System stewardship

- Develop a stewardship framework including a central agency in Kāwanatanga responsible for Māori soil and kai resiliency and leading on behalf of Kāwanatanga Tiriti partnership with iwi Māori.
- Establish a central agency in Kāwanatanga responsible for Māori soil and kai resiliency and leading Tiriti partnership with Iwi Māori.
- Have a Māori Minister responsible for soil and kai resiliency alongside the Minister for the Environment.
- Develop a cross-agency investment strategy to support Māori led and mātauranga based solutions for soil and kai resiliency.

Policy settings

- Engage Kaupapa Māori evidence in determining policy settings that impact on Māori soil and kai resilience.
- Adopt holistic approaches to policy setting in this space and to balance the export focused priorities with local Hua Parakore regenerative systems.

Funding

- Develop a cross-government funding strategy that addresses the underinvestment and inequitable current Tiriti settings; and that aligns with the findings of the WAI 262 claim. The strategy should share both power (leadership, decision making and inclusion) and resources (funding, infrastructure and expertise) with whānau, hapu, iwi and Māori communities and organisations to enact Māori-led solutions and strategies to soil and kai resiliency.
- Provide baseline funding for Te Waka Kai Ora (National Māori Organics Authority) to enable the continued implementation of the Hua Parakore (Māori organic regenerative verification system for kai atua).

Evaluating for outcomes

- Engage with Māori to develop across-government measurable goals for soil and kai resiliency.
- Develop a forum for Kāwanatanga leaders to report progress against goals to rangatahi and tamariki Māori.

Secondments

- Provide whānau opportunities to ako through secondments into soil and kai resiliency kaupapa. Preferably, enable Māori (eg. public servants) to return and grow their skills through kaupapa they whakapapa to.

Recommendations for funders to uplift Māori soil and kai resiliency

Whanaungatanga

- Invest in whanaungatanga across the Māori food ecosystem to strengthen a joined-up approach to transforming Māori food systems and soil resilience. Invest in hui and wānanga and on-farm Rauora advisors to accelerate the potential of change through collaborations.
- **Immediate action:** 3-year investment in annual, regional and national He Whenua Rongo wānanga to support the call for a kaupapa coalition for Rauora.

Strategic funding investments

- Make long term strategic investment in large scale projects to establish and grow Māori-led food farms and grow the skills of the next generation to be active players in restoring Māori food systems.
- **Immediate action:** 6-month investment in a kaupapa Māori feasibility study to establish pilot Māori-led food farms across Aotearoa.
- Provision of capital investment to support soil and kai resiliency. This could include costs for: polytunnels, cloches, weedmat, tools, wheelbarrows, timber, irrigation. This could also include the cost of land acquisition or lease where required.

Encourage Māori investment and gifting

- Work with existing Māori-controlled charitable trusts to establish a simple system of tithing for soil and kai resiliency. If required, develop a fit-for-purpose application that can enable all supporters to gift to Māori-led initiatives (specifically or generally). Reenergise the tikanga of koha.

Māori leadership and infrastructure investment

- Trust and invest in Māori leadership in the Rauora, soil and kai resiliency space. Invest in leadership in wide and expansive ways

that allows for creative space for collaborations and projects to develop.

- **Immediate actions:** Invest in leadership at all levels of soil and kai resiliency -including community leadership, social entrepreneurship, research and scholarship, mātanga mahi māra kai, mātanga taiao and governance development. Engage with employers and invest in learning or leadership (practitioner) paid leave for those in work and support job creation for those who would benefit from paid work.
- Invest in Māori leadership in the soil and kai space to allow for whakawhanaungatanga and the co-creation of ideas and action.
- Invest in a secretariat to convene the leadership group/tira and execute project ideas. Provide financial support to enable secondments into Māori organisations to strengthen systems to facilitate growth and scaling of delivery.

Rangatahi leadership and development

- Invest in rangatahi as leaders in ways that uplift te reo and tikanga and provide for mātauranga based solutions.
- **Immediate actions:** Commission a scoping study that is led by rangatahi to build rangatahi participation and leadership in soil and kai resiliency.
- Expand out Jobs for Nature and Ara Mahi programmes to enable paid work opportunities specifically for soil and kai resiliency mahi.

Kaupapa Māori research

- Invest in and encourage workforce pathways for Māori research, scholarship and mātauranga taiao imbued problem-solving. Impactful data and storytelling is essential to shed light on and restore the health of Hine-ahu-one and Papatūānuku.

He Kōrero Whakataki

Introduction

*Photo credit:
Ehsan Hazaveh*

Mana Atua Standpoint

Whakapapa¹ and wairuatanga pervade everything; they connect us as Māori, as people, as descendants of tūpuna and as members of the universal whānau. We are younger siblings or (in other narratives) we are offspring of Ranginui and Papatūānuku, along with all other living things. Living from this awareness affects how we observe and language our experience, how we live, learn/teach and work, how we respond to, or receive outside influences, and especially how we source or produce food to sustain ourselves and our communities.

Māori food systems, soil and kai sovereignty are held within the spiritual energies of ngā atua and it is from this standpoint that this project, He Whenua Rongo speaks. This standpoint is described further...

Ōnukurangi is a word that describes both Papatūānuku and Ranginui at the same time. They exist at the same time. They breathe the same breath. They live in the same space they live in the same spiritual dimension. And 'Ō' at the beginning of that word tells us [people] that we are in that divine space. So 'Ō' tells us that we are in the realm and in the domain of Io Matua Kore.

- Teina Boasa-Dean (Tira Maara Tautāne, Rūātoki)

Kawiti Waetford (rangatahi educator), also a speaker at the He Whenua Rongo online wānanga, expresses the realm of atua and articulates the standpoint of this project:

...ka timata ia wā, ia wā tēnei pito o te aho i kōrerohia nei way back, nō hea tātou. Ka timata i te orokohanga mai o te ao i ngā atua... kua nui ngā kōrero - he nui ngā kōrero kua puta mō ngā atua, a Hine-ahu-one, rātou katoa e whakatinana nei i te taiao. In our kaupapa one of our tino is connecting that ira tangata, tātou te ira tangata nei through that long aho back to our atua, our atua Māori our atua o taiao.

- Kawiti Waetford (rangatahi educator)

The mana atua standpoint of this project embodies the diverse realities and lenses from which we as Māori enter into soil and kai resilience discourses both in kōrero (discourse) and mahi (practice). Our mana atua standpoint is underpinned by kaupapa Māori values and principles. These values and principles are about re-connecting us as Māori to ngā atua and to foodscapes and environments where tikanga, reo and mātauranga Māori are thriving. Reconnecting to rebuild Māori soil and kai resilience is a wairua journey and one of restoring relationships with ngā atua.....

In He Whenua Rongo, in mahi kai atua, we are talking about growing food which can help restore our connection to ngā atua Māori and so our connection with Hine-ahu-one, with Papatūānuku, it's just so fundamental to who we are, as Māori and what a beautiful journey and a beautiful relationship.

- Jessica Hutchings (indigenous research)

Global Context

It is from our mana atua standpoint that the question of food secure futures has never been so pressing. In the wake of the COVID-19 global pandemic, news media reported food hoarding, flour shortages, food poverty and food banks disproportionately over-subscribed by Māori.

Rapid climate change, biodiversity loss and soil degradation all lead to on-going global food precarity. This precarity in part is a symptom of its own dependency on fossil fuel-based agriculture, capitalist flows of commodities and a monetary system that can be described as 'eating itself'. How Aotearoa New Zealand imagines and plans for our food futures in a time of unprecedented global disruption, failing capitalism and climate crisis, is one of our most urgent challenges.

Prevailing in the wake of climate change and an unstable capitalist system is dependent on our ability to understand the current situation and to aspire to, and dream of, new food horizons as food communities that place mana atua, mana whenua and Māori communities at the centre. This was discussed by Mike Smith at the He Whenua Rongo national wānanga:

So what we've inherited from colonisation and imperialism is a worldview that's based on consumerism and a colonial mindset. That's the worldview of the system that we live in today. Its attitude to resources is to extract them, to dig, to burn, to dump. And those are the characteristics of the extractive industry.

In terms of how these extractive industries exploit people, we are just in the cogs that are driving these industries and are expected to keep the machine going as exploited workforces within that machinery of the extractive economy. The purpose of all this activity is the enclosure of wealth and power.

Transnational companies and their shareholders get all the wealth from these activities and for those of us that have been marginalised, well, we suffer more polarisation between rich and poor, increasing homelessness, food insecurity, kids going to school without kai and all those sorts of things that beset us. So the governance - how all of this is controlled is by finance.

- Mike Smith (climate specialist/Pou Take Ahurangi)

Just as we note these pressing global issues, we can also look beyond Aotearoa for examples of activism for soil and kai resiliency. Some examples are noted in the Part 2 **'He reo kanorau, he reo matatini | Diverse voices, multifaceted narratives.'**

Elevating Hine-ahu-one

Māori food secure futures can only be achieved by ensuring that tangata whenua are engaged in this issue and are creating their own self-determined pathways in relation to food and wellbeing. Furthermore, connecting food with soil honours the interwoven universe² of Māori soil and kai resilience that contributes to building thriving Māori soil and kai resilient communities.³

This project deliberately reconnects and elevates the relationship between food and soil in discourses pertaining to Māori food sovereignty and food security. This is imperative from a te ao Māori standpoint to ensure that atua domains are honoured and that the link to horticultural and agricultural practices and their impact on soil are included when discussing Māori food sovereignty.

A FAO report 2014 presented evidence that there are only 60 harvests left globally due to the fast eroding rates of topsoil produced by climate change, non-sustainable agriculture and horticultural practices degrading soil.⁴ He Whenua Rongo takes the viewpoint that it is imperative that horticulture methods enhance soil microbiology and do not destroy the precious topsoil that is required to produce food. We also argue for mana whenua practices of kaitiakitanga to include advocating and care for the soil as a taonga that deserves the same level of protection as the flora, fauna, mātauranga, reo and Māori cultural and intellectual property protected under te Tiriti o Waitangi.⁵

Soil, and the kai that springs forth from this material, not only feeds us as tangata, soil and kai are conveyors of our mātauranga Māori and fuel our cultural identities as tangata whenua. While this project specifically focuses on soil and kai resilience it does so while remaining alert to the interwoven relationships within mana atua domains of te taiao, including the winds, waters, minerals and microbes. In this, we follow the complete systems thinking approach that guides Rauora: an Indigenous Worldview Framework for the National Climate Change Adaptation Plan developed by Ihirangi for the Ministry for the Environment in 2021.⁶



He Tūāpapa Foundations

What is He Whenua Rongo?

He Whenua Rongo is a kaupapa Māori research project that focuses on kaupapa Māori approaches to soil and kai resilience, sustainability and stewardship. It identifies what encourages and what hinders Māori having strong soil and kai resilience in which to grow, gather or hunt plenty of food for our whānau. This report shares insights into Māori aspirations to re-establish robust soil and kai systems, for Māori, by Māori, and with Māori in both rural and urban areas. The research was carried out from February to July, 2022.

The name, He Whenua Rongo, acknowledges that in Māori traditions and narratives Rongo is regarded as the purveyor of peace and the cultivator of the kūmara. The connection of Rongo to the land, Whenua, is intimate and symbiotic. Papatūānuku, the earth mother is the living personification of everything the whenua represents and produces.

He Whenua Rongo is an acknowledgement of the natural coalescence of earth, peace, cultivation, and productivity of everything positive that not only emanates from these entities, but also an Indigenous expression of the sense of human responsibility to nurture the elements that nurture us.

This research was conducted during a time when it became more challenging than ever for many whānau to feed themselves. In recent years we have become accustomed to seeing

empty shelves in supermarkets, steep increases in food prices; extreme weather events disrupting supply chains; continuing political unrest around the world. In addition, very few of us know how to grow or gather kai like our kaumātua or tūpuna did. This all leaves Māori very vulnerable or kai insecure.

The aim of He Whenua Rongo is to explore approaches to Māori food and soil resilience and sustainability. It identifies barriers, enablers and potential pathways to activate Māori food resilience and sustainability, including potential actions by a diverse representation of voices in te ao Māori and food system participants (e.g. whānau, hapū, iwi, rangatahi, Māori enterprise and agribusiness, urban community initiatives and central and local government).

Research Questions

The overarching research question of this study is:

What are the enablers and barriers to resilient Māori soil and food systems?

This research aims to:

- Understand the diverse realities of Māori in relation to Māori soil and kai resilient communities
- Identify best practice approaches to Māori food resilience and sustainability
- Identify barriers, enablers and potential pathways to activate Māori food and soil resilience and sustainability, including potential actions by a range of food system participants (e.g. central and local government, iwi, rangatahi, Māori agribusiness).

Our key research objectives are to:

- Provide opportunities for diverse Māori food system actors to hold their own discussions and build their own understandings of sustainable and resilient Māori food systems
- Build Māori capacity and capability through kaupapa Māori participatory approaches
- Strengthen connectedness across the Māori food system, including building Māori communities of interest with regard to a sustainable and resilient food system
- Identify enablers, barriers and potential pathways to activate Māori food resilience and sustainability, including potential actions by a range of food system participants (e.g. central and local government, iwi, rangatahi, Māori agribusiness).



Key Terms and Definitions

Indigenous resilience, Māori soil and food sovereignty

Our working definition of soil and food resilience is based on the capacity of soils and peoples to resist and/or recover from destabilising influences. This definition draws on Indigenous critiques of resiliency discourses in the fields of health, social work, disaster and wellbeing.

Existing scholarship defines Indigenous resilience as involving a complex interplay of individual and collective, social, cultural, spiritual and environmental as well as historical factors.⁷ Some scholars argue that resilience is part of the very fabric of being Māori due to enduring experiences of colonisation and racism.⁸ That is why ideas of resistance, self-determination and the development of sovereign capacities (the capacity to thrive) are part of Indigenous resilience discourses.

Or as Sir Mason Durie has noted,

“Indigenous resilience is a reflection of an innate determination by Indigenous peoples to succeed”⁹

Literature to do with the resilience of Māori also notes how relational the concept is, involving a collective approach based upon whānau and whakapapa relationships and the vital role played by environmental and ecological systems in shaping Māori experiences and identities¹⁰. As such, Māori resilience is tied intimately to the resilience of soil - as whanaunga - and our approach based on existing Māori-led research is to treat food as a conduit between tangata and in relation to the whenua. Our extended working definition

of soil and food resilience is therefore based not only on the capacity of soils and peoples to resist and/or recover from destabilising influences, but also the capacity of tangata to reconnect with whenua through food as an act of rangatiratanga and mana motuhake.

Connecting from these Māori and Indigenous understandings of resilience, this project works with the following Māori-led definitions in relation to Māori food and soil sovereignty:

This project works with the following Māori-led definitions in relation to Māori food and soil sovereignty by Jessica Hutchings.

Māori food sovereignty in Aotearoa puts Māori who produce, distribute and consume food - rather than the demands of the global markets, free trade agreements and corporations at the heart of food systems and policies.¹¹

Māori soil sovereignty is about honouring soil as a taonga. It is about advocating and speaking on behalf of the soil for her sovereign right to retain her health. It is a return to natural processes for the enhancement and maintenance of soil health. It is also resistance to capitalist-driven industrialisation and development that furthers the colonial project's imperialist practices of domination over nature. Māori soil sovereignty is about coming back to honouring, reclaiming and enacting our kaupapa-based relationships with soil, food and wellbeing that are held within our own diverse Māori knowledge systems.¹²

- Jessica Hutchings (Indigenous Research)

Report Structure

This report brings together six months of kaupapa Māori research for Māori by Māori. The report is in three parts and is dedicated to elevating the diverse voices of Māori¹³ and bringing them to the forefront of soil and kai resiliency discourses in Aotearoa. Through connecting with the diverse kōrero of Māori we aim to understand the enablers and barriers for building resilient Māori soil and kai systems and to provide guidance on where to next.

01: Whakataki Introduction

The report begins by explaining our kaupapa Māori methodological approach, the conceptual frameworks we adopted to guide this work and the collaborative partnerships that were essential for building a Māori community of interest in He Whenua Rongo. We also present the kōrero and resolutions from the He Whenua Rongo national online wānanga that was held as part of this project on the 11th and 12th of May 2022.

Part One ends with an overview of the literature pertaining to Māori soil and kai sovereignty, highlighting that in the academic literature this is an emerging field and there is a need to continue to build an evidence base to better support the development of soil and kai resilient Māori communities.

02: He Reo Kanorau, He Kōrero Matatini | Diverse voices, multifaceted narratives

This part presents Māori voices and communities of interests we engaged with. The cornerstone activity of the project was the online He Whenua Rongo wānanga, in which over 700 people registered interest. This online wānanga provided an opportunity for diverse Māori communities to hold their own discussions and build their own understandings of sustainable and resilient Māori soil and kai systems. Furthering the intention of bringing diverse Māori voices to this project, we also interviewed 21 mātanga connected to soil and food systems work in 17 interviews.

These experts are either growing kai, supporting food security through food banks or working on growing Māori agribusiness and export markets. In places we present extracts from these interviews in long form to honour and elevate the voices of the participants. The barrier and enablers to Māori soil and kai resilience are also drawn together from across all of the kōrero and presented. Lastly, the outcomes of an online workshop held with government agencies with soil and kai resiliency-related responsibilities are presented along with recommendations for kāwanatanga.

03: He Tūhura | Discussion and Next Steps

Part three of the report: He tūhura, he kimi ara whakamua, presents the key themes of the project alongside some ideal future states and Māori-led success stories in the soil and kai resiliency space. This part also includes a Māori soil and kai ecosystems map to assist in better understanding the context and players that are involved in the Māori soil and kai resiliency space.

Finally He Whenua Rongo recommendations, developed from the collective voices of Māori that we engaged, are presented.

Whakaritenga Rangahau

Kaupapa Māori Methodology

This research adopts a kaupapa Māori research methodology and research approach. It builds on previous research in this area¹⁴ and whanaungatanga connections to utilise the mātauranga embedded by Māori food actors within diverse Māori food systems, Māori communities, whānau, hapū and iwi. This kaupapa Māori research approach aims to extend the mātauranga continuum with regard to Māori soil and kai resilience. The shared kōrero from the Māori participants gathered here helps to reimagine what Māori soil and kai resilience looks like from diverse kaupapa Māori standpoints.

He Whenua Rongo is driven by Māori voices and priorities and is consistent with tikanga Māori. The intent of this research is to recognise the innovative potential of mātauranga as well as diverse Māori experiences in a contemporary context that can inform understandings of Māori soil and kai resilient communities.

The research extends current understandings of Māori food discourses, a field that remains under-examined and marginalised within its own right. An aim of our kaupapa Māori methodology is to strengthen the connectedness across the Māori food system to build a picture of pathways to activate Māori soil and kai resilience. He Whenua Rongo has contributed to building connected Māori communities of interest with regard to soil and kai resilience by; making visible current Māori-led practices that are contributing to building soil and food resilient Māori communities and

making connections across these communities through our participatory methodology and the Pātikitiki approach.

Hua Parakore Conceptual Framework—Hua Parakore

This research is underpinned and guided by the Hua Parakore conceptual framework. This kaupapa Māori framework was developed by Te Waka Kai Ora through a three year research study to develop a Māori validation and verification system of pure food.¹⁵ It has since been used as a conceptual framework for Māori soil health indicators¹⁶ as well as Māori kai resilience.¹⁷ The Hua Parakore is situated within mātauranga Māori understandings and consists of six kaupapa or principles that guide and frame our approach to this work. These interconnected kaupapa are; whakapapa, te ao tūroa, mana, mauri, wairua and māramatanga.

Hua Parakore Framework



Figure 1. Hua Parakore Framework

WHAKAPAPA

Hua Parakore is a connection to the natural environment.

WAIKUA

Hua Parakore maintains peace & safety.

MANA

Hua Parakore is a vehicle for social justice.

MĀRAMATANGA

Hua Parakore is a source of knowing and enlightenment.

TE AO TŪROA

Hua Parakore maintains natural order.

MAURI

Hua Parakore maintains healthy soils, kai and people.



Partnership with Te Waka Kai Ora

Papawhakaritorito Charitable Trust and Aatea Solutions partnered with Te Waka Kai Ora, the National Māori Organics Authority and the kaitiaki of Hua Parakore. Te Waka Kai Ora bring mana and integrity to the project having been leaders in the Māori soil resilience, kai resilience and organic horticulture and agriculture for the last 20 years. There are Te Waka Kai Ora regional networks around Aotearoa comprised of Māori food producers, growers, marae gardens, cooks, distributors, retailers, sellers, fermenters and bakers. The keystone partnership with Te Waka Kai Ora brings leadership and connections for the purposes of the project. The research team have been regularly advised by Te Waka Kai Ora throughout the research project to ensure the outcomes are owned by Māori.

Methods

Our research used a mixed-methods approach. A review of secondary data sources through a literature review contributed to the landscape mapping phase of the study. Our primary data collection methods are underpinned by the Pātikitiki methodology of engagement that has been developed by Aatea and Creative HQ¹⁸ from two distinct bodies of knowledge; kaupapa Māori research and design thinking methodologies. We developed kaupapa Māori ethics to ensure the rights of those who participated are upheld and full, prior informed consent was sought before any engagement

commenced. Our ethics process is aligned to our tikanga of pono and tika as a kaupapa Māori research team.

Our primary methods for data collection included; a literature review, 17 interviews with Māori sector experts (mātanga) and a national online wānanga. We brought together all data points using the Hua Parakore conceptual framework to understand the new learnings, insights and mātauranga to emerge from this research.

Pātikitiki

The Pātikitiki methodology of engagement evolved from two distinct bodies of knowledge; Kaupapa Māori research and design thinking. These methodologies are melded to create a distinct Aotearoa methodology for this kaupapa, using the Pātikitiki model. All who participate gain an opportunity to perspective-take and share their knowledge.

The process includes whakaaro, kōrero, wānanga and tikanga, and culminate in reaching enlightenment, te ao mārama. This comes from the adapted karakia below:

Nā te whakaaro ka puta te kōrero, nā te kōrero ka puta te wānanga, nā te wānanga ka poua he tikanga, kia puta ki te whai ao, ki te ao mārama. (The spark of thought motivates articulation, articulation provokes discussion, discussion drives decision making based on clarity and understanding.)

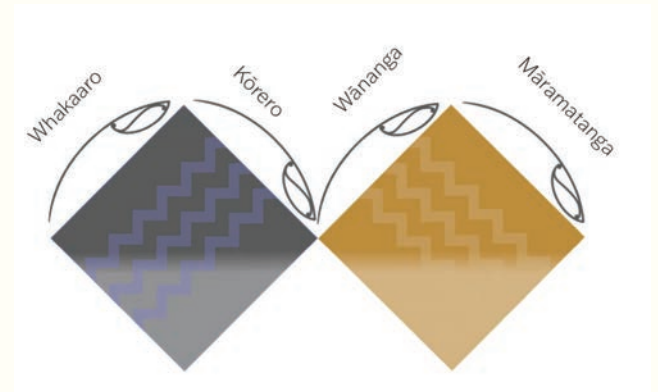


Figure 2. Pātikitiki Methodology

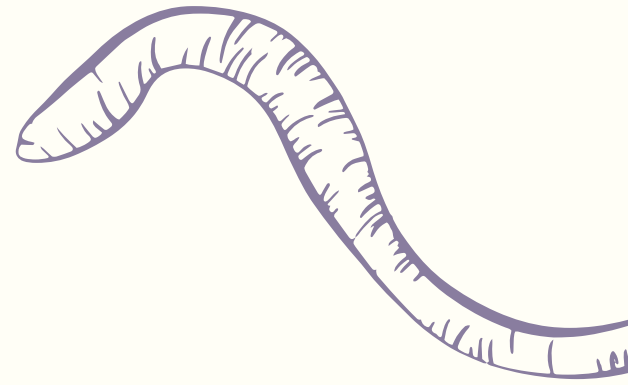
Research Phases

The research occurred in three phases.

- **Phase 1:** Landscape mapping - literature review, kāwanatanga wānanga, persona mapping, stakeholder mapping, and partnership meetings with Te Waka Kai Ora.
- **Phase 2:** Engagement - partnership meetings with Te Waka Kai Ora, mātanga interviewees, and the national online wānanga.
- **Phase 3:** Analysis and report writing.

Phase 1

Landscape Mapping



Literature Review

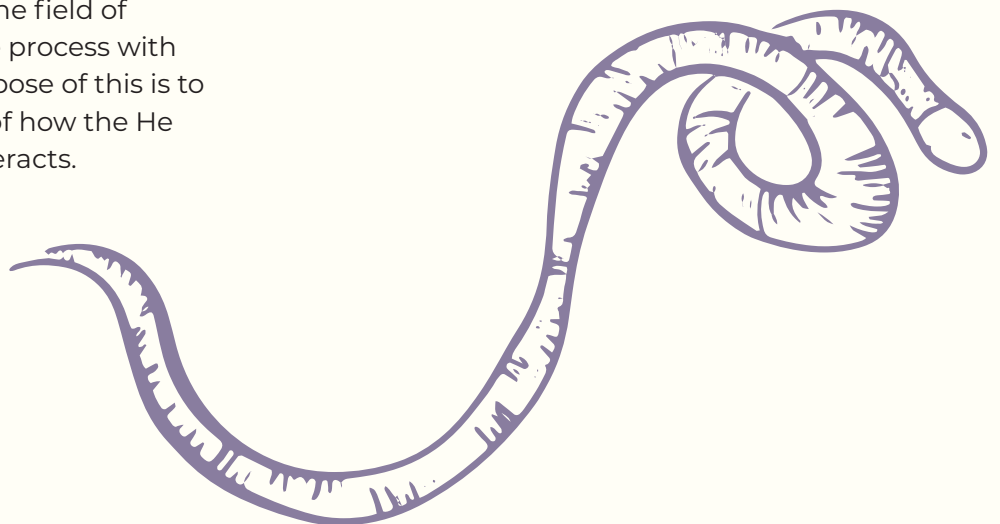
We undertook a high level scan of the literature relevant to Māori soil and kai resilience. This included academic literature, and grey literature such as reports and strategies. An overview of the literature review is presented later in this report.

Kāwanatanga Wānanga

In the early phases of engagement, we ran a wānanga with kāwanatanga representatives involved in soil and kai resilience-related projects, policies and programmes. The primary purpose of this activity was to socialise the current project and future authorising environments; and map alignment across government.

Stakeholder Mapping

The approach to ecosystems mapping draws off best practices from the field of design thinking, beginning the process with stakeholder mapping. The purpose of this is to create a visual representation of how the He Whenua Rongo ecosystem interacts.



Phase 2

Engagement



Expert Interviews

We undertook 17 online interviews with 21 experts (mātanga) or Māori leaders in the soil and kai resiliency sector, the majority of whom are Hua Parakore advocates. This included iwi voice, rongoā exponents, urban Māori, Māori food production leadership, Hua Parakore practitioners and other Māori food actors.

He Whenua Rongo National Online Wānanga, 11-12 May 2022

The culmination of the engagement phase was an online interactive national wānanga which was founded in kaupapa Māori, appealed to a diverse range of Māori with an interest in soil and kai resiliency, and created a safe space for perspective sharing. The wānanga outcomes are discussed later in the report.

The online wānanga was an opportunity to bring diverse Māori representation in the sector to consider and clarify its approach to Māori soil and kai resiliency in relation to the current challenges and aspirations. Rangatahi were invited to present as keynote speakers and in breakout groups at the wānanga to ensure that their whakaaro are woven throughout this work.

The wānanga structure consisted of speakers and breakout sessions whereby participants heard valuable insights by diverse and powerful keynote speakers from the Māori soil and kai resiliency movement. After the keynote there were breakout sessions whereby participants chose which topic they wanted to contribute

to and the facilitators posed key research questions to them. From a participant lens this increases their agency within the engagement and reduces engagement fatigue.¹⁹ From a research perspective, it enabled us to create both a broad collective conversation and focus on specific topic areas so we could gain deeper insights. Such an approach has multiple co-benefits including uniting communities where creative projects may evolve and drive the social economy.²⁰ This means the research is informed through real enquiry, focussed around insights gained from a diverse array of participants.

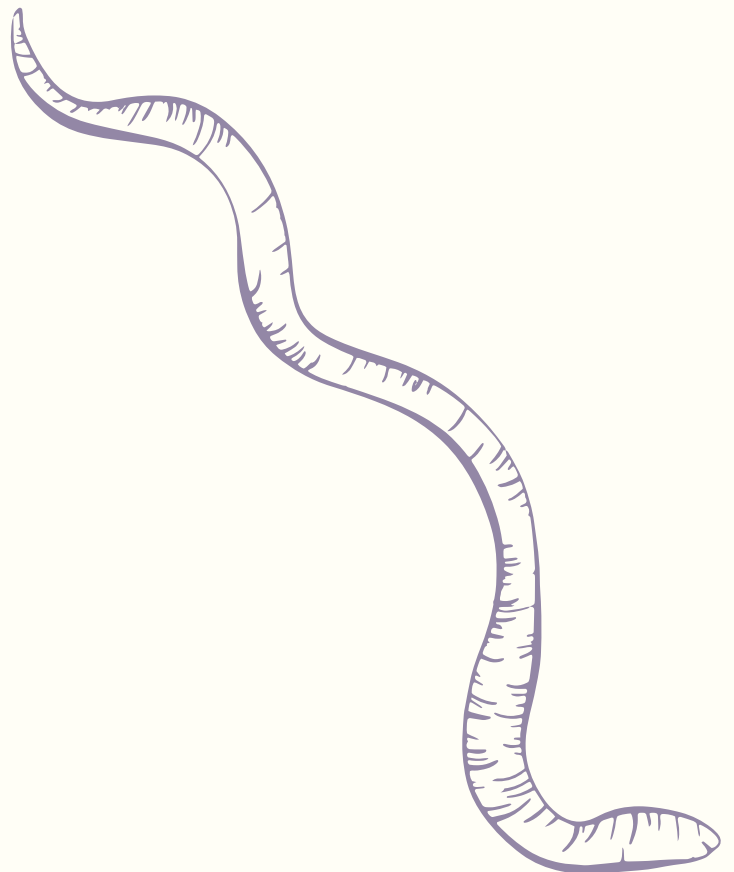
Phase 3

Analysis and write up

Phase 3 was dedicated to analysing the data from the previous phases and writing the research report: He Whenua Rongo - Elevating Māori Soil and Kai Resiliency. We engaged a wānanga method across the collaborative research team and spent three days together looking at the data points across the project to arrive at our key findings and analysis.

Our Foundations:

- Hua Parakore is the gold standard for Māori soil and kai resilience - He Whenua Rongo.
- Any mātauranga generated through this project will remain with the traditional knowledge holders and we will develop data sovereignty protocols specific to this body of work.
- Whilst we want to ensure that this is an inclusive discussion, we are prioritising groups and people that are driven to embark on a Hua Parakore journey or who are on the journey to building Māori soil and kai resilient communities.
- MfE feedback will be sought but will not determine the course of the project.
- Our assumption is that MfE will champion this work with other agencies and will undertake the lead to coordinate efforts across agencies to seek further funding to expand work in this area.



Kitenga | Findings

He Whenua Rongo National Wānanga

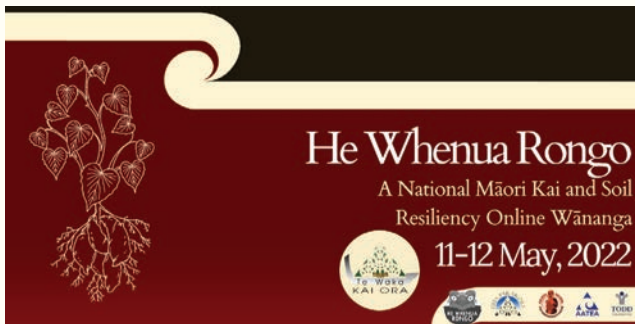


Figure 3: He Whenua Rongo national wānanga banner.²¹

He Whenua Rongo national online wānanga for Te Ao Māori, was held on 11-12 May, 2022.

Seven hundred people registered for the ‘dynamic, for Māori, by Māori, solutions-focussed, interactive’ wānanga with 270 attending live on day one and 170 on day two.²² Participants represented diverse voices from novice gardeners, Hua Parakore growers, community mara organisers, government agency staff, and mātanga from the sector. The wānanga was bilingual and premised on te ao Māori worldviews and included a range of speakers representing Hua Parakore practitioners and rangatahi leadership.

The aims of the wānanga were to:

- hear from expert Hua Parakore practitioners, researchers, and rangatahi at the forefront of this movement
- learn about a diverse range of kai growing approaches and inspiring initiatives from marae to urban settings
- learn how food sovereignty is exercised by other Indigenous peoples
- be part of a national tangata whenua movement reclaiming our tūpuna gardening practices and ensuring our people are nourished with mauri-rich kai.

These aims aligned with the overriding research aims of He Whenua Rongo to understand the diverse realities of Māori in relation to Māori soil and kai resilient communities. As well as to identify barriers, enablers and potential pathways to activate Māori food and soil resilience and sustainability, including potential actions by a range of food system participants, in this case, iwi, rangatahi, urban and rural Māori.

The wānanga also aligned with our research objectives to provide opportunities for diverse Māori communities to hold their own discussions and build their own understandings of sustainable and resilient Māori soil and kai systems; strengthen connectedness across the Māori food system. The wānanga programme focused on exploring and sharing understandings of key Māori soil and kai sovereignty aspirations and concerns including; reclaiming Māori kai security generally and specifically in urban areas; rangatahi empowerment; commercial Hua Parakore; transitioning to Hua Parakore approaches; and the connection between te reo revitalisation and mahi māra. It also provided opportunities to learn about key māra practices including community composting, syntropic and biointensive gardening.

A summary of the kōrero from the wānanga is presented below and is also highlighted in Part Two of the report. A copy of the program can be found in the appendices.

Keynote and Breakout Presentations

The keynote and breakout group presentations covered a broad range of kaupapa. A snapshot of key themes is provided here.

Kaikōrero Mātua - Dr. Jessica Hutchings

- Contemporary food systems require Indigenous peoples to eat colonial landscapes in our everyday.
- How might Māori (indigenous) values in relation to soil contribute to soil and kai resilience strategies?
- Begin where you stand; retain a broad perspective and act locally.

Kaikōrero Mātua - Hinemaru Ropati & Lionel Hotene

- Getting our hands back in the soil and everyone into the māra is our way to contribute to the goodness of our whānau. To bring about intergenerational healing.
- We need to eat and breathe Hua Parakore in the māra and in other spheres, including the political sphere.

Reclaiming Māori kai security - Wayne Paaka and Kelly Marie Francis

- Shifting our diet away from western processed kai is key.
- Kai sovereignty can not be based on land ownership, but on accessibility to land.

Mana māra, mana reo, mana whenua - Lahni Wharerau

- Ngā tikanga tuhu iho, ngā atua, me ngā karakia.
- Te Maihara nui me te pakihiwi kawa.

Kaikōrero Mātua - Pounamu Skelton

- Hine-ahu-one is the source of life; without her, we would not survive.
- Māra kai as a vehicle for transformational healing & whānangatanga.
- Listening in the garden and observing - this is rongo.

Kaikōrero Mātua - Teina Boasa-Dean

- Our tuakana are Ranginui and Papatūānuku; we are their teina.
- Whakapapa; we are born into responsibility; we must show and evidence our obligations before we evidence our rights.
- “Ko te tikanga me te kawa, kāre he kino o roto”.

Māori urban kai security – Pania Newton and Lani Rotzler

- We need to talk about the hītori and whakapapa before we can talk about aspirations.
- We need to grow kai to sustain our people and provide solutions to modern experiences of colonisation and the resulting, continuing trauma.

Sustainable business through Hua Parakore - Cathy Tait-Jamieson and Gretta Carney

- The health of the soil determines the health of all living beings.
- For a kai to be a rongoā it has to be a Hua Parakore, for a rongoā to be a kai it has to be Hua Parakore.

Kaikōrero Mātua - Mike Smith

- We have to move from an extractive economy to a rauora framework based in tino rangatiratanga
- The systematic and historical root causes of our problems must be dealt with; the good is not being built fast enough to overcome the bad.

Tēnei Te Tira Hou: Rangatahi Empowerment - Haylee Koroī, Te Rua Wallace, Rangipo Langa, Ngapera Matthews, Kahleyn Te Wairua Evans

- “To be a master navigator you need to train people to be better than yourself” - Papa Mau Piailug.
- Leave a legacy, not a liability.

- Whanaungatanga with tangata and atua is a key enabler of rangatahi engagement with kai and soil.

Hua Parakore Pathways - Pounamu Skelton and Lahni Wharerau

- Hua Parakore begins with understanding the whakapapa of the whenua you are growing on.

Community Composting – Hollie Russell

- Community engagement is a priority with composting knowledge.
- Raising community consciousness around how we engage with our atua, asking: How do we elevate the mauri of Hine-ahu-one?

Syntropic Agroforestry – Jared Hiakita

- Syntropic agroforestry is just another form of growing food and repairing the earth through density, diversity, stratification and succession.
- Start small, try to do a good job, do the research, and learn from your observations.

Transitions – Raihānia Tipoki, Mike Taitoko and Hinekaa Mako

- Urgent need to transition to regenerative pathways in agriculture.
- Need to invest in current regenerative practices that Māori are leading.

Whakataunga Wānanga Resolutions

The wānanga culminated in Te Waka Kai Ora and Papawhakaritorito Charitable Trust presenting resolutions they jointly developed calling for a Māori soil and kai resiliency kaupapa coalition to develop further plans for joint action that build on the connections made at the wānanga.

[Access the Te Waka Kai Ora YouTube channel and He Whenua Rongo National Wānanga videos here](#)

- 1.** Actively protect and restore to pristine states, Hine-ahu-one, Papatūānuku, our ngāhere, awa and maunga.
- 2.** Acknowledge the national kai, soil and climate emergency in Aotearoa.
- 3.** Develop independent, Māori-led approaches to Māori kai and soil resiliency.
- 4.** Develop collaborative Māori-led approaches to Māori kai and soil resiliency.
- 5.** Urgently collaborate to secure funding to establish Hua Parakore urban and rural Māori food farms, at scale, across regions in Aotearoa to build a solid evidence base of what works and what doesn't.
- 6.** Reject the use of genetic engineering (GE) in kai and the environment in Aotearoa, New Zealand.
- 7.** Advocate for increased Tiriti partnership via resourcing from kāwanatanga and other sources for Māori to develop pathways to grow the Hua Parakore (Māori organic) kai.

Kitenga | Findings

He Whenua Rongo: Literature Review

Guiding Question and Scope

He Whenua Rongo asks: What are the barriers and enablers to resilient Māori soil and food systems? This review has scoped the scholarly research and grey literature to do with Māori food systems, including aspects of resilience, sustainability, and kaupapa Māori approaches to soil and kai stewardship.

The review follows the working definition of soil and food resilience as based not only on the capacity of soils and peoples to resist and/or recover from destabilising influences, but also the capacity of tangata to elevate the sovereign capacities of whenua. This focus on sovereignty for both tangata and whenua reflects the ethos of the landmark findings of the Waitangi Tribunal report *Ko Aotearoa Tēnei* which highlights the government's obligation to work with Māori to protect taonga species and mātauranga Māori in ways that support Māori rights and interests.²³

Given the relative scarcity of literature to do with kaupapa Māori food systems, the search focused on the concept of Māori food sovereignty which foregrounds kai as the medium through which larger issues of resilience, sustainability and stewardship can be understood.²⁴ The review also builds on the findings of Māori soil health research which states that Māori kai resiliency starts in the soil and the obligations we have to Hine-ahu-one.²⁵ The review privileges existing academic scholarship to leverage the

authority of institutional research norms. Yet there is a wealth of information about Māori food sovereignty and soil health available to whānau and communities through social media platforms, television productions, documentaries and short-form journalism which deserves further attention.²⁶

Overall Learnings from the Literature Review

The review found that Māori are actively engaged in efforts towards food and environmental sustainability at both the flax roots and commercial levels.²⁷ An analysis of themes finds that Māori food sovereignty is not currently a coordinated social or political movement, but a collection of activities aimed at improving the physical, economic, social and cultural health and wellbeing of Māori and the environment through the availability and consumption of sustainable, culturally relevant kai.²⁸ As such, Māori foodways embody a diverse economies framework²⁹ that combine flax roots initiatives (māra kai, mahinga kai, soil health) and commercial efforts (Māori entrepreneurship) to re-imagine a political economy of food as one based in Māori values, sustainable production, mātauranga education, training, and community-building, with an eye towards improving the health of tāngata and whenua alike.



A Key Existing Study

In a 2015 literature review McKerchar et al. assessed the role that the revitalisation of mahinga kai has had for increasing Māori food security.³⁰ While focused more on food security than food sovereignty, their report identified Māori participation in the New Zealand fisheries industry, aquaculture and horticulture (e.g., gardening), as well as Māori involvement in resource and customary management, as key contributing factors towards generating food security through mahinga kai.

Enabling factors that contributed towards Māori food security at the time included: the Crown's return of traditional kai resources to Māori; the successful pursuit by Māori to obtain legal rights for resource management/development; Māori models of governance; Government policies incentivising Māori economic development and healthy eating; and Māori leadership on these issues.

The report also identified a number of ongoing barriers undermining Māori food security, which included disagreements over government and Māori models of governance over natural resources, and the environmental consequences of a competitive market structure (e.g., severely depleted fishing stocks; marine and freshwater pollution). The authors concluded by advocating for new policies and practical support to increase availability, accessibility and income streams around traditional kai to enhance Māori food security in the long-term.

The 2015 review found that revitalising traditional kai has considerable potential to improve food security for Māori, both directly in terms of food supply and by providing income, and warrants policy and practical support. While policy change is important, this review under appreciates the role flax roots food sovereignty projects are already playing in revitalising diverse Māori food systems and the overall hauora of Māori communities. This current review updates McKerchar et al's. 2015 study, but takes a broader scope of the food sovereignty literature. While the research has similar findings and conclusions, a major point of difference is that this review elevates the diverse economies that make up Māori foodways - notably those working at the flaxroots level and considers their combined potential for rangatiratanga-led Māori food systems.

Findings

Through the literature review we can see that kai is a potent vehicle for expressing rangatiratanga. Women are also significant actors who are working to redefine our current food system.³¹ The review found that Māori food sovereignty is about the availability and access to culturally appropriate foods, as well as the ability to generate financial security and at the whānau, hapū or iwi levels.

In addition, Māori food sovereignty is rarely discussed outside its environmental and ecological impact and underlying kaupapa that make up the woven universe of tangata and whenua. There is much optimism surrounding the perceived benefits that Māori-controlled foodways can have for the environment, e.g., reducing the effects of climate change, pollution, poor soil health, the decline of native species and other tragedies to the ecological commons brought upon by the unsustainable industrial practices of global capitalism.

The cultivation and provision of kai are also mana enhancing practices that contribute to the mātauranga Māori continuum and intergenerational knowledge sharing. More than this, the literature review highlights the whanaungatanga relations that exist between tangata, whenua, awa and wai and our obligations as tangata whenua. Therefore, this review of the literature suggests a third possible point of conceptual distinction in defining Māori food sovereignty: in addition to making culturally appropriate food available and increasing economic security, Māori food

sovereignty is equally about enabling food practices that contribute to a more connected relationship with the natural environment that sees our lands, waters and soils as whanaunga and atua who have sovereignty in their own right.

Key themes

01 Diverse Māori Economies

02 Indigenous Place-making

03 Resource Management and Governance

The first theme from the literature places Māori food sovereignty within a diverse economy framework that distinguishes the contributions made between small-scale, flaxroots initiatives (e.g., māra kai) and large-scale entrepreneurial efforts (e.g., Māori agribusiness). While these organisations occupy opposite ends of the economic spectrum, what defines Māori food sovereignty most of all is its basis in what it means to be Māori. Whakapapa, but also the honouring and mobilisation of kaupapa, tikanga, mātauranga and kaitiakitanga in pursuit of rangatiratanga, are central to what animates and thus distinguishes Māori food actors and food practices.

The remaining themes are less specific and to some extent only tangentially related to the kinds of production, distribution and consumption activities encompassed in the first theme. But Indigenous place-making (theme two) and tangata whenua/tangata tiriti approaches to a sustainable future (theme three) speak to institutions and practices that lie on the periphery of many of the key factors that enable or constrain Māori food sovereignty, be it directly or indirectly. As the literature suggests, this is particularly true of the work being done to create more urban green spaces for growing food (theme two), and those facilitating Māori contributions to resource management and environmental governance (theme three).

Enabling actions that promote Māori food sovereignty

The review identified some of the actions that support and enable Māori food sovereignty efforts, and extend those identified by McKerchar et al. (2015) to include the following:

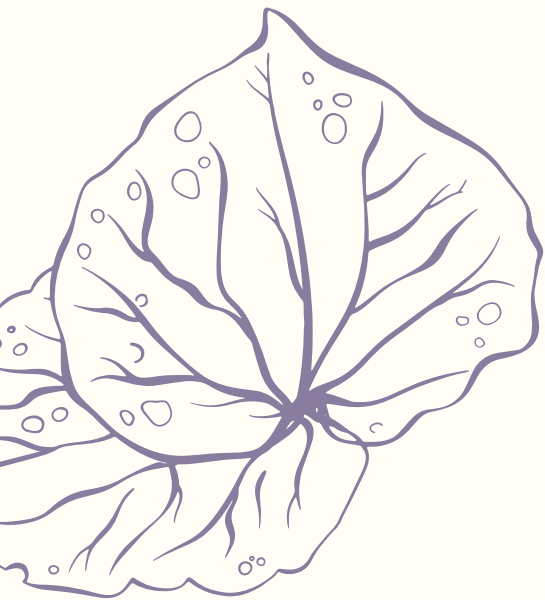
- Flaxroots efforts to revitalise mahinga kai and māra kai that create community economies and extend tikanga, manaakitanga and mātauranga to whānau, hapū and iwi at the community-level
- Growth in Māori agribusiness, certification schemes (e.g., Hua Parakore), and Māori brands that increase availability and accessibility to traditional foods that in turn, provide reinvestment opportunities in Māori foodways.
- Ongoing efforts, including legal changes, to reinstate iwi with customary management over natural resources.
- The end to inequitable resourcing and changes in government funding policies to support mātauranga-based research.
- Institutional and individual support for mātauranga Māori as a knowledge system in its own right, rather than knowledge that must be “respected” and accommodated by non-Māori scientists/researchers and governing organisations; this particularly includes efforts strategically designed to elevate the capacities of Māori scientists and environmental philosophers/philosophies
- The availability of grants and other contestable funding that represent Māori interests in the vegetable and horticulture sector.
- Kaupapa-centred business models that embed Māori commercial activity within sustainable ecosystem processes.



Ongoing barriers and challenges to Māori food sovereignty

Similarly, this list extends McKerchar et al's 2015 observations of the barriers and constraints to Māori food sovereignty efforts, which includes:

- Legal barriers preventing whānau, hapū and iwi to claim and enact traditional tiaki roles in relation to whenua and wai.
- The ongoing loss of localised (dialectal) language in conjunction with the loss of Aotearoa's biological heritage, which means the loss of whakapapa and customary management practices of land, water, species, kinship and other threatened resources held by language.
- The loss of mātauranga Māori by Crown-imposed harvest restrictions of mahinga kai, which cause iwi to lose contact and engagement with the land/natural resources upon which traditional ecological knowledge is based. This loss has implications for cultural identity and rangatiratanga, as well.
- The ongoing reluctance of city councils and planning boards to recognise and protect māra kai as Māori cultural heritage, and to design urban spaces that support Māori foodways.
- Increasing urbanisation and the disconnection of tāngata from whenua that results.
- The challenges facing kaupapa centred Māori enterprises that must negotiate the profit imperatives of corporate models.





*Photo credit:
Papatūānuku Mārae*

Conclusions from the literature review

Māori food sovereignty is more relevant than ever before, in the wake of the COVID-19 pandemic which reinforces the need to build more localised, resilient and sustainable food systems for all.

A Māori approach to food sovereignty, however, is about more than food security. It is about decolonising knowledge systems, production and consumption practices, reconnecting to whakapapa and elevating the mana of tāngata and whenua by reinstating māna motuhake to support tikanga and kaitiakitanga over Aotearoa's natural resources so Māori can deliver on sustainable food and environmental outcomes.

To this end, the goal of Māori food sovereignty is not just about increasing accessibility to mahinga kai and the financial boon that results; rather, it is a pathway towards social justice that can move Māori as a collective towards greater tino rangatiratanga over all aspects of social life. Māori food sovereignty is also about tangata whenua obligations to enhancing the sovereignty of lands, waters, soils, animals, insects and microbes that constitute the woven universe of te ao Māori.

He Reo Kanorau, He Kōrero Matatini

Diverse Voices,
Varied Narratives



*Photo credit:
Ehsan Hazaveh*

Introduction

Part two of the report; **'He reo kanorau, he kōrero matatini' - 'Diverse voices, multi-faceted narratives'** shares the voices from across Māori communities with regard to Māori soil and kai resiliency from both the national online wānanga as well as individual and small group interviews.

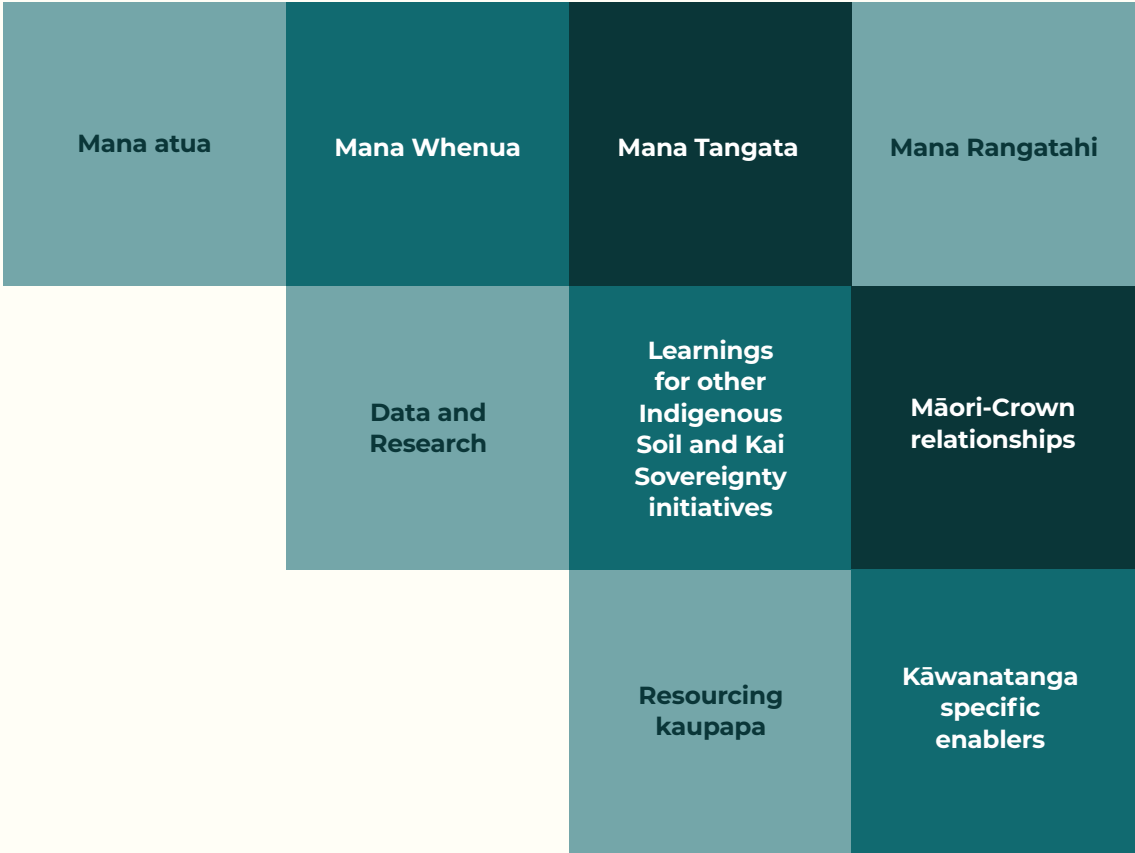
The first section provides a context for considering Māori soil and kai resiliency from the foundational standpoints of mana atua and kōrero wairua as told by the mātanga. Their kōrero shows us that te taha wairua is a foundation of Māori soil and kai resiliency.

We build an understanding through their voices, of the generational shifts in Māori soil and kai resilience and security. Most tell us of earlier generations, even after the initial period of colonial confiscation of land and waterways, who were still collectively growing food and where bartering was commonplace. In more recent generations, Māori soil and kai resiliency diminished significantly.

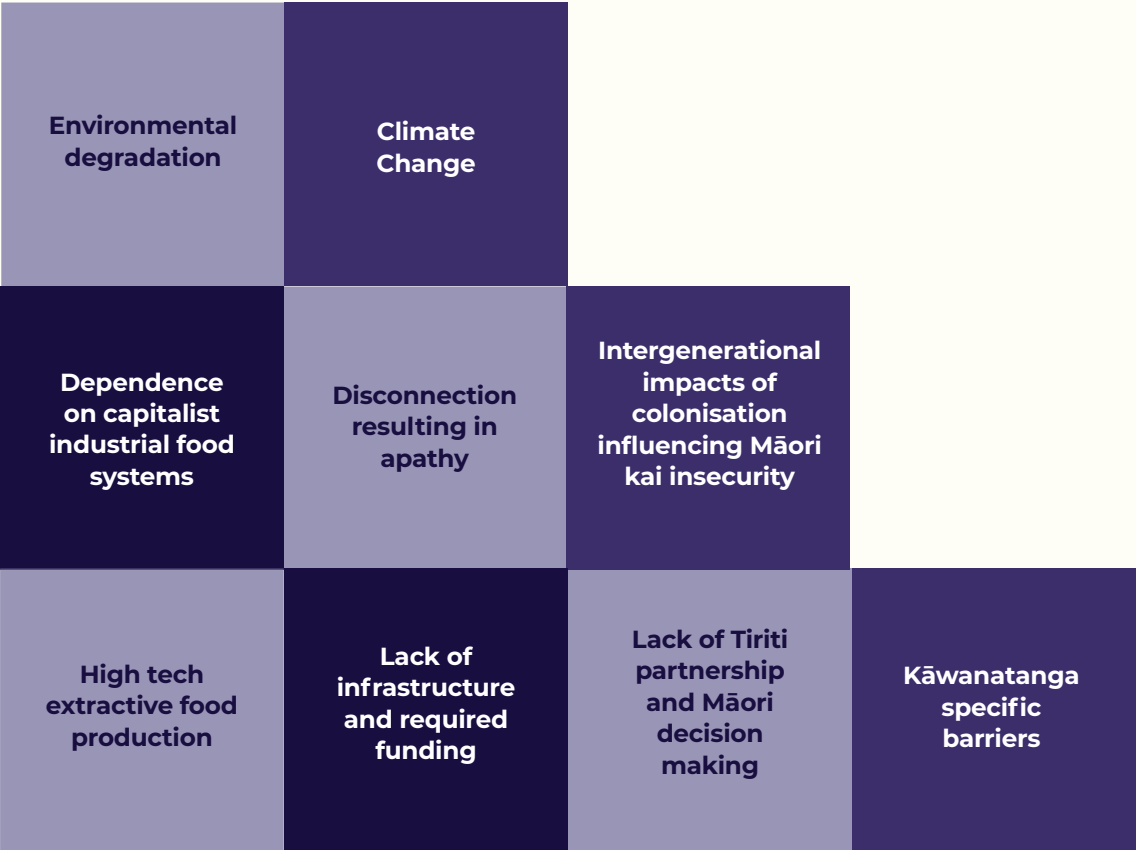
With historical trends identified, this section elevates the kōrero of Māori to understand the enablers and barriers for soil and kai resiliency.

Several of the experts who engaged in this project preferred not to be named in the report. For some, this was because the treasured information they shared is ancestral knowledge from time immemorial, or the views of their whānau, hapū, or iwi - it did not originate from them as individuals. Where names are not used, a code is given.

Enablers



Barriers



He Pātai: He Tohutohu

Conversations with tūpuna and future mokopuna

Mātanga interviewees were asked two pātai:

1. If they could ask any tūpuna a question about soil and kai resiliency, what would they ask?

How can we be more intentional so whānau don't lose their ability to grow their own kai?

What did we learn from the decision to relocate to Aotearoa from the warmer Te Moana-nui-a-kiwa?

How did you choose what you brought over from Hawaiki?

How do you use the maramataka?

What did time teach you when growing crops?

It's about restoration and bringing balance back to our land, to our resources to rejuvenate our indigenous species to be predator free.

How did Tāne feel coming back down to deliver Ngā kete o te Wānanga to us, his children? What was the intention?

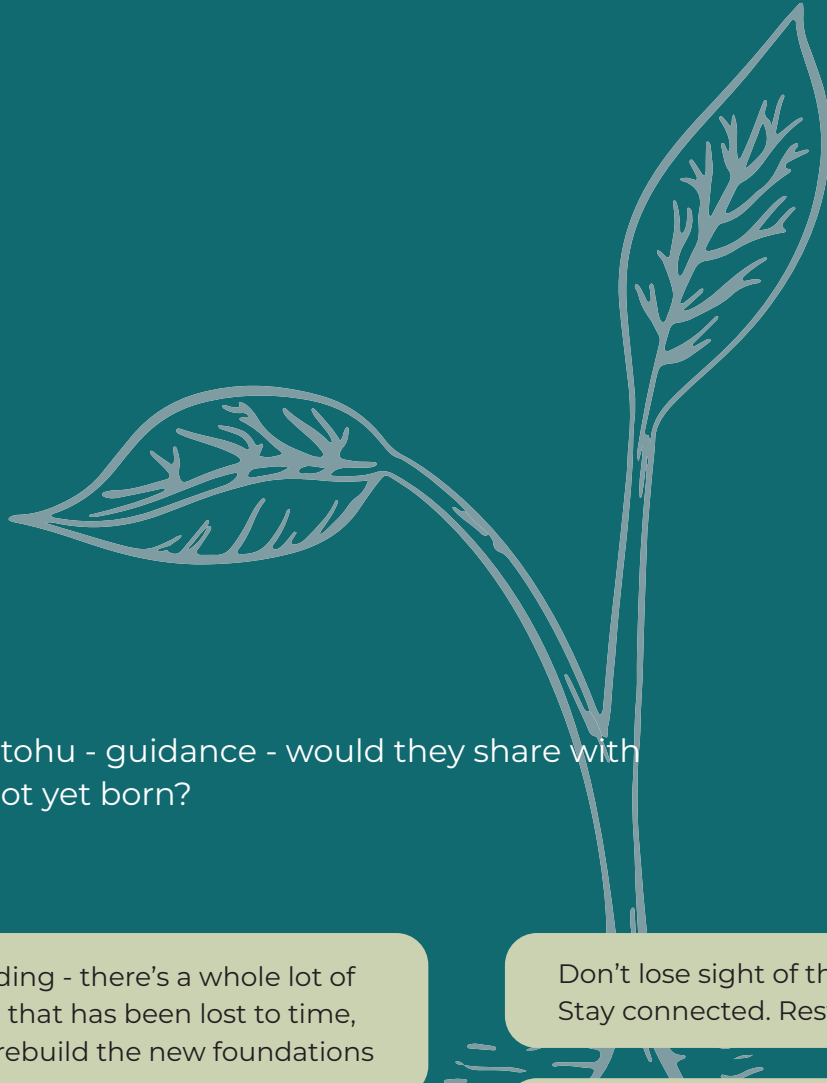
What kōrero has been lost and needs to be reawakened?

How can we become better kaitiaki?

In times of change how do we maintain mātauranga with intention?

What is your vision for the descendants and the whenua?

Who had which roles and why?



2. What tohutohu - guidance - would they share with mokopuna not yet born?

We're rebuilding - there's a whole lot of mātauranga that has been lost to time, We need to rebuild the new foundations

Pūpuritia ngā kākano o ō kuia, whakatipu kia ora ai

The visions we have now for our whenua, our awa, our kaimoana

You have permission to make decisions for us and for our land

He aha ōu karakia kai?

It's knowing the importance of being able to access kai from the soil, not just off the shelf

Don't lose sight of the seasonal clock. Stay connected. Rest work play

What was critical in the cultivation and the preservation of crops?

Set the path as people awaken to the idea of restoring our land, forest, birds & fish. It would be a marvellous place. We would be able to practice: Ko te hua o te oranga – ko te kai

You'll never be hungry if you can grow a garden, nurture plants, produce kai, & harvest the seeds

Live a life that you'll recognise as one where you've made conscious decisions to live

Te Taha Wairua as a Foundation of Māori Soil and Kai Resiliency

Te taha wairua is essential to all things Māori and no less so than in the growing and gathering of food.

At the national online wānanga and in the interviews conducted, our descent from and connection to atua was acknowledged, as was our whakapapa, as atua to kai atua - the foods that we grow.

The māra and te taiao generally were acknowledged as places where we connect with ngā atua. This is shared from both kaikōrero matua from the national wānanga, and mātanga interviews.

It's about growing kai atua. It's about acknowledging ourselves as atua, that we come from atua. It's about reconnecting the part of divinity back with our physical.

**- Pounamu Skelton Hua Parakore
education**

... in He Whenua Rongo, in mahi kai atua, we are really talking about growing food which can help restore our connection to ngā atua Māori and so our connection with Hīne-ahu-one, with Papatūānuku. It's just so fundamental to who we are, as Māori and what a beautiful journey and a beautiful relationship.

- Jessica Hutchings (Indigenous research)

So back in the days that was the first thing - survival. The first thing that they need is to survive, and they're going to grab it. And that survival doesn't necessarily mean only feeding the body, it's feeding the hinengaro, the wairua. So for me, hunting fulfils those other aspects - taha wairua, taha whānau 'cause I get to feed my whānau with it. Taha wairua - it's my connection to the bush.

- Tame Malcolm (hunting/biosecurity)

Mahi Māra as Spiritual Practice

Spiritual practices in māra and/or mahinga kai including karakia, waiata and pure that acknowledge and strengthen our connection to ngā atua and kai atua and as such are an integral aspect of Māori life. They have practical benefits for whenua and people alike. Today there is a strong desire by rangatahi and adults alike to learn more about these rituals and reclaim their practice.

Teina Boasa-Dean of Tira Maara Tautāne, Rūātoki, 2022, in their keynote presentation at the national wānanga described how women of their iwi had revived ancient rituals performed by women to raise the wellbeing and revitalise a 600-year-old garden. They also described the practice of reserving the best of seedlings—and only generations-old kūmara seedlings—for planting in the Māra Tautāne, the māra dedicated to Io Matua Kore.

...as we learn and become more educated around the role of mother nature, Papatūānuku, Hine-ahu-one and all the female energies and entities inside the pantheon of our atua Māori, we suddenly realise that women play a salient and pivotal role in raising the well being and welfare of the whenua. So one of the practices we undertook... in the recent three years was we established what we call a wāhine whakamoemiti, a group of women who revitalise and rejuvenate, pure, takutaku, whakamoemiti and tūā - various rites and different types of incantations have been

revitalised, that belong to wāhine, ā,...mā te wahine e taki, mā te wahine e kōkiri...and some of those have various pou. This is one of the pou. There are five. One of the pou that was constructed in the garden, referred to as Te Māra Tautāne was the revitalisation of an old garden that hadn't been in our valley for 600 years. We revitalised it, in order to understand, to bring back to life, the rituals, the rituals of incantation, the rituals of karakia and whakamoemiti, that were the preserve and the precinct of women.

Mahi whakarau is one of the activities that is exercised every year alongside the opening and closing of the Māra Tautāne. The Te Māra Tautāne is referred to as the Māra a te Atua. We undertake a dawn ceremony and the rituals of planting the best crop, the best tipu or slips of kūmara in that garden. Only kūmara is permitted in that garden. The kūmara from out of your own garden - for it's been in your soil for three generations. That's the rule in our valley. It must have been in your soil for three generations before it's permitted to be propagated in Te Māra Tautāne, the māra that is dedicated to Io Matua Kore. It's then closed and not reopened again until the following season.

Te Onetapu gives rise to a number of other very significant words that immediately connect us to this English word that is a close equivalent to the thing we talk about as being resilience and knowing what resilience and sovereign authority might mean from a soil point of view, from an oneone point of view. So what sits alongside these words like ōnukurangi and words like te 'ō' me te 'ā'? I understand each time we see imprinted in a word, the syllable 'ō', that 'ō' has come directly from the heavens from te whare of Io.

- Teina Boasa-Dean

M38 (mātauranga Māori) spoke of advice from tohunga of kūmara growing, Wiremu Tāwhai, that garden activities should please the atua so as to make them beautiful like works of art.

Nā Wiremu Tāwhai te kōrero, 'Te katoa o ngā mahi i roto i te māra he mahi whakakoakoa i ngā atua, i ngā mātua tūpuna e titiro iho mai ana. Nō reira me ātaahua rawa te mahi, ahakoa te aha, 'a work of art' ngā mahi i roto i te māra kai. Kia tika ngā rārangi, kia pai te tirohanga mai i runga ki tō māra...Ngā kete katoa mō te kōhi haere i ngā kūmara; te āhuatanga o ngā pūkei; te tāpae i ngā kūmara, me te tāpaetanga o ngā kai... he ātaahua.'

All activities done in the māra please the atua, and the ancestors looking down on us. Therefore all work, whatever it may be, done in the māra must be done most beautifully, 'works of art'. The arrangement, the rows must be done well so they are pleasing to sight - the kits for collecting the kūmara, the appearance of the mounds, the laying out of the kūmara and the kai... beautiful.

- M38 (matauranga Māori)

Some mātanga shared the importance of rituals carried out in the māra being so normalised that the practices were not discussed, explained or taught; they were just observed. In recalling the practices one mātanga noted that the loss of the practices of māra kai meant the loss of connection to that wairuatanga and mātauranga as Māori.

I didn't realise that when we were kids, that Pā really took a wānanga, mātauranga Māori, te ao Māori approach to how we did things. We just thought it was a big old rock in the middle of our garden, but you know, it was the mauri stone, for growing. We grew up knowing that if we look after the land, then the land will look after us.

- Traci Houpapa (governance/industry)

Dr Jessica Hutchings, who is of both Māori and Gujarati Indian descent, likened her experience of te taha wairua to a spiritual practice, a yoga, union or oneness with the divine, where it is an ongoing part of one's life and learning continues.

...trust in your own sense of divine Indigenous knowing of who you are, as a co-creator with nature... listen to ourselves and to trust that intuition... I think of it as a spiritual practice, a yoga. We just keep going because practising is never an endpoint, we just practise and practise. And we keep gathering more knowledge... as we continue to do that. So take notice and look at the same thing once a week and just trust yourself and what you're seeing and what you're coming to understand because we need to decolonise our senses and knowing around food growing.

- Jessica Hutchings, indigenous research

The healing effects of growing or gathering kai

Mātanga from both the national wānanga and the interviews spoke of how being in māra, having hands in oneone can facilitate profound healing of afflictions including deep-seated trauma. Such kōrero demonstrates the physical and spiritual resilience that is facilitated with māra practices:

And I'm receiving messages going, "Growing kūmara has really healed whānau trauma that we have had for years, and years, and years." ...So it's not me. It's the actual art of getting people growing kai, getting people back connected to whenua, back to soil, back to who they are, back to themselves... having that healing approach to māra, you can't not have that.

- Pounamu Skelton (Hua Parakore education)

... I've been spending so much time around electronics, I've lost touch with nature, know what I mean? So for me, being back in the garden, it's quite fulfilling mentally. I think gardening isn't just feeding us, it's spiritual and mental health, which is actually part of Māoridom....

- Wayne Paaka (Urban food security)

Summary

This section has shown that Māori soil and kai resiliency is not only about physical provision of food and returning soil to healthier states. Māori worldviews iterate that honouring Papatūānuku and Hine-ahu-one and our whakapapa to them and all atua, our cultural narratives and practices, are vital to strategies of achieving soil and kai resiliency as Māori. Further, these kōrero shared here by mātanga highlight that the relationship to, and ability to interact with whenua, via growing and gathering kai, are vital to Māori physical, mental and spiritual wellbeing.

Generational Shifts in Māori Kai Resilience and Security



As part of the research approach, mātanga at both the national wānanga and in interviews were invited to share their observations of how Māori soil and kai resiliency has changed. They all noted that major shifts have taken place describing how Māori had in previous generations predominantly cultivated their own māra and hunted, gathered and foraged in their territories, whereas today, the majority of Māori rely predominantly on purchasing food from external sources.

Resilient Māori Food Systems In Previous Generations

Despite massive political, economic and social disruption caused by colonisation that included mass confiscation of lands and waterways, the main sources of Māori food systems, Māori adapted and managed to maintain some tūpuna kai systems and practices.

M31 (grower specialist/researcher) and M22 (iwi/food governance) described Māori food systems of past generations where the māra was the main source of kai. Interdependence was key to ensuring whānau were fed. Whānau grew kai together. They bartered and even competed amongst themselves. The descriptions illustrate the variety of skills that would have been common amongst Māori whānau in past generations, such as food preservation and planning for an abundance of kai for special occasions and emergencies. Purchasing food was infrequent.

Gardening was a huge part of their [grandparents' and father's] livelihood. It's how they survived. And I grew up with these romantic stories of all the whānau coming down to the papakāinga and everyone chipping in to do the mahi for their māra ... My dad would say Koro was in charge of the rows. There was a row for the tangihanga, a row for birthdays, 21sts, especially. Then the [Whānau A] had a row, the [Whānau B] had a row, the [Whānau C] had a row and then there were some emergency rows. And now that's all gone to scrub, that farmland, which has real fertile soil.

- M31 (grower specialist/researcher)

On the papakāinga there would've been 15 households that were really active and they even had prizes, trophies... fierce competitions around kai and māra... So we did, but growing up definitely, that had gone with the passing of those particular old people, particularly the men, so too, did the practices of growing our own kai; it's not until we've got into 2020 there's been this fierce repatriation of growing kai. We've had a whole generation that's been devoid of being visibly active in growing kai.

- M22 (iwi/food governance)

Limited mahinga kai access resulted in decline of tūpuna food systems

Edward Ellison (iwi governance/mahinga kai) recounted a significant shift in Māori kai resiliency practices away from mahinga kai, activities that included hunting and gathering, fishing, mahi tuna, and foraging as well as gardening. Loss of access to traditional mahinga kai areas occurred as Western farming systems were established and consequently over time, the knowledge and experience of these activities declined, as did cohesion amongst families, whānau, hapū and iwi.

People don't do mahinga kai the same now because of the move to the urban areas. A lot of those lands ... they lost access. Kaumātua in the 1800s talked about how they lost access to their traditional mahinga kai areas in the interior where the big runs were established. They didn't like tangata whenua coming on to their land ... coming in to do the traditional mahinga kai... once upon a time, in the kāinga here - the kāika, people would have their own gardens, grow their own kai, in the wee farms ... do their seasonal work together from farm to farm, very, very collaborative community. But farms started to get big and some of the land was sold. People have moved to the city and lost the art of knowing how to keep a garden.

- Edward Ellison (iwi governance / mahinga kai)

Another mātanga, Rereata Makiha (mātauranga Māori) told how wetlands were destroyed so people could no longer gather food (such as tuna) from those places.

...kua patua katoatia ngā reporepo...i a mātou e tipu ake ana ko he kūmara, he tuna te nuinga o te kai engari iāianeī kua tino rerekē. Kua mōhio rātou āhea ka tere ngā ika o te moana ka haere mātou ki ngā kurutai, ngā awaawa ki te hopu ika, rama tuna engari he ao anō tērā ... All the wetlands have been destroyed...When we were growing up kūmara and eel were the majority of our kai but it's so different now. We knew when the sea fish were running and we'd go to the kurutai and streams to fish, to go eeling, but that was a different world.

- Rereata Makiha (mātauranga Māori)

Urbanisation and housing intensification: Where to grow kai?

Māori urban drift since the 1950's and the increased urbanisation of the Aotearoa New Zealand population generally. Government policies and legislation of the day limited the development of Māori owned lands and housing, and actively distablisng Māori community. This, and the need for a workforce to enable the expansion of cities resulted in many more Māori taking flight from tūpuna lands and becoming more dependent on western food systems.

A trend in recent decades has been escalating housing density resulting in the demise of the quarter acre block for a home and garden, and the development of high rise accommodation and that rarely allows space for food growing for one family, let alone whānau collectively. Lionel Hotene (Hua Parakore community initiative) noted these recent trends and some of the negative impacts on Māori.

And this is what we're trying to change is the landscape ... the norms for us here in Māngere. And we think about what Whaea talked about, there's so much development that's going on here. [An] incredible amount of housing that's going into this little space in Māngere. No longer do we have single dwellings, we have two level, three level, four level housing that's going on, two-way streets turning into one-way streets now. So there's a lot of pressure on our whānau.

...here in South Auckland, of course you will have seen it all on the news and all the negative media that's happening out there, we talk about food insecurity, the rising of crime, the disconnected rangatahi, lack of mahi for our whānau, a community in need of meaningful change. What used to be the quarter-acre house block can now have twelve houses in that same block but they're going up. So there are... less green spaces for our mokopuna to play in, let alone for our whānau to grow in. So we've had to change, we've had to evolve in that space.

- Lionel Hotene (Hua Parakore community initiative)

Housing intensification in urban areas as a strategy to address a critical housing shortage is very topical in current times. Amendments to the Resource Management Act³² have been confirmed and continue to take Aotearoa towards dependency and vulnerable food systems. This will see more housing in smaller spaces with less land for kai, for increasing city populations.

Embracing Western food systems

Another generational change for some Māori in more recent times noted by Wayne Paaka, a community activist and former Pou Māori at Kore Hiakai, was a shift in values that emphasised academic achievement and career focus at the expense of time spent doing food related activities (such as gardening, following the maramataka or hunting).

They described a common scenario in the late 1960s and 1970s when many Māori youth were actively encouraged to put education first (which was almost exclusively Western at that time), attain tertiary qualifications, and join the professional classes. With more income to purchase food and a lifestyle oriented toward social and educational advancement, learning the skills to grow and gather kai became less of a priority. Paaka also signalled another important shift, that 'somebody' (i.e. large industrial food production companies where making profit is the key priority) had become the dominant source of food for most Māori, particularly in urban areas, and Māori food growing practices had dwindled to being very supplementary.

When I was little, it was common practice to be in the māra. But in the '70s to '80s, a lot of our families were focused on educating their children to become professionals. And what came along with it was a lot of people that become professionals ended up buying food, therefore walking away from the garden. I don't think that was a good thing for our people ... And so you became reliant on the food system from the supermarkets. Therefore, you're putting your money into making somebody else rich.

- Wayne Paaka, urban food security

The coinciding introduction of more sophisticated 'mega' supermarkets that offered convenience, highly processed products, importing greater volumes of food products with further urbanisation of Māori, and emphasis on economic skill development resulted in a dramatic decline in one generation of kai growing and a corresponding increase in reliance on the Western industrial food production model as noted by Anne-Marie Broughton (governance) and Ron Taiapa (community education).

Definitely a very strong reliance on supermarkets - that's the greatest shift I see. Our people aren't growing like they used to do, they're not gathering. Once upon a time, my mum and dad wouldn't go anywhere without a bag and a knife, so that they could pick some pūhā and you'd always see people on the side of the road, Māori, picking pūhā on the side of the road. You don't see that very often these days. So we do a whole lot less gathering, whether it's of plant material or kai moana ... we have little resilience. We don't have the pātaka that we used to have, whether it was at a community level or at a whānau level; so many whānau are living day to day.

- Anne-Marie Broughton (governance)

The drift towards us being Pak'n'Save gardeners - this is a recent thing ... because we grew up in an era when ... every section, every house had its garden and then ... we saw that drift to people not having a garden. The other significant thing we saw was the move from whānau gardens to individualised practice of 'my garden, my kai' and no sharing. I reckon right now we are seeing a swing back and we are right at the beginning of that particular movement. When we grew up there were hunting families, fishing families, and barter was alive and well; it was not even called barter, it was just what people did. It wasn't even spoken of. Sometimes it was just a knock on the door and you'd get up in the morning and you would see, 'Oh, Uncle Jack's been here' ... We don't see that so much nowadays. And you knew people by the sort of kai or skills they had. That's who does the hāngī at the marae; Oh, they grow the spuds.

- Ron Taiapa (community education)

Rereata Makiha (mātauranga Māori) told how, to many Māori, mahi māra and tūpuna practices that involved toil, time, and collective effort had become foreign and unattractive. The convenience of industrially produced western food was more appealing. The practice of earning money to purchase food became the norm.

Kua roa kē ō tātou nei whānau kua taunga te haere ki te tiki moni ki te hoko kai i ngā whare hoko o ngā Pākehā. Kua kore e hiahia ana ki te huri ki te ngaki taru, ki te kerī mahinga, he māmā atu te haere ki takeaways, te haere ki McDs kāore he werawera. I tīmata mai tērā i ngā tau '60, ngā mid-1960s. Me pēhea e patu? Kāore au i te mōhio...

Long have our whānau been accustomed to fetching money to buy kai from Pākehā stores. They don't want to turn to pulling weeds, to digging cultivations. It's easier to get takeaways, go to McDonalds, there is no sweat involved. That started in the 60s. How do we nip that? I don't know.

- Rereata Makiha (mātauranga Māori)

M32 (Indigenous research) offered sombre reflection on the actions of Māori in recent generations. From living as one with Papatūānuku many generations prior, the majority of Māori are now largely disconnected from te taiao and have seen and directly contributed to its degradation. From an intergenerational perspective, M32 (Indigenous research) questions if we, the current generations, have been good ancestors.

In one generation we've screwed up so bad... Although there has been damage done by human settlement over time, it's nothing like the scale of the damage that's been done in the last 50 years, which is my lifetime. It's my generation. It's your generation who are screwing things up. It's not the ones before us. And so what we're handing over to our future generation is a very degraded environment that we're responsible for. In terms of being a good ancestor, what have we done? So coming back to your question, I guess that I'm always asking myself, 'Am I being a good ancestor?'

- M32 (Indigenous research)

The scenarios of disconnection outlined above were not the case for one of the mātanga interviewed who also presented at the national wānanga. M25 (regenerative farming) was raised in an urban setting with whānau that continued to have a high level of food self-sufficiency despite no longer owning their land. They learned to grow kai by taking part in whānau activities.

... probably 50 to 80% of our food on the table came out of our garden... we would go back to our marae or back to my nan's place by the marae ... and all the farmland ... all farmed by [non Māori] farmers ... It used to be our land, so we had gardens. My nan would have gardens at her place and grow kai around her home. And then some of the meat would be the farmers'... [they would] give them meat from time to time. By and large... a lot of our veggies... were definitely grown at home both where I grew up in town and... by nan's. So it was just the thing, it wasn't like this is cool, we grow our own food. It was just like you had to, to survive... Charles Royal said way back when the term mātauranga was [used] to describe something that we've lost... It just was how we lived.... And it was just natural for us... I never remember being taught how to put seeds down or put plants down on the ground. We just did it.

- M25 (regenerative farming)

Return to whānau soil and kai practices

A resurgence in Māori food growing and gathering is regaining some momentum mātanga noted, stimulated by reclamation of mātauranga Māori including a growing desire for healthy, locally produced kai as part of a global trend to return to sustainable living, and most recently COVID-19 disruption of commercial food supply networks and escalating food prices. Many are consciously reducing or eliminating their reliance on industrialised, multinational food systems. M36 (whānau organic agribusiness) describes awakening to traditional food growing approaches and mātauranga such as our shared whakapapa with crops we grow, to atua and to reo in māra. Mātauranga Māori provides valuable insights, understanding - knowing - that are garnered through the senses via wairua, via awareness from noting signs in nature that can be used along with Western food production approaches.

...māra, as you know, not only brings in kai, good healthy living but also awakens all those things about mātauranga Māori. Ko wai a Rongo-mā-Tāne? He aha ōna mahi? He aha ōna pūken-ga? Ko wai a Haumietiketike me ōna tāonga? So that really encouraged our tamariki, our taura to not only be in the garden but also learn from other people who have been bought up and grown kūmara. So not only ngā kōrero from the textbook, also ngā kōrero tuku iho from people. We still do it, live it... Sometimes you don't need a pH test... by signs, by the birds, by the animals in the māra, by the insects, by the wind, or by the condition of your plants. So it's about understanding that which has helped revitalise our reo as well.

- M36 (whānau organic agribusiness)

Emerging shift in values: connection to kai sources, self reliance and mana motuhake

Kelly Marie Francis' (charitable trust) kai resilience journey and reclamation of identity as a wāhine Māori was ignited after a successful corporate career no longer resonated and they contemplated how they might care for Papatūānuku. A Kai Oranga class at a Hua Parakore verified organisation, Papatūānuku Kōkiri Marae, ignited their passion for mahi māra and supporting more whānau in South Auckland to begin their kai resilience journey via her [kaupapa Māori social enterprise]. They represent a growing number of Māori returning to tūpuna values of kaitiakitanga of the environment, mahitahi - working together, and having food security, inspired into action by mātauranga Māori kai resiliency initiatives.

I ended up doing 12 years in travel and tourism ... realised that the happiness level that I was getting to with all my money, and all my fancy toys, and my fancy house and stuff, that happiness level just wasn't enough. And I started realising that, actually, I'm missing a lot of things. One of them was culture, connection. I started wondering about Papatūānuku, and who it was that looked after her. And then my major question, or my major challenge came up on my last day of actual work, which was: how do I get people to respect Papatūānuku?...My passion actually came from doing a Kai Oranga class through Papatūānuku Kōkiri marae in Māngere and learning for the first time about mauri and mana and how you can use yours to benefit the people via the land and benefit that land via the people. The karakia were on! It was really the beginning of my te ao Māori journey too, simply because I was brought up in a world where corporate was the cool thing to do, not reo Māori and not mana wahine. Corporate money making was where I was brought up in.

- Kelly Marie Francis (charitable trust)

Growing interest in mātauranga Māori approaches

The gathering of kai through hunting and gathering practices has remained intact in some whānau and communities. The ability to hunt on whānau blocks and the third of all Aotearoa land held in the Conservation Estate provides a pātaka kai of great bounty for those who know how or can learn from others. Lack of knowledge prohibits many Māori to learn mātauranga Māori practices although there is a growing interest.

Tame Malcolm (hunting/biosecurity) noted that their whānau learned through 'observation, practice and [their father] consistently drilling us.' They said 'We knew when the time was right to get kai. For example, any month with an 'r' was not a month to go for tuna.' Tame noted that signs have changed and dates have shifted to a point that there is less certainty of getting kai that was always available at certain times of year. They noted that some of their whānau have strengths in other kai gathering tikanga than them, such as fishing. This meant that kai can be shared and variety gained.

Tame noted a positive shift they had observed as a hunter. Their description of how, five years ago when culling, they would be circumspect about the tikanga they practised, in case they were misunderstood. He notes a growing interest in hunting, mātauranga Māori hunting practices, and a growing acknowledgement of mātauranga Māori in many spheres including in government.

When I left uni I went straight to DOC as a goat culler. I remember hiding my mātauranga practices. So we would go into the bush, and the first kill of the cull, I'd put the heart in a tree and i tukuna he karakia ki tētahi o ngā atua. (I would offer karakia to one of the atua) From there on in, I'd just bury the guts, or the heart and stuff like that, following certain tikanga. And then I would hide it because I thought they'd think, 'what are you doing?' And even pronunciation of names; I knew if they couldn't pronounce the names they would butcher my tikanga. Then two years into the job, one of them said, 'Oh my God, there must be a murderer out here because I just saw a heart in a tree!' Whereas now it's totally flipped. People are engaging me to come talk about those tikanga and those kawa, whether it's possum control or goat control and how can they embed that in policy - and that's a whole other kōrero around tikanga and kawa in policy but the fact that we've come such a long way in 15 years.

- Tame Malcolm (hunting/biosecurity)

Changing attitudes in younger generations

Melody Te Patu (iwi kai initiative) noted a shift in societal attitudes as younger generations are more enthusiastic about gardening than her generation were. Their interest has been stimulated by the normalisation of kura māra and school gardens, where younger generations are reintroduced to skills that their parents and grandparents did not learn growing up. Māra kai learning for adults is also becoming available in some communities.

I know in my day it wasn't cool to be gardening. You bought your stuff from the supermarket, but I know from my younger children actually, now it's cool. It's cool to go to Mum's and pick her spinach. I was lucky that I always had a mother that always had a māra, always, all year round. We were totally supplied from that māra. My kids didn't get that. My mokopuna are getting that now ... 'Nanny Mel [the speaker] she's got a bit more free time and she's growing the garden,' and my whole family benefits from it.

- Melody Te Patu (iwi kai initiative)

COVID as a catalyst for further reclaiming Māori kai resilience

Many mātanga observed several trends since 2020, and in the wake of COVID-19 that have highlighted Māori food insecurity and dependence on capitalistic, industrial food production including: gardening material shortages; seed saving became a major activity as Māori realised their over reliance on supermarkets as queues formed and shelves emptied; the more wealthy are embracing gardening and those less food secure, less so; they observed whānau, helmed by a lone female parent, particularly struggled with food insecurity.

Lionel Hotene (Hua Parakore community initiative) recalled the queues for food and other household items in South Auckland during COVID noting the vulnerability of kaumātua and single parent mothers.

Ron Taiapa (community education) detailed how Māori food security has been negatively impacted by the arrival of COVID to Aotearoa but it has stimulated many into taking action to become more resilient. They expressed particular concern that many of the most impacted were not taking steps to become more kai resilient as they struggled with everyday life.

I've definitely seen a refocus on growing kai. During the first lockdown you just could not get gardening stuff. We go back to sovereignty and resilience - if you can't get gardening stuff, it's because you were not in control of your own gardening destiny.

Mana kākano was huge for us - us saving our own seed. As well as Hua Parakore, we pump hard the varieties, the whakapapa of the seed that we get when we talk about kūmara. Our guys don't talk about kūmara, we talk about Owairaka Red or Tapatini - they talk about..... varieties. Having control over those and saving them - that suddenly put its hand up big-time varieties. Having control over those and saving them - that suddenly put its hand up big-time. People looked around and went, "Oh, gosh we've fallen into the supermarket trap. I've seen that change over the last couple of years..."

The interesting thing with COVID-19 and food security over the last year is who grew. There's a certain element of wealth in that - those that could afford to, those with discretionary income - that's one lot, and the other one is those who didn't do it that actually needed to do it - they're a real big group. Why didn't they do it? A lot of them are rangatahi. A lot of them just..... have ...too many choices. How do we get those people gardening that actually really need to?

The whānau that struggled, the ones I noticed most, were solo mums with a lot of kids - those ones that are so busy they're just trying to deal with their kids; they don't have the chance to do anything else. So you know when you give food to them that's going to be eaten and used.

- Ron Taiapa (community education)

... during COVID people understood, we are in a dilemma around where we are in this food system, seeing the lines going right back to Idlewilde [Avenue], if you're familiar with Bader Drive, the lines go over the bridge, past Mataatua Marae, down towards Idlewilde, never seen before. And I think people were asking themselves ... 'Is this it? Seeing people fight over toilet paper and then having our kaumātua and kuia and our single parent mothers in line'...

- Lionel Hotene (Hua Parakore community initiative)

Mātanga noted that COVID has been a catalyst for many whānau to prepare gardens and plant trees, even if this was their first time to do such activities.

This lockdown has ... given a whole lot of people, the feeling that they need to be planting some things because they had to stay home for a few weeks, last year, or the last two years, and they suddenly want to plant an apple tree or whatever it might be, to the point that those fruit trees, you can't get stock at the moment because it's all ... pre-sold because they've got this interest in the māra. But a lot of those people also have a short term (interest) and something else will come along now and that'll get them back to where they used to be.

- M31 (research/grower specialist)

This pandemic has flipped the model - we are recognising what we have done that made us good in the past can make us better now.

- Traci Houpapa (industry governance)

People are extremely interested in growing food in Māori communities. This has been heightened due to COVID where we have seen in sharp relief the impacts of Māori food insecurity due to the current colonial capitalist food system. I see a real interest at a marae level and kōhanga reo level especially in Te Awakairangi, which is we are situated at the top here, marae gardens all around the marae in the Hutt Valley, which is lovely and connecting with the whānau food growers in the rohe is just a beautiful thing to be able to do. So that's what I'm seeing, people coming into the community, wanting to give it a go. Not knowing very much but knowing that back in their whakapapa, their parents and their grandparents were doing things and they didn't really pay much attention to it.

- Jessica Hutchings (indigenous research)

I've been growing a garden and the pandemic was a godsend in as much as it gave impetus to resolving a food security crisis for our whānau. As a result, we received the support that we needed to fund the construction of the māra kai.

- Rob Small (mātanga māra)

...and hardship and suffering which COVID has been, you have to reach back and simplify your life. And when our people simplify, peel things back in order the two things that were important. Saving lives and protecting livelihoods. Those are the things that matter at that point.

- M22 (iwi/food governance)

Summary

Generations of whānau Māori are currently disconnected from their whakapapa and tūpuna practices. Urbanisation encapsulates the shift away from whenua and Māori food systems into ever-rapidly intensifying living settings that do not facilitate growing food. As whānau traditions are lost and whakapapa to Papatūānuku and Hine-ahu-one was forgotten we have become people with significantly reduced resilience. Dependence on Western food systems including our reliance on supermarkets is a cause of grave concern. Local and global disruptions from COVID and other supply disruptions impact our people disproportionately. These disruptions have been a catalyst for a return to kai growing for those who can access resourcing, including mātauranga, money and land. A return to tūpuna practices for spiritual, physical (including economic) wellbeing is summarised by this mātanga.

In [region] we see a lot of our whanau struggle with food security, affordability, poverty, drug and alcohol abuse, and mental health. A lot of those issues stem from colonisation and one of the things that we say here on our whenua is that the solutions lie with our tūpuna and our tikanga and our kawa. We firmly believe by reconnecting our whānau back to our whenua and back into our traditions around mahinga kai, we can heal our people and begin to find a way forward that sees justice and redress and reconciliation afforded for our people."

- M12 (Mana whenua leader)

What does soil and kai resiliency mean to you?

The mātanga who presented at the national wānanga were asked to share what soil and kai resiliency meant to them.

It means Tino Rangatiratanga, it means Mana Motuhake. The state of the soil is a reflection of the built environment that surrounds it.

Tino Rangatiratanga – healthy soil with plenty of clean fresh water to grow strong, healthy, and happy children in communities that are secure in the knowledge and actions that respect our sources of life.

Nurturing soil health and providing quality kai, for ourselves, our families, and ideally our communities, in today's climate and in the face of the changing climate over the coming decades and centuries.

The ability to provide for ourselves and our whānau without having to rely on big corporations who don't care for me as a person, only as a customer. He kai kei aku ringa.

Resilience is a system that is put in place to strengthen action against negative, unforeseen circumstances and to recover quickly from issues that arise.

Having food to feed myself, my whānau, our manuhiri and our community. For me, resilience is about actively taking responsibility for mitigating these potential barriers to ensure they do not come into play.

Te Ao Tūroa – a legacy Indigenous knowledges and old way of thinking nothing new to us valuing koha, reciprocity through a Te Ao Māori lens.

Key Themes

- Oranga
- Atua
- Tangata
- Whakapapa
- Whenua
- Hononga Connection
- Tino Rangatiratanga
- Haepapa responsibility
- Manaakitanga reciprocity

Overtime, this progression elevates the vitality of a soil. If, as a people, we can observe, understand and utilise these natural processes in our practice as growers and gatherers of kai, our ability to exercise long term soil and food resilience will be realised.

Soil is but one layer of this extensive whakapapa. This conversation starts earlier with questions around the mana of the soil that informs kai, the mana of ecosystems and atua which feed the soil, and circles back around to questions of what to do after we have earth.

A whole and inseparable connection to the responsibilities of helping nature to sustain a will for life that never ends. A disposition that inspires intergenerational and disciplined prosperity for all life, human and non-human. This example is set by mother nature herself.

Toitū ko te whenua, tū teitei ko te Wao-Nui-o-Tāne – soil is the foundational life force that drives the formation of any healthy ecosystem. Left to its own devices, degraded soil will raise plants that will facilitate her own restoration. She provides space for them to live and the opportunity to companion with her microbial kin.

Enable the act & participation using ancient, traditional & contemporary knowledge to achieve wellness to soil, plants, animals & people throughout lifetimes.

Kai for me is about invoking a whakapapa, made of the many layers of relations – tūākana and teina – who contribute to and inform the way that kai emerges as a source of mana within our lives.

Ngā mea whakakaha

Enablers of soil and kai resiliency

Mana Atua

Strengthen knowledge of, and living from mātauranga Māori (tūpuna wisdom)

Tūpuna wisdom was identified as a major enabler for Māori soil and kai resiliency by both wānanga kaikōrero and the mātanga interviewed. They reiterated the importance of transmitting tūpuna knowledge which includes their tikanga, observations of the environment such as maramataka, narratives of mahinga kai, and how whakapapa of people and kai connect all to atua. These kōrero tuku iho - knowledge passed down from one generation to another - are invaluable resources to guide today's generation in how they can be sustained by Papatūānuku and Hine-ahu-one, without causing harm to them. Mātanga stated:

We all have the blueprint of our tūpuna, and our grandparents and parents, and it is our role to step into that and carry it to the next generation.

- Hineāmaru Ropati (Hua Parakore community initiative)

...we have rich and beautiful stories and pūrākau as a people, which speak to our histories, whakapapa, tikanga, and connections to māra and mahinga kai.

- M12 (mana whenua leader)

Our mission is to feed the community, teach the community to feed themselves, and also empower them to feed each other. And the way that we do this is by reflecting on the solutions that our ancestors had, and try to apply them to the issues that we face today.

- Kelly Marie Francis (charitable trust)

Mana Whenua

Return land to Māori

Some mātanga including M6 (Hua Parakore business), Wayne Paaka, and Hinekaa Mako urged that Māori needed to own land again to work it and grow their own food. There have been numerous examples in recent years where lands have been gifted back to the original hapū or iwi grouping for descendants of those original owners to now connect with and utilise the whenua as did their tūpuna, generating benefits including the growing and gathering of kai.

We need to take 'ownership' of our whenua.... we've got to come back home. It's not about parking up on the land and just sitting there watching around us. We need to actually be working it, the way that my parents did here.

- M6 (Hua Parakore business)

To be kai-sovereign you must possess your own whenua. You can't feed yourself if you have no whenua in order to grow your food. The land to have access to hunt ... access to waterways, seashore to collect kaimoana.

- Wayne Paaka (urban food security)

We need to think about how to regenerate the relationships, mauri, the whenua with the tangata. How do we get Māori thinking about moving back to the whenua?... Because in my Dad's day, that's not two generations ago, they were living on the land, with the land, off the land.... The question that I always have is how do we get back to living on the land? What changes need to be made legislatively to help that happen?

- Hinekaa Mako (Pou Take Ahurangi)

Being Better Kaitiaki: Enabling Soil Resiliency

Kaitiakitanga, exercising guardianship of whenua and awa according to tikanga, ensures that an environment is kept or returned to a good state to be used by current and future generations. This is a key enabler for Māori soil and kai resiliency but the capacity to exercise kaitiakitanga is dependent on a wider set of issues. While industrialised approaches to kai as well as chemical fertilisers and pesticides are still commonplace, even on Māori-owned landholdings, the ability to express and enact kaitiakitanga will remain severely restricted.

Hua Parakore Validation and Verification Process - Soil and Kai Resiliency

Many of the mātanga at both the national wānanga and interviews were Hua Parakore verified practitioners and described how Hua Parakore had guided their farming and gardening practices. Practitioners described how Hua Parakore principles also reminded them of the privilege and potential there is in living and working on ancestral land with ancestral knowledge, and the importance of being attuned to it.

People talk about adding value, you know, in marketing slang, but Hua Parakore adds values and through those values, through the integrity with which we maintain those values, we do create healing.

- Gretta Carney (Hua Parakore business)

We have some beautiful whānau on the course who are all living in shared land spaces and landscapes, all working together with each other. And we had some really neat conversations in our first whakapapa session. Because one of the requirements of becoming Hua Parakore accredited is that you understand the whakapapa of the whenua that you're growing on. Not all of us are privileged enough to be on tūpuna whenua. Our whānau are realising that there really is a responsibility to be aware of what our whenua is saying to us. And one of the things that struck me about the session, that Pounamu said was, 'If you listen to your whenua, what do you hear? And if your whenua could speak to you, what is your whenua saying?'

- Lahni Wharerau (Hua Parakore advocate)

By farming this way it marries into the six kaupapa of Hua Parakore... The thing that we use daily is whakapapa, with anything or anyone that comes to our farm. We buy minerals, that's about all we buy. What is its whakapapa? What are the ingredients? Where did that come from? That traceability is just so important. For our yoghurt, where does the honey come from? Who are the people on the ground with the hives? How do they treat them?

- Cathy Tait-Jamieson (Hua Parakore business)

Hua Parakore is a 3-year kaupapa Māori validation and verification process, open to home gardeners to commercial kai producers, and agricultural and horticultural enterprises.

The curriculum includes developing a kai production plan based on the six principles of Hua Parakore and implementation in kai production. It provides an opportunity to connect with the wisdom of tūpuna and to grow in ways that are in harmony with tikanga Māori and uplift the mana and mauri of Te Taiao. It is the first international Indigenous organic verification system and has also been adopted by whanaunga in Hawaii for their organic Indigenous kai production. Developed from a three-year kaupapa Māori research project, under the leadership of the then chairperson of Te Waka Kai Ora - Percy Tipene, the project asked the simple question: He aha ngā mea o te Hua Parakore? This question was asked of Māori communities and growers, rongoā practitioners, iwi Māori, hapū and whānau.

The resulting kōrero was developed as the Hua Parakore - a kaupapa Māori approach and framework for kai production and kai atua.

For Māori growers, producers and those working on the whenua, Hua Parakore is a pathway to uplift Māori soil and kai resilience and is also a transition pathway to Indigenous rauora/regenerative agriculture in Aotearoa New Zealand. This system operates in spite of a lack of support from kāwanatanga.

This is a missed opportunity on the part of kāwanatanga to work with and uplift this for Māori by Māori model of organics and rauora/regenerative agriculture. This is akin to the lack of government support for the organics generally in New Zealand, when at this time of agricultural, ecological, climate and food insecurity crisis it makes sense (in a Māori worldview) to uplift and accelerate these modes of kai production that nurture the mauri of the soil.

Multiple Benefits of Regenerative Farming for Soil and Kai Resiliency

Regenerative farming is one approach gaining momentum in Aotearoa in recent years which enables kaitiakitanga as it benefits whenua by boosting soil health without the use of synthetic or toxic inputs, providing more nutrient-dense kai for animals and not harming whenua, animal, crops, waterways or humans with the harmful industrial fertilisers and pesticides currently used in conventional farming approaches. M25 (regenerative farming) and Raihānia Tipoki, both were kaikōrero at the national wānanga who were also interviewed, are part of a growing number of Māori farmers who have embraced regenerative farming. They are enthusiastic about the holistic benefits, which includes improved health of the whenua and people; the economic returns of regenerative farming and the potential to feed all people in Aotearoa.

Our society grows increasingly resentful toward dairy farmers but there's a real opportunity to transition dairy farms to regenerative agriculture. Dairy farms are already set up for long rotational grazing systems which cover the grazing management component of regen ag. They just need to increase the diversity in the pasture and stop using chemicals and synthetic fertilisers. Once the root systems in their diverse pasture sword become deeper there'll be less need to irrigate. In time they could transition to beef farms incorporating silvo-pasture precluding the need to irrigate at all. Or if the water application was truly sustainable, they could become market gardens - depending on the region's needs.

- **Raihānia Tipoki**

M25 (regenerative farming) makes the connection between the extractive nature of conventional farming that constrains farmers as much consumers into dependence on industrial food production systems. Regenerative farming aligns with the Rauora framework which enables Māori soil and kai resiliency.

Imagine if we could get our whānau on that Māori freehold land to support them [farmers] to find ways to think about and I don't want to say industrialised but how do we de-industrialised ourselves and make the most of what we have right in front of us, right now. Just on our Māori freehold land we could feed this entire nation, there is zero doubt about that. But as long as we have continued to have an industrialised mindset in the way we grow our kai we won't even be able to feed ourselves.

- **M25 (regenerative farming)**

Traci Houpapa (industry governance) noted that many Māori would not be aware of regenerative farming practices, and investment was needed to create practical, educational resources to stimulate discussions. They rightly noted that many Māori like most farmers using conventional farming methods, do not yet understand soil health and how it can be achieved without the standard practice of using pesticides and synthetic fertilisers. They suggest whānau may need time to understand the benefits of regenerative farming to consider changing their current practices. M25 notes, however, their observation that when the economic benefits of regenerative farming are explained, there is more willingness to explore transitioning to the sustainable approach.

Māori authorities and key government agencies have an important role to play to provide educational opportunities for Māori and all in the agriculture and horticulture sectors to adopt rauora/regenerative practices.

We need to front load education, engagement and awareness to show that there is a practical way of showing our whānau, how to do things better.

- Traci Houpapa (industry governance)

Government agencies such as the Ministry of Primary Industries (MPI) have recently started pilot programmes specifically for Māori land-owners in some regions to explore regenerative farming with a focus on incorporating tikanga and whakawhanaungatanga, led by Māori facilitators.

Whakawhanaungatanga practices offer Māori farmers and some of their shareholders the support of learning together in a Māori environment, sharing experiences and seeing the changes at each farm over time.

As Melody Te Patu (iwi kai initiative) expressed, a bottom line for these groups is: will an activity be good for the whenua and the generations that follow?

...this was the whole point behind the native plant nursery that was set up with [iwi] was to work better with those farmers, to help with the riparian planting to protect our waterways, and put some goodness back into that soil. So I think for Māori, we totally get that and because we don't want to leave whenua for our future generations that can't be used because we've totally abused it... And so every decision that we make in regards to what we're going to plant, in how we look after our land is based on those fundamentals of - is this going to be good for our whenua and for future generations? And as simple as it is, or isn't, and if it isn't, we're not going to look at it.

- Melody Te Patu (iwi kai initiative)

Biodiversity Audits

M32 (Indigenous research) explained how undertaking biodiversity audits would give Māori practical steps to be better kaitiaki. They emphasised that it was essential to not just be able to articulate one's connection to whenua and awa in pepeha, but to know the physical environment and care about all the species in that space. Conducting biodiversity audits would enable Māori to better strategise on how to sustain the environment while deepening the connection as kaitiaki that comes with intimate knowing of your whenua, awa, and all its hua.

Soil resiliency is a matter of great importance for both cultural and very practical reasons that if soil health is poor, food quality, human and animal, and biodiversity are threatened.

If we want to reconnect whānau to whenua, the whānau need to know about the whenua. As kaitiaki, when we say that we care about the environment, what are we actually saying? Do we know the environment that we say we care about? Do we know who's [what species] living alongside us and do we know how they're doing? Are they okay? Do they need our help? Are there some plants at risk of extinction or dangerously close to extinction, that we could maybe do something about?

You won't know these things unless you take that very important step of doing what we did ... doing this [biodiversity] audit. With the information we can find out who's in need of help, and we can actually design intervention strategies so we can go to DOC (Department of Conservation) and instead of having random conversations about access to the Conservation Estate, we can go to DOC with a specific list of species that we then collect seeds for. Then we can go to the local council and say, "Instead of you using Jacaranda trees to beautify [place name], why don't you use these species which are endemic to this region found nowhere else in New Zealand?" ... With information you can make more informed evidence-based submissions around resource constraints, the implications of a project going on a particular site, a site that is close to, or a species in need of help, so it's such valuable information to have in order to make these really informed decisions.

- M32 (Indigenous research)

Urban Māori Access to Whenua - Leasing Arrangements

Potential for leasing arrangements in both rural and urban areas. The following account from Wayne Paaka (urban food security) shows how a win-win scenario can be created where community gardens are established at low cost, via a lease.

...maintenance and use of whenua is my real focus because I realised that's the root of the problem. So I have to do everything I can to try and get as much land back into Māori ownership or if it's not ownership, it's a management and use of the land that can be gardened because that will actually start solving the food problem. And once you start solving the food problem, it is the root of solving the poverty problem...

It's in our best interest to lease that land out to you. We'll lease it out at a really marginal cost.' They lease it out, it's a huge block of land for ten dollars a week. So that way, they make ten dollars. But also, what happens is every two weeks, it has to be mowed and weeded. So he says, 'We spent hundreds of dollars on mowing and weeding every two weeks.' So he says, 'By renting it to you, we make a little bit of money. But we save hundreds of dollars every week because we don't have to maintain the land because you're putting a garden on it and you're feeding the community. Everybody wins.

We must focus on land access, whether it is renting, accessing, asking for permission or bartering on the short term, we must focus on accessing land in any way we can as it is imperative for our people to be able to feed themselves without the use of whenua. The long term goal has always been to get our land back.

- Wayne Paaka (urban food security)

Para Kore approaches for byproducts of kai production

The online wānanga and interviews also highlighted that Māori are developing many initiatives based on tūpuna knowledge about te taiao and kai growing and gathering. Many mātauranga Māori organisations presented at the national wānanga including Para Kore, a national Māori zero waste organisation. Hollie Russell spoke to the organisation's mission:

Our mission at Para Kore is to educate and advocate from a Māori worldview for a world without waste, so para - waste, kore - none, and our education programs support growing the capacity and capability of whānau, hapū, iwi, marae, kohanga reo, kura, wānanga, pakihi, hapori. Anyone who wants to work with us, we always try to find a way of supporting. Our vision is for a thriving natural environment that nurtures our communities, who can then in turn nurture Papatūānuku and Ranginui. We are about oranga taiao, oranga marae, oranga whānau.

- Hollie Russell (Kaiārahi, Taitokerau, for Para Kore)

Mana Tangata

Reclaiming Our Independence Through Interdependence

Throughout the two-day wānanga and in the interviews, mātanga described many initiatives that are Māori and/or mātauranga Māori driven, sustainable, and achieving successful outcomes on Māori terms.

Strong leadership within an initiative is a key enabler of Māori soil and kai resiliency identified by mātanga interviewed and at the national wānanga. Many of them are such people and have been these people for decades or are part of a new wave of leadership in the Māori soil and kai resiliency sector. Often these leaders in the Hua Parakore and community grassroots realm are women.

We need to identify that cohort or that group who are prepared to be first movers in this transition programme because some of us aren't ready for change.

- Traci Houpapa (industry - governance)

Identify kaikōkiri and early adopters

Anne-Marie Broughton (governance) and Rereata Makiha (mātauranga Māori) identify the importance of having an individual or small group, kaikōkiri or kaiwhakahaere, to drive the vision of a soil and kai resilience initiative. It is also essential that kaikōkiri have mātauranga Māori knowledge or a strong desire to learn,

ideally has whakapapa ties to the area and/or is well connected within the Māori community. These qualities are generic yet essential when introducing new audiences to initiatives with limited resourcing.

...You have to have a core body of people that really want to lead out something like this. And then you've got to find, inspire, and encourage people to get on board.

Engari ko ētahi he momo anō kei roto o ia whānau ... aua tāngata pukumahi, mōhio ki te mahi i te whakatō kai ahakoa kōhatu koirā tētahi mahi ka oti i a rātou. Kei roto i ō tātou whānau ētahi o aua momo tangata, engari ... te nuīnga o rātou e whakahaere kamupene ana; kua kore e wātea ki te hoki mai ki te mahi i roto i ngā mahinga kai ... ko tā mātou e whakaponu ana, tērā pea, waiho mā te wā; koirā e mahi tahi ana mātou ki te taha o ētehi rōpū pērā i te Puanga Māra a Pania Newton mā i roto o Ihumātao; ngā Whenua Warriors, a Papatūānuku Marae, ērā momo rōpū. (But there are different sorts in each whānau. There are hardworking people who know how to plant kai; even if the ground is hard or stony, they'll finish the mahi. In whānau there are some of that sort, however the majority of those are running companies; they aren't free to come help in the food gathering areas, but we have faith that maybe, in time...

- Anne-Marie Broughton (governance)

That's why we work alongside some groups such as Puanga Māra with Pania Newton and others in Ihumātao; Whenua Warrior Papatūānuku Marae, those sorts of groups).

- Rereata Makiha (mātauranga Māori)

Ron Taiapa (community education) brings up salient practical points on what can facilitate participation for Māori. A great experience can contribute to people returning to participate further. This is important as changing mindsets and learning new approaches takes time and dedication, and for Māori, the whakawhanaungatanga and tautoko accelerates adoption of new ideas. Timeliness is essential for those whānau members who are juggling whānau commitments, heavy workloads, and have community leadership responsibilities.

Find your kaiwhakahaere—they are the communication champions. They keep people connected, informed. When people turn up they make sure the manaaki is just awesome. It's a celebration of whakawhanaungatanga each time they turn up. In a modern sense it means having access to good gear. You don't want to turn up and slave, you want to turn up and be part of a good process. So there's a lot of thinking about it as well. It's our coordinator ... we managed to gather around us the equipment that we need (tractor, harvester, weeders) because we don't have the labour units, we've got to make it easy and efficient for ourselves and because of that people keep turning up. We have an absolute cut-off time at lunchtime, it doesn't matter where we are, bang, we stop because you just can't drag on, so people know that actually they only ever commit half a day.

- Ron Taiapa (community education)

Traci Houpapa (industry governance) notes:

We need to identify that cohort or that group who are prepared to come in the form of first movers in this transition programme because some of us aren't ready for change and that might be a pilot program or a research programme.

Connection and collaboration

Speakers and participants alike emphasised that connection between people and environment, and whakawhanaungatanga - whether linking networks of like-minded people are essential to enabling Maori soil and kai resilience. This view was shared by national wānanga participants as approximately 30% of them indicated that the opportunity to meet other Māori in the soil and kai resiliency space was a key reason for attending the wānanga.

Many of the mātanga commented on the need for connection, sharing of ideas and knowledge to decolonise from the industrial food system that fosters isolation. Collaboration and community building were desired to grow support for action for Māori soil and kai resiliency. By developing such connections in mana-enhancing ways, the experience as well as the outcome of forming and maintaining connections is powerful.

In 2000, we became Hua Parakore verified. Hua Parakore has enabled us to validate what we do and it also gives us a community, which as a farmer, you can actually be pretty isolated but the community aspect of Hua Parakore is really important to us.

- Cathy Tait-Jamieson (Hua Parakore business)

I think between iwi there are plants that we could share and we could maybe be sharing more and working ... together better you know. We can grow the kūmara but you can't but you can grow this: let's share. It feels very odd talking about it because I know for our people that was just how it was done. We would trade like that. It's really hard to think now that we don't continue those practices. But what if we changed it? Now, we have become so sort of safe about what we've got and what we can do. While we know what happened. Colonisation happened, that's what happened.

- Melody Te Patu (iwi kai initiative)

Wayne Paaka emphasised how developing strong networks and a desire to think positively can create solutions beyond seemingly insurmountable barriers such as landlessness.

How do we attain kai sovereignty without whenua? My experience with working for Kore Hiakai was to network with marae, Māori organisations and community groups. The lack of food sovereignty for Māori has been systemic. But on a practical [level], we must think outside the square and focus on positive solutions. To help me think of ways to design possible solutions I had to look at what was working in the community and what was duplicatable.

- Wayne Paaka (urban food security)

Building and preserving strong relationships for durable (commercial) pathways or supply chains, was highlighted. This is key within kai systems that do not rely on off the shelf, high-input (chemical) food production input systems.

Look after your relationships with all your suppliers and anybody that is a part of your supply. Look after those relationships. That would be the key thing. You know, because if you don't look after those relationships, you only need one of those cogs of the wheel to break down and your whole supply chain is going to come to a standstill. And we learned it from experience.

- Melody Te Patu (iwi kai initiative)

Creating paid work and supplementary income

Many of the mātanga shared stories of how rangatahi can be enabled to develop not just mātauranga Māori food growing skills, but entrepreneurial skills.

A lot of crops are grown for market, to build that economy for our whānau so we can get resources, get more tools, more wheelbarrows... but also to get our whānau involved in understanding the value of different sorts of foods, not just the kūmara.

- Lionel Hotene (Hua Parakore community initiative)

For Māori to establish thriving food systems again, it is important that whānau, hapū, iwi and urban Māori initiatives can become self-sustaining and are able to provide employment and business opportunities for their hapori. In this way, local, sustainable Māori economies can redevelop and realise the potential of rangatahi and hapori Māori.

...the economic side of it, not only the wellbeing side, but also the economic side... For us, the other initiative is to encourage people to grow food in our little space so they can perhaps subsidise their power bill or the petrol prices... See the rhyming word is health and wealth. Abundance is the goal for us to get people out of the stress of thinking about how am I going to pay my school fees? How am I going to get uniforms? So that looks like a twelve by four plot and how we can support them in growing their kai.

- Lionel Hotene (Hua Parakore community initiative)

Emulating Successful Māori Engagement Approaches

As Ron Taiapa (community education) observed, there are established kaupapa Māori events that are hugely successful in bringing their people together from around the country to celebrate their kōrero and their hapū uniqueness. These annual or biennial events include Pā Wars in Ngāti Porou, Taranaki Tū Mai, and Te Matatini on a national/pan tribal scale. Māori soil and kai resilience events could likewise celebrate Māori prowess, innovation as well as provide much needed education and whakawhanaungatanga opportunities.

That'd make a really good planning workshop. What does cohesion and connectedness look like in my backyard? In my community? Regionally, nationally? We do Matatini, Pā Wars really well. We could do a festival of mahinga kai really well: cooking, preserving, trapping, storytelling, making māra taputapu, mahi toi to do with it. With a little bit of tweaking, we could make it like Pā Wars is and Matatini is.

- Ron Taiapa (community education)

What would you like to learn at the He Whenua Rongo Wānanga?

National wānanga participants were asked the question **“What would you like to learn at the He Whenua Rongo National Wānanga?”**

Their responses are presented as a word cloud. The most common responses were: solutions; connections; mātauranga Māori noting maramataka particularly; knowledge; resilience; self sustainability; and soil wellness.



Figure 4: National wānanga responses: What would you like to learn?

Te Reo Māori

The integral connection of te reo Māori with an environment centred life as lived in past generations is highlighted in the comments below by several mātanga both at the national wānanga and in the interviews. Edward Ellison (iwi governance/mahinga kai) and Tame Malcolm noted that loss of access to mahinga kai and no longer performing certain associated activities resulted in declining use of related vocabulary. Mike Smith (climate specialist/Pou Take Ahurangi for National Iwi Chairs Forum), likened that disconnection from whenua and te reo Māori as a deliberately induced amnesia from colonisation which Māori can awaken from by remembering and connecting again. In more recent times, Māori communities have initiated communal kai growing and are normalising te reo Māori as a language of everyday communication, the 'reo o te māra' is returning, albeit with 21st century foci.

You know the saying that you can lose your reo in a generation and you can lose your mātauraka as well in a generation. That's another element of mahika kai as well. And if we completely lose it, we lose access to the customs that go with it and the knowledge it goes with: the gathering, the preservation, and cooking and whatever. The sharing of it, trading with others, there's a whole world of customs there and te reo that goes with it and kupu, that approximately 70% of our kupu are similar to kupu of North Island reo [plural], which means up to near 30% of our kupu are not. I think in NZ terms that is quite a high degree of difference. So all of that is extremely important.

- Edward Ellison (iwi governance/mahinga kai)

Declining biodiversity leads to decline in reo and we've seen that in Matatini over the last 50 years. If you look at some of the waiata composed in the early stages, they were reflective of our people living in the environment whereas now, not so much. Bringing back māra, mahinga kai, will bring back that reo. I think a good measure of success would be anything that ends up in Matatini to be an indication of revival. ...they did a waiata or a haka on kūmara or māra... kīwaha. For us in Te Arawa, He Kete o Whakaotirangi, a super prized possession. There's only one, if that was lost, we'd have all died. No doubt there's hundreds of more kīwaha and whakataukī that come from māra.

- Tame Malcolm (hunting/biosecurity)

Instilling food growing habits in the very young and their whānau through the intergenerational model for reo revitalisation that is kōhanga reo and kura kaupapa Māori is an exciting proposition to Wayne Paaka:

Having māra reo is awesome. Because what we can do is we can go to all the kura kaupapa, and the kōhanga reo and we can tie into the syllabus. Then the tamariki become the kaitiaki of the kaupapa, and then it becomes generational because it goes from parents and children, they bring the children up. I say, if we make it part of the system, it won't die... So as we're doing it with kōhanga reo, we need to plant the seed at the age of kōhanga reo, when they understand the importance of growing food and growing their reo because it's the same thing.

- Wayne Paaka, (urban food security)

Mana Rangatahi

Growing Resilient Rangatahi Leadership

There is great potential for rangatahi involvement and leadership within the Māori soil and kai resiliency space as highlighted by the call from both rangatahi and pakeke alike for increased empowerment and education of rangatahi.

Ko te whakaaweawe i te hiringa ... It's about bringing about joy to ourselves, feeling that warmth, that hari and we truly believe that through the reconnection to whakapapa, the reconnection of ringaringa, waewae ki tō tāiaa, ki te whenua ka ara mai, ka ora mai.

- Te Atawhai Kumar (rangatahi education)

A generation of reo speaking, strong and confident rangatahi is emerging as new leaders in the Māori soil and kai resiliency space. The transmission of mātauranga Māori ways of living, and of growing and gathering kai is a key tenet of one education and mentoring kaupapa which has been active for over a decade. Te Aho Tū Roa, who facilitated a keynote session at the national wānanga, empowers rangatahi, and all generations to explore and experiment for themselves via learning kōrero atua, kōrero tūpuna. Some rangatahi are raukura (graduates) of Kura Kaupapa Māori and some are not. M38, a kaiwhakahaere matua of Te Aho Tū Roa,

explains that part of our mahi is through rangatahi mentoring their teina and then taking their learnings to the wider community.

Ko tētahi mea nui kua kitea e mātou o Te Aho Tū Roa, ko te ako, ko ngā wānanga tonu me pēhea te whakaoho i nga tai rongo katoa, kia mōhio tātou ki te whakarongo, ki te āta titiro ki tō tātou taiaa, ā, me pēhea te whakamahi i ngā akoranga hou i roto i te noho o ia ra; kia rongo tātou ki te mauri o Papatūānuku, o ērā atu o ngā atua hoki. Nō reira ko te whakatū wānanga, papamahi kia mārama ki te whakatupu rākau, kia ako hoki rātou me pēhea te whakatō rākau. I konei ka karanga ki te hapori whānui, ki ngā whanaunga, ki ngā hoa.

A predominant thing we at Te Aho Tū Roa have found is the importance of learning how to awaken all our senses, so we are listening carefully observing as we consider how to apply new information and then how to put it into action; so we experience the life essence of Papatūānuku, and characteristics of the other atua. So we may run learning sessions / workshops to learn when is the best time to propagate trees, to plant trees. Here the call goes out to the wider community - our relations, our friends.

- M38 (mātauranga Māori)

Succession Planning

An important aspect of capability and capacity building in the soil and kai sector is succession planning. Rangatahi led kaupapa are a key element of developing succession in soil and kai resiliency. For Māori a particular focus on intergenerational planning is required particularly for whakapapa based groups.

Intergenerational planning enables Māori soil and kai resiliency by ensuring there are shared visions between generations, tūpuna knowledge is shared and the necessary skills are available. M36 (whānau organic agribusiness) described how in their youth, they and other rangatahi were mentored by their iwi in roles to support iwi objectives. This is where they observed intergenerational and strategic thinking.

...we were brought together as rangatahi then to help consolidate our claim. But he said to us this may take two or three generations before we see the fruits of what we are trying to achieve. And we were all disappointed. We thought it was all gonna happen tomorrow. But he was right and I believe we [are] probably in the second generation now. And maybe it's the third generation now. Our mokopuna or our children are the ones that go to start seeing some of those fruits, start opening their eyes, start becoming the farm managers and all those things. It's those things that we need to start now to help kids, encouraging them to get into those farm management, science, lawyer [courses] - whatever. I wasn't given that opportunity as a young child.

- M36 (whānau organic agribusiness)

Planning is important to iwi and personal commitment is required as M32 explained (indigenous research):

We need plans. What is happening is ad hoc and is not consistent across all regions. It comes from a personal commitment of individuals and whānau and sometimes hapū to do it, because it feels right for them to do, but it should be elevated to a much higher importance and significance in the daily life of an iwi.

Ka hao te rangatahi

What do they consider is needed to enable rangatahi?

The following quotes shows both rangatahi viewpoints and pakeke viewpoints expressed in interviews and the national wānanga regarding the pātai:

- Rangatahi highlighted wellness and connection as key influences and aspirations for their development as leadership in soil and kai resiliency kaupapa.
- Pakeke messages identified education, resource, and engaging action as contributors to growing potential rangatahi leadership for collective wellbeing.

Rangatahi viewpoints

Resilience is about remembering that we're part of an intergenerational whānau and that none of us need to, should or probably even can be doing this on our own. Mā te mahi tahi o aua reanga katoa, ka whai hua tātou.

My experiences is actually just doing kanohi ki te kanohi with the rangatahi and sharing my personal experiences with rangatahi tend to open them up to the idea of reconnection with the taiao again.

It's by being in whanaungatanga with our taiao or with our community that the roles and the needs actually emerge. That's where we can step into our roles as kaitiaki within our local context.

You'll find the easiest place to start is amongst your own puna of friends and whānau. It's just finding that one person and then relating it to Māori. It's just like having a pou in your life who loves and is passionate about that stuff.

I see this deep vision of wellness that our tūpuna hold for us. That's almost like unfathomable to think of all these layers being and to imagine the joy and the playfulness, the rest, and the generosity that exists in that vision.

When we do things well, and when we do things properly, we don't have to convince our rangatahi. That stuff is really cool because the world turns into a place for us to in relation.

Pakeke viewpoints

To create a kaupapa which is all focused around rangatahi, around taiohi, where taiohi become interns. So the college fees are paid for and there's a tuakana/teina relationship set up. So the food farming actually becomes incidental, because the main thing is about flourishing rangatahi.

They want to hear what koro's done but dammit, they want to do it! Get out there and it's awesome! You get the kids out there planting and it doesn't matter you might spend the whole day fixing it up.

Māra not only brings kai, good healthy living but also awakens all those things about Mātauranga Māori.

Create the space where rangatahi are completely safe taking on the responsibility to guard whenua, and guard our whakapapa and describe what it is that they know so that people can flourish and share the knowledge from the kete of Tāne Mahuta.

Our tamariki taiohi not only grew the kai and learnt about it but built a pātaka kai, a proper one. One of our whānau made one and our tauira were part of that growing kai, which enhanced their reo.

Kei ā tātou tamariki tonu, ētahi whakaaro mīharo rawa atu, that we as adults, as pakeke, don't have. Kei ngā reanga katoa he whakautu.

Soil and kai resiliency learning in kura and schools

Several mātanga suggested kura and schools be used more to provide soil and kai resiliency education to ākonga and whānau. Wayne Paaka (urban food security) believed it would take pressure off whānau stating; “People are too busy trying to pay the bills, so what we have to do is we have to incorporate them in the school system.” This idea was also shared by Raihānia Tipoki (regenerative farming): “Growing food needs to be more central to the education system as does normalising local food production in general.”

One kaikōrero noted, younger generations can be very disconnected from the kai production and not appreciate what it takes to get milk to the supermarket. To become soil and kai resilient, we must ensure youth understand what is involved including how healthy soil is vital to growing healthy kai.

So we need to take more notice of where the kai comes from. It's like asking the school kids, where does milk come from, and they say, the shop, and they've got it wrong. Most of them haven't seen the process of milk coming from the grass, to the cow, to the processing. This is a need to re-engage, to actually experience some of that so that they do get it.

- M31 (research/grower specialist)

Kura kaupapa Māori and kura ā iwi are particularly equipped to foster these matauranga Māori resiliency skills with whānau actively involved as M36 (whānau organic business) explained:

Our wharekura is a very good example. Where our tamariki [and] taiohi not only grew the kai and learnt about it but built a pātaka kai, a proper one. And so one of our whānau made one and our tauira were part of that growing kai, which enhanced their reo and it's a two way thing backwards and forwards and it really helped me ki te whakatau ngā tauira by having as part of their what would you call it curriculum? So it's an important part of their learning and that understanding. Because māra, as you know, not only brings in kai good, good healthy living, but also awakens all those things about mātauranga Māori. Ko wai a Rongo-mā-Tāne? He aha ōna mahi? He aha ōna pūkenga. Ko wai a Haumietiketike me ōna tāonga? So that really encouraged our tamariki, our tauira to not only be in the garden but also learn from other people who have been brought up and grown kumara...

- M36, (whānau organic business)

Some mātanga considered that training rangatahi in mahi māra in schools could involve rangatahi and their whānau using IT.

Better mobilising our rangatahi - they want technology and they want activity. And 'cause our kura are different schools. Because if you get a bunch of kids you get a bunch of adults that come with them so you automatically get the whānau support.

- Ron Taiapa (community education)

Some kura and schools have māra though research is needed to measure the impact of this exposure to mahi māra and workforce development strategies are needed for career pathways into paid māra work, entrepreneurial training, pathways for whānau, hapū and iwi roles as well as pathways for urban māra settings.

...you have to make it attractive. One of the projects I saw that I thought was really cool was incorporating IT into gardening. So somebody came up with an electronic garden. And what they did is they built a system, which you build, and you put it into your garden, and put software in... And I thought to myself, getting kids to be in a project like that, I think is a guide for getting them back into the garden.

- Wayne Paaka (urban food security)

My other role is to look after the Māori Pacific Trade Training scholarships in Taranaki so I work with rangatahi in that space and they're wanting to do the horticulture courses and I actually think they're way more open to it and looking at it probably more than our generation were... we all went to work for Māori Affairs...and those spaces... we didn't think about that stuff but I think that the up and coming generation are way more inclined to it.

- Melody Te Patu (Iwi kai initiative)

Data and Research

Alongside education, resourcing and information were highlighted as major enablers for soil and kai resiliency.

Good data and research aids planning so Māori are enabled to make evidence based decisions and can demonstrate support for their viewpoints. This is especially important when challenging kāwanatanga or any other organisations' positions as M25 (regenerative farming) explained:

...create a data lab and grow our own rangatahi, and start growing capability to do our own analysis for ourselves. What I got to see was government agencies take their gloves off and start fighting. Up until then they could hide stuff and bury stuff and do things that meant we never knew what was going on. But when you can put data in front that you can't argue with, they have got to find another way of stopping it.

- M25 (regenerative farming)

M25 (regenerative farming) also described how good research and the right information for an audience is imperative when advocating for soil and kai resiliency innovations to newcomers. They explained how when they first talk to some farmers about the economic benefits of regenerating soil before talking about soil health, their focus can be on economic bottom lines.

It's a journey of re-educating farmers ... we almost had to start with carbon, in terms of the carbon markets, to keep them in their economic headspace as we jump in there [because if you] jump straight to soil health system, they say, 'There is nothing wrong with my soil, what are we talking about?' But if you start from a wānanga about carbon and the opportunity to sequester more carbon through the types of land practices and soil health, and there's economic upside to creating space to go upwards from here.

- M25 (regenerative farming)

Wayne Paaka noted (in the context of discussing how enabling whānau to become more food secure can contribute to positive economic and health outcomes), the importance of longitudinal research about kai resiliency initiatives to better understand their impacts over time. As someone who has worked closely with food banks across the country over the past five years, they recommend research should start when projects start, over a 5-10 year timeframe.

Do a five-year and 10-year questionnaire saying, What changes have you seen? Are you still doing this? ... I think that something like this has to be done. Often, in the past, there's not enough research done at the right time. They do research after the fact. So I believe that us doing research, if these ideas come to fruition has to be done from day one, when these projects start.

Metrics and economic drivers for shifts

Some mātanga articulated that whenua derived wellbeing should be measured holistically, including economically. One mātanga recommended communicating with people in a way that enables them to take action was a key. Economic improvements could be a motivation towards regenerative farming and soil and kai resiliency.

This transition and adaptation programme needs to acknowledge that financial return and investment return profiles are as valuable and as important as our obligation to deliver on the various roles we have as Maori. So, what are the new metrics for this new operating model or system that recognises and looks after our land. These are the new characteristics or attributes or performance indicators that we'll be tracking on might be considered.

- Traci Houpapa (industry governance)

There is a need for more gathering of insights as initiatives across Aotearoa whānui flourish. The literature review in Part One of this report provides one collection as do the videos of speakers and contributors from the national wānanga, that is accessible online.

Learnings from Indigenous Soil and Kai Sovereignty Initiatives - Hawai'i

This section highlights a soil and kai sovereignty initiative by another iwi taketake from Hawai'i - MA'O Organic Farm on the island of O'ahu, Hawai'i. This initiative can inspire us here in Aotearoa as we work toward reclaiming our soil and kai sovereignty.

E ngā tuākana o Wai'anae, e hāpai ana i ngā mahi tūpuna, hei oranga whenua, hei oranga tangata hoki, tēnā koutou, tēnā koutou, tēnā koutou katoa.

MA'O Organic Farms Wai'anae, Hawai'i

International Indigenous Initiative

MA'O is one of the largest certified organic farms in Hawai'i, growing over 40 different varieties of fruits and vegetables. The farm enterprise is co-managed by youth interns and apprentices, feeding the community while receiving training and mentorship to become entrepreneurial community leaders. It also offers community education programs for 'keiki' - children to 'kupuna' - elders. The food they grow is sold through farmers' markets, Community Supported Agriculture (CSA) subscriptions, supermarkets, health food stores and restaurants.

MA'O Organic Farms is a social enterprise developed by Wai'anae Community Redevelopment Corporation (WCRC), O'ahu Hāwai'i to 'grow two of the community's greatest assets, the rich food-producing traditions of the region and youth who were not achieving their academic potential'.

MA'O Farms' mission is: 'We are building a future of māona, of plenty, by connecting youth and land through the daily practice of aloha āina, empowering youth to succeed in college and secure sustaining careers and growing organic produce that yields individual and communal vitality.'

Aloha āina means 'love of the land' and acknowledges that connection to whenua is essential to the physical, emotional and spiritual well-being of Indigenous people of Hawai'i. MA'O is an acronym for Mala 'Ai 'Opio,

which translates to 'youth, food, garden' and is an affirmation of their belief that when they restore the relationship between youth and 'āina, they restore ancestral connection to the land and foster an interdependence that returns abundance and prosperity to the community.

From: www.maoorganicfarms.org

Jessica's reflection on MA'O Farms

I am deeply inspired by Ma'ō Farms in Hawaii. It is an example to us as Māori of the potential for transformation in Māori communities around organic food production, rangatahi leadership, enterprise and education. Driven by the formidable leadership of Kukui Maunakea-Forth (Founder and Executive Director) and Gary Maunakea-Forth (Founder and Farm Operations Director), youth interns, partnerships with education and social agencies and philanthropic funders, they are beacon for restoring biocultural relationships with our Indigenous Food Systems. MA'O Farms has a long standing relationship with Te Waka Kai Ora and is the first Indigenous farm to become Hua Parakore verified outside of Aotearoa.

Leadership is about seeing when things aren't working and learning from others. I really believe, given the state of our current food systems and the never ending global precariousness and of course climate change we have to prioritise establishing alternative kai economies for ourselves as Māori communities and return to being gardens and growers of the epic proportions that our tūpuna were. What really left an impression on me was that rangatahi were at the centre of the food system at MA'O Farms and the healing aspect of having rangatahi return to the māra after so many generations displaced from growing due to on-going and everyday colonisation and land confiscation.

To have that return to the whenua be made by rangatahi was really moving and just made me feel very inspired about hopeful about the future of our food systems. During their hours each week, rangatahi are growing food, harvesting, packing the CSA boxes, selling them at market and they are able to take home plenty of food to their families that are intergenerationally living - it is a model that strengthens food security across whole communities.

So, how can we replicate this here in Aotearoa? What Māori communities have an interest in establishing a Hua Parakore Food Farm like MA'O and who will come to the party to fund this, including the capital expenditure to really get it going?

Māori-Crown Relationships

Over the last 180 years since the signing of Te Tiriti o Waitangi, Māori-Crown relationships have been a part of our landscape in Aotearoa New Zealand. Many Crown decisions over the period have diminished Māori influence over their soil and kai resiliency. However, given this complex relationship and what it has evolved into in the 2020's, there is potential for Māori-Crown relationships to enable exercise of tino rangatiratanga in the soil and kai resiliency space. This was noted by Edward Ellison (iwi governance/mahinga kai)

I think it is just that the Treaty didn't get its due recognition and the partnership didn't grow as it might have, I think, so we were left on the sidelines by and large. So, we've got a chance now back through the Treaty settlement process and plus legislation now being much more attentive to concepts like mana whenua. They have to talk to us now. We're able to talk about these things like the mana o te wai which they wouldn't have listened to 10 years ago.

- Edward Ellison (iwi governance/mahinga kai)

Tiriti Rights and Interests

Te Tiriti o Waitangi provides a framework for Māori-Crown relationships and how Tiriti partners engage with each other regarding

any kaupapa. It is the prerogative of each iwi and hapū as mana whenua to determine their soil and kai resiliency visions, and strategies to achieve them, and to determine to what degree it may involve the Crown.

Several mātanga for this research project are involved in the Māori-Crown relationship space. They commented that the Crown has obligations to: actively protect iwi and hapū soil and kai resiliency rights and interests; to actively protect natural resources and partner with iwi and hapū to manage them, and ensure Tiriti partners are properly resourced to develop their plans for soil and kai resiliency. Mātanga noted te Tiriti is an enabler to hold the Crown to account for its role to actively protect Māori interests as mātanga Anne-Marie Broughton (governance) stated:

... Our resources have to be protected by our Treaty rights and interests ... The Treaty is supposed to ensure that things like our water quality, biodiversity, air quality—all of those taonga—are managed appropriately, which they are not being, we know that.

The Treaty is the thing that is going to help us ensure sustainability and it all filters down. So that, to me, is the enabler and we have to make sure that we have critical actions in place to protect and preserve our taonga.

- Anne-Marie Broughton (governance)

A salient point raised by Jessica Hutchings is that iwi and hapū, and Māori communities generally must be able to act independently and set their own agendas. Resourcing iwi and hapū to achieve their own agendas and outcomes is not unfamiliar territory in recent years. Investment in Māori and mātauranga Māori initiatives will assist Māori to continue valuable revitalisation research of tikanga and historical practices.

One of the risks is having the government too involved in our food system. However in our Treaty relationship, they also hold the pūtea so it's very important that pūtea is released to enable Māori-led structures to be developed to support flourishing Maori food communities again.... I also do feel very strongly that it's a right under Te Tiriti o Waitangi that compensation or that space, pathways are made available to really enable Māori communities to restore our food farmers in our autonomy, our mana motuhake, our rangatiratanga around food and soil again.

- Jessica Hutchings (indigenous research)

M32 (Indigenous research) suggested a Waitangi Tribunal claim would be valuable to acknowledge and attempt to measure the impacts of Tiriti breaches regarding biodiversity. They also raised an important point regarding the lack of data on what species have been lost via Crown actions nor insist on the return of wāhi tūpuna and other natural resources in a good state.

It's always amazed me that we have had all these Treaty settlements without iwi asking for this biodiversity audit, without that connection of what we lost is not just te reo and cultural expressions, and blocks of land. It's all the species within the lands. The case of the loss of biodiversity, that state hasn't been fully expressed so I would like to see a biodiversity claim. It's different to what is external because it's a claim for all of our Indigenous flora and fauna, that we have been completely effed up through colonisation. We often in settlements, didn't ... insist that what was handed back, was handed back in a good state. A lot of what people have inherited is degraded.

- M32 (Indigenous research)

Tiriti Partnerships at the Local Government Level

Edward Ellison (iwi governance/mahinga kai) notes important developments at local council level in terms of iwi and hapū. It is at the local level that hapū and iwi are re-engaging with wāhi tapu, mahinga kai, and negotiating partnership with local councils to care for biodiversity. It can be challenging to work at local levels due to conflicts of interests, divergent priorities and cultural viewpoints.

...high country, ...low country, wherever we're talking - councils, high country farmers - you name it. We do have a right. We do have an interest in all corners. The whole place is ancestral land. And so we have this concept of wāhi tūpuna, putting those into the district plans ... We call it partnership down here. We say to councils, "Are you up for partnership?" We are really developing quite strong partnerships with these councils and they stand up and fight for us.

- Edward Ellison (iwi governance/mahinga kai)

Resourcing Kaupapa

The elevation of soil and kai resiliency requires financial and other support. This includes seed funding to enable kaupapa to evolve from great ideas to tangible activities. Such initiatives enable social entrepreneurship and create employment for whānau and community. Many initiatives can become self-sustaining. It is the critical early stages when kaikōkiri and their communities are developing projects where third-party resourcing for initiatives is critical.

Hollie Russell described here how funding from a local funding body enabled their organisation to create a durable, composting system.

We recently got funding to set up the awesome hot compost setup from Carbon Cycle. ...they're [a] pretty expensive setup. That's what has been awesome that it's really been community funded... Collaboration to make things happen in the places that they have. Yeah, so all of the carbon cycles, compost represents community collaboration between both not for profit, on the ground kaimahi, our agencies and funders.

- Hollie Russell (Kaiārahi, Taitokerau for Para Kore)

Research that is owned by Māori is also an area for resourcing. Better connectedness between funding sources and those who need them, and sustainable terms rather than short term funding is required for greater outcomes.

Funding, we need more funding... as it went away, all of those little gardens went away. So we need to better pay people to drive gardens.

- Pounamu Skelton (Hua Parakore education)

Data rich approaches to attracting funding may enable more self-determined Māori driven initiatives as described.

We looked at the climate crisis and looked at food systems and biodiversity loss and three of us founded a company called [name] to build an impact investment platform where we could disregard the breakdowns in government funding and contracting to get to those projects that work and so if we can prove that some of us mahi is actually making a difference for whānau and communities, then we should be able to attract funding that can get to those projects

- Lionel Hotene (Hua Parakore community initiative).

Collaborative funding is required so that Māori initiatives with limited resources can unlock partial funding, e.g. dollar-for-dollar or similar.

But we installed this about three weeks ago with funding that we were able to get from [community funder] ... They offered to fund up to 80% of compost hub and they can offer up to \$8000 towards a project. And so they asked that, 'sign up to that to provide the other 20%' which we were really lucky to receive funding from Parakore. Because we valued this mahi at Hihiaua we were able to put in some of our own pūtea as well to make the turbine which was cool.

- Hollie Russell (Kaiārahi, Taitokerau for Para Kore)

With much activity and funding being made available to address environmental and climate change challenges, it is important that funding is apportioned and directed through Māori eyes and influence, lest the funding be stymied from making the greatest difference and enable far-sweeping and immediate action.

...the Crown holds all of the resources, resourcing needs to be released to enable Māori to activate this. ... I think the idea of having some beacon farms set up and they're at different stages of transition is a really critical fundamental step because or else we're not modelling or walking the talk.

- Jessica Hutchings (Indigenous research)

Resourcing is explored more deeply in the following Barriers section. Recommendations for funders are also contained in this report - both for kāwanatanga, te ao Māori and philanthropic sources.

Summary of Enablers

Following is a summary of enablers of Māori soil and kai resiliency, drawn from diverse views of Māori including elders, youth, Hua Parakore educators and practitioners, Māori regenerative farmers, business owners and governance leaders in soil and kai spaces. Their grouped perspectives point to eight summary points:

Mana Atua

Transmission of ancestral wisdom and living from tūpuna knowledge were identified as a major enablers of Māori soil and kai resiliency. Inspired by tūpuna narratives and guided by bodies of knowledge including whakapapa and maramataka, successive generations are simultaneously grounded and buoyed by living as Māori, descended from and connected to atua.

Mana Whenua

Returning to Hua Parakore practices that restore the health of soil was considered vital. Access to and ultimately return of whenua were identified as high priorities to Māori. With access to land, Māori can live our tikanga in situ rather than in the abstract. Returning to tikanga and other rauora/regenerative approaches that restore soil resiliency is paramount.

Mana Tangata

One of the key enablers for Te Ao Māori to rebuild soil and kai resiliency is to foster Māori leadership in the sector in both urban and rural settings, and in pan-Māori and whakapapa-based groupings. Connect kaikōkiri with strong support networks (whether business or Māori communities) and funders will enable greater impact in their communities. It is vital to ensure Māori of all ages have opportunities to grow in their understanding and practise of mātauranga Māori pertaining to mahinga kai and to the environment generally.

Mana Rangatahi

Where accessible, rangatahi are very involved in mātauranga Māori revitalisation of mahi māra and mahinga kai practices. They desire opportunities to learn more regarding being good kaitiaki of Papatūānuku. As leaders of future generations, they must be key players in developing soil and kai resiliency initiatives for Te Ao Māori.

Data and Research

Data and research is needed to demonstrate the benefits of Hua Parakore and other soil and kai resiliency approaches, particularly for new audiences, and to enable Māori to share learnings from existing initiatives. Longitudinal research is recommended to identify impacts for Papatūānuku and Hine-ahu-one.

Learnings from other Indigenous Soil and Kai Sovereignty Initiatives

Indigenous initiatives from other whenua show us ways we can be more genuine in our claim to be kaitiaki. Our whenua and awa need a stronger voice for their interests. True commitment and a plan will elevate action for our daily lives. Transformation and a return to social enterprise can great holistic wellbeing.

Māori-Crown Relationships

The Crown has an obligation to actively protect iwi and hapū soil and kai resiliency rights and interests' and actively protect natural resources. Working together in Tiriti-honouring way could unlock greater opportunities and beneficial outcomes. This must be designed for and pursued proactively.

Resourcing Kaupapa

Coordination and long-term funding that is directed by Māori expertise and lenses is required to support soil and kai resiliency initiatives. Provisions from the land create one source of resourcing but third-party funding is required for far-sweeping and immediate action. Māori-led and directed use of such funds through collaborative findings and data can help the flow of resources where they are needed and effective.

Ngā mea tāmi

Barriers

We ask the question, **“What are the barriers to Māori communities building resilient and sustainable soil and food systems for themselves?”**

Below is a summary of responses common to the kōrero.

Intergenerational impacts of colonisation influencing Māori kai insecurity

Several mātanga, who presented at the national wānanga and those who were interviewed, described the ongoing detrimental effects of colonisation on Māori soil and kai resiliency, particularly the effects of land confiscation that severely limited traditional kai growing practices and created a dependency on capitalist, industrial food production and distribution.

So here we are stuck in a colonised framework, where success is measured in many ways that takahi the mauri of Papatūānuku, Ranginui, Tangaroa and Hinemoana. We've inherited this system of exploitation and extraction ... that's why we're in the situation that we're in today. And it also informs us about how these destructive practices have led the world that we live in to almost the point of what's been called the sixth global extinction event. And every year a staggering amount of life forms are driven to extinction.

- Mike Smith (climate specialist/Pou Take Ahurangi)

Environmental degradation

At a macro level, soil and kai resilience is broader than just getting food on the table and empowering new generations of Māori to grow kai. The ongoing destruction of te taiao by industry (which includes Māori actors) is risking the long-term kai resiliency of Māori and wider society. Action is required to restore the environment and increase Māori access to the conservation estate. This would enable Māori to access cultural kai that most Māori can not access, and thereby truly achieve resiliency.

The historic and ongoing felling of our native forests to make way for intensive farming, the spread of invasive animals and weed species and the push for fast carbon sequestering pine forest, and our native ecosystems in particular, our native ngahere are seriously under threat... I deeply question what it would mean for us as Māori to garden without our native ecosystems intact. My past self has dissected and reduced my garden from its wider relations. So while my personal garden appeared to be thriving, the wider ecosystem that held us was not well.

- Haylee Koroī (Toi Tangata)

There are too few farm advisors who are experienced in regenerative practices to advise on restoring soil health, the use of organic fertilisers and of maramataka in horticulture and agriculture. In a similar way that Māori have become reliant on supermarkets, the trend toward mega farms and large

scale horticultural practices has seen the disappearance of small scale family farming units and connection to whenua.

The difficulty really lies in the farm advisors; lots of them are tauīwi and going off the fertiliser song sheet ...'there's not enough' [fertiliser]... We don't believe that you have got to drop your cow numbers or what not in order to meet all the environmental things we can do without, but you've just got to bring in those practices that look after our soil and our animal health.

I think the fertiliser companies - it won't be too long before someone takes them to the Environment Court. I think what they've done is immoral. It's leading people to poison our soils. It's unethical the way that we source those nutrients from disputed lands in Western Sahara, Morocco. And it's immoral the way that they've completely tied the system up to have bad practice around soil testing and then recommendations of their own product. So that whole sector has to change. Absolutely, if we want to see change, that has to go.

- M10 (whānau organic agribusiness)

Health impacts

Mātanga at the national wānanga and participants shared accounts of negative impacts of the toxins used in agriculture and horticulture - on flora and fauna, land, waterways and on people.

I was 10 years in [town] so what started getting me going on this was a long time ago [town] had one of the highest cancer rates for children in the country. Everywhere you look there were sprays going on the fields on potatoes and carrots, on broccoli, on everything. And one day we had a tractor across the road doing spuds. The tractor was fully closed in and air conditioned and had a big filter on the back, keeping that cabin clean. The driver had a hood on with some oxygen coming in for clean air. And he was spraying that crop and two weeks later that crop was being listed to go to market and we're looking across the range, we're looking at our four little kids, looking at the death rates, cancer rates in that region going I don't want our kids to go out and spend another day here... We had just built a five bedroom house on 10 acres and we were like, we're out.

- M25 (regenerative farming)

I grew up just down from the road where they made agent orange in Taranaki. It was criminal what they did. They buried stuff that was deemed too toxic to spray on 'government' land and built state houses on it. People remembered the ground foaming in the 60s-70s... It was illegal for Americans to manufacture it there, so they did a deal with our government to produce it here. Lots of birth defects etc., and the soil toxified.

- He Whenua Rongo wānanga participant

Amongst all of this industrialised area are our Māori people living. We have a marae, we have a few marae in [location] ... The council has purposely put these areas where our people are, around whenua Māori... to displace us, to put us into places where our health and wellbeing is being jeopardised as opposed to others.

- Te Rua Wallace (rangatahi environmentalist)

Climate change

Climate change is now recognised as a major global issue that will impact all aspects of the way we live, including our soil and food systems. For this reason, climate change was a key topic at the He Whenua Rongo online national wānanga and was also raised in the mātanga interviews. Mātanga spoke of the impact on soil; the need to broaden our kai growing approaches and to plan for crisis scenarios.

The increasing frequency of weather events is impacting availability of quality soil and consequently, Māori kai resiliency. Social and economic disruption is very possible.

...soil is getting washed away every time there is a rain event. You can look at the soil, but the reality is you need to look at the climate as well, because that's one of the biggest factors on what's happening. So you know that tons of topsoil gets washed off, if it runs out to sea. It's a huge loss, it can never be recovered.

- M31 (research/grower specialist)

As Ron Taiapa noted, Māori and others will have to adapt our food growing practices to the changing physical environment.

We definitely should be planning for climate change and we should be stepping a little outside our straight mahinga kai and māra kai field and be looking at our taiao as an entity in itself and redeveloping our farms as ecological models - planting of slip faces and stream sides, and retiring some of the land that is not productive anyway.

- Ron Taiapa (community education)

They also described how one iwi is planning for resilience in worst-case climate change scenarios and advised that whakapapa and other relationships be strengthened now, to mitigate impacts should worst-case scenarios eventuate.

We should always plan for disaster ... We should be definitely divesting or diversifying some of our income streams into other areas for a little financial security. We in [Iwi] have quite a few holdings outside of our region - which is about mitigating risk. We've got a lot of common sense, we've got a lot of whānau relationships: just build on and strengthen them.

- Ron Taiapa

Mike Smith (climate specialist/Pou Take Ahurangi) is a long-time activist and advisor on climate change action. His strong and clear call to action was impactful during the national wānanga.

The Rauora Framework for climate change action is discussed in Part Three.

If we do not confront these systematic, historical root causes of the problem then all of our hopes and dreams of a better world will come to nothing. So it's not just a case of building the good, because the good hasn't been built fast enough to overcome the bad. So we've got to stop the bad while we're building the good as well. We need to uplift. We've almost got to weed the gardens and let the sunlight in, in order for our puāwaitanga to occur.

But it just didn't stop with pillaging the top of the land. The extractive economy then turned its sights to what's under the land and these are the mineral permits that are currently active, around our country; gold mining, coal mining, fossicking - you name it, it's happening and once again, unfortunately for our whānau in Taranaki, you have become the energy sacrifice zone for the motu and so you've got the dual problem of not only raupatu, but then the subsequent pastoral farming and its impacts upon the land, the creation of the chemicals required to support that industry - poison, then you've got all the oil and gas extraction and fracking on your whenua so you guys are copping it, as we all are. But living with a wahine from Taranaki I'm reminded every day when I wake up, "Okay, Mike, your job is to battle evil and work to help solve the situation now."

- Mike Smith (climate specialist/Pou Take Ahurangi)

Dependence on capitalist, industrial food systems

Mātanga acknowledged that Māori, like other Indigenous and lower socio-economic communities, can be exploited by corporate food interests that undermine food security by weakening local control over food production. Measures are needed to better protect Māori from this exploitation and ensure that access to nutrient-dense locally grown kai at affordable prices is incentivised and mātauranga Māori community based kai growing initiatives and other by Māori for Māori hauora initiatives, are properly resourced.

Further, the incentivising and normalising of nutrient-poor food choices through the abundant fast food options that surround whānau, coupled with the lack of access to land, power and resourcing within wider food systems, do considerable harm to land, waterways and the capacity to live as Māori. Keynote speaker Jessica Hutchings describes these normalised food activities as 'eating whiteness and eating colonisation in our everyday'.

Choices are limited and of low quality leading to higher levels of chronic diseases. This leads to more dialysis centres, or as we call them the ambulances at the bottom of the hill.

- Hineāmaru Ropati (Hua Parakore community initiative)

Māngere alone is like the mecca of fast foods. We've got three lots of McDonald's, 3 KFC's, bakeries on every corner, alcohol outfits next to the dairy, next to the school, or next to the bakeries... So we have all that, we have that type of lifestyle. One of the things that makes a big impact on all of us and this is why it's so important around kai... when you don't have access to really good healthy food, there are damages there.

- Hineāmaru Ropati (Hua Parakore community initiative)

There are only three spaces [where] fresh kai is known to be available in Māngere - yet every corner has a takeaway bar and a big chain corporation selling kai without mauri and whakapapa - we've got work to do.

- He Whenua Rongo wānanga participant

\$22 billion is the value of our supermarket duopoly. We have no governance as Māori in that system. We have no control in that system, we're merely the end users in an overinflated market that does destruction to our environment.

- Jessica Hutchings (indigenous researcher)

Apathy resulting from disconnection

Mātanga acknowledged lost connection to whenua and therefore our traditional food production practices. For most Māori, a dependency on industrial food systems and access to relatively inexpensive food can lead to complacency and apathy.

We've got a lazy mindset around food availability,... it just arrives on our shelves or on our plates ... we've lost that connection to food production.... we've lost our way, we've lost our social constructs that actually taught us how to be self-sufficient and how to look after ourselves when it comes to kai. We're living in a very different world now - the supermarket world.

We don't have that community of people around, don't have access to land. People don't have the skills, they don't have the time, they don't have the motivation. I think it's not valued as much by younger generations.

- Anne-Marie Broughton (governance)

It was acknowledged by several mātanga that although there has been exploitation for generations, Māori have not exercised duty of care for land and waterways by 'accepting and allowing' continued widespread agricultural industrial practices that destroy biodiversity and soil health, or at a whānau level, where Māori health could be better prioritised.

...we're all also abdicating our duty of care right now for our whenua and our waters in our inland and coastal areas. Because our responsibilities as we know [are] intergenerational to maintain our cultural integrity, the maintenance of our kawa and tikanga, in our reo and in what we do. Everyday we accept and allow synthetic nitrogen fertilisers to continue to be put on our whenua. Any part of our whenua across any of our islands is basically going to lead to this the perpetuation of the wars that we will have to struggle, our whānau going into a High Court. We've just got to make sure that we can remove this stuff as fast as possible and that will help exponentially I believe the transition... So it is vital that we actually become politically conscious and in that consciousness, how do we pull the levers? How do we put pressure... how many years have our tūpuna [been] fighting for us to be here? Kua roa te wā e whawhai ana mātou.

- Hinekaa Mako (Pou Take Ahurangi)

Whai ki ēnei rangi, kei te nui rawa atu te utu ki te hoko kai, mai i te toa hoko o Pak'nSave. Kei te nui rawa te utu mō ngā huarākau me ngā huawhenua. Ko te māngere noa iho pea tērā o ētahi o tātou. Kei te aro kē ki wētahi atu māpīhi, kei te whai i ngā mahi te mahi moni, kei runga i ngā rorohiko, kei ngā wāhi kē atu i tō kāinga.

(On to the present, the price of food from Pak'nSave is excessive. Possibly it is just laziness on the part of some of us. Some are inclined to other valued pursuits, searching for work reaping financial gain, on computers, at places other than home).

- He Whenua Rongo wānanga participant.

We do have global threats, but our biggest threat is ourselves, is that apathy and lack of action. Yes, it is climate change, but there's so much that can be done when it comes to protecting the diversity of our species. There is something that can be done that isn't subject to external factors. It's purely subject prioritising. I see ourselves as a bigger threat than the global market or the global... climate change situation. I'm more concerned about conflict because I'm almost certain that we're heading into a third world war and that's the other thing that's our other legacy we make for our descendants. So my role in life is just to be as good an ancestor in a generation of bad ancestors.

- M32 (Indigenous research)

There are a whole lot of others that think they are in dire need, but actually they're really well off. They've got their hand out. They grab it, give it a shake, but you say, "come down, put a shovel in that hand, bro, and you can get some food." You got to be really careful who you hand out to. There's definite genuine need - there's identifying that - and then there's what's perceived need and really what they need is a hand up, not a hand out.

- Ron Taiapa (community education)

As one mātanga noted that some whānau hesitate to receive kai from community māra and may not be aware that they can give back by working at the māra. Feelings of whakamā about receiving, lack of clarity about expectations of the recipients, uncertainty about what tikanga or kawa is involved if at a marae unfamiliar to them could also be contributing factors.

So there are community māra inside our communities, they are thriving, they are gifting away food, but because of our inability to understand what free food looks like, and the ability to koha time and aroha, other than koha off pūtea or trade of pūtea. That is stopping our community gardens from flourishing and from feeding more people.

- Kelly Marie Francis (charitable trust)

High-tech extractive food production

We have got to take action in terms of transforming the activity of that agricultural sector away from what they're doing, and more on plant based food systems, which is what we are here to talk about, because it's plant based food systems that are going to be the future for us going forward... And then the latest extractive industry, of course, is water.

These are some of the water consents that have been issued, that are being exported overseas at the moment. And in a drought-challenged world where global warming is occurring the last thing we need to be doing is, number one, polluting our water which the agriculture industry has just about killed every awa in the country. And if we don't have fresh water well, ka mate noa, korekau he wai, ka mate noa. [We'll simply die. Without water, we're done for]. And so, all our gardens, all our life, all our animals - everything, we don't have clean water.

- Mike Smith (climate specialist/Pou Take Ahurangi)

Kai resilience is absolutely distinct and different to production horticulture. Production horticulture is us using our land to grow money.

- Ron Taiapa (community education)

Access to resource and information

Lack of access to whenua

Lack of access to whenua including conservation estate land, was identified as a major barrier to rebuilding mātauranga Māori based kai resiliency. Mātanga noted how government policies were perpetuating the disconnection from whenua to the detriment of Māori kai resiliency.

We've got all this land around us, but we can't use it because it's locked up in policies and wars. - M36 (whānau organic agribusiness) Intergenerational trauma are consequences experienced by our people through colonisation and urbanisation. Our whenua was confiscated in 1863 by colonial forces. The land was then granted to settler families, our māra and pā were destroyed and replaced with European farming. Without our māra and whenua we experienced the loss of our economic base, cultural traditions, reo, and tikanga pertaining to mahinga kai which impacted our spiritual sustenance and wellbeing ... Our maunga were quarried away and our moana (our pātaka kai) was polluted through the establishment of the Mangere Wastewater Treatment Plant.

- M12 (mana whenua leader)

...Lack of space to grow kai at home. One statistic that sticks in my mind with this particular statement is the fact that Kāinga Ora are proud to be taking out 250 three-bedroom homes in Māngere alone and replacing them with 10,000 apartment blocks. Realistically what that is meaning is they are taking away our ability to own space, to have grass to grow gardens, to have a deck, to have multiple carpark spaces to increase the equity that we have within our lifestyles. But mainly what we'll be speaking to is the fact that we have not got the space to grow kai at home.

- Kelly Marie Francis

Lack of research

The lack of research on Māori soil and kai resiliency reflects inadequate government policies and practices across agencies that are embedded in Western global food system approaches that compartmentalise food production efforts and undermine community and Indigenous collectivisation toward food resiliency. Wānanga speakers challenged these barriers to whanaungatanga between Māori food and soil resilience actors and collectives while highlighting the broader vision of decolonising the food system.

The field is so under researched and so under invested in and I know all of you are working really hard in your home gardens, community gardens, marae gardens, as commercial producers. But we are not connected and that's the impact of the global food system that puts us into producers, the chemical inputs, the marketing, and actually our job in decolonising the food system is to restore those for whanaungatanga connections.

- Jessica Hutchings (Indigenous research)

Lack of funding

Mātanga at both the national wānanga and in interviews highlighted many exciting examples of kai, māra and soil initiatives developed by Māori that were successfully re-engaging Māori with mātauranga Māori based kai growing practices but they struggle to thrive due to no funding, being underfunded, or lacking longer term financial backing.

...how do we unlock access to funding for Māori because Māori had been kept out not only in education, but in being able to access funding to unlock some of those doors to be able to send our children away to university. And part of that and we found even though iwi have got some of their settlements back, how do we build from it? How do we unlock that, get it back to the hapū and eventually back to the people. Those are the challenges.

- M36 (whānau organic business)

Wayne Paaka (urban food security) noted that whānau with high food insecurity are negatively impacted when emergency assistance is not sustained by government or other sources.

A whole lot of local organisations gave more funding to them [foodbanks]. Because they say, "That's good. People are hungry. No excuses, you're getting them food." Only unfortunate thing was that the Government funding stopped at the end of the financial year. So they got their last funding last month, which will last to the end of April.

- Wayne Paaka (urban food security)

Sustainability of funding

Successful programmes struggle without sustainable funding. Many mātanga described how they or other successful Māori soil and kai resiliency initiatives that are meeting needs of Māori communities are struggling to gain ongoing finance streams to sustain or expand their highly demanded services. Lack of access to resourcing and time were barriers to employing staff, setting up business structures or charitable status, resulting in high reliance on unpaid labour, limited long term planning and service provision to more whānau. Resourcing for kaikōkiri to be able to work on soil and kai resiliency kaupapa as their main income source if they desire, would assist projects to better serve their communities.

We've done this all on the smell of an oily rag, but now the need is growing and we need more support as we grow. We need more people to contribute and join the development of a circular economy and zero waste. As success grows, so does the amount of mahi; needing more labour and resources; drivers, volunteers, partners and donations to cover costs and growth...

How is it that we've got these amazing projects on the ground that are unfunded or underfunded and projects that aren't working continue to succeed in getting the big funding and contracting models up?

- M25 (regenerative farming)

We do that by being supported by our community and also being supported by funders like Foundation North's philanthropy. It was initially really difficult for me to take funding applications on.

- Kelly Marie Francis (charitable trust)

What I see is that they're driven by a handful of dedicated unpaid people and kaupapa Māori organisations who are really passionate, who continue to stay in this kaupapa and try and move it along. And it's very hard and its flax roots organisation, it often doesn't have funding, and if it does have funding it is with the generosity of philanthropy.

- Jessica Hutchings (indigenous research)

Low trust levels impacts financing or contract opportunities

Some mātanga shared frustration about the barriers some Māori experience contracting with government agencies on soil and kai related initiatives. They identify lack of trust as an issue. It may also involve a lack of shared understanding of expectations and aspirations of the funders and contracting parties.

If a whānau in a little community on the coast somewhere says, "We are getting these amazing results but the government won't fund us because we don't meet their funding and contracting requirements"... Government has in the last 10 years been trying to have high trust contracting requirements, but none of them are high trust. We don't trust them and they don't trust us. Consequently we have seen too many delivery failures because of that breakdown in funding and contracting models.

- M25 (regenerative farming)

Lack of resources and resource shortages

Shipping delays from overseas and high demand for goods such as wood, seeds and plants nationally have resulted in ongoing resource shortages since 2020. It is possible that political instability overseas could also affect resource availability and prices. Kelly Marie Francis described how her social enterprise, Whenua Warrior, has been affected by material shortages:

One of the things that we've noticed about our market is that with COVID, it's delayed all the availability for materials, which includes the wood for our garden boxes, and the seedlings. Even Bunnings can't keep up with the amount of seedlings we need, which is 120-a-day and this is just our first set of this project. So one major thing we've learned about building 600 gardens and 600 homes, is that 600 is nowhere near enough. Every time we do one garden build, there's at least two more inquiries after that. To keep up, we have to support ourselves by growing our own seeds into seedlings and then sustain ourselves. Community-level charities have restrictions that multi-billion dollar corporations don't.

- Kelly Marie Francis, (charitable trust)

An unmet growing demand for educational resources for a variety of audiences at different stages of their soil and kai resiliency journey and mātauranga Māori resources in te reo Māori for Māori medium education was also noted by M31 (research/grower specialist). This also suggests a lack of kaupapa Māori researchers, writers, and resource developers.

... It's more at a local level... People wanted a resource and they wanted to understand the crops or the plants that they see... we need resource, like it or not, because there aren't the people to do (the support). We need the resources to help teach the young ones in some cases, what food is edible, but in other cases, what's happening with your crop? So we have a book on the kūmara pests and diseases so that people can actually answer some of the questions - they ask themselves, "What's happening here? What's eating this plant? or

What's the problem?" Once you get people on their journey of starting to ask those questions, and having the resource to carry them further down the path. So that's what those resources were about.

- M31 (researcher/specialist grower)

...An example of the growing interest because you've got this cohort of teachers now who want to start including the māra, including the maramataka, including those things in the experience in kura ... But most of them don't have the background or the resources around them to do it... That's not that they don't want to do more, they just need that resourcing as teachers so that's what they were doing. So we've done a series of webinars.

- M31 (researcher/specialist grower)

Lack of capability and capacity

My original journey started with the idea that I was going to go into homes and teach about maramataka and soil sovereignty, and the reality is whānau, that we're going into these homes to teach people how to take the seedling out of the pottle. We are nowhere near being able to individually learn the levels that we are discussing today and the levels that we are hoping to achieve over the next few years. We are literally at the point of starting with the seed.

- Kelly Marie Francis (charitable trust)

A major and underpinning barrier to Māori soil and kai resiliency identified by several speakers was the lack of recognition that resiliency requires a monumental shift away from western capitalist agricultural practices that are polluting waterways, land and disempowering all but a few people.

Linkages were made between toxic poisoning of whenua via industrial agricultural practices and adverse effects on Māori health status. Another described the resultant marginalisation of Māori when transnational companies have overt influence on social and economic conditions that government has little jurisdiction over due to their concentration of wealth. Another noted that many Māori still embrace this model of food production.

So it's not only our whenua, it's our water. As we know, there's been lots of mahi, Three Waters Reforms and things trying to look at how to protect our water, but specifically around the nitrogen balance in Aotearoa. We have worsened more than any other OECD country and that's primarily due to the expansion and intensification of the dairy industry at the turn of the century... Because, kei mate kē, and this is one of the most horrific and horrifying examples where our lands and our waters suffering that toxic poisoning is reflected - literally reflected in our illnesses carrying them, carrying our bodies.

- Hinekaa Mako (Pou Take Ahurangi)

If we look here, this is Rotorua's wastewater treatment plant, I don't know who thought this was a great idea to put it right next to our roto. And every year we see overflow from this that goes into the Puarenga Stream which makes its way directly into our awa... Amongst all of this industrialised area are our Māori people living. We have a marae, we have a few marae in Ngapuna... The council has purposely put these areas where our people are, around whenua Māori... to displace us, to put us into places where our health and wellbeing is being jeopardised as opposed to others.

- Te Rua Wallace (rangatahi environmentalist)

Lack of diverse kai growing

One mātanga noted that growers are not adopting approaches to crop growing or food production that align with seasons or naturally replenish soil.

We tend to become quite narrow. And people are not growing season by season. They're just growing certain foods that they like and so they have a very narrow profile of what they produce in the ground and so we tend to have lost the key to supporting Papatūānuku.

- M31 (researcher/specialist grower)

Governance

Constraining policy and legislation

Mātanga described many legislative and policy barriers to Māori soil and kai resiliency including inadequate protection of species (particularly indigenous species) and intellectual property rights. Māori control of their food systems, across the food production process have also been restricted as Anne-Marie Broughton describes:

... an issue that I see around Māori kai security is making sure that at the Treaty, policy/ regulatory level, we are protecting our species from exploitation ... so we don't lose our intellectual property to commercial bodies, foreign companies etc. A big issue for me is to make sure that our Treaty interests are protected across our food chain, and our intellectual property rights as Māori are protected... I don't want us to lose our rights to be able to use those resources, whether it's for our personal use or for commercial use. That's my view on that, I guess.

- Anne- Marie Broughton (governance)

As Edward Ellison (Iwi governance/mahinga kai) notes that conflict of interest and vested interests on governance bodies can present barriers to Māori advancement of their soil and kai resiliency.

At the local government levels, you're dealing with local politicians who are very much vested interests. In your regional council, the ones responsible for the RMA are normally dominated by the rural sector, who have a vested interest, like conflict of interest, but not shy about doing it that way. That's why the RMA has struggled as well. So it's very frustrating working with local politicians because there are good ones but there are those who don't even know that they're biased, bigotted and full of conflict of interest. So it's extremely frustrating working at the local level. You've just got to take it and carry on and carry on and be persistent. You've just gotta keep going. That's what our ancestors did, just ongoing.

- Edward Ellison (Iwi governance/mahinga kai)

Summary of Barriers

The lack of Māori in food and soil governance in wider food production and distribution systems along with a supermarket duopoly charging ill affordable prices (noting that the food prices have also been influenced by global instability accelerated by COVID, climate change and political volatility) leave Māori particularly vulnerable to food insecurity.

This summary of barriers to building resilient soil and kai systems have been drawn together from the diverse voices of Māori presented above.

Intergenerational colonial trauma and disconnection from te taiao

Intergenerational colonial trauma and disconnection is one of the fundamental barriers for te ao Māori in rebuilding resilient soil and kai systems is the myriad of impacts from intergenerational colonial trauma and on-going disconnection from whenua and te taiao. As Māori continue to be alienated from ancestral whenua, awa and moana as pātaka kai, and as Māori are still unable to grow food, disconnection from te taiao persists.

Environmental degradation

Rapid environmental degradation due to climate change, predators, invasive species, pollution, nitrogen based fertilisers and conventional agriculture are impacting the mauri of te taiao. When the mauri of te taiao is depleted this in turn depletes the mana of the people further disconnecting Māori from their environments. There is a clear correlation

between biodiversity loss and the loss of Indigenous knowledge.

Health impacts

Toxins released into the environment by industry, agriculture and food production impact food quality, the health of the environment and local community. Such practices continue to impact some Māori land and Māori communities.

Climate change

Climate change will disproportionately impact Māori and Pacific Island peoples. Māori must be resourced to plan for crisis scenarios and food growing in adverse conditions, and to urgently shift from extractive to rauora/regenerative living.

Dependence on current capitalist, industrial food systems

The lack of alternatives to the capitalist food system places many Māori in a position of dependency on industrial food production and distribution at the expense of developing localised soil and kai resilient Māori-led food systems. The current food systems is an insidious form of colonisation that does not uphold a mana atua approach to wellbeing to soil and kai resilience and thriving Māori food communities.

Disconnection resulting in apathy

Lack of access to whenua, awa and moana as their pātaka kai and not being able to grow or gather food at those places, heightens the

disconnection of Māori from ancestral lands and mahinga kai which can lead to apathy and reluctance to participate in mahi taiao.

Access to research and information

Many of the successful programs that are working towards soil and kai resilience with Māori communities struggle without sustainable funding. Low trust levels impact financing opportunities and a lack of capital funding is a significant issue in upscaling Hua Parakore food production that can feed communities. Kaupapa Māori organisations that take on leadership roles in this space are doing this outside of an infrastructure to hold the kaupapa.

Decades of under-funding in this area has had a negative impact on building Māori capacity and capability in rauora/regenerative practices. This is also a lack of Māori-led research in this area and a rangahau Māori strategy to address building of an evidence base that can support soil and kai resilient Māori communities.

High tech extractive food production

New methods of producing food are constantly developing. Food produced these ways may not directly connect the people eating them to Rongo-mā-Tāne, Hine-ahu-one or Papatūānuku, (to māra, soil, or the earth) so whether the kai has mauri is debatable.

Lack of infrastructure and required funding

Lack of infrastructure includes whenua, legislative barriers that perpetuate Māori

disconnection from whenua, inadequate resources (e.g. seeds, clean water, mātauranga) to enable Māori access to and control of all stages of food growth/production and distribution—from māra or mahinga kai to the plate, to the compost, to the māra, whether on small- or large-scale—and without reliance on supermarkets and the like. Whether workers in these spaces are paid at least a living or in-kind wage is an important issue here too.

Lack of Tiriti partnership and Māori decision making

There has been little work toward national Tiriti partnership development between kāwanatanga and iwi regarding Māori soil and kai resilience. Also there is a lack of Tiriti partnership across the food systems. Māori are not at food governance tables as decision makers. Constraining legislation continues to be a barrier.

Kāwanatanga-specific barriers

These barriers include: inadequate capacity and capability to work effectively with and for Māori aspirations for soil and kai resiliency; siloed activities within and between agencies; short term work planning cycles; lack of internal cohesion due to high staff turnover; too few Māori in senior kāwanatanga agency roles; siloed thinking, acting and resourcing for Māori soil and kai resilience within and between agencies; funding of Māori initiatives not determined by Māori priorities and values.

Kāwanatanga workshop

Purpose

Early on in the engagement phase of this research, we facilitated a wānanga with kāwanatanga representatives involved in soil and kai resilience-related projects, policies and programmes. An objective of the project was to understand the kāwanatanga landscape in order to reveal the structural settings in which soil and kai resilience is prioritised and funded. We also wanted to understand how Te Tiriti o Waitangi partnership is or is not being initiated and enacted to further ensure food secure futures for whānau.

The kāwanatanga wānanga held online on 17 February 2022 served two purposes: to bring together central government agencies involved in soil and food sustainability and resilience-related projects, policies and programmes to share their activities and hear from other officials who are working in this space; and to inform government agencies of the He Whenua Rongo research. Ultimately, it was envisaged that this engagement would facilitate the beginning of stronger government agency coordination with potential for collaboration across the sector, to better enable Māori soil and kai resiliency aspirations.

Method

The interactive wānanga was attended by 25-plus officials from across 10 government key agencies together with Papawhakaritiorito Trust, Te Waka Kai Ora and Aatea. Agency

representation included two agency principal advisers with others working on food safety regulations, science policy, food policy, sustainable food systems, long term environmental monitoring, soil health, Māori community resilience, food security, Wai 262, and regulatory regime for organics. In addition to learning about He Whenua Rongo, agencies shared about their Māori soil and kai resiliency programmes and projects and identified barriers and ideal future state for agencies to better enable Māori food and soil resilience.

Kāwanatanga findings

Siloed and ad hoc approaches to supporting Māori soil and kai resiliency

The wānanga confirmed that while there are many pockets of activity in the Kāwanatanga space that contribute to Māori soil and kai resiliency, the projects are largely ad hoc and siloed. There is little oversight, strategic vision nor a lead agency that can provide an all-of-government approach to support Māori soil and kai resiliency. All projects were short term (three years or less), some were partnerships with iwi. Very few involved hapū.

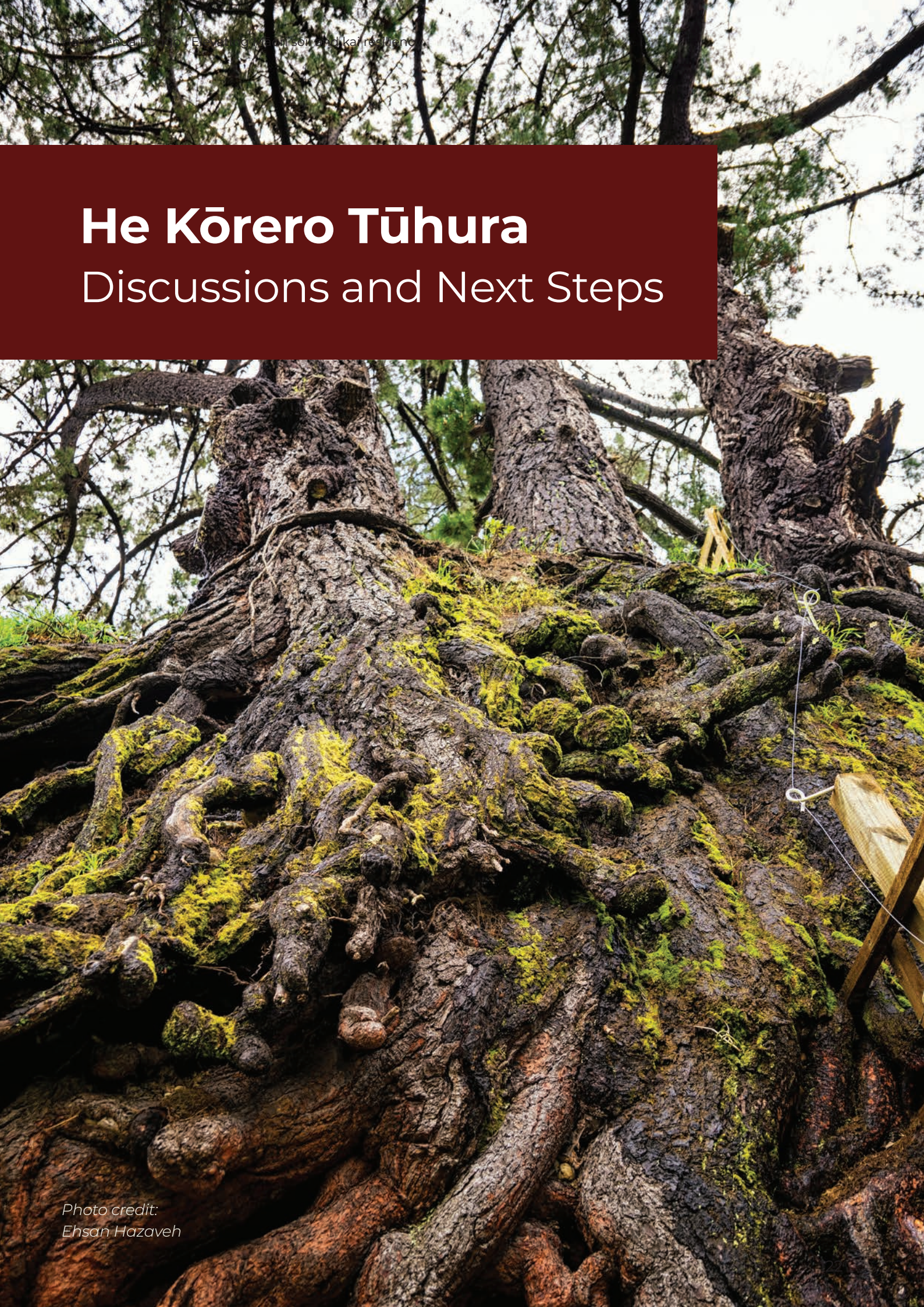
Crown agencies: Ideal future states to enable Māori soil and kai resiliency

To achieve the 'ideal future state enablers' below will require considerable planning, coordination and more resourcing within and between agencies. Major shifts in approaches should be co-designed with Tiriti partners, iwi and hapū with urban Māori involved in codesigns affecting them. The primary focus would be that Māori are enabled to drive their for Māori by Māori soil and kai objectives.

	Barriers	Ideal Future State Enablers
Engaging with Māori	<ul style="list-style-type: none"> • Lack of Treaty analysis capability • Lack of experience working with whānau and hapū. Historically had worked with iwi authorities and trust board levels • Lack of government agency coordination resulting in Treaty partner engagement exhaustion • Lack of capability/capacity to engage appropriately with whānau and hapū/iwi • Lack of strong relationships with Māori that can lead to better discussions and outcomes • Balancing equity and ministerial priorities • Western science vs mātauranga Māori. Lack of awareness of the latter • High staff movement to other agencies not helping to build relationships with Māori • “Short-termism”: work programme focus too short (three years). Frustrating for agency staff and more so Māori 	<ul style="list-style-type: none"> • Strong Treaty capability • Stronger Treaty relationships not based on case by case by across government • Use regional offices to engage locally as they hold the relationships • Nurturing mutually beneficial relationships • Building mātauranga Māori capability of agencies’ staff so not dependent on a few knowledge holders • Long term planning not constrained by government cycles and timeframes • Ability and processes in place to engage at whānau and hapū level • Government enable iwi and local initiatives • Enable Māori-led research in the sector • Connected ecosystem with lots of relationships who are leaders in the sector, in Māori communities • Nurturing mutually beneficial relationships based on trust and respect • Agencies “get out of the way” - quoting Ngahiwi Tomoana
Authorising environment	<ul style="list-style-type: none"> • Shifting attitudes of decision makers • Don’t have Māori at top table (though currently recruiting) 	<ul style="list-style-type: none"> • Te Waka Kai Ora/Hua Parakore must be involved in tikanga being attached to organic standard • Māori in decision making positions • Support and empower Māori to determine their own solutions

	Barriers	Ideal Future State Enablers
Cross-agency collaboration	<ul style="list-style-type: none"> • Siloed thinking within and between agencies • Different priorities within and between agencies and ministers • Huge resourcing issue to connect time and funding resource. How to collaborate under these pressures? 	<ul style="list-style-type: none"> • Clear platform for sharing mahi being done by agencies on food and soil systems • All agencies working toward shared outcomes • Clear understanding of government’s role in Māori food systems - not adhoc across 30 agencies • Local and central government collaboration and support. Local government enabled to support and fund whānau, hapū, and iwi community food systems • The public service has good Treaty capability
Policy settings	<ul style="list-style-type: none"> • Lack of holistic thinking • Rush of policy development hinders true and meaningful engagement with Te Tiriti • Need for greater understanding of the complexity of Māori producers • Strong export focus • Lack of long term thinking. How do we shift from immediate needs • Food systems is a new conversation globally working with Indigenous peoples struggles to get traction in the UN. 	<ul style="list-style-type: none"> • Acknowledgement and recognition of kaupapa Māori, mātauranga Māori in policy settings • Provide evidence approach combined with mātauranga Māori to incorporate both
Funding	<ul style="list-style-type: none"> • Māori values not reflected in funding approaches • Funding mechanisms not well framed for Māori-led work • Systems not framed to support Māori-led work • Lacking Māori-led processes • Inequity in funding decisions • Māori growers have poor access to funding/loans • Rural Māori especially impacted and restricted by funding application timeframes. 	<ul style="list-style-type: none"> • Partnering with iwi • Have more stable (longer term) funding • Support available to Māori applications so they have access to funding systems • Devolve and trust Māori receiving funding

Figure 6: Kāwanatanga: Barriers and ideal future state enablers for Māori soil and kai resiliency



He Kōrero Tūhura

Discussions and Next Steps

Photo credit:
Ehsan Hazaveh

Introduction

Part Three of the report has three main sections: key themes to emerge from the kōrero and mātauranga presented in Parts One and Two; a visual map of diverse Māori food system actors; and possible future pathways for soil and kai resiliency practices that draw on kōrero from He Whenua Rongo interviewees and wānanga participants.

A central aim of He Whenua Rongo was to identify the enablers and barriers to resilient Māori soil and food systems. To recall a definition of resilience noted by a wānanga participant, “Resilience is a system that is put in place to strengthen action against the negative unforeseen circumstances, and to recover quickly from issues that arise”. Strengthening possible action is a key component of the emerging themes discussed below, as is the underlying need to act quickly in the face of our current soil and kai resiliency emergency.

The key themes include: the colonial legacy that still shapes our current extractive, industrialised food systems as well as the hopes held for more rauora/regenerative and Māori-led soil and food practices and norms to prevail; the difficulties of enacting change and for Māori, by Māori approaches required to ensure Māori-led food and soil futures; the importance of a diverse and fluid approach to support initiatives at multiple levels (including individual, whānau, hapū, iwi, regional and national scales); the infrastructure needed to bring communities of interests together

as well as expertise, leadership skills and “best practice” exemplars that will help actively shape and help hononga the next generation of soil and kai resiliency advocates and actors. Crucial too, is the theme of evidence-led best practice and the importance of showcasing and implementing Māori-led soil and food resiliency practices. This section of the report also gives visual expression to the diverse and multilayered nature of soil and kai resiliency practitioners and practices.

The future visions expressed in the kōrero gathered by He Whenua Rongo kōrero suggests that this future is intergenerationally connected, strengthened by its diversity (as visualised in the ecosystem mapping graphic) and by the shared mātauranga that helps shape daily practices that affirm the sovereignty of te taiao and the role of tangata in that realm.

Key Themes



Transitioning from extractive economies to rauora/regenerative economies - connecting soil and kai with the global climate emergency. Extractive economies and production systems are creating irreversible impacts on our climate and environment. Food production systems and conventional agriculture are one of the largest global extractive economies and are the biggest contributor to biodiversity loss, soil degradation and self-determined food security and localised food systems.

The history of extractive economies is deeply tied to global colonisation and the expansion of colonial ideologies through capitalism. Capitalism was a necessary item in the toolkit of colonisation, requiring inputs or labour, in the forms of slavery, children, and Indigenous Peoples and their environments.

He Whenua Rongo notes the very clear connections between the climate, soil and kai emergencies and the origins of these emergencies as rooted in colonialism. Yet the ongoing impacts of colonisation are not the only stories told here.

Kōrero in parts one and two also shine light on existing kaupapa-centred business models that embed Māori commercial activity within sustainable ecosystem processes; regenerative food growing practices that heal the heart as well as the whenua; the enduring practices of tikanga, kawa, and kaupapa that will help to shape and safeguard our soil and kai resilient futures.

Willingness (and capacity) to change

There is diversity amongst Māori views on ways to support soil and kai sovereignty. Change needs to happen on multiple levels before systemic shifts are achieved in ways that elevate soil and kai resiliency.

The diversity of Māori views on these matters will be our strength as we prepare to shift from extractive to rauora/regenerative economies. Imaging Māori-led soil and food futures first requires a change of mindset in the farmer, grower, producer, governors and trustees - indeed, any participant in our current food system. These changes to mindset need infrastructural support, including role models and mentors to support and inspire change; best practice examples; curriculum dedicated to soil and kai resiliency; community connectedness.

These individual shifts need to be supported by, and reflected in, wider social and institutional changes. For example, many Māori farming practices still use pesticides and chemicals which are acceptable norms for most New Zealand farmers and growers. Shoppers at supermarkets accept that their fruit has been sprayed (or are unaware). In order to encourage change within individuals and then wider communities, we need compelling evidence, told in engaged and meaningful ways, that can transform information into action. What if a conversation about the use of pesticides began with the idea that this is an 'add on' approach that views te ao tūroa as in-deficit and requiring inputs?



Shining light on kaupapa Māori soil and kai practices and champions can help shift the default acceptance that Papatūānuku deserves to absorb such toxic inputs.

Hua Parakore and organic regenerative Māori producers are the champions in our food system leading the way for what was once seen as alternative practices that have now become normalised. Allies in the para kore and rauora sector are also invaluable supports that could work with soil and kai resilient initiatives.

For Māori, By Māori with Māori Solutions

It is clear that Māori are seeking Māori-led solutions and that for Māori, by Māori, with Māori solutions work in ways that contribute to the transformation of communities. This means that Māori are best placed to develop their own solutions to the soil and kai emergency and these efforts need to be funded, elevated and evaluated to ensure the solutions are effective and the funding impactful.

Māori solutions to funding is also an opportunity for coordinated approaches to investing in soil and kai resiliency action, research and impact evaluation from a mātauranga Māori perspective. Iwi entities can also coordinate more with community-led initiatives and seek ways of investing in their existing, successful soil and kai kaupapa.

Highlighting iwi kaupapa that are supporting their people in this way (for example, and not limited to Ngāti Whātua o Ōrakei) may enable more iwi investment, or Māori land trusts investment back to replenishing soil and strengthening Māori food systems and kai resiliency.

Rangatahi Leaders and participation in growing food communities

There is an immediate need for accessible and empowering paths for rangatahi to reconnect with soil and kai. Normalising these relationships through education, resource development, access and mentoring is key to ensuring mana-enhancing succession.

Activation must also enable rangatahi to connect to communities, including pou tuākana, hāpori, and other rangatahi. We live in a time of hyper connectivity, yet we suffer disconnection and isolation. Grow experiences that amplify authenticity and joy!

The utmost importance for growing rangatahi participation and leadership in growing Māori food communities is re/ connection to whakapapa including self. By doing so, rangatahi will develop and deepen relationships with atua, tūpuna, whenua, and subsequently, soil and kai.



Regional Leadership to grow Maori food communities

Working on a local and regional scale is what will make the most difference. This does not diminish the need for Māori-led national bodies like Te Waka Kai Ora. Rather, it emphasises that soil and kai resiliency happens in and with communities and on farms and in māra and through at place participation. Change can happen rohe by rohe, paddock by paddock and it is through the development of regional and local Māori leadership with an emphasis to grow Māori food communities that this can be enabled to happen.

Need for infrastructure to support soil & kai sovereignty

Infrastructure necessary to support soil and kai resilience includes the physical, the economic, the educational and the social. Growing kai is not an end in itself for Māori, it is the doing and the sharing of these activities that helps build greater resiliency for tangata, mātauranga Māori and so whenua.

The social aspects of supporting soil and kai resilience include learning and education programs, the establishment and ongoing support of member-based organisations (including the Hua Parakore verification system), the development of skills, expertise, and leadership capacities and the fostering of partnerships and collaborations.

More physical, organisational and economic infrastructural needs include support for Māori-led seed-saving and soil-testing systems, rauora land development projects, expanded Māori-focused research funding opportunities as well as hui and wānanga to continue to enrich our understandings of emerging practices that contribute to greater soil and kai resilience.

Urgent need for cohesion and coordination across Māori soil and kai resiliency kaupapa

The current capitalist food system thrives on a fundamental disconnect between tangata and nature, yet there are many existing Māori-led practices and entities that are creating alternatives to this system.

Targeted, coordinated and resourced action is needed to disrupt and dismantle the silos and harness the learnings of existing initiatives. Identifying and creating cohesive and connected Māori food communities remains an imperative.

Coordinated alliances across existing silos will enable the flourishing of new projects and leaders and will help whānau to access the existing and emerging mātauranga Māori needed to secure Māori-led soil and kai futures. Bringing like-minded organisations together will help to avoid the duplication of efforts and has the potential to produce more effective use of resources and more strategic approaches to resilient Maori soil and kai systems.

Evidence-led best practice

Collecting compelling and comprehensive evidence of best practice will support the changes necessary to achieve greater soil and kai resilience. Research related to soil and kai resiliency is an emerging field and needs to be elaborated by ensuring that we capture the learnings along the way from the myriad of existing kaupapa Maori initiatives.

Elevating existing and emerging mātauranga around these issues will amplify, and lend authority to, Māori worldviews and norms, and will help reset assumptions about the role of soil and kai in the everyday. The existing research around climate cha

nge, food insecurity and resiliency highlight the importance of Māori-led solutions derived from the mātauranga of tūpuna in the wake of colonisation. Support for research that showcases the current and future soil and kai innovations led by Māori is a necessary next step to re-imagining what our food and soil futures might look like.



Eco-System Mapping

Te ao Māori utilises art forms including tukutuku, raranga, kōwhaiwhai and whakairo and their connecting threads, fibres and patterns—to represent narratives: whakapapa, stories, lessons and aspirations for the future.

Ecosystem mapping is similar as it depicts how groups connect as part of an ecosystem. Ecosystem maps show us who is (or could be) involved in a kaupapa, and where we most urgently need to build relationships. This ecosystem map was informed by the findings across the whole project and can be used to:

- identify opportunities for diverse Māori food system actors to participate in discussion about sustainable and resilient Māori food systems, both with and independent of kāwanatanga agencies, with all parties building their own understandings of sustainable and resilient Māori soil and food systems.
- strengthen connectedness across the Māori food system, including building Māori communities of interest about sustainable and resilient food systems
- strengthen connectedness across the Māori food system, including building Māori communities of interest
- identify where Māori have/do not have access to kai.

The Māori soil and kai ecosystems map illustrates how far reaching the Māori soil and kai resilience ecosystem is. The green coloured bubbles denote the many Māori soil and kai related groupings involved in the ecosystem. The centre of the graphic signifies a space for collaboration between any combination of Māori groupings with others within the ecosystem, and symbolises te ao hurihuri; ongoing movement, change, adaptation in calm and dynamic times, for the benefit of collective Māori soil and kai resiliency.

A wide range of Māori and allied organisations are represented in the ecosystem map who contribute to Māori soil and kai resilience. Some of those organisations take different food growing approaches that include use of pesticides and herbicides. Their inclusion acknowledges the diversity of Māori participants in the soil and kai resilience ecosystem, and that common denominators exist independent of a stance on pesticides or herbicides.

Common denominators such as being Māori; connecting to whenua; desiring to exercise tino rangatiratanga - to be Māori-determined and led; upholding Māori values such as manaakitanga and whanaungatanga; and upholding tūpuna practices to some degree. As growers of kai they have access to whenua and may eventually adopt Hua Parakore practices upheld by Te Waka Kai Ora-verified growers—especially if supporting information is accessible and relationships formed that

Māori Soil & Kai Ecosystem Map



Figure 7: Māori Soil and Kai Ecosystems Map

FOOD SYSTEMS ACTORS

influence their practices. He Whenua Rongo seeks to encourage alliances and shared visions for Māori soil and food resilience and to not fall into siloed thinking and working.

Whilst the He Whenua Rongo ecosystem map is inclusive, it prioritises organisations and individuals (tāngata kōkiri) with expertise who are on a Hua Parakore journey. A distinguishing characteristic of Hua Parakore advocates is that they consider restoring soil health without pesticides and herbicides as critical to developing premium soil health and resilience, which in turn contributes to the health of all of

MĀORI KAI & SOIL RESILIENCY ACTORS

the environment including, people, animals, insects etc.

It is well documented that synthetic fertilisers and pesticides can result in soil degradation which destroys. Research shows that the Hua Parakore tikanga (along with Western organic, biodynamic and permaculture practices) are the best practices to ensure premium soil health and soil resilience. These tikanga acknowledge the connection to atua/tūpuna, including Hine-ahu-one and the essence of our relationship as people, to Papatūānuku.

Visions for Resilient and Sustainable Māori food systems

This section discusses future pathways for Māori soil and kai resiliency practices as voiced by mātanga at the national wānanga, and interviews. They were asked, **“How would you describe resilient and sustainable Māori food systems?”** Most mātanga resoundingly agreed that such systems would be embedded in tikanga and mātauranga Māori - practices based on intergenerational observation of te taiao and the cycles of nature.

As Edward Ellison, (iwi governance, mahinga kai) explains, an important part of a resilient and sustainable Māori food system would involve people knowing and following tikanga that ensures sustainability of kai. He notes that tikanga and council regulations are not always aligned as there are good reasons for tikanga based on understanding a species and te taiao, from observations over many generations.

Coming together as a community resonated with many of the mātanga. Sustainable Māori food systems would also involve returning to communal living such as papakāinga living though as Raihānia Tipoki notes, it may be a matter of necessity as the impacts of climate change and economic and social conditions adapt.

The collectivism of Māori was also acknowledged in that while having an abundance of kai is a major activity of a resilient Māori food system, the act of working together as whānau, hapū, iwi and Māori communities and sharing kai is as essential as the kai itself.

It is important that resourcing for Māori food systems also invests in the social aspects of redeveloping Māori resilient and sustainable food systems.

Resilience and understanding how nature works, understanding when to take and when not to take. There's the natural rāhui that should apply... it's understanding the tikanga around particular species and when to take. A lot of those things about protecting, so that the next season would be just as good as the last.

- Edward Ellison (Iwi governance/ mahinga kai)

...getting our whānau Māori reconnected with the land, back onto the land. I think that's the biggest challenge for us. If you look back in history, it's quite clear how the Crown was able to disconnect us. It's a cornerstone of colonialism - disconnecting the people from the land so the land can be taken.

- Raihānia Tipoki (regenerative farming)

Māori soil sovereignty for me is about stepping outside of colonial capitalist paradigms so we have total agency, mana motuhake over the system in which we choose to produce food... people are coming together. And some of those people have knowledge around māra kai and others often don't, but it's really about coming together as a food community because we're not meant to just grow food for one or two or three people.

Growing food is hard work. It takes a long time and it takes skills and knowledge. The amount of effort you have to put into actually being food sovereign, for a small household, it's a lot of effort. You have to really plan out.

- Jessica Hutchings (Indigenous researcher)

The importance of mana motuhake, autonomy and agency over gathering, growing and distributing kai is also part of the collectivism of Māori, and connects too, to our capacity for manaakitanga. Consistency of access to land and resourcing are major components of a resilient Māori food system, as is the capacity to innovate and trial alternative soil and kai practices.

I think the basic thing is that our whānau need to be able to feed themselves. So we already have systems like here in Waitara ... intergenerational fishermen ... So it's already a system that works. Doesn't need any fisheries or anyone. So it's ensuring they are teaching the next generation - when, how, using all the signs that are the maramataka. Hunters get pigs and deer. They go and get the meat that often ends up on the marae tables.

What's not happening are bigger māra kai because we've got no land, right? Got nothing to grow on.

- Pounamu Skelton (Hua Parakore education)

For me personally in terms of sustainability and resilience, I would love to see all our people have a garden. I'd love for us to have spaces in our own homes or community spaces...I've got to say Taranaki is brilliant at it. They're all over the place up here. It'd be really nice to see that spread out further. And you see the benefits and you see how it works. And not only are you learning to grow this kai but there's so much more learning that happens.

- Melody Te Patu (iwi kai initiative)

Resilience and sustainability are two things. Resilience, you can build that up through your whānau, hapū, iwi. And then sustainability, you do that by consistently solving that person's problem, not everybody's problems - that person's problem.

- Kelly Marie Francis (community charitable trust)

He uaua te kite i te rerekētanga [o ngā tukanga Māori ki ngā tukanga a iwi kē] nā te mea he nui ngā kai nō tāwāhi kei te tipu i roto i ngā māra kai ... tae noa ki ngā hua rākau me ngā mahi whakatupu kai. I muri mai o te mahi whakatupu kai i roto i ngā paddocks, i whakatūria e mātou he no-dig garden! We weren't going to be out there weeding it like they did! We laid hay on it.

Kei te whakaaro au mō aku mokopuna i tēnei wā tonu, me whakatipu kai ahakoa te momo; koinā te take i whakamātauria e mātou te whakatupuranga o te quinoa, te amyranth me ērā atu momo kai.

It is difficult to make a distinction between Māori systems of growing

kai and that of other peoples because there are numerous techniques from overseas used by our grandparents for growing kai in our māra... for example, fruit trees, corn, alongside Māori growing practices. After working in huge paddock cultivations, we decided to set up a 'no dig garden!' We weren't going to be out there weeding it like they (our tūpuna [who had large numbers of workers and were solely focussed on mahi māra - as per M38's kōrero]) did! We laid hay on our māra, making it much easier to manage. At this time I am thinking of my mokopuna and the need to just grow kai, whatever the kind; that's why we trialled growing quinoa and other kai to explore what types of kai are possible to grow in our backyard.

- M38 (mātauranga Māori)

If future soil and kai resilient systems are embedded in tikanga and mātauranga Māori, then the realm of ngā atua will play a significant part in shaping Māori-led soil and food pathways. While mana motuhake, innovation and consistency are important to future practices, these practices will be informed by the care and responsibilities we have to Papatūānuku firstly. We also need to be able to see the future from the longitudinal viewpoint of Papatūānuku, as our tūpuna once did.

The reality is, we need to place ourselves appropriately in this space, and it should always be Papatūānuku first because she will be here for all those future generations. We won't be; we are transient. And that's a change of head-space for a lot of people.

And similarly, when you look at people doing projects, and they're wanting to tick boxes and different things, and in all those things need to be tangible, I guess for the people who's funding it or whatever it might be, but the reality is, we should be primarily looking at: that there's no negative change in Papatūānuku.

We may not see a change forward straightaway, you know, because everything has a short term approach. Now, people would approach it with a one year, two year, sort of view, and no further, we won't see the gains, in that short term, you need longer.

That's why we have kaitiaki; that's why we have those people who are familiar with their landscape so that they can observe the change as it comes through the times.

- M31 (researcher/specialist grower)

So we need to be Papatūānuku first, we need to recognise the value of the foundation for our kids that they need to feel the whenua. They need to see all those elements that are a part of the cycle. See that weeds are not weeds, they are just part of the cycle of the whenua. They need to know what role they play, they feed it, or they break the soil down. The kopakopa, for example, helps break up the soil, but it also provides rongoā, etcetera, etcetera. So we need them to look at those resources with a new set of eyes, that allows them to value it in a way that the older, the old people did. I think we need to resource it.

- M31 (researcher/specialist grower)

Firstly, that we are recognised as Māori land owners, land managers and land users... that we use our land for food systems in a way that's best suited to that land at that time, and that we are really open to change. - Traci Houpapa (industrial governance)

At a whānau level, I think it's being able to have the knowledge, the skills and the resources to be able to sustain your whānau. At a systems level or policy level, it's about ensuring our values, our aspirations and needs are catered for and protected so that we will always have access to those resources that enable us to have kai systems and kai resilience.

- Anne-Marie Broughton (governance)

Whānau-centred production systems focussing on village wealth, not individual wealth, I reckon that's key. Some Pākehā said years back, 'We must crush this unholy communism,' talking about how we used our land. Individualised land cut the connection between people and that effectively crushed our wealth in a really subtle and insidious way. Bring back whānau-centred production, multiple ownership.

Organic, obviously - I love the Hua Parakore, but sustainable and resilient because it's centred on growing kai and people, not just money.

- Ron Taiapa (community education)

Resilient and sustainable soil and kai systems would also operate within a wider culture where Māori values, beliefs and worldviews were recognised and responded to by an informed Tiriti partner.

Colonisation has contributed to current soil and kai conditions and the dismissal of Māori knowledge is part of this history. Developing resilient and sustainable practices will require the continuing disruption of norms set by capitalist cultures and the elevation and amplification of Māori values, aspirations and beliefs.



Visions for Resilient and Sustainable Māori food systems

Rauora means abundance and is the key concept underpinning the framework developed by Ihirangi, a foundational group of Māori climate and environmental experts. Ihirangi's core work is to empower and increase the capacity of whānau, hapū, and iwi to engage proactively in climate change mitigation and adaptation through the provision of robust, comprehensive and relevant data, information and analysis.

Ihirangi engaged with the Ministry for the Environment ('MFE') and developed an Indigenous Worldview Framework to underpin the National Climate Change Adaptation Plan (NAP) and this document is a useful touchstone for thinking about soil and kai resiliency within the wider context of climate change.

Employing an Indigenous worldview to frame the policy response to climate change is an investment in a cultural shift model which could also benefit soil and kai resiliency aspirations.

Taking a complete systems thinking approach, the Rauora Framework centres Māori

worldviews and privileges interconnection, collectivity, holistic understandings of wellbeing and intergenerational equity.

So what we're trying to construct at the moment is a Rauora Framework which is based on whakapapa mai i te tīmatatanga, mai i Te Kore - heke mai, heke mai, heke mai, tae noa ki tēnei wā - the interconnectedness of everything that we know that our tūpuna have told us - Te Ao Tūroa, and all those things that keep us alive from the natural world - mai te kaitiakitanga o ō tātou atua and how we must respect the tapu and the mauri of that realm, that we have to work together in cooperation and the whole purpose of this activity is whenua ora, tangata ora, mauri ora, and that's the outcome and that's what we're looking for. And so it requires rangatiratanga that we will mahi tahi in some form of deep democracy.

- Mike Smith (climate specialist/Pou Take Ahurangi)

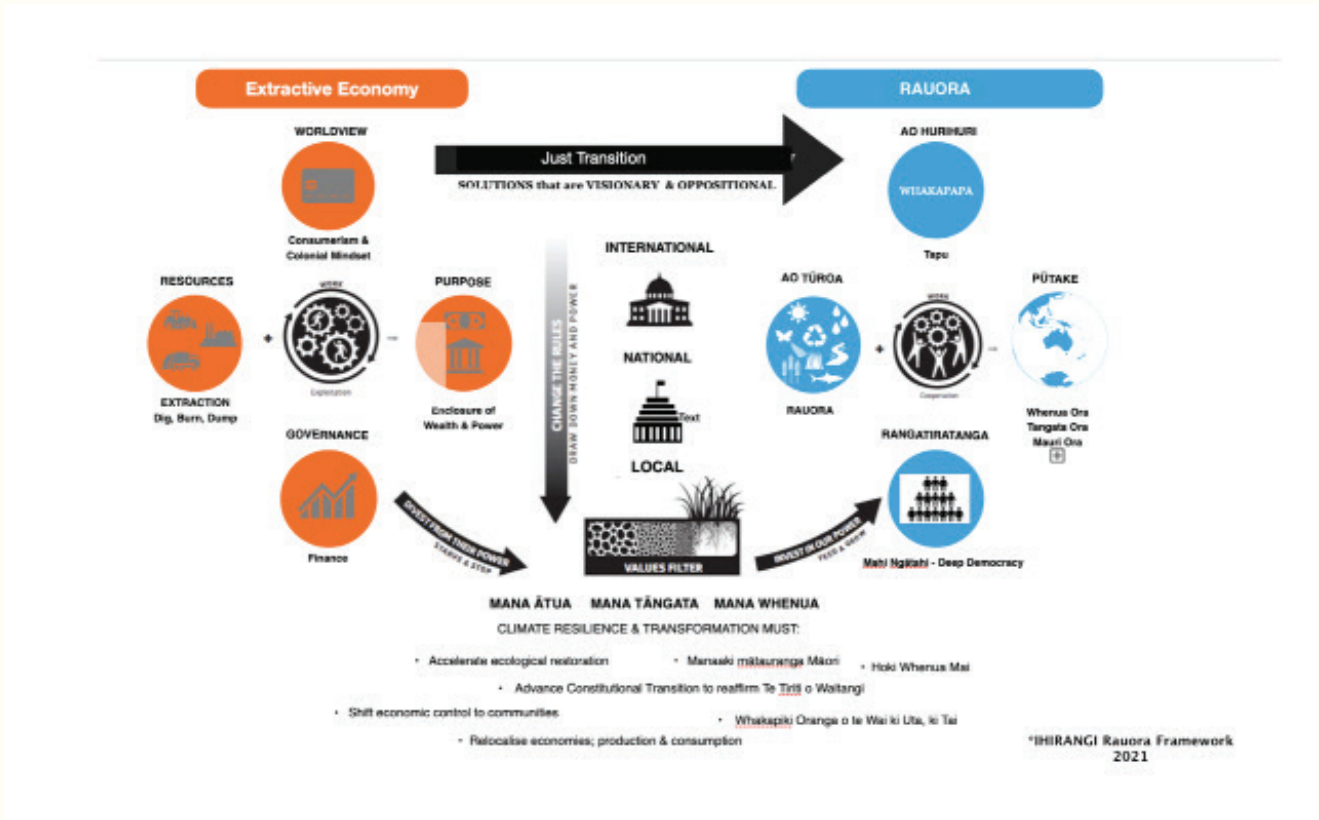


Figure 8: Rauora Framework

Rauora Framework

By beginning with abundance, the Rauora Framework affirms the mana of the ancient world, whenua, te taiao and whakapapa connections and focuses on measuring abundance, vibrancy, regeneration and optimal health. The Framework is designed to encourage Kaupapa Māori-based climate change action that can harness the rich reservoir of intergenerational knowledge held by Māori.

This complete systems thinking approach affirms the entire customary system in which specific kaupapa Māori values (kaitiakitanga, manaakitanga etc.) are housed. The Indigenous-led solutions to climate change offered through the Rauora Framework are directly relevant to the soil and kai resiliency aspirations showcased by He Whenua Rongo. Climate resilience and transformation based on the Rauora Framework requires the withdrawal from extractive industries and a concerted investment in mahi ngātahi – deep democracy. A rauora approach involves a genuine acceleration of ecological restoration and manaaki mātauranga Māori; advanced constitutional transition to reaffirm Te Tiriti

o Waitangi, and the devolution of economic control to communities. It must whakapiki oranga o te wai ki uta, ki tai (address freshwater quality and allocation with an oranga lens), relocalise economies, production and consumption, and hoki whenua mai by acknowledging the vulnerabilities created by the Crown's neglect of Te Tiriti o Waitangi obligations.

E kore au e ngaro te kākano i ruia mai i Rangiātea: Seed sovereignty

Seed sovereignty is a kaupapa that was raised by some mātanga who were interviewed and is a key part of Māori soil and kai resiliency. One mātanga, M32 (Indigenous research), discussed this issue as focused around the plants of significance to Māori and noted the different responsibilities we have as kaitiaki to take care of these plants through their various stages in their lifespan from seed right through to fully grown.

In Aotearoa there are seed collections that have been established and held by kāwanatanga. Of those 5000 seeds within these seedbanks there

might only be 1000 that are actually culturally significant and the rest are not of interest to Māori. The management of seed banks in New Zealand needs to be transparent with information being accessible and shared. This way you can make more informed evidence based submissions around resource constraints, the implications of a project going on a particular site, a site that is close to a species in need of help so it's such valuable information to have in order to make these really informed decisions.

M32 (Indigenous research) discusses that the purpose of a seed bank is about using this information to make the best decisions. It enables you to prioritise those seeds that you need to collect because they are at threat. And there is a whole programme that you would design about nurturing those seeds and getting back to growing them and developing nurseries alongside. But you could also include in your bank those species that are sort of commercially important to you or vital just for food production. You have multiple layers of why you have a seed in there. But there should be a purpose to every seed that goes into a bank. There should be a narrative that clearly explains why you've chosen this seed over some other seed.

The important thing with seeds is there has to be a narrative - why you've chosen it, what its importance is... the importance of seeds is that they're like an iceberg, and that the seed itself is just what you see, but behind it and underneath it sits all this information. It doesn't require a huge amount of technology. It's about temperature. Last year with Te Tira Whakamātaki, we ran a series of seminars around seed sovereignty and I was absolutely amazed at the numbers of whānau, hapū at the whānau-hapū level, seed sovereignty people who have freezers in their garages and they just do it because it seems to be the right thing to do. It's like there is a whole network out there, which we did know existed... Coming from farming families, it just makes sense to store seeds.

- M32 (Indigenous research)

Regional and national co-ordination

Soil and kai resiliency has become a major priority due to societal changes and the impacts of climate change. With Māori initiatives flourishing but largely unconnected, it was considered of value to ask mātanga is it important to have a national soil and kai resiliency strategy, and if so, who should drive it?

The question was asked with it in mind that a national strategy could potentially facilitate collectives of Māori leadership to share perspectives regarding Māori soil and kai resiliency aspirations and approaches, and where useful look at collaboration, or sharing perspectives with kāwanatanga. Strategy developers could include: iwi and hapū leadership; urban Māori; organisations working with Māori experiencing high food insecurity; and kaikōkiri representing collectives who facilitate ringaringa ki te oneone, hands in soil and feet in te taiao initiatives working to further resuscitate Māori food growing and gathering practices. Such a strategies would be by Māori for Māori, developed and driven with particular regard to mātauranga Māori, and ideally transitioning toward Hua Parakore (and from learnings of this research) Rauora approaches that bolster Māori communities of food growers, and are not solely focussed on the extractive industrial model of food production.

The question was also asked with potential future scenarios in mind - climate change and other socio-political impacts that could result in greater disruption of food distribution, and food shortages, that might strongly impact on Māori soil and kai resiliency - where a national Māori strategy that has been developed with iwi and hapū leaders, urban Māori interests, and kaikōkiri could provide shared understandings of how various players in te ao Māori could collaborate for better outcomes for Māori at local levels, and potentially contribute to wider community responses.

It should be emphasised that the thinking behind a national strategy was not to impinge on iwi or hapū rangatiratanga or the mana whakahaere of Māori community initiatives. Mātanga responses to the question indicated some support for a national strategy. Some

considered a national strategy was needed because of the importance of the kaupapa, and to ensure kāwanatanga did not fill the void. Others were more curious as to what national level action might look like while some indicated that efforts were best focused at the regional regional level to keep action locally driven.

It's timely and it could only do good because soil is such a scarce resource and we've definitely got to look after it. The contribution we can make to that in a Hua Parakore sense to mainstream soil health is just huge, so having a national strategy that brings a whole lot of these things together, great idea. ...You could use the principles of Hua Parakore to write that strategy. It'd be silly not to because it's such a great vehicle for growth.

- Ron Taiapa (community education)

...we need a strategy so funding can follow the strategy... the money can flow to it gives funders or government or whoever wants to fund projects, something to put it on, hang it on. At the moment it's just all willy nilly, ... great stuff going on, though... we've [Te Waka Kai Ora] got the philosophy and the heart. We need to partner with someone else that has got the grunt, the main power and the structure. We... haven't got the infrastructure at the moment.

- Pounamu Skelton (Hua Parakore education)

First of all, it wouldn't hurt to have such a thing. Who would drive it would be whoever has that vision and passion to do it because it would not be easy. The thing is that if we don't do it, chances are the Crown will do it. They do love imposing national policies on us...

- M32 (Indigenous research)

Yes, we need national coordination, we need a national strategy that needs to be owned by Māori for Māori.

- Jessica Hutchings (Indigenous research)

Definitely. And if we don't set one up, someone's gonna set up on their behalf and it's a little bit like what I said before we're going to be told this is what you should be doing. We don't need that. We've got all the experts. Really we just need to set up a policy so that beyond just [named region] can benefit from it.

- M29 (iwi kai initiative)

There's always a place for national voice and influence for Maori.

- Traci Houpapa (industry governance)

I think from a national strategy, for example, what does good look like? What does the future that we want to see look like and what are some potential pathways to get there but giving people the autonomy or self responsibility or self empowerment.

- M10 (whānau organic agribusiness)

I'm trying to imagine what that would look like on the ground. So if we think about our urban dwellers, what would a national strategy deliver for them? What could it deliver for them? I don't necessarily have the answers to that. And I think it would probably depend on who you ask.

- Anne-Marie Broughton (governance)

Regional Focus Responses

For me it's about each region growing the produce suited to their local climate and conditions. International trade will soon be a thing of the past. Preparing for the future now means ensuring we can produce all the essentials locally. Regional trade might look like people in the south of Aotearoa trading apples and harakeke products for bananas and mangoes to people in the north

- Raihānia Tipoki (regenerative farming)

I think a National Soil Resiliency Strategy for Aotearoa, from the North to the South is so different. So it would be too big, too clumsy, I would have thought. And I guess, there's a couple of things that need to be happening. One is that they need to recognise, alongside the soils, those elements that are the key effects... ...a case of good example in the dairy sector, the impact of the industry on our soils and on the leaching of components, I'm inclined to pick that it's got to be some regional for want of a better word, but there's got to be some more localised [response]. So it probably comes back to those layers that we talked about before. You do need that as a view in one, will be those people that are in the business, talking about Taranaki as an example, that the dairy sector needs to take ownership of how ... they occupied the activity on that resource.

But then those people of the region who are beneficiaries off that activity need to take an interest as well, because they, like it or not, they may not physically be out there milking cows, but they are all connected in some way that those sectors that are contributing to the regional have been to their regional benefit.

- M31 (research/specialist grower)

Kaikōkiri: Reclaiming Māori kai resiliency

Despite the clear barriers to Māori aspirations for soil and kai resiliency, Māori are developing successful initiatives that achieve Māori determined outcomes based on tūpuna knowledge and sustainable practices. Here are just a few examples of Māori soil and kai resiliency success stories.

Examples of Māori soil and kai resiliency success stories:

Organisation	Who They Serve	Key Activities	Impact
Te Waka Kai Ora	Māori growers and producers	Tikanga centred Indigenous verification and validation authority for food and products	<ul style="list-style-type: none"> • Hua Parakore verification • Political lobbying and activism • Elevating the mahi of Kai Atua
Para Kore	Māori community - Aotearoa whānau	Educate marae, whānau and communities to design out, reduce their waste	Wānanga held all over the country; numerous whānau, marae and communities changing practices; tonnes of material diverted from waste

Organisation	Who They Serve	Key Activities	Impact
Te Aho Tū Roa	Tamariki, rangatahi, whānau o ngā kohanga/puna reo, Kura Kaupapa Māori Te Aho Matua, ngā Kura ā-iwi, me ngā Wharekura - Nationwide	<ul style="list-style-type: none"> • Whakawhenua i te hunga rangatahi mā te reo Māori me ngā kaupapa Māori • Strengthen tuakana-teina relationships • Education and connection through nukanuka, joy, expression, and creativity 	<ul style="list-style-type: none"> • Engagement with tamariki, rangatahi, and pakeke through various national and regional events since the early 2000s including: <ul style="list-style-type: none"> • Kōtuia • Wiki Hākinakina • Noho Taiao • Hinonga ā-kura/ā-rohe • Mahi whakangungu
Whenua Warrior Charitable Trust	Urban Māori in South Auckland	<ul style="list-style-type: none"> • Help achieve food sovereignty in Aotearoa starting with communities of South Auckland • Project South Side 600 - 600 māra in 600 homes • Project Mana Motuhake: Design urban māra build package for 10 kohanga reo, kura kaupapa Māori & marae; • #ProjectTipuTubs: Supply kai packs to 350 families 	<ul style="list-style-type: none"> • 480 māra completed at 14 May • 401 tubs delivered to 17% apartments; 13% kaumātua; 70% young families
Te Kāhui o Taranaki <i>Post-Settlement Governance Entity</i>	Uri of Taranaki iwi, throughout Aotearoa and some, overseas.	<ul style="list-style-type: none"> • Tātai Tangata ki te Whenua Programme. Nine month mahi māra online programme. 	<ul style="list-style-type: none"> • 70 uri participated in the first cohort.

Organisation	Who They Serve	Key Activities	Impact
Papatūānuku Kōkiri Marae <i>Urban Marae, Mangere, Auckland</i>	The marae and wider South Auckland community	Oranga Whenua, Oranga Tangata: “We are in pursuit of a vision that has all our whānau who participate at Papatūānuku marae – in relationship with the whenua that sustains and nurtures us, and with each other, as self-sustaining, self-determining healthy communities.”	<ul style="list-style-type: none"> • 12 community gardens; distributed 150,000kgs of fish heads, • Hua Parakore verified with values of whakapapa, wairua; māramatanga, te ao tūroa embedded; • Worm factory at marae
AgriSea <i>(Family owned company)</i>	Dairy, dry stock, horticulture, apiculture, equine industries, lifestyle blocks and other industries, nationwide. Export markets.	AgriSea is committed to providing innovative, proven and effective seaweed products that add value to both people and the planet.	<ul style="list-style-type: none"> • AgriSea New Zealand is an award winning, family owned seaweed company at the forefront of the biostimulant industry in NZ – we are the single biggest investor in research for the sector and have been helping farmers and growers for over 22 years.
Biofarm <i>Hua Parakore verified</i>	Their organic range of yoghurts and butters are available at supermarkets nationwide.	Biofarm is committed to the production of clean nutritious food using biodynamic farming principles, which are based on our consideration for the health and welfare of consumers, the animals in our care, and the environment we all live in.	<ul style="list-style-type: none"> • Farming since 1997 in Manawatū. Co-founder, Cathy Tait-Jamieson was recognised as Māori business woman of the year in 1997.
Hapi Organic Cafe and Maara <i>Hua Parakore verified (Kakano)</i>	Hawkes Bay region.	He kai he rongoā, he rongoā he kai. A wāhine driven business that works hard to support whānau, our community and our whenua	<ul style="list-style-type: none"> • Outstanding Cafe of the Year 2018 and finalist in 2022.

Figure 9: Māori soil and kai resiliency success stories.

New technologies and soil and kai resilience

New technologies in food and agriculture are constantly being invented and developed by global agribusiness and agritech companies. These new technologies are not free for any farmer or Indigenous community to use.

Usually they are developed within an intellectual property rights regime that returns the profits of the technology back to the 'inventor' which in most cases is the global agribusiness and agritech companies.

Furthermore, these Western property rights regimes do not account for collective knowledge and are working within knowledge production frameworks that are antithetical to the collective ways indigenous knowledge is developed.

In her interview, Jessica Hutchings cautioned against the use of advanced technologies when growing kai due to the lack of connection to Hine-ahu-one and Papatūānuku and te ao Tūroa, the natural world. **She states:**

...My caution to Māori communities, in an era where society and governments are looking towards technological innovation to 'fix' the multiple human induced crisis is to be careful and to think about what it means to be a good ancestor.

The New Zealand science systems policy agenda of 'Vision Mātauranga', which is about

working at the interface of mātauranga Māori and science, technology and innovation, is to really think about the values that are going to drive what we, as Māori, participate in. Not all innovation is good innovation.

This is where Hua Parakore for me is a very clear guideline around what is permissible and what's not. New and convergence technologies such as genetic engineering (GE) and nanotechnologies do not uphold the values of our kaupapa Māori approaches to food growing. In fact, 20 years ago Māori were very active in the GE debate, particularly at the Royal Commission on Genetic Modification citing the impacts of GE on whakapapa, mauri, wairua and mana as negative detrimental impacts that do harm.

The questions I constantly ask of these new technologies is...how do they connect with the whenua and uphold the interconnections in te ao Tūroa? How do they support the farmer or grower to cultivate their divine senses? Who owns the technologies and who is financially benefiting?

And so those types of technologies from a He Whenua Rongo/kai atua standpoint, for me, take us away from that connection with ngā atua and our divine Indigenous senses.

- Jessica Hutchings (Indigenous research)

In addition to the biotech driven new technologies there is an increase in indoor growing technologies that enable plants to be grown in factory-like conditions. Certainly in crisis situations these food sources could be considered to be invaluable, particularly where kai sources are completely destroyed.

However it is vital that Aotearoa New Zealand and te ao Māori consider what we value about growing kai and what practices we may want to keep where cultural, social, spiritual factors alongside food security are considered. In addition to the questions Jessica Hutchings raises below, it is vital that Māori, particularly horticulture business decision makers consider, in consultation with prospective Māori consumers, the following:

- *What does kai mean to us when there is no tūpuna connection or other cultural narrative?*
- *What of our connection to Papatūānuku and Hine-ahu-one?*
- *How do various technological approaches to kai growing affect tikanga Māori and the mauri of kai?*
- *Food security may be enhanced by these approaches in the short term, but could we become more food insecure over the long-term?*
- *What are the risks if we become more dependent on large global companies providing our kai if they own the means of food production, including seeds?*
- *How would developing technologies*

impact on our cultural practices and tikanga around mahi māra?

- *How do we weigh up the health risks and benefits if we became reliant on these sources of plant food?*

The Hua Parakore and Rauora Frameworks can guide consideration of the benefits and impacts of new food growing technologies to our ways of living and being. Kai is more than a commodity designed to feed us. Kai connects us to te taiao, to ngā kai atua, and to one another.

More advanced industrial growing of kai could become commonplace in Aotearoa in the next generation, particularly as climate change impacts escalate. It will be important that Aotearoa observes overseas trends and evidence-based research in unison with mātauranga Māori investigations, and that we have opportunities to wānanga about our choices as Māori and as a nation.

Taking personal and collective action

Throughout this project mātanga articulated that visions require intentions to be converted into action both personally and collectively. They talked of the current generations being 'the worst ancestors' due to the degradation of Papatūānuku and the soil and kai insecurity we are now facing. A way forward includes taking personal responsibility for our soil and kai resilience needs and accessing support from the various Māori entities and actors who are active in the sector.

This speaks to mana motuhake in action at a personal level, which contributes to collective and impactful outcomes - with funding or without.

Now you might be someone as mentioned before, who is a part of an organisation, you might be one person inside your marae that has this idea. You might be a solo mama of four who just wants to have an extra bit of silverbeet in the boil up pot. But either way, the Whenua Warrior challenge that I'm going to leave you with today is to improve the food system that controls your individual access to kai, individual access to kai, remove yourself as the barrier and give it a go. We all must take the responsibility where we can... Our mission is to feed the community, teach the community to feed themselves, and also empower them to feed each other. And the

way that we do this is by reflecting on the solutions that our ancestors had, and try to apply them to the issues that we face today.

- Kelly Marie Francis (community charitable trust)

At the end of the day, if we want to say that we're kaitiaki, if we want to say that places are important to us, and we're at one with nature and all this, we have to show that! We have to make that commitment ourselves to do the things that need to be done to allocate our resources, minuscule as they might be. And this is about mana motuhake; it is just having control.

- M32 (Indigenous research)

Recommendations

The He Whenua Rongo recommendations are underpinned by the Hua Parakore values and principles. These Hua Parakore values and principles honour the mana of Ngā Atua and enhance Māori soil and kai resilience.

The Hua Parakore framework can be used across kaupapa movements to uplift kaupapa Māori practices and tikanga. The following recommendations are for everyone with an interest in uplifting soil and kai resilience for Māori.

Mana Atua

All decisions and pathways forward in building soil and kai resilience honour and uplift the mana of Hine-ahu-one and mana atua. This relationship with ngā atua is acknowledged as the spiritual source of life, tapu, mauri and mana and provides the balance between the te ao tūroa (the natural world) and the spiritual realm.

Hua Parakore Food Farms and Māra Kai

Scope work to fund and undertake to establish Hua Parakore food farms at various scales and in diverse Māori settings and regions across Aotearoa, to contribute to Māori soil and kai resiliency. Potential sites and communities identified. Build Māori food systems infrastructure, including community connectedness. Strategic investment required.

Supporting Māori-led transitions to Rauora practices

Establish a Māori transition fund that supports conventional Māori farmers and growers to transition to rauora practices such as the Hua Parakore organic regenerative practices. Establish a cohort of Hua Parakore on-farm advisors to deliver Hua Parakore education and training. Strategic investment required.

Treaty partnership and food governance

Urgently increase Māori participation in food governance and decision making across Aotearoa by adopting Te Tiriti o Waitangi partnership approaches that align with the findings of the WAI 262 claim. Recommend Iwi Chairs Forum prioritise soil and kai resilience.

Kaupapa-led movement to address the multiple emergencies

Strategise approaches and activities to join across kaupapa Māori movements that engage mana motuhake and rangatiratanga responses to climate change, soil and kai resiliency.

Upscale investment in success

Increase investment in Māori-led organisations and kaupapa that are successfully promoting and enabling Māori soil and kai resiliency. Identify opportunities to scale up and replicate or adapt for success across regions and communities.

Rangatahi leadership

Ensure that rangatahi-led responses to the soil, kai and climate crisis are invested in and enabled. Rangatahi voices, participation, experiences and realities are at the forefront of solutions to the soil, kai and climate crisis.

Rauora education and learning

Develop rauora and Hua Parakore curricula and bilingual education materials for teaching across all generations, in particular with whānau. Promote rauora and Hua Parakore practices to support transitions in food production and agriculture.

Grow and propagate strong governance

Create ways to propagate excellent governance through fostering relationships with mātanga in this field, developing teina (associate) governance roles and enabling people to serve as secondees or advisors for short-term roles. Excellent Māori governance takes into account 'mokopuna' or intergenerational decision making, whakapapa based, collectively held taonga, and multiple bottom lines.

Establishing a for Māori by Māori Seed Bank

Support the development of a, for Māori by Māori seed bank that ensures both seed sovereignty and security of ngā rākau Māori as well as kai production crops. Enable the gifting of seeds (and therefore kai) as the ultimate expression of tino rangatiratanga and mana motuhake.

Specific Recommendations for Kāwanatanga

While the focus of this research is to elevate, for Māori by Māori solutions, we make the following recommendations for kāwanatanga that will assist in supporting and enabling Māori-led solutions for soil and kai resiliency.

Engaging with Māori

- Develop Tiriti partnerships for soil and kai resiliency. Privilege Māori voice in established and new Tiriti partnerships for soil and kai resiliency.
- Resource Māori to engage with kāwanatanga on soil and kai resiliency kaupapa.

New Authorising Environment

- Create space and enabling environments for Māori as decision makers within food governance in Aotearoa.
- Ensure Māori are at the decision making table and decisions are not being made in our absence.

System Stewardship

- Develop a stewardship framework including a central agency in kāwanatanga responsible for Māori soil and kai resiliency and leading on behalf of kāwanatanga Tiriti partnership with iwi Māori.
- Establish a central agency in kāwanatanga responsible for Māori soil and kai resiliency and leading Tiriti partnership with iwi Māori.
- Have a Māori Minister responsible for soil and kai resiliency alongside the Minister for the Environment.
- Develop a cross-agency investment

strategy to support Māori-led and mātauranga based solutions for soil and kai resiliency.

Policy Settings

- Engage kaupapa Māori evidence in determining policy settings that impact on Māori soil and kai resiliency.
- Adopt holistic approaches to policy setting in this space and to balance the export focused priorities with local Hua Parakore, regenerative systems.
- Promote and fund Rauora practices and localised food and farming models as part of the Climate and Environment Strategy work to build kaupapa Māori best practice and impact.

Funding

- Develop a cross-government funding strategy that addresses the underinvestment and inequitable current Tiriti settings; and that aligns with the findings of the WAI 262 claim. The strategy should share both power (leadership, decision making and inclusion) and resources (funding, infrastructure and expertise) with whānau, hapū, iwi and Māori communities and organisations to enact Māori-led solutions and strategies to soil and kai resiliency.
- Create opportunities within Te Ara Paerangi reforms to fund kaupapa Māori research that enhances the uptake of place based Rauora practices that build resilient Māori soil and kai communities, this includes Hua Parakore food farms,

seed banks and Hua Parakore on farm extension programs.

- Provide baseline funding for Te Waka Kai Ora (National Māori Organics Authority) to enable the continued implementation of the Hua Parakore (Māori organic regenerative verification system for Kai Atua).

Evaluating for outcomes

- Engage with Māori to develop across-government measurable goals for soil and kai resiliency.
- Develop a forum for kāwanatanga leaders to report progress against goals to rangatahi and tamariki Māori.

Secondments

- Provide whānau opportunities to ako through secondments into soil and kai resiliency kaupapa. Preferably, enable Māori (eg. public servants) to return and grow their skills through kaupapa they whakapapa to.

Specific Recommendations for funders to uplift Māori kai and soil resiliency

Whānaungatanga

- Invest in whanaungatanga across the Māori food ecosystem to strengthen a cohesive approach to transforming Māori food systems and soil resilience. Invest in hui and wānanga and on-farm Rauora advisors to accelerate the potential of change through collaborations.systems.
- **Immediate action:** 3 year investment in annual regional and national He Whenua Rongo wānanga to support the call for a kaupapa coalition for rauora.

Strategic funding investments

- Make long term strategic investment in large scale projects to establish and grow Māori-led food farms and grow the skills of the next generation to be active players in restoring Māori food systems.
- **Immediate action:** 6 month investment in a Kaupapa Māori feasibility study to establish pilot Māori-led food farms across Aotearoa.
- Provision of capital investment to support soil and kai resiliency. This could include costs for: polytunnels, cloches, weedmat, tools, wheelbarrows, timber, irrigation. This could also include the cost of land acquisition or lease where required.

Encourage Māori investment and gifting

- Work with existing Māori-controlled charitable trusts to establish a simple system of tithing for soil and kai resiliency. If required, develop a fit-for-purpose application that can enable all supporters

to gift to Māori-led initiatives (specifically or generally). Reenergise the tikanga of koha.

Māori leadership and infrastructure investment

- Trust and invest in Māori leadership in the rauora, soil and kai resiliency space. Invest in leadership in wide and expansive ways that allows for creative space for collaborations and projects to develop.
- **Immediate actions:** Invest in leadership at all levels of soil and kai resiliency – including community leadership, social entrepreneurship, research and scholarship, mātanga mahi māra kai, mātanga taiao and governance development. Engage with employers and invest in learning or leadership (practitioner) paid leave for those in work and support job creation for those who would benefit from paid work.
- Invest in Māori leadership in the soil and kai space to allow for whakawhanaungatanga and the co-creation of ideas and action.
- Invest in a secretariat to convene the leadership group/tira and execute project ideas. Provide financial support to enable secondments into Māori organisations to strengthen systems to facilitate growth and scaling of delivery.

Rangatahi Leadership and Development

- Invest in rangatahi as leaders in ways that uplift te reo and tikanga and provide for mātauranga based solutions.
- **Immediate actions:** Commission a scoping study that is led by rangatahi to build rangatahi participation and leadership in soil and kai resiliency.
- Expand out Jobs for Nature and Ara Mahi programmes to enable paid work opportunities specifically for soil and kai resiliency mahi.

Kaupapa Māori research

- Invest in and encourage workforce pathways for Māori research, scholarship and mātauranga taiao imbued problem-solving. Impactful data and storytelling is essential to shed light on and restore the health of Hine-ahu-one and Papatūānuku.

He Āpitihanga | Appendices

*Photo credit:
Ehsan Hazaveh*

Appendix 01

Kuputaka

Select Glossary

Māori

English

ara	path, pathways
atua	an ancestor with continuing influence over particular domains; a supernatural being
hāngī	method of cooking food in an earth oven
hapū	to be pregnant (n) subtribe
hauora	(stative) to be fit, well, healthy
hua	(n) health, vigour to bear fruit, originate, be abundant, to flower, to bloom, to blossom, - a product, fruit, berry, - benefit, gain, asset
iwi	extended kinship group, tribe, often refers to a large group of people descended from a common ancestor and associated with a distinct territory
iwi taketake	Indigenous people, native people
kahika	ancestor or leader - see Kahikatea
kai	to eat, consume, feed oneself; food, meal
kaihāpai	advocate, promoter, supporter
kaikōkiri	instigator, initiator, activator (person)
kaikōrero matua	keynote speaker
kāinga,	home, settlement, place of residence
kāika	(kāika in some South Island dialects)
kaitiaki	minder, guardian, caregiver
kaitiakitanga	guardianship, stewardship
kākano	seed, kernel, pip, berry, grain
karakia	prayer, incantation or ritual
kaupapa	topic, policy, matter for discussion, purpose, scheme, proposal, agenda
kaupapa Māori	Māori approach, Māori topic, Māori customary practice,

Māori

English

Māori institution, Māori ideology - a philosophical doctrine incorporating knowledge, skills, attitudes and values of Māori

Kāwanatanga

Government

kimi

to look for, seek, search, hunt for

kīwaha

colloquialism, colloquial saying, slang, idiom

kōhanga reo

kaupapa and te reo Māori space of learning for children and babies

kōkiri

to champion, advocate, to lead.

kōrero

(v) to tell, say, speak, read, talk

(n) speech, narrative, story, news

kōrero matua

executive summary

kaikōrero matua - keynote/primary/senior speaker

kōrero tuku iho

histories of the past, traditions, oral traditions

kura

school, learning gathering

māra

garden, cultivation

mahi māra

(v) to garden, (n) gardening

mahi

(v) to work

mahinga

a place where work is done

mahinga kai

food-gathering place; garden, cultivation

mana

prestige, authority, control, power, influence; supernatural force in a person, place or object.

mana motuhake

mana through self-determination and control over one's own affairs

manaaki

show respect, generosity and care for others

marae

courtyard - the open area in front of the meeting house where formal greetings and discussions take place. Often used to include the complex of buildings around the marae

maramataka

Māori lunar calendar

māramatanga

enlightenment, insight, understanding

mātanga

(modifier) experienced, skilled, sophisticated, (n) experienced person, specialist, consultant, professional, practitioner

matatini

complex, having many parts, complicated

mātauranga Māori

Māori knowledge, the body of knowledge originating from Māori ancestors and includes a Māori worldview and perspectives, Māori creativity and cultural practices

Māori

English

mauri	life principal, life force, vital essence
mirimiri	to rub, soothe, smooth
motu	(n) island, country (v) to cut, sever
oneone	earth, soil, dirt, ground, land
oranga	health, living, livelihood
pā tūwatawata	fort defended by a stockade
pakeke	adult, elder
papakāinga	original home, homebase, communal Māori land.
pātaka	storehouse raised upon posts, pantry, larder,
pou	a post, particularly carved posts
pou tuākana	older rangatahi leaders
pūtea	fund, sum of money
rangatahi	the younger generation, youth
rangatira	a Māori leader, chief or person of high standing
rangatiratanga	Māori leadership, authority and self-determination
raupatu	to conquer or confiscate
rauora	abundance; to save alive
reo	language (often implies Māori language)
rohe	region or district
rongoā	(v) to treat, apply medicines (n) a remedy, cure, treatment medicine
Rongo, Rongo-mā-Tāne	the ancestral being or atua of Peace, atua of cultivated food, including the kūmara
taha wairua	the spiritual side of existence
taiao	world, earth, natural world, environment, nature
taiohi	youth or younger generation
takarangi	the double spiral pattern
tangata-ki-te-	human-to-human; person-to-person
tangata	
tangata whenua	Indigenous people - people born of the land, ie. of the placenta and of the land where the people's ancestors have lived and their placenta are buried.
taonga	anything prized - applied to anything considered to be of value including socially or culturally valuable objects, resources, species, phenomenon, ideas and techniques, property, goods.

Māori**English**

taonga tuku iho	heirloom, something handed down, cultural heritage
tauirā	students; exemplars or patterns to be followed
te ao hurihuri	the changing world or the modern world
te ao tūroa	the enduring world, the natural world or the light of day
te one tapu	sacred soils or earth
te reo Māori	the Māori language
teina	younger siblings of same sex, also used to describe relatives who are junior in terms of genealogical rank or generation
tikanga	correct procedure, custom, habit, lore, method, code, meaning, protocol, practice
tikanga tuku iho	customary law, traditional lore, custom
tino rangatiratanga	self-determination, sovereignty, autonomy, self-government, control, power
tūpuna	ancestor, grandparent
Tiriti	Te Tiriti o Waitangi/The Treaty of Waitangi
tuākana	elder siblings of same sex, also used to describe relatives who are senior in terms of genealogical rank or generation
uri	descendants
WAI 262	the Treaty of Waitangi claim for tino rangatiratanga over native flora and fauna
wāhi tūpuna	places of significance to the ancestors
wahine	woman, female
wānanga	to discuss particularly important cultural knowledge - also seminar or Māori tertiary institutions
whakaaro	thought, thinking
whakakaha	to strengthen, enable
whakapapa	genealogy, lineage, descent
whakawhanaungatanga	building relationships
whānau	extended family, family group
whanaungatanga	family, extended family, shared sense of kinship and belonging
whenua	land, ground, country, state
whenua tuku iho	ancestrally inherited land

For further translations visit: Māori Dictionary

Appendix 02

He Whenua Rongo

Wānanga Speakers and Mātanga Interviewees

Wānanga Keynote speakers

- Jessica Hutchings - Papawhakaritorito Charitable Trust
- Lionel Hotene and Hineāmaru Ropati - Papatūānuku Kōkiri Marae
- Mike Smith - Ihirangi/Pou Take Ahurangi
- Pounamu Skelton and Geneva Hildreth - Te Waka Kai Ora
- Teina Boasa-Dean - Māra Tautāne, Rūātoki

Wānanga Breakout group presenters

- Cathy Tait-Jamieson - Biofarm
- Gretta Carney - Hāpi
- Haylee Koroi - Toi Tangata
- Hinekaa Mako - Ihirangi/ Pou Take Ahurangi
- Hollie Russell - Para Kore
- Jared Hiakita, Ngāi Tūhoe
- Kelly Marie Francis - Whenua Warrior Charitable Trust
- Lani Rotzler-Purewa - Papawhakaritorito Trust, Feed the Whānau
- Lahni Wharerau - Te Waka Kai Ora
- Ngapera Matthews, Rangipo Langa, Kahleyn Te Wairua Evans, Te Rua Wallace - Te-Pu-A-Ngā-Māra
- Pania Newtown, Makaurau Marae
- Raihania Tipoki, Regenerative farmer, community leader
- Wayne Paaka - Kore Hiakai Zero Hunger Collective

Mātanga Interviewees

- Anne-Marie Broughton - Māori land governance, management and development specialist
- Edward Ellison - Farmer, Te Rūnanga o Ōtakou
- Jessica Hutchings (producer) - Papawhakaritorito Charitable Trust, Hua Parakore food
- Kelly Marie Francis - Whenua Warrior Charitable Trust
- Melody Te Patu - Te Kaahui o Rauru
- Nick Roskruge - Tahuri Whenua
- Pounamu Skelton - Te Waka Kai Ora
- Raihānia Tipoki - Regenerative farmer, community leader
- Rereata Makiha - Tohunga
- Ron Taiapa - Te Whare Wānanga o Awanuiārangi
- Tame Malcolm - Hunter and Indigenous biosecurity specialist
- Traci Houpapa - Federation of Māori Authorities
- Tuihana Bosch - Te Aho Tū Roa, Te Mauri Tau
- Wayne Paaka - Kore Hiakai Zero Hunger Collective

Please note: Other mātanga participated in the interviews and national wānanga but preferred not to be identified in the report. Kei te mihi tonu.

Appendix 03

National Online Wānanga Programme

He Whenua Rongo: A National Māori Kai and Soil Resiliency Online Wānanga

Kaupapa Wānanga

Rā Tuatahi

Karakia whakatūwhera & whakatakoto kaupapa

Te Waka Kai Ora opening remarks | Pounamu Skelton & Geneva Hildreth (*Co-chairs*)

Kaikōrero Matua | Kai & Soil Resiliency Through Hua Parakore
Jessica Hutchings - *Papawhakaritorito Trust*
Lionel Hotene & Hineāmaru Ropati - *Papatūānuku Marae*

Breakout Sessions | Ki Te Ao Mārama

Reclaiming Māori Kai Security Wayne Paaka - *Kore Hiakai* & Kelly Marie Francis - *Whenua Warrior*

Sustainable Business Through Hua Parakore Cathy Tait-Jamieson - *Biofarm* & Gretta Carney - *Hāpi*

Māori Urban Food Security Pania Newton - *Makaurau Marae Ihumatao* & Lani Rotzler - *Papawhakaritorito Trust*

Mana Maara, Mana Reo, Mana Whenua: Mahi Māra and Te Reo Revitalisation Lahni Wharerau - *Te Waka Kai Ora*

Tēnei Te Tira Hou: Rangatahi Empowerment Haylee Koroi - *Toi Tangata*, Te Rua Wallace - *Te Arawa*, & Rangipo Langa, Ngapera Matthews, Kahleyn Te Wairua Evans - *Te Pū-a-ngā-Maara*

Ngā Kōrero Matua: Māori Soil Resiliency
Pounamu Skelton - *Te Waka Kai Ora*
Teina Boasa-Dean

Kōrero whakakōpani & karakia whakakapi

Rā Tuarua

Karakia whakatūwhera & whakatakoto kaupapa

Kaikōrero Matua | Mike Smith

Kai Resilience Workshop | Kawiti Waetford & Te Atawhai Kumar - *Te Aho Tūroa*

Breakout Sessions | Te Toto, He Kai - Te Oranga, He Whenua: Kai and Soil Regeneration Methods

Syntropic Food Forestry and Biointensive Growing Jared Hiakita *Ngāi Tūhoe*

Hua Parakore Pathway Q&A Pounamu Skelton and Lahni Wharerau - *Te Waka Kai Ora*

Community Composting Hollie Russel - *Para Kore*

Transitions Raihānia Tipoki *Ngāi Kahungumu*, Mike Taitoko - *Calm the Farm*, & Hinekaa Mako - *IHIRANGI*

Living our Aspirations for Kai and Soil Resiliency
Pounamu Skelton, Jessica Hutchings, Hinerangi Edwards

Kōrero whakakōpani & karakia whakakapi

Appendix 04

List of figures

Figure 1. Hua Parakore Framework

Figure 2. Pātikitiki Methodology Model

Figure 3: He Whenua Rongo national wānanga banner

Figure 4: National wānanga responses: What would you like to learn?

Figure 5: National wānanga participant voices: What has inspired you?

Figure 6: Kāwanatanga: Barriers and ideal future state enablers for Māori soil and kai resiliency

Figure 7: Māori Soil and Kai Ecosystems Map

Figure 8: Rauora Framework

Figure 9: Māori soil and kai resiliency success stories.

Appendix 05

Footnotes

1. See Appendix 1 for a glossary of Māori words use in this report
2. Marsden, M.(2003). *The Woven Universe. Mauri ora ki te ao Living*. Otaki.
3. Hutchings, J and Smith J. eds. (2020). *Oneone Ora Tangata Ora: A Māori Soil Sovereignty Handbook*. Freerange Press: Christchurch. / Hutchings, J. (2015). *Te Mahi Māra Hua Parakore. A Māori Food Sovereignty Handbook*. Te Tākupu. Te Wānanga o Raukawa. Ōtaki. / Hutchings, J., Smith, J., Harmsworth, G. (2018). *Understanding the Mana of Soil through the Hua Parakore framework MAI Journal*. 7 (1):92-102.
4. Arsenault, C. (2014). *Only 60 Years of Farming Left if Soil Degradation Continues*. *Scientific American*. Reuters. Dec. 5. <https://www.scientificamerican.com/article/only-60-years-of-farming-left-if-soil-degradation-continues/>.
5. Kukutai, T., McIntosh, T., Boulton, A., Durie, M., Foster, M., Hutchings, J., Mark-Shadbolt, M., Moewaka Barnes, H., Moko-Mead, T., Paine, S.J., Pitama, S., and Ruru, J. (2021). *Te Pūtahitanga: A Tiriti-led science policy approach for Aotearoa New Zealand*. Auckland: Ngā Pae o te Māramatanga.
6. Ihirangi, (2021). *Insight to the Rauora Indigenous Worldview Framework for the National Climate Change Adaptation Plan*. Brief Summary Document. Ministry for the Environment.
7. Lambert, S., Mark-Shadbolt, M., Ataria, J., & Black, A. (2014). *Indigenous resilience through urban disaster*. the Maori response to the 2010 and 2011 Christchurch Otautahi earthquakes. *Proceedings of the International Indigenous Development Research Conference*, Auckland University, 27-30 June 2012, 234-241; Boulton, A., Gifford, H. (2014). *Conceptualising the Link between Resilience and Whānau Ora: Results from a Case Study*. *MAI Journal* 3(2), 111-125.
8. Penehira, M., Green, A., Smith, L.T., Aspin, C. (2014) *Māori and Indigenous Views on R & R: Resistance and Resilience*. *MAI Journal*, 3(2), 96-110; Baker, K. (2010). *Whānau taketake Māori: Recessions and Māori resilience*. Social Policy Evaluation and Research Unit (Superu).
9. Durie, M. (2006). *Indigenous Resilience: from disease to disadvantage to the realisation of potential*. Unpublished Paper. Pacific Region Indigenous Doctors Congress, Rotorua, New Zealand, 7 December.
10. Moeke-Maxwell, T., Nikora, L.W., Te Awekotuku, N. (2014). *End-of-Life Care and Māori Whanau Resilience*. *MAI Journal* 3(2), 140-152; Savage, C., Hynds, A., Leonard, J., Dallas-Katoa, W., Goldsmith, L., Kuntz, J. (2018). *All Right? An investigation into Māori Resilience*. Ihi Research; Waiti, J., Kingi, T.K., (2014) *Whakaoranga Whānau*. *MAI Journal*, 3(2), 126-139.
11. Hutchings, J. (2015). *Te Mahi Māra Hua Parakore. A Māori Food Sovereignty Handbook*. Te Tākupu. Te Wānanga o Raukawa. Ōtaki. p.38.
12. S Hutchings, J and Smith J. (Eds.) (2020). *Oneone Ora Tangata Ora: A Māori Soil*

- Sovereignty Handbook. Freerange Press: Christchurch. p.51.
13. See Appendix 2 for a list of mātanga interviewed as well as speakers at the national online wānanga.
 14. Chase, L., Grubinger, V. (2014). *Food, Farms and Community: exploring food systems*. Durham, New Hampshire: University of New Hampshire Press; Hutchings, J. (2016). *Bringing Māori Food Politics to the Table: Decolonising food knowledge*. In Hutchings, J and Lee, J. (Eds.) (2016). *Decolonisation in Aotearoa: Education, Research and Practice*. NZCER Press, Wellington. (pp.172-182); Hutchings, J. (2015). *Te Mahi Māra Hua Parakore*. A Māori Food Sovereignty Handbook. Te Tākupu. Te Wānanga o Raukawa; Johnson, E. (2017) *Kai and Culture*. Free Range Press, Christchurch; Massey, C. (Ed.) (2017). *The New Zealand Land and Food Annual*. Massey University Press. Palmerston North; Moeke-Pickering, T., Hita, M., Heita, S., Karapu, R., & Cote-Meek, S. (2015). *Understanding Māori Food Security and Food Sovereignty Issues in Whakatāne*. MAI Journal, 4(1), 29-42; Pawson, E. (Ed.) (2018) *The New Biological Economy. How New Zealanders are Creating Value from the Land*. Auckland University Press. Auckland.
 15. Hutchings, J., Tipene, P., Carney, C., Greensill, A., Skelton, P., & Baker, M. (2012). *Hua Parakore, an Indigenous food sovereignty initiative and hallmark of excellence for food and product production*. MAI Journal, 1(2), 131-145.
 16. Hutchings, J., Smith, J., Harmsworth, G. (2018). *Understanding the Mana of Soil through the Hua Parakore framework* MAI Journal. 7 (1), 92-102.
 17. Hutchings, J. (2015). *Te Mahi Māra Hua Parakore*. A Māori Food Sovereignty Handbook. Te Tākupu. Te Wānanga o Raukawa. Ōtaki.
 18. Te Kāhui Raraunga. (2021) *Tawhiti Nuku: Māori Data Governance Co-design Outcomes Report*. Rotorua: Te Kāhui Raraunga.
 19. Clark, T. (2008). *'We're Over-Researched Here!': Exploring Accounts of Research Fatigue within Qualitative Research Engagements*. British Sociological Association. 42(5), 953-970.
 20. Ballantyne-Brodie, E., Wrigley, C., & Ramsey, R. (2015). *Evolution of the docklands Food Hub: a design-led innovation approach to Food sovereignty through local Food systems*. Journal of Design, Business & Society. 1(1), 43-55.
 21. The Tino Rangatiratanga flag tohu was used for the wānanga with permission from Linda Waimarie Nikora.
 22. See Appendix 3 for a copy of the program for the National online wānanga
 23. Sullivan, B., & Tuffery-Huria, L. (2014). *New Zealand: Wai 262 report and after*. Journal of Intellectual Property Law & Practice, 9(5), 403-410; Kukutai, T., McIntosh, T., Boulton, A., Durie, M., Foster, M., Hutchings, J., Mark-Shadbolt, M., Moewaka Barnes, H., Moko-Mead, T., Paine, S.J., Pitama, S., and Ruru, J. (2021). *Te Pūtahitanga: A Tiriti-led science policy approach for Aotearoa New Zealand*. Auckland: Ngā Pae o te Māramatanga: Mead, A. (2021). *Webinar 1: History and Impacts of WAI 262*. Ngā Tāonga Tuku Iho: WAI 262 and the National Science Challenges. Hosted by Rauika Māngai and Ageing Well National Science Challenge. <https://www.ageingwellchallenge.co.nz/wai-262-webinar-series/>. 21 July.
 24. This review of literature also informs an aligned research project, "Kai Atua: food for hope and wellbeing" led by Jessica Hutchings and Jo Smith and funded by the Royal Society Te Apārangi Marsden fund

- (2020-2024).
25. Hutchings, J and Smith J. (Eds.) (2020). *Oneone Ora Tangata Ora: A Māori Soil Sovereignty Handbook*. Freerange Press: Christchurch; Harmsworth, G.R. & Roskruge, N. (2014). *Indigenous Māori Values, Perspectives and Knowledge of Soils in Aotearoa-New Zealand: Chapter 20 – Māori Use and Knowledge of Soils over Time*. In *The Soil Underfoot: Infinite Possibilities for a Finite Resource*. eds. G.J. Churchman, and E.R. Landa, Boca Raton: CRC Press. 257–268.
 26. For example, television series such as *Waka Huia* have captured a wealth of *kōrero* about kai and *māra kai* practices since its inception in 1987. Māori Television online search engine has a “kai” category featuring lifestyle shows such as *Kai Time on the Road*, *Hāngī Pit Masters*, *Hunting Aotearoa*, *Moon Tide Fishing*, *Toa Hunter Gatherer* and *Life of Kai*, the latter offering insights into contemporary Māori culinary artists. Māori Television also features the 2021 series *Home, Land and Sea* that explores a new age of Māori farming. See also online media sources such as: *Ngāi Tahu Mahinga Kai* lifestyle series <https://ngaitahu.iwi.nz/culture/mahinga-kai/>; *Decolonising your Puku: Indigenous food sovereignty*. (2021). Podcast. <https://dowse.org.nz/news/podcast/2021/decolonising-your-puku/>; *To Decolonise Food Access in New Zealand*. (2019). *Pātaka Kai Movement*. <https://www.vice.com/en/article/pa57qk/these-public-pantries-aim-to-decolonise-food-access-in-new-zealand>; *Slinger, S.* (2018). *From a Corporate Life to Teaching Gardening*. *Taranaki Daily News*. <https://www.stuff.co.nz/taranaki-daily-news/news/108591953/from-a-corporate-life-to-teaching-gardening>; *Teng, J. & Muru-Lanning, C.*, (2022). *Food media’s diversity problem: what NZ can learn from the Bon Appétit saga*. *The Spinoff*. <https://thespinoff.co.nz/food/13-06-2020/food-medias-diversity-problem-what-nz-can-learn-from-the-bon-appetit-saga>; Recent documentaries include *Huriwai, C.* (2021). *Milked*. *Ahimsa Films*; *Āro-Reid, G.* (2019). *Koro’s Hangi*. *AUT*; *Osmond, J. and Wilson, A.* (2021). *Building Indigenous Food Sovereignty with the Hua Parakore Organic Framework*. *HappenFilms*. <https://happenfilms.com/film/hua-parakore-living-Indigenous-food-sovereignty>.
 27. *Huambachano, M.* (2018). *Enacting food sovereignty in Aotearoa New Zealand and Peru: Revitalizing Indigenous knowledge, food practices and ecological philosophies*. *Agroecology and Sustainable Food Systems*, 42(9), 1003–1028; *Kawharu, M.* (2019). *Reinterpreting the value chain in an Indigenous community enterprise context*. *Journal of Enterprising Communities*, 13(3), 242–262; *Kawharu, M.* (2020). *System reset—Regenerating the marae economy*. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 9(4), 22–24; *King, P., Hodgetts, D., Rua, M. R., & Te Whetu, T.* (2015). *Older men gardening on the marae: Everyday practices for being Māori*. *AlterNative: an international journal of Indigenous scholarship*, 11(1), 14–28; *Reid, J., & Rout, M.* (2016). *Getting to know your food: The insights of Indigenous thinking in food provenance*. *Agriculture and Human Values*, 33(2), 427–438.
 28. *Ritchie, I.* (2016). *Food Sovereignty in Whaingaroa: Perspectives of Food Providers in a Small, Coastal New Zealand Township*. *Anthropological Forum*, 26(3), 289–300; *Ritchie, I. P.* (2020). *Food, freedom, community: A study of food sovereignty in New Zealand*. *Te Rā Aroha Press*; *McKerchar, C., Bowers, S., Heta, C., Signal, L., & Matoe, L.* (2015). *Enhancing Māori food security using*

- traditional kai. *Global Health Promotion*, 22(3), 15-24; Mark, G. T., & Lyons, A. C. (2010). Māori healers view on well-being: The importance of mind, body, spirit, family and land. *Social Science & Medicine*, 70, 1756–1764; Boasa-Dean, T., & Bryce-Hare, R.N., (2020). Ngāhuia Lena: Kaitiaki of Moroitī. *Te Mahi Oneone Hua Parakore: A Māori Soil Sovereignty and Wellbeing Handbook*. Eds. J. Hutchings and J. Smith, Christchurch: Freerange Press. 90-105; Kawharu, M., & Tapsell, P. (2019). Whāriki: The growth of Māori community entrepreneurship. *Oratia Books*; Taiapa, K., Barnes, H.M., McCreanor, T. (2021). Mārakai as Sites of Ahi Kaa and Resistance. *MAI Journal*, 10.2. 148-158.
29. Bargh, M., Douglas, S.-L., & Te One, A. (2014). Fostering sustainable tribal economies in a time of climate change. *New Zealand Geographer*, 70(2), 103–115; Awatere, S., Mika, J., Hudson, M., Pauling, C., Lambert, S., & Reid, J. (2017). Whakatipu rawa ma ngā uri whakatipu: Optimising the “Māori” in Māori economic development. *AlterNative: An International Journal of Indigenous Peoples*, 13(2), 80–88.
30. McKerchar, C., Bowers, S., Heta, C., Signal, L., & Matoe, L. (2015). Enhancing Māori food security using traditional kai. *Global Health Promotion*, 22(3), 15-24, 62-63, 77-78.
31. Stein, K., Miroso, M., & Carter, L. (2018). Māori women leading local sustainable food systems. *AlterNative: An International Journal of Indigenous Peoples*, 14(2), 147–155; Stein, K. (2016). *Māori Women Promoting Food Sovereignty in Aotearoa (New Zealand)* [Thesis, University of Otago].
32. Housing intensification enabled by RMA Amendment Act. (2022). Ministry for the Environment Manatū mo te Taiao. [https://environment.govt.nz/what-government-is-doing/areas-of-work/urban-and-infrastructure/housing-intensification-](https://environment.govt.nz/what-government-is-doing/areas-of-work/urban-and-infrastructure/housing-intensification-enabled-by-rma-amendment-act/)
- enabled-by-rma-amendment-act/
33. Wannan, Olivia (2022), Eco-friendly strawberries all year round: The benefits of farming upwards. *Stuff*. Jun 22, 2022

Appendix 06

Selected Bibliography

- Awatere, S., Mika, J., Hudson, M., Pauling, C., Lambert, S., & Reid, J. (2017). Whakatipu rawa ma ngā uri whakatipu: Optimising the “Māori” in Māori economic development. *AlterNative: An International Journal of Indigenous Peoples*, 13(2), 80–88.
- Ballantyne-Brodie, E., Wrigley, C., & Ramsey, R. (2015). Evolution of the docklands Food Hub: a design-led innovation approach to Food sovereignty through local Food systems. *Journal of Design, Business & Society*, 1(1), 43-55.
- Baker, K. (2010). Whānau taketake Māori: Recessions and Māori resilience. Social Policy Evaluation and Research Unit (Superu).
- Bargh, M., Douglas, S.-L., & Te One, A. (2014). Fostering sustainable tribal economies in a time of climate change. *New Zealand Geographer*, 70(2), 103–115.
- Beavis, B. S., McKerchar, C., Maaka, J., & Mainvil, L. A. (2019). Exploration of Māori household experiences of food insecurity. *Nutrition & Dietetics*, 76(3), 344–352.
- Boasa-Dean, T., & Bryce-Hare, R.N., (2020). Ngāhuia Lena: Kaitiaki of Moroitī. Te Mahi Oneone Hua Parakore: A Māori Soil Sovereignty and Wellbeing Handbook. Eds. J. Hutchings and J. Smith, Christchurch: Freerange Press. 90-105.
- Boulton, A., Gifford, H. (2014). Conceptualising the Link between Resilience and Whānau Ora: Results from a Case Study. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 3(2), 111-125.
- Chase, L., Grubinger, V. (2014). *Food, Farms and Community: exploring food systems*. Durham, New Hampshire: University of New Hampshire Press.
- Clark, T. (2008). `We're Over-Researched Here!': Exploring Accounts of Research Fatigue within Qualitative Research Engagements. *British Sociological Association*, 42(5), 953-970.
- Durie, M. (2006). Indigenous Resilience: from disease to disadvantage to the realisation of potential. Unpublished Paper. Pacific Region Indigenous Doctors Congress, Rotorua, New Zealand, 7 December.
- Hanna, C., & Wallace, P. (2021). Planning the urban foodscape: Policy and regulation of urban agriculture in Aotearoa New Zealand. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 0(0), 1–23.
- Harmsworth, G.R. & Roskrug, N. (2014). Indigenous Māori Values, Perspectives and Knowledge of Soils in Aotearoa-New Zealand: Chapter 20 – Māori Use and Knowledge of Soils over Time. In *The Soil Underfoot: Infinite Possibilities for a Finite Resource*. eds. G.J. Churchman, and E.R. Landa, Boca Raton: CRC Press. 257–268.
- Hond, R., Ratima, M., & Edwards, W. (2019). The role of Māori community gardens in

health promotion: A land-based community development response by Tāngata Whenua, people of their land. *Global Health Promotion*, 26, 44–53.

Huambachano, M. (2018). Enacting food sovereignty in Aotearoa New Zealand and Peru: Revitalizing Indigenous knowledge, food practices and ecological philosophies. *Agroecology and Sustainable Food Systems*, 42(9), 1003–1028.

Hutchings, J and Smith J. (Eds.) (2020). *Oneone Ora Tangata Ora: A Māori Soil Sovereignty Handbook*. Freerange Press: Christchurch.

Hutchings, J. (2015). *Te Mahi Māra Hua Parakore. A Māori Food Sovereignty Handbook*. Te Tākupu. Te Wānanga o Raukawa. Ōtaki.

Hutchings, J. (2016). Bringing Māori Food Politics to the Table: Decolonising food knowledge. In Hutchings, J and Lee, J. (Eds.) (2016). *Decolonisation in Aotearoa: Education, Research and Practice*. NZCER Press, Wellington. 172-182.

Hutchings, J., Smith, J., Harmsworth, G. (2018). Understanding the Mana of Soil through the Hua Parakore framework *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 7(1), 92-102.

Hutchings, J., Tipene, P., Carney, C., Greensill, A., Skelton, P., & Baker, M. (2012). Hua Parakore, an Indigenous food sovereignty initiative and hallmark of excellence for food and product production. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 1(2), 131–145.

Johnson, E. (2017) *Kai and Culture*. Free Range Press, Christchurch.

Kawharu, M. (2019). Reinterpreting the value chain in an Indigenous community enterprise context. *Journal of Enterprising Communities*, 13(3), 242–262.

Kawharu, M. (2020). System reset—Regenerating the marae economy. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 9(4), 22-24.

Kawharu, M., & Tapsell, P. (2019). *Whāriki: The growth of Māori community entrepreneurship*. Oratia Books.

King, P., Hodgetts, D., Rua, M. R., & Te Whetu, T. (2015). Older men gardening on the marae: Everyday practices for being Māori. *AlterNative: an international journal of Indigenous scholarship*, 11(1), 14-28.

Kukutai, T., McIntosh, T., Boulton, A., Durie, M., Foster, M., Hutchings, J., Mark-Shadbolt, M., Moewaka Barnes, H., Moko-Mead, T., Paine, S.J., Pitama, S., and Ruru, J. (2021). *Te Pūtahitanga: A Tiriti-led science policy approach for Aotearoa New Zealand*. Auckland: Ngā Pae o te Māramatanga.

Lambert, S., Mark-Shadbolt, M., Ataria, J., & Black, A. (2014). Indigenous resilience through urban disaster. the Maori response to the 2010 and 2011 Christchurch Otautahi earthquakes. *Proceedings of the International Indigenous Development Research Conference, Auckland University, 27-30 June 2012*, 234-241.

Mark, G. T., & Lyons, A. C. (2010). Māori healers view on well- being: The importance of mind, body, spirit, family and land. *Social Science & Medicine*, 70, 1756–1764.

Marsden, M. (2003). *The Woven Universe*. Mauri ora ki te ao Living. Otaki

Massey, C. (Ed.) (2017). *The New Zealand Land and Food Annual*. Massey University Press. Palmerston North.

McKerchar, C., Bowers, S., Heta, C., Signal, L., & Matoe, L. (2015). Enhancing Māori food security using traditional kai. *Global Health Promotion*, 22(3), 15-24.

McKerchar, C., King, P., Lacey, C., Abel, G., & Signal, L. (2020). Rights-based approaches to improving food availability for tamariki Māori: A narrative literature review and theory-based synthesis. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 9(3), 237-248.

Mead, A. (2021). Webinar 1: History and Impacts of WAI 262. Ngā Tāonga Tuku Iho: WAI 262 and the National Science Challenges. Hosted by Rauika Māngai and Ageing Well National Science Challenge. <https://www.ageingwellchallenge.co.nz/wai-262-webinar-series/>. 21 July.

Ministry for the Environment. (2022) Housing intensification enabled by RMA Amendment Act. Ministry for the Environment Manatū mo te Taiao. <https://environment.govt.nz/what-government-is-doing/areas-of-work/urban-and-infrastructure/housing-intensification-enabled-by-rma-amendment-act/>

Moeke-Maxwell, T., Nikora, L.W., Te Awekotuku, N. (2014). End-of-Life Care and Māori Whānau Resilience. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 3(2), 140-152.

Moeke-Pickering, T., Hita, M., Heita, S., Karapu, R., & Cote-Meek, S. (2015). *Understanding Māori Food Security and Food Sovereignty Issues*

in Whakatāne. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 4(1), 29-42.

Moewaka Barnes, H. (2010). Sexual coercion, resilience and young Māori: A scoping review. Wellington, New Zealand: Ministry of Women's Affairs.

Panelli, R., & Tipa, G. (2009). Beyond foodscapes: Considering geographies of Indigenous well-being. *Health & Place*, 15, 455-465.

Payne, D. (2020). The Hau of Kai hau kai: the practice of intergenerational reciprocal exchange. *Mahika Kai Journal*, 1(1) (2020), 1-14.

Pawson, E. (Ed.) (2018) *The New Biological Economy. How New Zealanders are Creating Value from the Land*. Auckland University Press. Auckland.

Penehira, M., Green, A., Smith, L.T., Aspin, C. (2014) Māori and Indigenous Views on R & R: Resistance and Resilience. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 3(2), 96-110

Raerino, K. (2017). *Marae food gardens: Health and wellbeing through urban marae in Tāmaki Makaurau*. PhD Thesis. Auckland: University of Auckland.

Reid, J., & Rout, M. (2016). Getting to know your food: The insights of Indigenous thinking in food provenance. *Agriculture and Human Values*, 33(2), 427-438.

Ritchie, I. (2016). Food Sovereignty in Whaingaroa: Perspectives of Food Providers in a Small, Coastal New Zealand Township. *Anthropological Forum*, 26(3), 289-300.

Ritchie, I. P. (2020). *Food, freedom, community: A study of food sovereignty in New Zealand*. Te Rā Aroha Press.

Rolleston, A., McDonald, M., & Miskelly, P., (2021): Our story: a Māori perspective of flourishing whānau, Kōtuitui: New Zealand Journal of Social Sciences Online.

Roskruge, N. (2007). Hokia ki te Whenua. PhD Thesis. Palmerston North: Massey University.

Rout, M., Reid, J., & Mika, J. (2020). Māori agribusinesses: The whakapapa network for success. *AlterNative: An International Journal of Indigenous Peoples*, 16(3), 193–201.

Savage, C., Hynds, A., Leonard, J., Dallas-Katoa, W., Goldsmith, L., Kuntz, J. (2018). All Right? An investigation into Māori Resilience. *Ihi Research*.

Stein, K. (2016). Māori Women Promoting Food Sovereignty in Aotearoa (New Zealand) PhD Thesis, Dunedin: University of Otago.

Stein, K., Miroso, M., & Carter, L. (2018). Māori women leading local sustainable food systems. *AlterNative: An International Journal of Indigenous Peoples*, 14(2), 147–155.

Stronge, D. C., Stevenson, B. A., Harmsworth, G. R., & Kannemeyer, R. L. (2020). A Well-Being Approach to Soil Health—Insights from Aotearoa New Zealand. *Sustainability*, 12(18), 7719.

Sullivan, B., & Tuffery-Huria, L. (2014). New Zealand: Wai 262 report and after. *Journal of Intellectual Property Law & Practice*, 9(5), 403–410.

Te Rūnanga o Ngai Tahu. (2013, November 19). Thriving Māra Kai. https://web.archive.org/web/20150121113319/https://ngaitahu.iwi.nz/our_stories/thriving-mara-kai/

Taura, Y., Reihana, K., Awatere, S., Harmsworth, G., & Forrest, E. (n.d.). Wai Ora Wai Māori – a kaupapa Māori assessment tool for Ngati Tahu-Ngati Whaoa. 8.

Taiapa, K., Barnes, H.M., McCreanor, T. (2021). Mārakai as Sites of Ahi Kaa and Resistance. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 10(2), 148-158.

Waiti, J., Kingi, T.K., (2014) Whakaoranga Whānau. *MAI Journal: A New Zealand Journal of Indigenous Scholarship*, 3(2), 126-139.

