Regional Food System Plan: Phase One Report

Stakeholder/ Partner Engagement, Data and Baseline Information for Wairarapa-Wellington-Horowhenua Region

Health New Zealand
Te Whatu Ora
Capital, Coast, Hutt Valley and Wairarapa

Wellington
Regional Leadership Committee

Contents

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- Te Rūnanga o Toa Rangatira Inc. representing Ngāti Toa Rangatira
- Port Nicholson Block Settlement Trust representing Taranaki Whānui ki Te Upoko o Te Ika
- Muaūpoko Tribal Authority representing the seven Muaūpoko hapū
- Te Rūnanga O Raukawa Inc. represented by Ngā Hapū o Ōtaki
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Glossary of te reo Māori used in this report

Adapted from Te Aka Māori Dictionary (1)

Aroha	Love, affection, caring
Atua	Ancestor with continuing influence, god, deity, supernatural being
Hapū	Section of a large kinship group and the primary political unit in traditional Māori society
Hui	Gathering, meeting, assembly, seminar, conference
Iwi	Extended kinship group, tribe
Kai	Food/meal
Kaimoana	Food gathered from the sea
Kaitiaki	Trustee, minder, custodian, guardian, caregiver for the environment
Kaitiakitanga	The process and practices of protecting and looking after the environment
Kōkiri	Advance or move forward. To champion, promote, advocate, lead.
Kotahitanga	Unity, togetherness, solidarity, collective action
Mahinga kai	'To work the food'. Relates to Māori traditional values of food resources as well as their ecosystems and the practices involved in producing, procuring, and protecting these resources.
Manaakitanga	To support, take care of, give hospitality, protect, show respect and generosity to others
Mana taurite	Equal status, equity, equality
Mana whenua	Power associated with possession and occupation of tribal land. The tribe's history and legends are based in the lands they have occupied over generations and the land provides the sustenance for the people and to provide hospitality for guests.
Marae	The open area in front of the wharenui, where formal greetings and discussions take place. Often also used to include the complex of buildings around the marae.
Mātauranga Māori	Māori knowledge - the body of knowledge originating from Māori ancestors, including the Māori world view and perspectives, Māori creativity and cultural practices.
Mauri	Life force
Moana	Ocean, sea
Mokopuna	Grandchildren
Ōritetanga	Equality, equal opportunity
Pou	Post, support, pillar
Rangatiratanga	Chieftainship, right to exercise authority, chiefly autonomy
Rohe	Boundary, district, region
Rōpū	Group, party of people
Taiao	The natural world that contains and surrounds us – land, water, climate and living beings. The interconnection of people and nature.
Tamariki	Children

Taonga	Treasure, anything prized – includes socially or culturally valuable objects, resources, phenomenon, ideas and techniques
Tangata Whenua	Local people, hosts, indigenous people. People born of the whenua.
Te ao Māori	The Māori world
Te tuāpapa	Foundation
Tuanui	Roof
Tupuna	Ancestors, grandparents
Wai	Water, stream, creek, river
Whakapapa	Genealogy, lineage, descent
Whānau	Family group or extended family
Whare	House
Wharenui	Meeting house, main building at the marae
Whenua	Land

Glossary and key concepts used in this report

Agroecology	Sustainable farming that works with nature (2).
Foodshed	The geographic location or region where food is produced, processed, distributed, and consumed (3).
Food security	When people have physical, social, and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences (4).
Food sovereignty	The right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems (5).
Food system	The food system is comprised of all the components (environment, population, resources, processes, institutions, infrastructure and other activities) involved in the production, processing, distribution, preparation and consumption of food. It also includes the impact of these activities on health and nutrition, equity, environmental sustainability and socioeconomic growth (6).
Informal food system	A non-commercial food system including community gardens, food swaps, and various other communal practices for sharing and distributing food amongst the community.
Kai sovereignty	Kai sovereignty is the freedom and responsibility of Tangata Whenua to protect their ancestral food systems, to protect the cultural knowledge, practices and ceremonies associated with the production, distribution, and consumption of food (7).

Local	For the purpose of this report, local refers to the Wairarapa-Wellington-Horowhenua region.
Local food	Raw food including fruit, vegetables, meat, poultry, dairy and fish that is produced, grown, caught or hunted close to the place where it is sold. Also includes lightly processed food where the main ingredient is supplied from nearby. In this report local food refers to food produced, grown, caught or hunted, as well as food processed within the Wairarapa-Wellington-Horowhenua region (3).
Local food economy	Local food economies encompass the economic and social systems involved in growing, processing, distributing, and consuming food within a specific locality (3).
Producers	Producers of primary produce including fruit, vegetables, meat, poultry, dairy and fish. This includes farmers, growers, game and fisheries, workers and processors (dairy producers, egg producers, flour millers, bakers etc.) (3).
Retailers	Food outlets/sellers of food through shops, farm shops, markets, box schemes, food cooperatives, supermarkets, and food delivery services.
Social determinants of health	The social determinants of health (SDH) are the factors that influence health outcomes that sit outside of the scope of the health system. They are the conditions or circumstances in the environment where people are born, live, learn, work, and age. These include factors such as housing, transport, education, employment, discrimination, and access to food. SDH are also a wider set of forces and systems affecting these circumstances such as the economy, social norms and political systems (8).
Stakeholders	The businesses, organisations, groups, and individuals that influence the local food economy and are affected by changes to it.
Sustainable	A sustainable food system is one that delivers food security and nutrition for all and includes economic sustainability (it is profitable throughout), social sustainability (it has broad-based benefits for society), and environmental sustainability (it has positive or neutral impact on the natural environment) (9).

List of acronyms used in' this report

CAB	Community Advisory Board
CSA	Community-supported agriculture
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
GDP	Gross Domestic Product
GHG	Green House Gas
LFE	Local Food Economy
MOH	Ministry of Health
MPI	Ministry of Primary Industries
NPHS	National Public Health Service
REDP	Regional Economic Development Plan
RFSP	Regional Food System Plan
RKN	Regional Kai Network
WRGF	Wellington Regional Growth Framework
WRLC	Wellington Regional Leadership Committee

Section 1: Executive summary

1.1 Executive summary

As our region prepares for an estimated 200,000 more people in the next 30 years, we need to plan for how we will feed a growing population in a way that is in harmony with the environment, nourishes our communities, celebrates our diverse cultures, and strengthens our local economy.

The need for a regional plan is set against the backdrop of a global and national food system grappling with profound challenges, such as:

- 1 in 5 children live in households that run out of food sometimes or often in Aotearoa New Zealand. For Māori and Pacific children, more than 1 in 3 live in households that run out of food sometimes or often, highlighting the unacceptable inequities within our food system.
- This lack of access to affordable, healthy food, alongside food environments that enable accessibility and marketing of highly-processed foods can lead to diet-related diseases that cause 1 in 5 deaths globally.
- Our industrialised food system creates a disconnect between people, the land, and the food they eat.
- One third of our regional greenhouse gas (GHG) emissions come from our agriculture sector.
- The COVID-19 pandemic, recent severe weather events and global conflicts have highlighted supply chain vulnerability and sustainability risks. These events also impacted food prices, which rose in 2023 at a pace not seen in 30 years.
- A supermarket duopoly in Aotearoa New Zealand reduces competition and consumer choice, while taking over $1million per day in profits. Supermarket arrangements are difficult and costly for medium and small-scale growers, and consumer expectations of “perfect produce” drive food waste.
- Nationally, we throw away over 122,547 tonnes of per annum: enough to feed around 262,917 people, or about half the population of the region.
- National and regional policies and regulations favour export models for food and provide hurdles for the local sale of food.

Phase One of the Regional Food System Plan (RFSP) has been developed through strong connections with mana whenua, community members, and pivotal stakeholders within the food system. The RFSP is firmly rooted in the guiding principles of Te Tiriti o Waitangi and Te Tirohanga Whakamua (described in section 2.4, page 13). This collaborative methodology to our partner and stakeholder engagement and data collection, ensures due reverence for mana whenua rights and aspirations, establishing a values-driven foundation for the plan.

This report describes the strengths, challenges, and opportunities for a future food system that prioritises sustainability, equity, and local leadership. There are complex interconnections and tensions that exist between food and climate change, housing, urban intensification and the economy.

Over half of the region's land is dedicated to food production, suggesting capacity to meet much of our region's nutritional needs and resilience to the ever-changing global supply chains. We heard from local growers about the support they need to be part of our local food economy. The region boasts a dynamic network of community initiatives and local food businesses, signalling a substantial opportunity to build upon existing initiatives. While there is growing momentum for a national food system strategy in Aotearoa New Zealand, we know solutions and actions must begin at local and regional levels today.

At the end of Phase One the overarching vision for this work is *to forge a sustainable, equitable, and locally-led food system that centres the well-being of the environment and people.*

The RFSP envisions a future state where:

- Sustainable growing and agroecology are the norm, powered by a skilled, growing workforce
- Food production supports biodiverse, thriving ecosystems and high animal welfare
- We have a de-carbonised, zero-waste food system, operating fully on renewable energy
- Mana whenua are key leaders and decision-makers in the governance of our regional kai systems
- Our food system supports and builds capacity of small/medium scale and locally owned food operations. They are enabled to access land, produce and distribute good food
- Our population is healthy; all communities can easily access good food, including local and home-grown produce
- We have strong food literacy across our population and institutions
- We meet most of our region's kai needs with locally grown, locally sourced and locally produced kai
- We invest in, share, and celebrate the kai traditions and stories unique to our region

The RFSP will aim to pilot projects and prototypes in Phase Two, refining key interventions based on mana whenua, community and stakeholder feedback. Phase Two, to be finalised in 2024, will look to define the roles of each partner and stakeholder as we develop actions aimed at fostering a sustainable, equitable, and locally-led food system in the region. These actions should be integrated into council work plans and other initiatives happening across the region. This work will continue to acknowledge the critical role of the food system in promoting the health and wellbeing of communities, supporting local economies, and mitigating environmental impact.

Section 2: The purpose and background of this report

2.1 What is the purpose of this report?

This report provides an overview of the Wairarapa-Wellington-Horowhenua regional food system for the Wellington Regional Leadership Committee (WRLC), comprised of mana whenua and community input, data collection and research. It concludes Phase One of the development of a Regional Food System Plan (RFSP) that embeds the vision of a regional food system that is sustainable, equitable and locally-led for the wellbeing of the environment and our people.

A food system is everything that is involved in keeping people fed. Food systems around the world are facing a triple challenge: ensuring food security and nutrition for a growing population; supporting the livelihoods of millions of farmers, food producers and others in the food chain; and doing so in an environmentally and economically sustainable way (10). As our region grows, it is projected there will be an additional 200,000 mouths to feed within the next 30 years (11). With population growth and the predicted changing climate, it is essential to understand the current food system context in order to plan and prepare for the region's future food needs.

For a food system to be sustainable we consider how we are growing, processing, transporting, consuming, and disposing of food across our region in a way that is in balance with the environment, while remaining financially sustainable. This includes ensuring growers are supported to produce food that does not degrade our natural resources, but rather regenerates and replenishes them, and that our growth planning protects the land where we grow food.

For a food system to be equitable we aim to ensure that everyone in our region has access to the food that supports their cultural, spiritual, physical, and mental health needs. They should have a choice in what they eat, have the ability to be involved in their local food system, and live in a region that cultivates food sovereignty. Our collective responsibility is to ensure that food is valued and that those who produce and grow the food in our region are also valued and fairly compensated. People in our region deserve their human right to healthy food to be upheld, no matter their age, gender, ethnicity, socioeconomic status, or geographic location. How a food system is designed is a strong determinant of the food security and food sovereignty of our communities.

For a food system to be locally led we look to mana whenua as key leaders within the food system. We are learning from and building upon community organisations on the ground. Small and medium growers have fair and profitable markets within the region. We centre the people in our region who produce and consume the food and build an infrastructure that empowers them to sell and buy locally, with attractive career paths.

To realise the vision of a regional food system that is sustainable, equitable, and locally-led and to understand how to achieve this, we need to first understand what is happening in the region.

This document provides an overview of how the region uses land in relation to food production, how much food is currently produced within the region, how much we will need to produce to feed the growing population, how supply chains are oriented, and what our current local food economy looks like. It also begins to describe some of the voices and visions of mana whenua and community in the region. **There is more work to do**, more to learn and test, and all stakeholders and partners are invited to continue to feed into this work with their respective expertise and perspectives.

This document will inform Phase Two, the Regional Food System Action Plan. It will assist in understanding how baseline data alongside information gathered through partner and stakeholder engagement and further research can come together and lay the foundations for an actionable plan that helps us begin the shift we want to see.

2.2 Why focus on food?

Food is central to all of our lives and our wellbeing. It is part of our identity, linking us to our cultures, traditions, environment, and our communities. Food nourishes our bodies, our minds, and our spirits. Healthy food and access to healthy food is the foundation of living a healthy life and preventing disease. Food produced in this region is essential to the livelihoods of many. When discussing the food system in this document, we are referring to the systems and components that keep us fed. For the purposes of this report, we will focus mostly on fresh foods (fruit, vegetables, meat and poultry, dairy and fish), predominantly those grown on land, while recognising the importance of seafood.

Kai is about more than just food. When we refer to “kai” in this document and work, we intend a much deeper and broader meaning, drawing wisdom from local indigenous knowledge systems. In te reo Māori, kai often means “food consumed through the mouth”, but it can also include all things that we absorb into our bodies, like knowledge and energy (12). Kai is embedded in our whakapapa (genealogy), connecting us to those who came before us (tupuna | ancestors), to those who will come after us (mokopuna | descendants), to the atua (deities), whenua (land), and to te taiao (environment) around us. Kai is what brings people together. It is an act of aroha (love) and manaakitanga (expressing care and consideration of others).

2.3 Where did this work come from?

2.3.1 The Wellington Regional Leadership Committee

The Wellington Regional Leadership Committee (WRLC) is a partnership between councils, iwi and central government who are working together on the region’s biggest challenges and opportunities for the next 30 years (see Figure 1 page 11). The Wairarapa-Wellington-Horowhenua Future Development Strategy sets out a long-term vision and plan for how the region will work to deliver well-functioning urban environments in our towns and cities over the next 30 years. The Future Development Strategy builds upon and will replace the work previously achieved within the Wellington Regional Growth Framework (WRGF) (11).

Challenges and opportunities that have been a focus for the WRLC include housing, transport, economic development, iwi capacity, and climate change. To address the challenge of climate change, the region is working on both mitigation (reducing GHG

emissions and environmental impact) and adaptation (adjusting to the changes that are already in motion and building resilience) opportunities. Because the food system both contributes to and is harmed by climate change (13) (explained further in section 4.2.1, page 18), the RFSP has been placed under the region's climate priorities and sits alongside the Regional Climate Change Impact Assessment, the Regional Emissions Reduction Plan and the Regional Adaptation Plan (14). Together, these will act as a coordinated regional approach to support the transition of our region to a low carbon and climate resilient region (see Figure 2 page 12). It is also important to note the role of the Regional Kai Network (RKN), who advocated for this work to be included in the WRGF. For more details about the RKN, see Section 4.1.2.

The WRLC, as a union of regional partners, is well situated to address food system challenges and foster solutions.

Mana whenua can help lead the direction, knowledge and action of the Food System Plan. Indigenous worldviews and knowledge is foundational for a regenerative and resilient food system.

Local governments need to prioritize the integration of food into all planning and policy development processes. This includes transportation, land use planning that supports local food production and supply, urban growth and city planning strategies that foster food access within 15 minutes, research and data to understand community wellbeing indicators linked to food, and the facilitation of local initiatives and partnerships aimed at promoting food sustainability, equity, and resilience.

At a national level, Central government need to introduce and maintain national policies that support a local food economy, incentivise sustainable growing, and support initiatives that help make nutritious food more affordable and accessible to all.

Figure 1: Partners and priorities of the Wellington Regional Leadership Committee

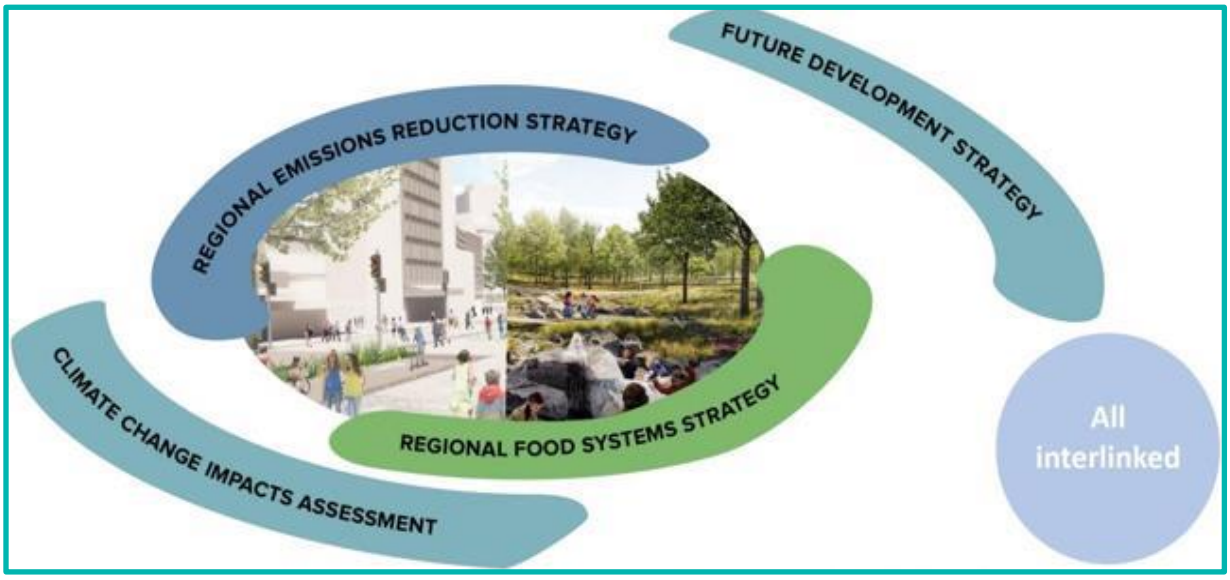

Figure 2: Wellington Regional Leadership Committee Climate Change projects

2.3.2 Health NZ | Te Whatu Ora National Public Health Service

The WRLC has commissioned Health NZ | Te Whatu Ora National Public Health Service (NPHS) Capital, Coast, Hutt Valley and Wairarapa to lead Phase One of the RFSP, understanding that a health and equity lens will be applied to the plan.

Food security is a social determinant of health. Having continual access to nutritious, safe, and affordable food is essential for a person's health and wellbeing. Without access to healthy food, people are more likely to suffer from dietary-related chronic disease, with food insecurity often being associated with poor health outcomes, reduced learning in schools, and higher costs to the healthcare system (8). Healthy food is foundational to physical, mental, spiritual, and whānau wellbeing.

The NPHS Capital, Coast, Hutt Valley and Wairarapa has statutory obligations under the Pae Ora Act (2022) (15) and the Health Act (1956) (16) to improve, promote and protect the health of people and communities within the region. We have a particular focus on improving the health of Māori, Pacific and disabled people. To meet our obligations as Crown agents, Health NZ | Te Whatu Ora is building a health system that embeds Te Tiriti o Waitangi as its foundation. This means placing Te Tiriti o Waitangi at the forefront of thinking and providing opportunities to enact Te Tiriti o Waitangi principles and articles to improve health outcomes for Māori.

2.4 Te Tirohanga Whakamua

Te Tirohanga Whakamua stands as a statement, a visionary compass, and a kōkiri or driving force crafted by the iwi partners of the WRLC for the Future Development Strategy, generously gifted to each project encapsulated within the WRLC portfolio (11). Te Tirohanga Whakamua acts as a pathway to honouring our Te Tiriti o Waitangi responsibilities and also serves as a blueprint for achieving enhanced outcomes across our diverse communities and the environment when envisioning the future development of our region. Te Tirohanga Whakamua possesses its own intrinsic mauri (life force) transforming it into a living document that evolves organically over time.

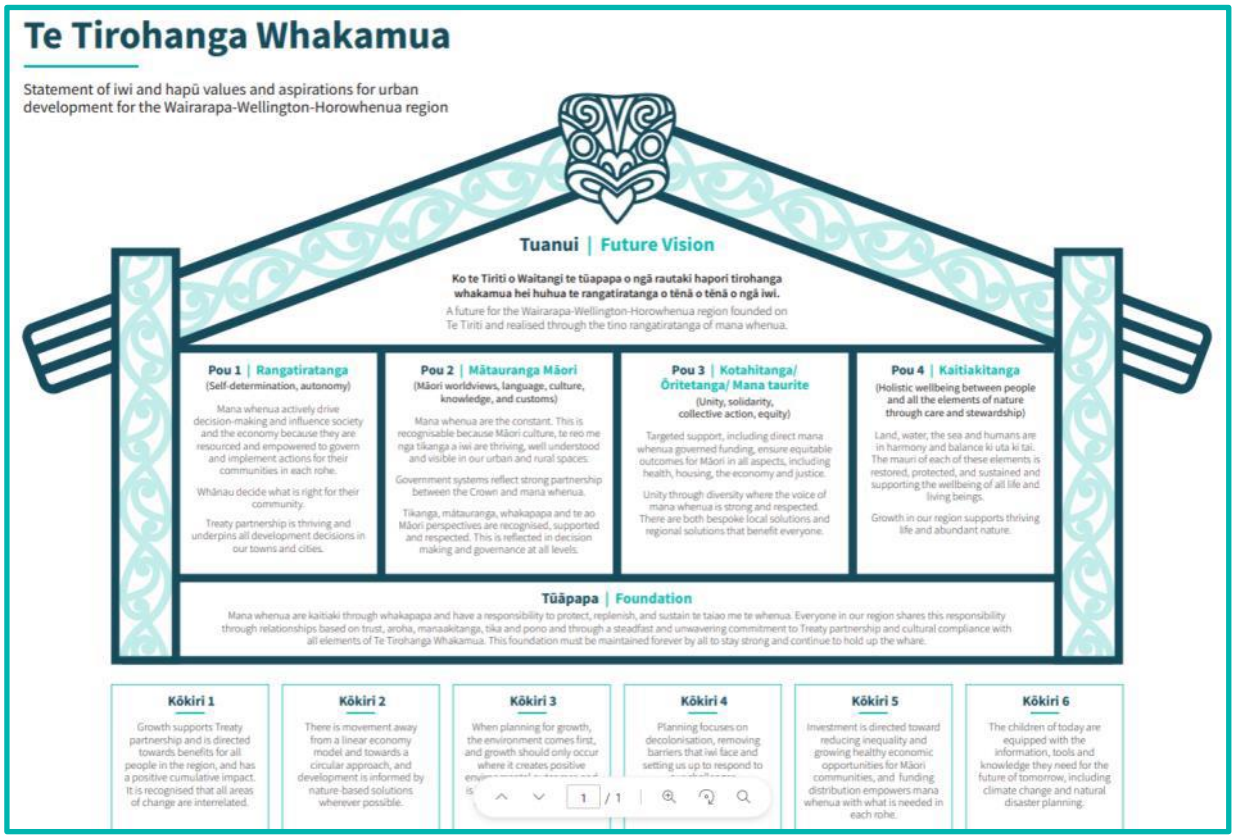

Figure 3: Te Tirohanga Whakamua

Source: Wellington Regional Leadership Committee. *Future Development Strategy*. 2023

Te Tirohanga Whakamua is based around the structure of a whare. Each element of the whare depends on and supports the other, and all are needed for the whare to stay standing. Much like these structural components of a whare, the components of Te Tirohanga Whakamua work in harmony, with their synergy being indispensable for the overall coherence of the structure. This holistic approach is key in bringing to fruition the aspirations and values that mana whenua hold for the region. For a larger graphic of Te Tirohanga Whakamua see Appendix 1 (page 62).

Te Tirohanga Whakamua encompasses the following:

- Te tuāpapa or the foundation of the whare emphasising the role of mana whenua as Kaitiaki for our region and the responsibility everyone has to protect, replenish and sustain te taiao me te whenua, the environment and the land.

- Upon the foundation, four pou support the whare. These pou are important concepts of Te ao Māori, speaking to elements such as self-determination, Māori worldviews and knowledge, equity and unity, and holistic wellbeing. They are the central pillars of what sustains and holds up mana whenua and our communities into the future:

    - **Pou tahi**: Rangatiratanga
    - **Pou rua:** Mātauranga Māori
    - **Pou toru:** Kotahitanga/ Ōritetanga/Mana taurite
    - **Pou wha**: Kaitiakitanga
- **Te tuanui** (the roof) sits atop the four pou, representing the future vision ‘Ko te Tiriti o Waitangi te tūapapa o ngā rautaki hapori tirohanga whakamua hei huhua te rangatiratanga o tēna o tēna o nga iwi’. This statement emphasises aspirations of mana whenua for the future of the region as one founded on Te Tiriti and realised through the tino rangatiratanga of tangata whenua.
- The whare is supported by six kōkiri or driving principles. These are value statements to guide and provide consistency in the way we plan for and make decisions on the future of our region. This includes supporting Te Tiriti partnerships, circular economy models, sustainable growth, removing barriers for iwi, investment that reduces inequality and promotes economic growth and equipping future generations to face challenges, such as climate change.

Further discussion around how the values of this framework are embedded in the work are found in Section 5 (page 26).

Section 3: The food system and the local food economy

3.1 What is a food system?

A food system includes everything that is needed to keep people fed. It begins with the whenua (land), soil, and seed during the production phase, progresses through various stages of processing and distribution, is accessed by consumers through venues such as supermarkets, local shops and restaurants, ultimately reaching our mouths for nourishment and enjoyment. Additionally, it encompasses the management of food waste (17), see Figure 4 (page 15).

It is important to highlight the existence of a non-commercial food system, or an 'informal food system.' This encompasses community and backyard gardens, food swaps, and various other communal practices for sharing and distributing food among community members. This system incorporates activities such as hunting, gathering, and cultivation/distribution outside the realm of commercial markets. Moving forward, there is a crucial need for research and a deeper understanding of this informal, non-commercial food system within the region, as it is not covered within this report.

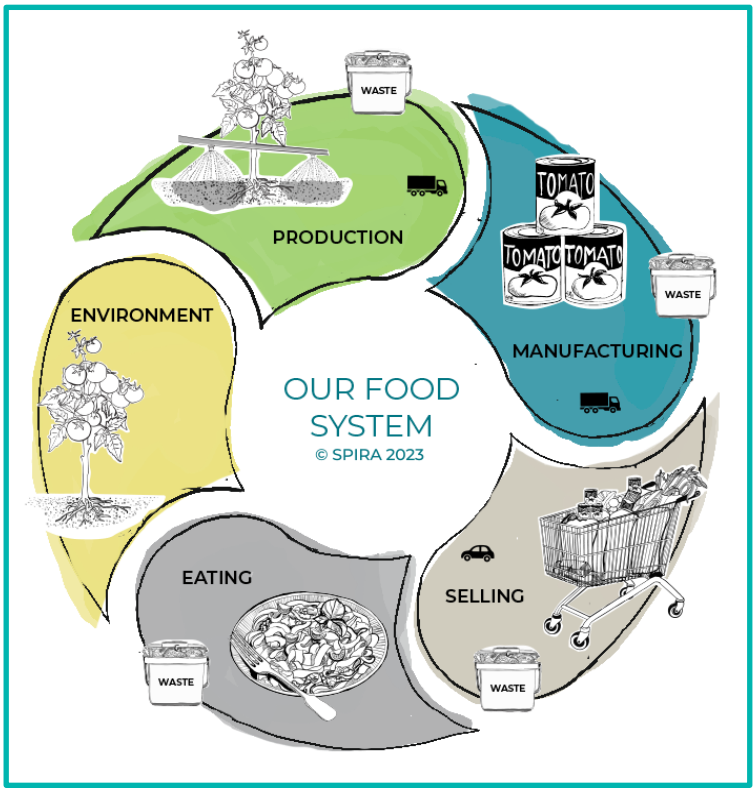

Figure 4: Food System Diagram

Source: Spira. *Our Food System*. 2023

3.1.1 Why a systems approach?

Because we are all part of the ecosystem, not in charge of it, we must understand our role and how our actions affect all parts of the ecosystem (in this case the food system). It is important to address the entire food system, as all parts of the food system are intricately connected. Applying siloed initiatives to singular components of the food system (i.e. just production or just waste) leads to less impactful (and sometimes conflicting) outcomes, and often does not take into account the social, economic, cultural, and environmental impacts of the entire system. Working in a systems-led approach also acknowledges the many stakeholders and partners within the food system and fosters collaborative solutions to address the complex issues. It allows for small shifts to compound to larger changes. Finally, a whole systems approach allows us to work more “upstream,” directing efforts towards root causes of our issues that can be prevented and understanding that changes in one part of the system can have cascading effects on other parts.

3.1.2 Why is a regional approach important?

Collaborative efforts at a regional level are vital to shaping a resilient and sustainable food system. The region's unique geography, climate, and cultural diversity requires a locally tailored approach that addresses specific challenges and leverages regional strengths. By working together, stakeholders and partners (ranging from iwi to local farmers and producers to policymakers to community groups and the retail sector) can use their collective expertise and resources to develop actions that align with the region's distinctive needs. This collaborative approach fosters a sense of shared responsibility, ensuring that the resulting food system solutions are not only effective, but also culturally appropriate and socially

inclusive. Local knowledge and initiatives can help inform regional efforts, and regional findings and actions and help influence national plans.

3.2 What is a local food economy?

A local food economy (LFE) makes up the economic and social systems related to the growth, processing, distribution, and consumption of food within a specific local area. LFEs can play a crucial role in boosting social capital and resilience within farming communities, positively influencing the local economy. By promoting collaborative processes, LFE initiatives strengthen community cohesion and deepen consumer understanding of food and farming systems (18, 19).

The emphasis on local systems also supports agricultural diversity and biodiversity in crops and livestock. This diversity serves as a protective mechanism, guarding against crop failures and bolstering the overall resilience of the food system. LFEs lend themselves well to adopting circular economies, which prioritises the elimination of waste, keeping products in circulation, and regenerating natural living systems (20).

Beyond its positive economic and environmental impact, an LFE fosters community engagement and connection by encouraging direct relationships between producers and consumers. Initiatives like farmers' markets, community-supported agriculture (CSA) programmes, and local food events create opportunities for individuals to connect with those responsible for growing their food, cultivating a sense of community. The focus on local food preservation also contributes to the safeguarding of traditional food practices and culinary heritage, particularly in regions with unique food traditions and cultural identities (18, 19).

Supporting local agriculture also translates into job creation within the community, spanning from farm work to the processing, distribution, and marketing of local products. This not only bolsters economic prospects but also strengthens the social fabric of the community. Local food systems offer educational opportunities, serving as platforms for learning about farming practices, sustainability, and nutrition. This educational aspect fosters a greater understanding and appreciation of the origins and production processes of food, promoting a holistic approach to local food systems.

The RFSP recognises the significance of Aotearoa New Zealand's food export market. The emphasis will be on capitalising on local opportunities within the region, with the belief that these opportunities can enhance, rather than diminish, the prosperity of farmers and growers.

Section 4: The regional food system: strengths and challenges

4.1 What are the strengths of our regional food system?

4.1.1 Abundant opportunities

Rich soils in Wairarapa, Kāpiti, and Horowhenua support thriving food production in our region. Wairarapa is known for its crops, orchards, farms, artisan products and is the world's largest mānuka honey producer (21). Kāpiti is a thriving area for organic growing, innovative local brands (including plant-based protein companies) and a strong dairy production industry. Horowhenua is our horticulture haven and a driver of dairy as well. It is home to one of Aotearoa New Zealand's largest vegetable growing areas and is estimated to supply up to 30% of the county's leafy green vegetable supply (22). Our peri-urban spaces boast innovative retailers and infrastructure for our foods alongside smaller-scale community growing operations. Porirua hosts mushroom production, orchards, and a prosperous food company headquarters. Te Awa Kairangi ki Uta (Upper Hutt) and Te Awa Kairangi ki Tai (Lower Hutt) host various local brand producers, orchards and regenerative farms, and strong neighbourhood growing initiatives. The heart of our country's capital city, Pōneke (Wellington) is home to unique cultures, diverse restaurants, and claims more cafes per capita than New York City. It has progressive solutions to food waste via compost hubs and local supermarket alternatives.

The strengths of our region have immense potential for further innovation and local opportunities. The food and fibre industry contributed nearly $2 billion to our regional GDP in 2021 and provides employment opportunities to over 13,000 people (23).

4.1.2 Communities passionate about kai

Over 75 community organisations and marae across the region play a vital role in supporting access to kai by growing, harvesting, cooking, and distributing kai to community members. We have a successful local fruit and vegetable cooperative with 40 pickup hubs across our region that distributed nearly 71,000 packs in 2023. To minimize food waste, local food rescue organisations help to rescue and redistribute quality surplus food to charities and community groups that support the demand for food. Kaibosh, for example, rescues over 75,000kg of surplus food each month (24).

Hua Parakore, developed by Te Waka Kai Ora, is the world's first indigenous and globally recognised verification system for food, applying tikanga deeply grounded in te ao Māori. Our region is lucky to have this non-profit kaupapa organisation headquartered in Te Awa Kairangi ki Uta (Upper Hutt). This framework is used across the country, and aligns with closed systems of production, prioritising zero or minimal inputs and operating in harmony with nature. Practices foster self-reliance and self-sustainability, supporting indigenous food security and food sovereignty in Aotearoa New Zealand (25).

The Regional Kai Network (RKN), a group of community organisations, growers, and individuals passionate about kai in their communities, was formed in 2020, facilitated by NPHS and community-based organisation, Common Unity. Over 130 members meet bi-monthly to work collaboratively towards their mission of *'together we're growing a food-resilient region where everyone has access to good food'.* Members focus on advancing food security and food sovereignty in their communities, and have contributed significantly to the vision of the RSFP. The RKN played a leading role in advocating for food systems work to be integrated into the WRLC portfolio. For an interactive map of the community initiatives and organisations involved in the RKN see the following link: Regional Food Network Map.

4.2 What are the tensions and challenges that exist in our regional food system?

While it is important to acknowledge the strengths of our region, it is equally vital to address the significant challenges and tensions that hinder the development of a robust regional food system. These issues extend beyond our region, encompassing global and national tensions that necessitate comprehensive solutions.

Navigating the intricacies of the food system, with its inherent complexities, poses a significant challenge for decision-makers and stakeholders within the food system. Understanding the available opportunities to reorient the food system and identifying collaboration points is crucial to addressing these complex challenges.

4.2.1 Food and climate change

The food system plays a dual role in the context of climate change. It is a significant contributor of GHG emissions, while also being vulnerable to impacts and disruptions caused by climate change, such as temperature shifts, extreme weather events, floods and droughts (13). Approximately 1/3 of the Wellington region's emissions come from agriculture (26), see Figure 5 below (note this figure does not include Horowhenua).

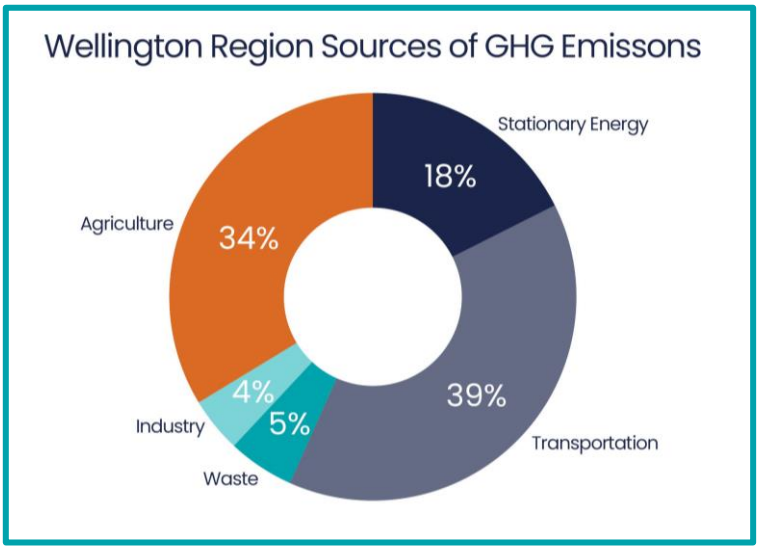

Figure 5: Wellington Region Sources of GHG Emissions

Source: Greater Wellington Regional Council. *Wellington Region Greenhouse Gas Inventory*. 2019

Key emitting activities throughout the food system include livestock agriculture, the use of fertilisers and pesticides, deforestation, energy-intensive food processing, transportation, and food waste (13). For an example, see Figure 6 below for a depiction of emissions produced from both tomato and beef production, based on a meta-analysis of global data. Food production is also the largest consumer and contaminator of fresh water, a resource that is limited and holds cultural significance to many (27). Economic interests can take precedence over environmental concerns, making it difficult to manage these impacts on our climate.

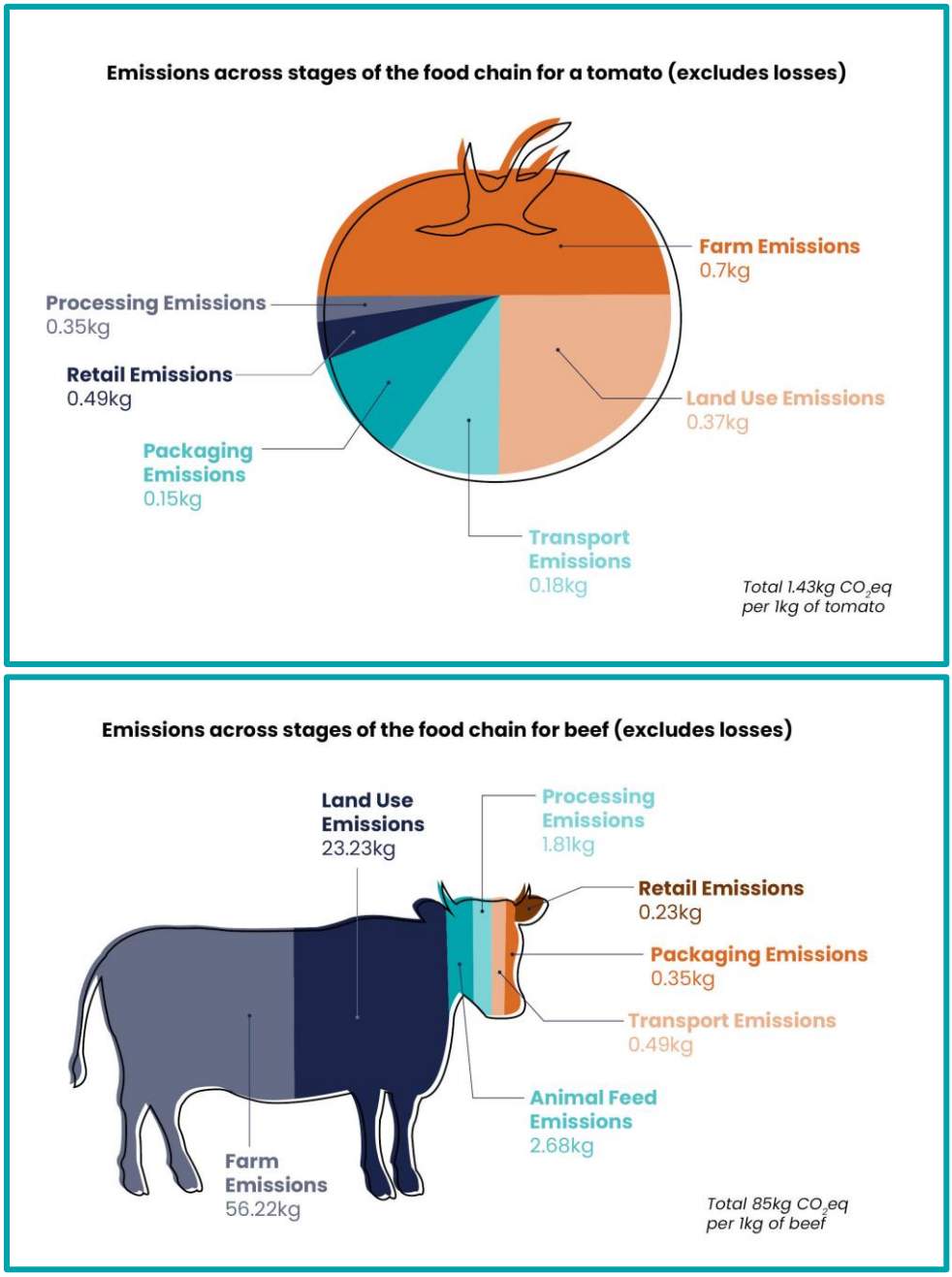

Figure 6: Emissions across stages of food chain for tomato and beef

Source Adapted from: Emily King, *Re-Food*. 2023

Consumption patterns also influence climate, with sustainable eating patterns not always aligning with our country's primary industries (such as meat and dairy). There is growing research identifying how sustainable diets in Aotearoa New Zealand can improve population health while aligning with environmentally sustainable practices (28).

According to the Intergovernmental Panel on Climate Change (IPCC) the impacts of climate change on food insecurity will be most significant in the near to medium future (29). The downstream effects of climate change including temperature shifts, extreme weather events, water scarcity, drought, sea level rise, saltwater intrusion, and biodiversity loss negatively impact multiple layers of the food system, leading to production challenges, decreased nutrient density, and disruptions in distribution and supply chains. These disruptions, in turn, affect the growth, price, quality and availability of, and access to food, causing humanitarian and economic repercussions (29).

The relationship between the food system and climate change in conjunction with predicted trends in population growth creates a dangerous feedback loop that puts increasing pressure on natural resources. This loop is depicted below in Figure 7: a growing population requires a greater agricultural and food production output, agriculture and food production outputs contribute greatly to climate change and climate change negatively impacts agricultural and food production outputs (13).

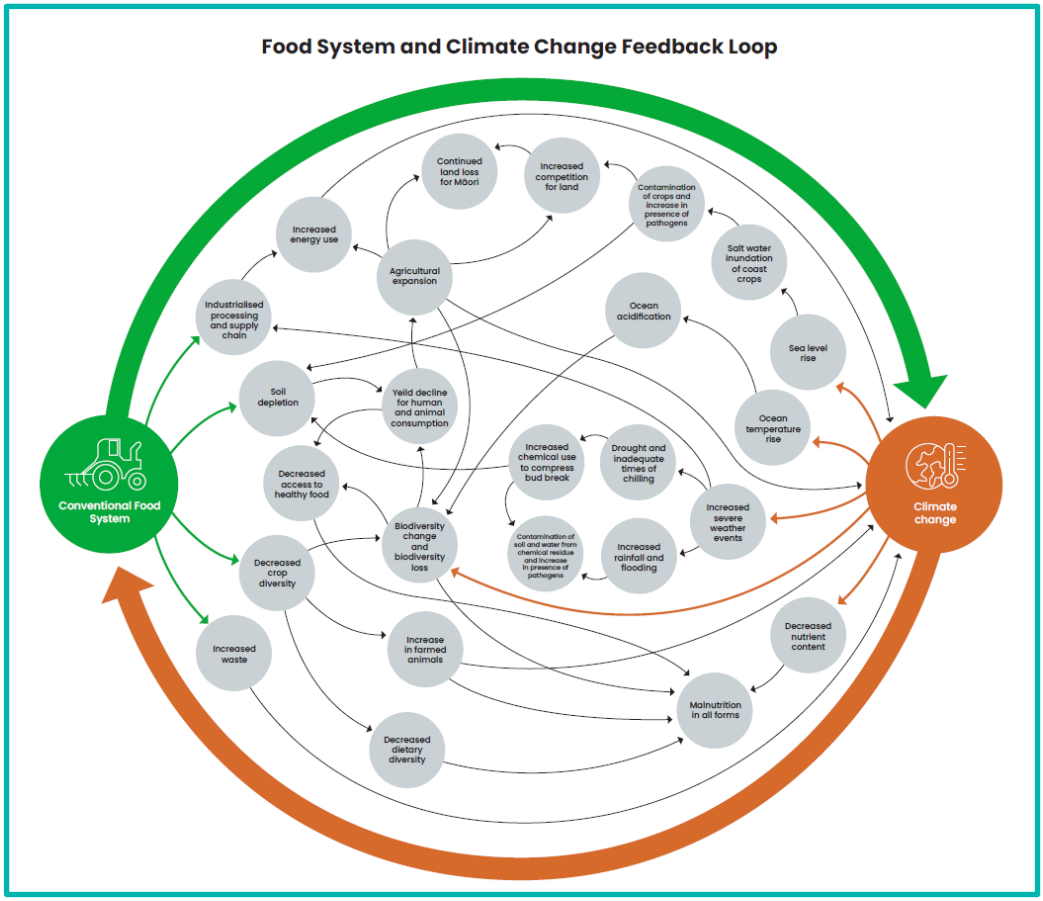

Figure 7: Food system and climate change feedback loop

In Aotearoa New Zealand the impacts of climate change threaten the whenua, the wai and taonga species for Māori with traditional practices related to kai and wellbeing already being impacted. Signs used to forecast natural changes in the environment are becoming less reliable, impacting mahinga kai. A diminished abundance of kai not only impacts health and wellbeing but has long lasting impacts on cultural identity and the ability to manaaki (30).

4.2.2 Food and Soil

Soil is the foundation of the food system. Soil microbiomes are thriving ecosystems, home to millions of microorganisms, bacteria, and nutrients that are crucial to plant life. Nutrient-rich soil is crucial to growing nutrient-rich food. Ninety-five percent of food production relies on topsoil (2). Soil stores more carbon than the atmosphere and all the trees and forests on the planet. It is the largest reservoir of carbon in the terrestrial biosphere, making it the foundation of a healthy, thriving, and climate-smart food system. When a food system uses large, industrial agriculture to grow food, it can degrade soil health and erode topsoil (2).

4.2.3 Food waste

Food waste occurs through:

- On farm losses, inadequate harvest times, climatic conditions, harvest and handling practices, challenges with positioning in the marketplace
- Poor household purchase and meal planning
- Losses through supply chains, inadequate storage, inadequate handling practices and long wait times
- Over supply, lack of demand and procurement gaps

Food waste contributes to GHG emissions. In 2018, Love Food Hate Waste found that New Zealanders throw away over 122,547 tonnes of food a year – enough to feed around 262,917 people, or about half the population of the region for 12 months (31). Food rescue and redistribution offsets carbon emissions. For example, in our region, the aforementioned 75,000kg/month of rescued equates to a 22,425 reduction in carbon emissions. (24). It is important to note that while food rescue is a helpful short- term solution to reduce food waste, it should not be relied upon as a long-term solution. Investing in food rescue over food system change perpetuates our reliance on charity models. Currently, however, food rescue is very helpful in supporting those who are food insecure.

Source: *Wellington City Council. Food Waste in New Zealand*. 2023 (32)

4.2.4 Food insecurity and community wellbeing

Food insecurity in Aotearoa New Zealand is defined as “a limited or uncertain availability of nutritionally adequate and safe foods or limited ability to acquire personally acceptable foods that meet cultural needs in a socially acceptable way” (33, 34). Food insecurity has significant adverse effects on health, wellbeing, and development, especially among children.

Source: Ministry of Health. *Children Household Food Insecurity Data*. 2023

Recent New Zealand Health Survey 2022/2023 data reveals that nationally, 21% of children lived in households where food ran out often or sometimes, up from 14%, which is the largest increase on record for children in food insecure households (33). The most recent Growing Up in New Zealand study found that one in six 12-year-olds experienced food insecurity (35).

Among Māori and Pacific children, the numbers are even higher, with over one in three, or 35.1% and 39.6%, respectively, living in food insecure households (33).

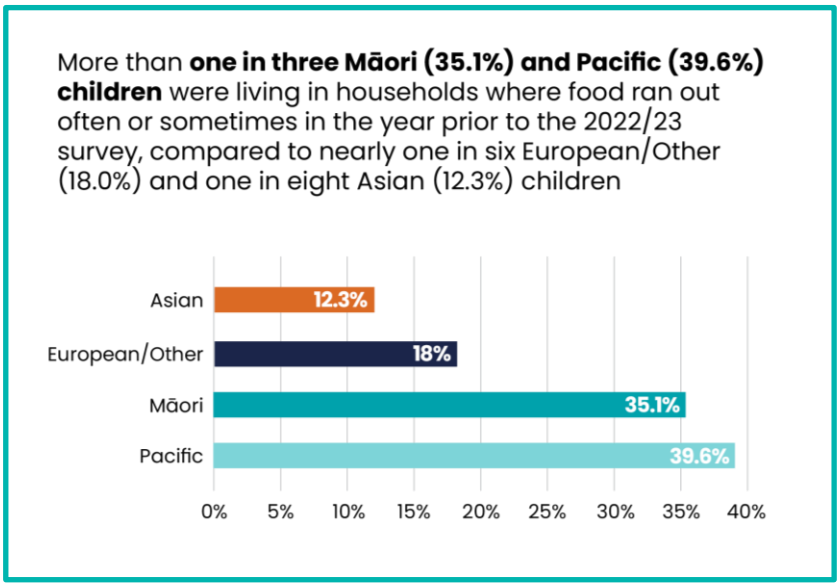

Figure 8: Children Household Food Insecurity

Source: Ministry of Health. *Children Household Food Insecurity Data*. 2023

Furthermore, 14% of children relied on food grants or food banks, with higher percentages for Māori children (25.6%), Pacific children (34%), and those in the most deprived areas (32%) (33). There is no regionally specific food security data, which is a vital next step to this work.

New Zealand Health Survey nutrition data (2017–2020) for the Wellington region indicates that most children (74%) meet the recommended daily fruit intake, but less than half (47%) consume the recommended vegetable intake. Among adults in the region, just over half meet the recommended daily fruit (51%) and vegetable (56%) intake (36).

In the most deprived areas of the region, 38% of adults meet the recommended daily fruit intake, and 44% meet the recommended vegetable intake; this is lower than national figures for the most deprived areas (36). The rising cost of food, in combination with the inflated cost of living, will influence nutrition patterns (37). In addition to this, healthy food is often more expensive than processed, less nutrient-dense foods, meaning the healthy choice is often not the easiest choice.

The effects of food insecurity result in poor nutritional intake, which in turn can increase the risk of obesity, cancer, and cardiovascular diseases (38, 39) experiences of emotional distress (40, 41), declined cultural and spiritual wellbeing (42, 43) and negative impacts on child health, schooling, behaviour, and development (44, 45).

To effectively address hunger and ensure access to healthy food in our region, it is imperative that we have detailed food security data. Without this knowledge, providing crucial assistance becomes challenging, and evaluating the impact of our efforts in shifting the food system remains uncertain. It is therefore key to gather high-quality, current, and regionally specific data on food insecurity and nutrition. This comprehensive dataset should encompass qualitative information, with a specific focus on Māori and Pacific families, who currently face significant inequities compared to the general population. Additionally, we anticipate insights from the next National Nutrition Survey (currently being scoped) which will contribute valuable information on eating patterns across the country.

For a more comprehensive overview of food insecurity in the region and country see Appendix 2 (page 63).

4.2.5 Food, housing and highly productive land

In planning for expected population growth in our region, it is crucial to include the accessibility of healthy food alongside urban development and housing availability. We need to consider how changes in land use affect the ability to produce and access nutritious food, and the subsequent impact this has on our health and wellbeing. The RFSP is a vital addition to ongoing regional initiatives such as the draft Future Development Strategy, Emissions Reduction and Climate Change Adaptation Plans. This plan also needs to be considered in the context of relevant National Policy Statements including Urban Development, Highly Productive Land, and Freshwater Management.

Land use for food production should be balanced with the need for safe and affordable housing. Recognising that certain areas are particularly suited for growing specific crops, incorporating the National Policy Statement for Highly Productive Land into regional planning becomes crucial. This is particularly relevant for the Horowhenua, Kāpiti, and Wairarapa

regions, which contribute significantly to our fresh food supply and are already experiencing pressure on food production due to climate change effects. Considering the cultivation of food at home, in communal spaces or individual households, is equally important. This should go hand in hand with other design considerations aimed at creating healthy, safe, and accessible housing.

Loss of highly productive land, a non-renewable resource, may adversely affects population health by increasing fresh food costs and limiting access. This impact disproportionately affects households already struggling with affordability. A pro-equity perspective on urban planning, recognising the interconnected nature of development, land use, food access, and community health, is fundamental to the success of the RFSP.

4.2.6 Food resilience and supply chain risks:

The COVID-19 pandemic, severe weather events and global conflicts have highlighted supply chain vulnerability and sustainability risks. This has contributed to increased transport and freight costs, resulting in a greater cost to consumers. Cyclone Gabrielle and flooding events have reduced crop yields, further contributing to an 18.4% increase in fruit and vegetable prices from May 2022 – May 2023 (46).

The supermarket duopoly impacts food production and retail supply, and generates over $1 million in profit daily. This duopoly not only hinders supply chain resilience to external shocks but also limits consumer choice in food selection and reduces opportunity for fair pricing (47). Local food opportunities are impacted by supermarkets and large corporations that dominate profit-driven food systems, while these provide employment they leave local food producers struggling to compete with the capacity that corporate food systems can operate at (48). It is worth noting that locally grown, farmed, and produced food does not always mean cheaper or affordable food.

Source: New Zealand Government. *Government acts on supermarket duopoly.* 2022

4.2.7 Food policy and regulation

Food-related policies can sometimes have unintended consequences that exacerbate tensions within the food system.

For example, policies aimed at protecting water quality and health can significantly limit growers' capacity to cultivate fresh fruits and vegetables. This becomes especially pertinent when considering the regional balance of food supply and demand (see Figure 19, Section 6.2.2, page 42). Consequently, a tension arises between environmental conservation efforts

and the necessity to maintain food security through ensuring access to affordable and accessible fresh produce (49).

Similarly, many of the regulations governing food production in Aotearoa New Zealand are often designed for international markets, particularly those with stringent food safety and quality standards. While these regulations are essential for ensuring the safety of exported products, they can impose significant compliance burdens on local producers, making it challenging for them to operate in smaller, localized markets (48, 50).

When examining regional food production and distribution models, it's crucial to consider the diverse range of policies and regulatory frameworks that food system stakeholders operate within. Local and regional contexts must be carefully considered to determine the most effective approaches moving forward. These approaches should enable food production practices that meet the needs of our communities while adhering to regenerative and best-practice models that protect both our environment and our people.

Section 5: Vision and approach

Key Shifts:

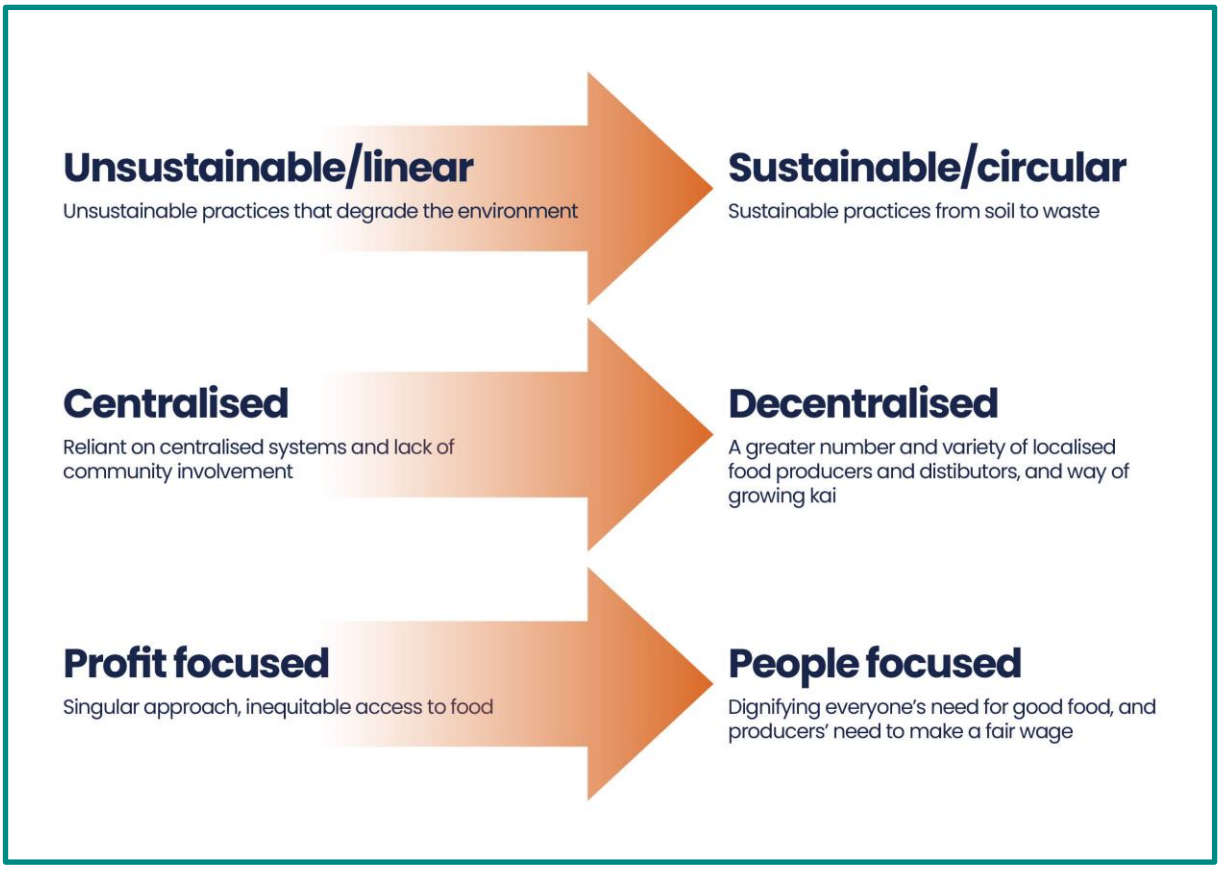

Figure 9: Key Food system shifts for our region, defined with input from partners

5.1 Plan vision

"A sustainable, equitable, and locally-led regional food system that centres the wellbeing of the environment and people."

The vision statement outlined above was crafted through a collaborative effort involving iwi and the Community Advisory Board (CAB) (described in section 5.2.2). The consensus among partners and stakeholders was that the initiatives aimed at transforming the food system should be grounded in a commitment to prioritise the wellbeing of both the environment and people. This shared understanding underscores the integral role of fostering a symbiotic relationship between human welfare and environmental sustainability in the ongoing efforts to reshape the regional food system.

5.2 What is the approach of the Regional Food System Plan?

5.2.1 RFSP Phases

The RFSP will develop across two distinct phases:

1. Phase One started with mana whenua and community voice bolstered by the guidance of a group of technical advisors, and supported by quantitative and qualitative data from the region. This initial phase serves a dual purpose: firstly to foster the establishment of the iwi/hapū rōpū, the CAB, and the Technical Advisory Group and to support them to work collaboratively so they can drive the plan forward; secondly, to capture both qualitative and quantitative data that can then be used to inform the next phase of this plan.
2. Phase Two aims to include: implementation of pilots and prototypes paving the way for the finalisation of the comprehensive RFSP (scheduled late 2024). Figure 7 below illustrates how the components of Phase One work together to inform the development of the RFSP.

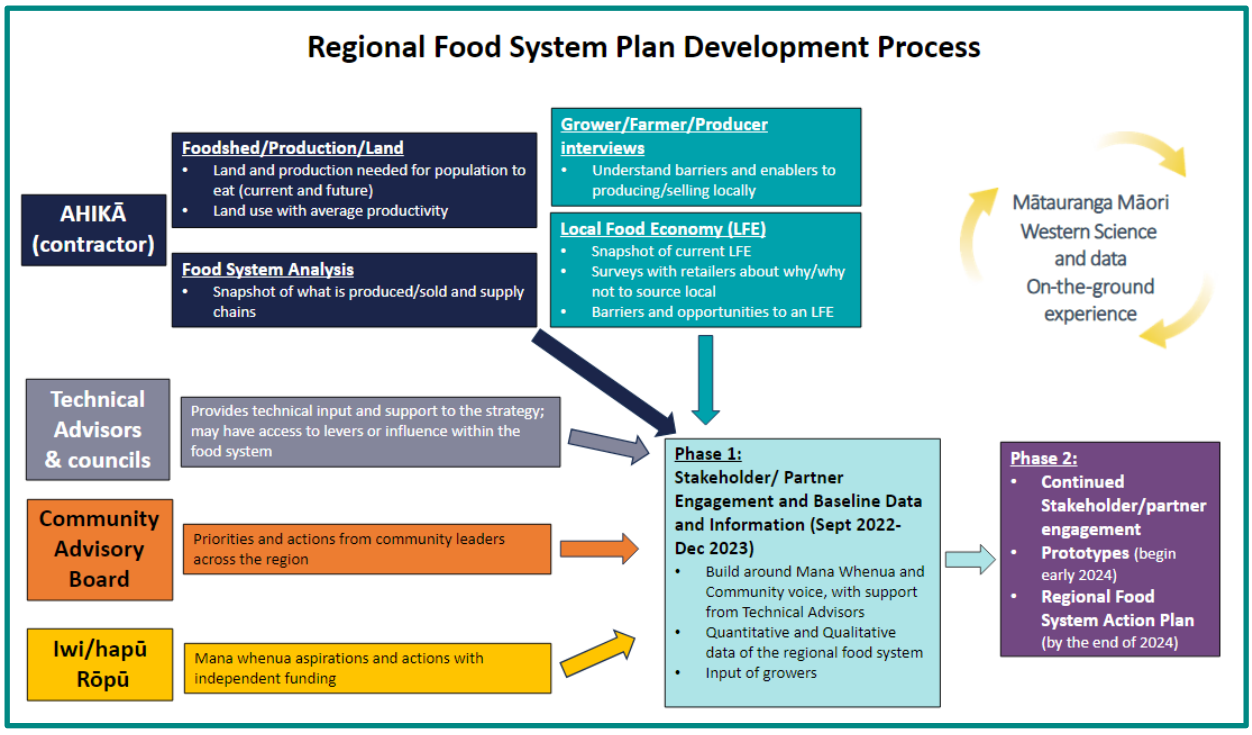

Figure 10: Key Components of Phase One for the Regional Food System Plan

5.2.2 Engagement with partners and stakeholders

Iwi/hapū Rōpū – In alignment with Te Tiriti o Waitangi and Te Tirohanga Whakamua, we initiated Phase One of the RFSP by engaging with and establishing meaningful connections with mana whenua partners. Mana whenua hold customary rights and duties of the land; they are the constant of our region. Mana whenua hold intergenerational mātauranga Māori (indigenous Māori knowledge), which is vital to the protection and preservation of the whenua, as well as a regenerative and resilient food system. The Te Ao Māori worldview sees people as a part of te taiao, and defines the values and practices of living in harmony

with te taiao. Te Ao Māori understands the interconnectedness of all beings and organisms involved in the food system - from soils, to skies, to animals, plants and people, and acknowledges the impact that positive-and negative changes can have on all involved. Mana whenua know their local places intimately, and uphold their responsibility and rights as kaitiaki of the whenua and people, maintaining the social fabric of a kin group, and preserving the unique and life-giving values of the environment.

It is important to mana whenua that all people in their rohe have access to nourishing and affordable food that supports their physical, spiritual, mental, and whānau health. It is also important that whānau have kai sovereignty and have the tools or opportunities to be involved in their local food systems. Kai is not seen as a commodity, rather a taonga from ngā Atua, and a foundation to vital cultural and whanau practices.

Iwi partners, integral members of the WRLC, were allocated dedicated resources so as to exercise tino rangatiratanga within the overarching plan.

The iwi/hapū rōpū has representatives from the following iwi:

- Rangitāne Tū Mai Rā Trust representing Rangitāne o Wairarapa Inc. and Rangitāne o Tamaki nui a rua
- Te Rūnanga o Toa Rangatira Inc. representing Ngāti Toa Rangatira
- Port Nicholson Block Settlement Trust representing Taranaki Whānui ki Te Upoko o Te Ika
- Muaūpoko Tribal Authority representing the seven Muaūpoko hapū
- Te Rūnanga O Raukawa Inc. represented by Ngā Hapū o Ōtaki
- Ngāti Kahungunu ki Wairarapa Tāmaki nui-a-Rua Settlement Trust

We acknowledge Ātiawa ki Whakarongotai who have chosen not to participate in the WRLC or RFSP at this time, and we keep them abreast of developments with the option of joining us, if desired.

Discussions with the iwi/hapū rōpū were layered and nuanced. Some of the themes that emerged include:

- There are deep concerns with the human-induced climate change that is impacting te taiao me te whenua and kai. In particular, how sea level rise, drought, flooding, increasingly hotter temperatures, the pollution of our moana and freshwaters will continue to impact our kai.
- It is unacceptable that people are going hungry and growers receive insufficient value for their produce, while the supermarket duopoly is making excessive profits daily.
- Incentives for growing food through permaculture and organic methods of growing are needed, emphasising crop diversification, exploring vertical gardening, and prioritising regenerative practices (including riparian planting).
- These forms of growing should be linked to alternative markets outside of supermarkets that allow profits to go more directly to growers and allow whānau to more easily afford and access good, healthy kai.
- Education in all forms is essential. It should be rooted in mātauranga Māori and ensure that quality education is centred on kai, te taiao, and food production skills. It should be standard for our tamariki and rangatahi, and strong, enticing careers in food and fibre must be available for the next generation.

- Based on where Aotearoa New Zealand is positioned in the world, and the current global conflicts, we need to continually reduce our reliance on fossil fuels moving forward.
- Urban development should be planned around whānau, te taiao, and kai to ensure land is used appropriately, to protect natural resources, and provide households access to land to grow kai (i.e. papakainga model). Working with city planners is important to achieve this.
- The RFSP should contribute to affordability, sustainability, and financial feasibility for Māori food security within their communities.
- Iwi partners discussed the importance of political advocacy and legislative change: identifying political levers and aligning iwi priorities into a unified voice to drive the necessary changes above.
- Iwi partners have also identified key pilots to contribute to these visions, which will be developed and implemented in Phase Two of the plan.

The Community Advisory Board (CAB) – Alongside the iwi/hapū rōpū, the CAB comprises dedicated community members representing diverse backgrounds across the region. Their valuable contributions involve not only articulating the unique needs of their communities but also championing community-led initiatives integral to the RFSP's foundation. Empowered as decision-makers and key drivers, these two groups play pivotal roles in shaping and steering Phase One.

Discussions with the CAB and the RKN echoed much of the discussions with the iwi/hapū rōpū. Key themes and visions included:

- We can easily access a range of healthy kai options
    - People are food-secure and well nourished, with walking access to affordable healthy kai options.
    - Permanent fresh food markets, not just weekend ones
    - Diversity of markets – not just shopping at the supermarket
- Our growing systems support healthy environments, humans and animals
    - Food production protects our waterways and environment
    - Alternative land use & move towards regenerative growing and organic growing
- We have integrated, community-scale seed and food production, distribution and composting, with local decision-making
    - Marae supported to lead
    - Local groups designing their own food system
    - Circular economy, people-swapping, bartering and giving produce; crop swaps for every neighbourhood
    - Community growing food together on land
    - Food delivery by bike or environmentally-friendly methods
    - Community gardens & compost hubs
    - Hyper-local food sharing and community meals
- We have the skills and knowledge to grow and prepare good kai, eat well and understand the food system
    - Everyone can access education on growing, cooking, preserving, fermenting, compositing with the support of dedicated staff, schools, and community workshops

    - Marae and community hubs support whānau with kai education
    - Link between healthy soils, healthy food and healthy people is well understood, especially by health practitioners and workers
    - Value of kai is understood
- Our regulatory environment and economic system supports kai resilience, wellness and fairness
    - Our system centres people over profit
    - Farmers are paid a fair price
    - Focusing on building resilience rather than minimising cost
    - Integration of policy and practice at local, regional, national and international level

Pictured above: A joint iwi/hapū rōpū and CAB meeting, September 23.

Sketch showing how these groups possess the right skills and passion – Sketch from Marama Fox, Ngāti Kahungunu

Growers and producers are central to this plan. Without them, the food system would not operate. Growers and producers have many demands on their time. We invited nearly 100 growers and producers across the region to participate in sub-region workshops, but due to time constraints, individual interviews were conducted instead (results are below in section 6). We will continue to seek input from growers and producers as the plan develops. Their input is vital.

Council representatives working in the environment or food space were invited bi-monthly to provide input and ideas into Phase One's development. Given council's important role in land use, regulations, waste management, economic development, and support for community wellbeing, their partnership is essential to the development and implementation of the RFSP.

Technical advisors were identified for their knowledge, expertise, and roles within the food system. Positioned as supporters of both the iwi/hapū rōpū and the CAB, these advisors play a pivotal role in the project. Their significance lies in their unique perspectives, access to influential levers, and the considerable potential they bring to collaborative efforts.

See Figure 11 below for a stakeholder map and Figure 12 for a summary of engagement activities. For a more detailed list of iwi partners, the CAB and technical advisors invited to the process, see the following link: RFSS Stakeholder List

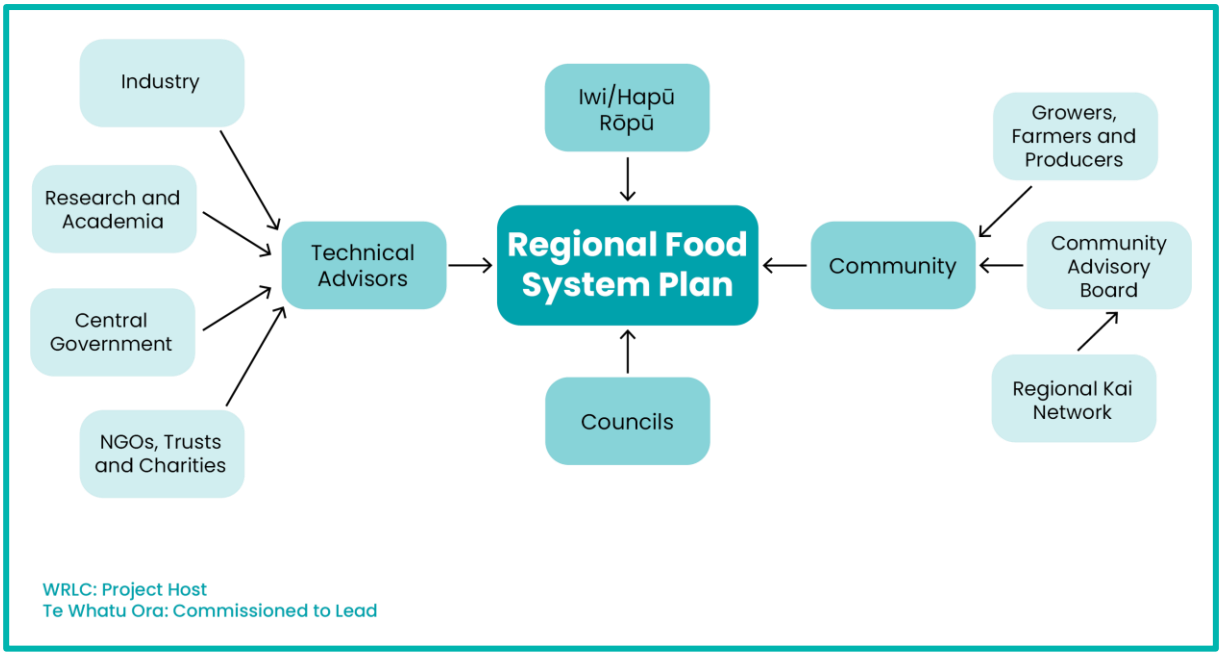

Figure 11: Stakeholder map

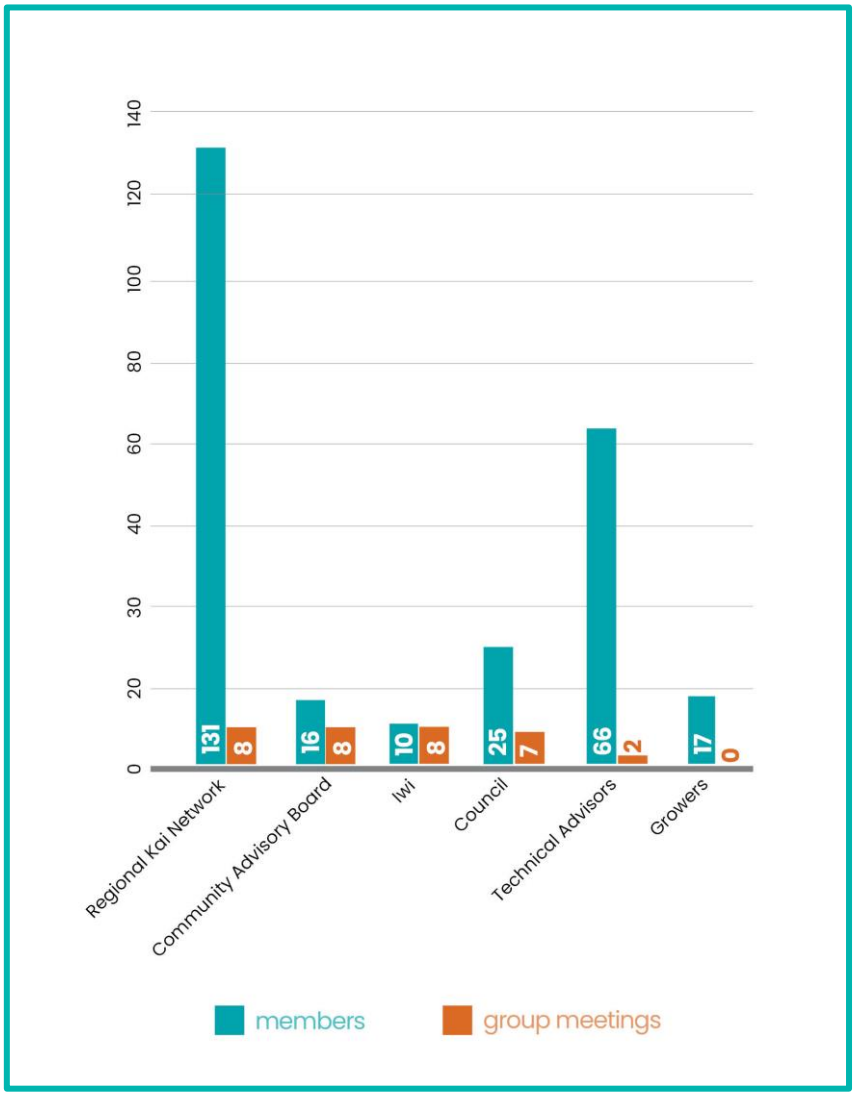

Figure 12: Summary of group members and meetings

Section 6: Key food system data from the region

To effectively identify and develop regional initiatives aligning with the vision of a sustainable, equitable, locally led food system, it is necessary to have a base understanding of our region's food system. We need to know where we are now, to understand where we want to go. To deliver on the qualitative and quantitative data requested by the WRLC, NPHS contracted Ahikā Consulting to carry out research to produce a food production and food economy report for the region. This work is one form of information for Phase One of the RFSP. The ensuing summary encapsulates key insights and data points gathered by Ahikā Consulting (3). Please also refer to Ahikā Consulting's *An Overview of the Regional Food System for Wellington Region and Horowhenua District* (2023) (3).

6.1 How is land used in our region, and what does it mean for our food needs?

6.1.1 Land use in the region

The AgriBase® map (Figure 13) provides a snapshot of the region's land use and the type of food produced on any given piece of land. This map provides a tool for spatial analysis, aiding in the formulation and implementation of effective strategies for both food production and urban development. It provides a comprehensive view of existing land use patterns and supports decision-making processes that promote sustainability, efficiency, and the wellbeing of communities.

Using the AgriBase® dataset (a product of AsureQuality), the foodshed has been mapped and classified into the main land use types of food production. Non-productive uses, unconfirmed and urban areas are also classified. Table 1 (page 35) provides detail about the number of farms associated with each land use, the net area of each land use, and its contribution to the total land area of the region.

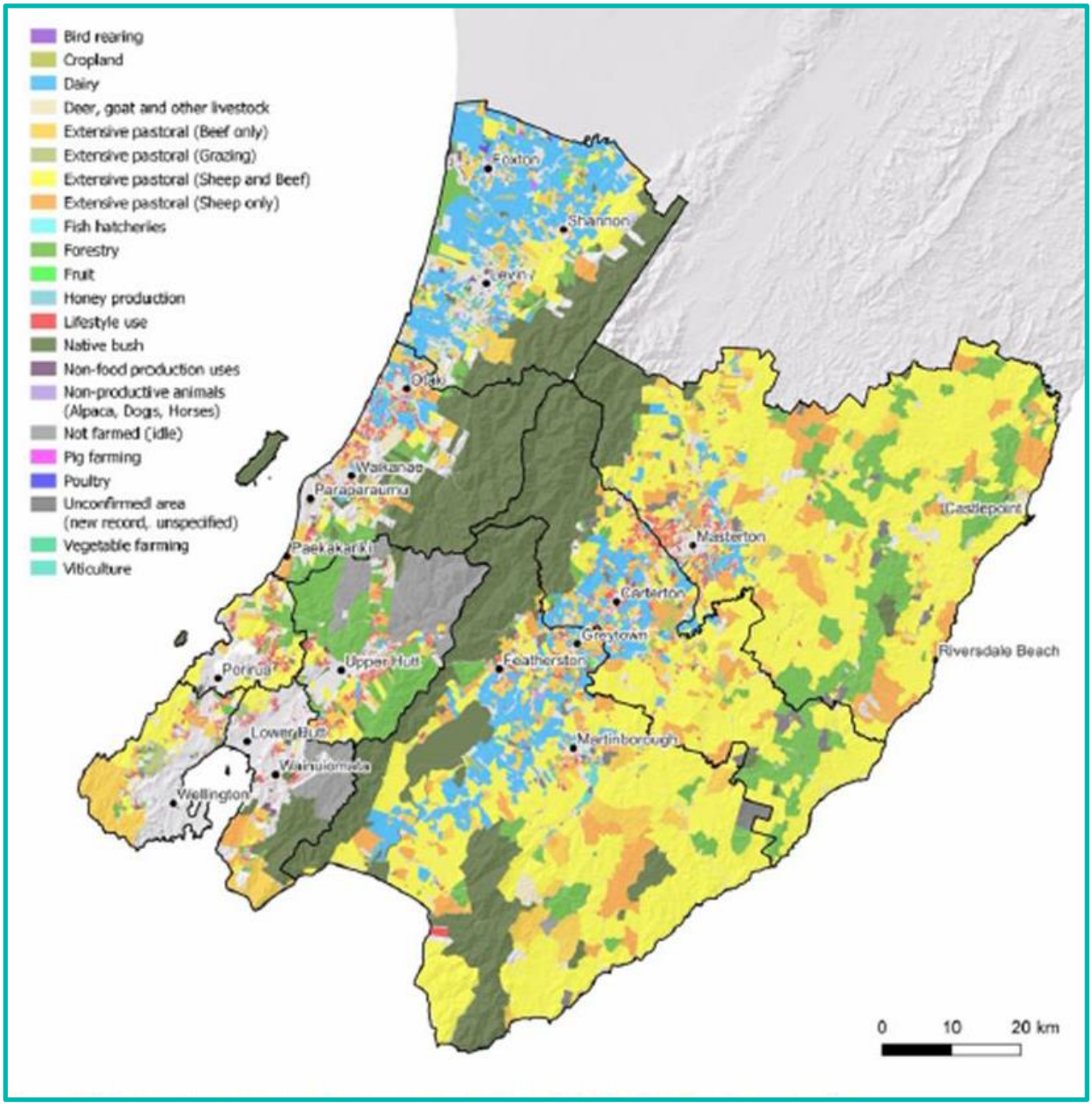

Figure 13: Map showing the overall land use across Wairarapa-Wellington-Horowhenua region

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 23: *Map showing the overall land use across Wairarapa-Wellington-Horowhenua region,* pg. 26

Land use types	Farm count	Total area (ha)
Extensive pastoral (beef only)	770	58,513
Extensive pastoral (sheep and beef)	747	294,358
Extensive pastoral (sheep only)	381	54,872
Dairy	365	67,883
Extensive pastoral (grazing)	186	7,395
Fruit	104	820
Viticulture	72	1,605
Deer and goat and other livestock	66	6,040
Vegetable farming	60	1,353
Cropland	51	3,645
Poultry (meat and eggs)	48	483
Pig farming	7	134
Other food production uses (food processing plants, etc.)	6	84
Bird rearing	5	39
Honey production	3	193
Fish hatcheries, etc.	2	12
Total assumed 'Food Production Land'	**2,873**	**497,428**
Other land use types	**Farm count**	**Total area (ha)**
Lifestyle use	4,226	15,987
Not farmed (idle)	54	24,592
Unconfirmed area	135	10,398
Non-productive animals (alpaca, dogs, horses)	132	1,716
Forestry	416	86,847
Native bush	77	173,275
Non-food production uses	152	2,060
Urban areas, water bodies, road reserves, etc.		99,673
Total Land		**911,976**

Table 1: Land use in the nine territorial authorities within the Wairarapa-Wellington-Horowhenua region.

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Table 7: *Land use in the nine territorial authorities within the Wairarapa-Wellington-Horowhenua region, p. 24*

At 911,976 hectares, the land area of the nine territorial authorities represents 3.4% of the area of Aotearoa New Zealand. Of this, 497,428 ha (55%) is used for food production while urban areas, waterbodies, road reserves, native bush, plantation forestry, and non-food production uses account for 40%. 2% is lifestyle blocks. The remaining 4% is idle farmland, or of unknown use.

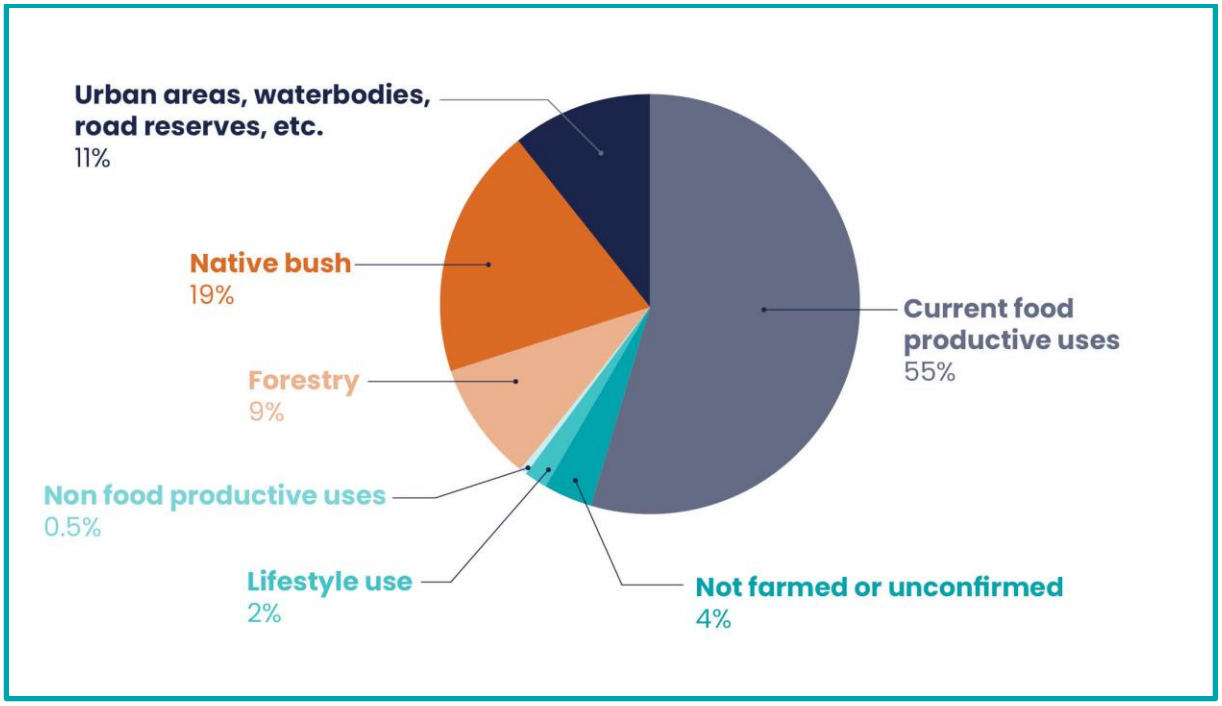

Figure 14: All land use type and area (ha) in the Wairarapa-Wellington Horowhenua region

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 21: *All land use type and area (ha) in the Wairarapa-Wellington Horowhenua region, p. 25*

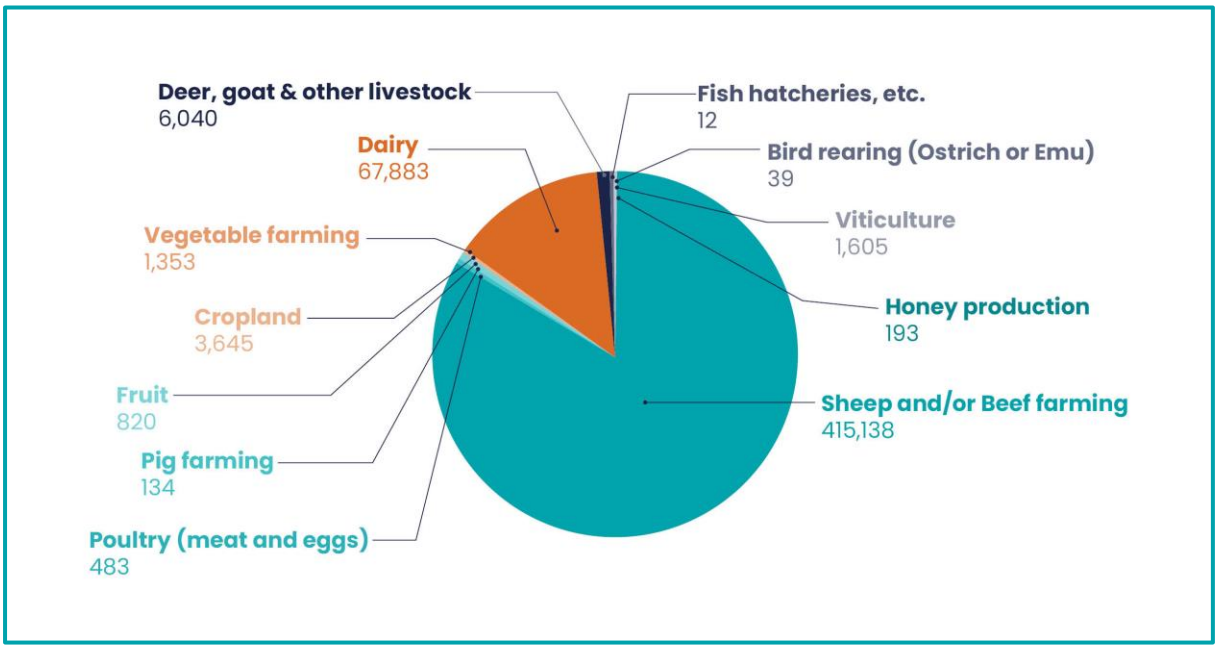

Figure 15: Only food production land use type and area (ha) in the Wairarapa-Wellington Horowhenua region

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 22: *Only food production land use type and area (ha) in the Wairarapa-Wellington Horowhenua region, p. 25*

6.1.2 Wellington region foodshed

There are four parts to determining what the "foodshed" is for the Wellington Region and Horowhenua District:

1. Understanding the land area of Wellington Region and Horowhenua District.
2. Understanding the population within Wellington Region and Horowhenua District.
3. Understanding the Ecological Footprint calculations per person.
4. Calculating the Foodshed.

The foodshed theoretically required to feed the region's population **today** is 296,075 hectares of food-producing land. Meaning, just under 33% of the total land area of the region is required to feed the population. The foodshed theoretically required to feed the region's population by **2052** (with an assumed population growth of 200,000 people) is 398,075 hectares of food producing land. This equates to 44% of the total land area of the region required to feed the population by 2052, see Tables 2 and 3 below.

Territorial Authority (TA)	Population estimates at 30 June 2022 (StatsNZ)	X Ecological Footprint 0.511ha / person (Lawton, 2013)	Land area for each TA (StatsNZ)	Deviation
Wellington City	213,110	108,899	28,999	-79,900
Lower Hutt City	112,520	57,498	37,658	-19,839
Porirua City	61,610	31,483	18,248	-13,235
Upper Hutt City	47,730	24,390	53,988	29,598
Kāpiti Coast District	57,610	29,439	73,148	43,709
Horowhenua District	36,980	18,897	106,380	87,483
Carterton District	10,270	5,248	117,950	112,702
Masterton District	28,950	14,793	229,868	215,074
South Wairarapa District	11,760	6,009	245,737	239,728
TOTALS	**580,540 ppl**	**296,656 ha**	**911,976 ha**	**615,320 ha**

Table 2: Calculating the foodshed based on each Territorial Authority within the Wairarapa-Wellington-Horowhenua region

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Table 3: *Calculating the foodshed based on each Territorial Authority within the Wairarapa-Wellington-Horowhenua region, p. 5*

Territorial Authority (TA)	Population increases by 200,000 over 30 years (by 2052)	X Ecological Footprint 0.511ha / person (Lawton, 2013)	Land area for each TA (StatsNZ)	Deviation
Wellington City	286,528	146,416	28,999	-117,417
Lower Hutt City	151,284	77,306	37,658	-39,648
Porirua City	82,835	42,329	18,248	-24,081
Upper Hutt City	64,173	32,793	53,988	21,195
Kāpiti Coast District	77,457	39,581	73,148	33,568
Horowhenua District	49,720	25,407	106,380	80,973
Carterton District	13,808	7,056	117,950	110,894
Masterton District	38,923	19,890	229,868	209,978
South Wairarapa District	15,811	8,080	245,737	237,658
TOTALS	**780,540 ppl**	**398,856 ha**	**911,976 ha**	**513,120 ha**

Table 3: Calculating the foodshed based on each Territorial Authority within the Wairarapa-Wellington-Horowhenua region over the next 30 years

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Table 4: *Calculating the foodshed based on each Territorial Authority within the Wairarapa-Wellington-Horowhenua region over the next 30 years, p. 6*

	Population estimates at 30 June 2022 (StatsNZ)	X Ecological Footprint 0.511ha / person (Lawton, 2013)	Food producing land (AgriBase® dataset)	Deviation
Total current food producing area	580,540 ppl	296,656 ha	497,428 ha	200,772 ha

Table 4: Calculating the foodshed based on food producing land within the Wairarapa-Wellington-Horowhenua Region over the next 30 years

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Table 4: Calculating the foodshed based on food producing land within the Wellington Region and Horowhenua District, p. 6

6.1.3 Land use and foodshed findings

- The total land area of the region is 911,976 ha. Just over half of this is currently used for food production.
- The estimated food-producing land required to sustain the region's population by 2052 is 398,705 ha. This is still 100,000 ha less than total land available for food production, though are there significant variances between each TA.
- These calculations do not take into account land degradation over time or the diminishing amount of productive land accessible due to external events brought on by a changing climate and housing intensification. It also doesn't take into account improvements in food production technology over the next 30 years.
- We need to use this information moving forward to understand opportunities for diversifying land use and protecting highly productive land.

For further details of the region's foodshed land use type and quantities see **Section 3: Stage 1: Baseline Foodshed Analysis** (pp. 2-33) of *An Overview of the Regional Food System for Wellington Region and Horowhenua District* (3).

6.2 What types of food and how much food do we produce in our region?

6.2.1 Food consumption (demand)

The Ministry of Health's (MOH's) model of recommended average food consumption for an average person is used as a basis to calculate the food requirements for the region's population. Data from FAOSTAT (Statistics Division of Food and Agriculture Organization of the United Nations) and other datasets used by Ahikā Consulting provide the breakdowns of percentages of consumption of different types of milk products and different types of protein products. Based on these datasets, assumptions can be extrapolated to other food categories, including red meat, poultry, legumes (which are grouped with nuts and seeds), eggs, and fish, therefore aligning with food types reported in the FAOSTAT data.

With a combined population of approximately 580,540 individuals residing in the region, the annual consumption of food reaches an estimated 353,401 tonnes. This figure reflects the overall quantity of food necessary to sustain the population of 2022. Looking ahead to the anticipated population growth by 2052 of 200,000 people, the projected annual food requirement for this expanded community is estimated to be 475,150 tonnes. This calculation assumes an average annual food consumption of 609 kg per person within the regional foodshed, see Figure 16 below.

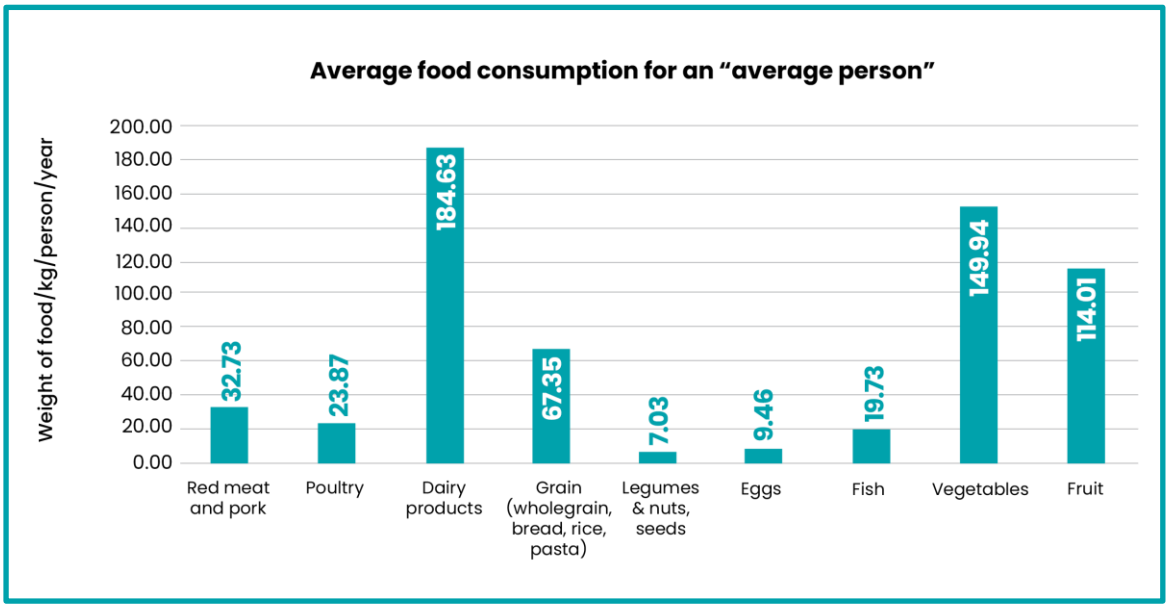

Figure 16: Wairarapa-Wellington-Horowhenua region average food consumption

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 18: *Wairarapa-Wellington-Horowhenua region average food consumption, p. 19*

6.2.2 Food production (supply)

To estimate the total region foodshed food supply, the area of each type of land use was determined and multiplied by the volume of food produced. Overall, milk is the most produced food product supplied from the foodshed, despite sheep and/or cattle farming utilising 84% of the food-producing land. The dairy sector utilises 14%, which is 67,883 hectares, see Figure 17 below.

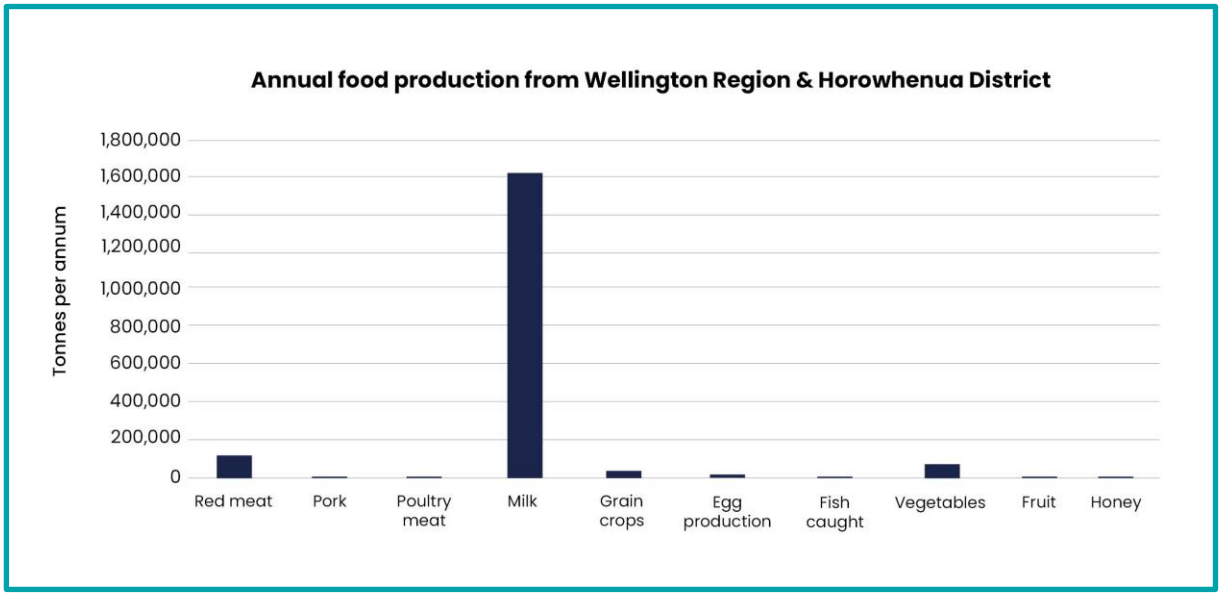

Figure 17: *Food supply estimates within the Wellington Region and Horowhenua District foodshed in tonnes per annum*

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 25: *Food supply estimates within the Wellington Regional foodshed in tonnes per annum, p. 30*

Due to the high level of milk production, the graph in Figure 17 (above) is reproduced in Figure 18 below without the milk. The reproduced graph provides a better understanding of the other food types estimated to be grown in the region foodshed. In the reproduced graph, red meat emerges as the second-largest food type produced, estimated at 94,021 tonnes per year. Vegetables follow as the third-largest, with an estimated production of 56,166 tonnes per year. Grain crop production is estimated at 20,046 tonnes per year, and egg production is estimated at 14,976 tonnes.

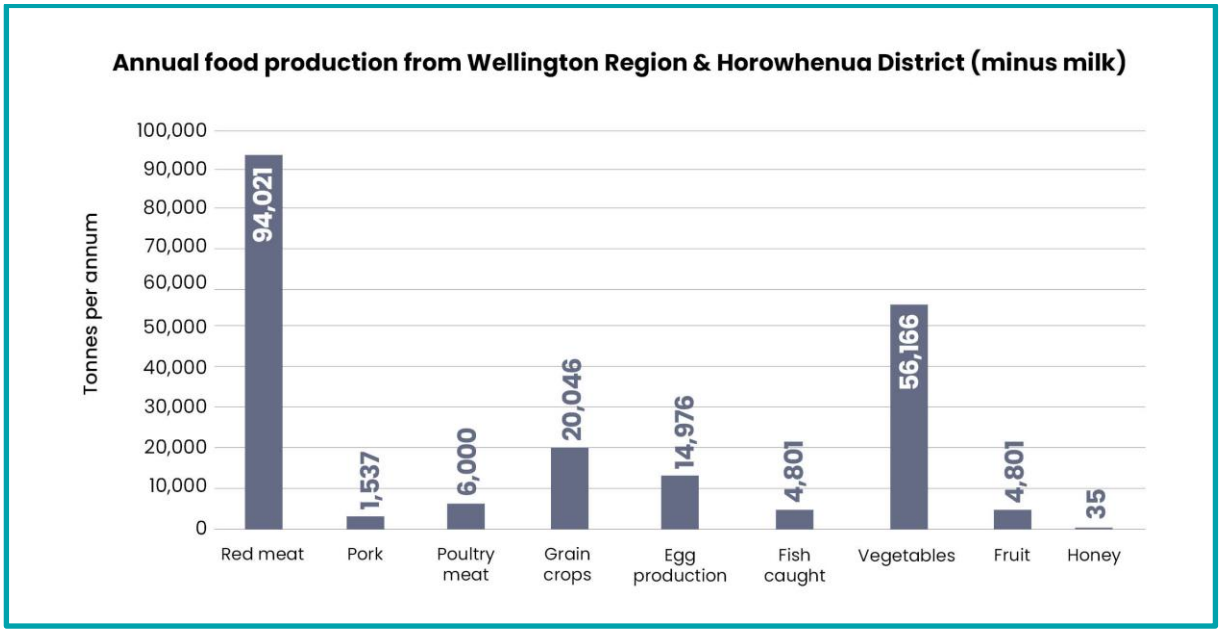

Figure 18: Food supply estimates within the Wairarapa-Wellington-Horowhenua regional foodshed in tonnes per annum without milk

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 26: *Food supply estimates within the Wellington Regional foodshed in tonnes per annum without milk, p. 31*

It is important to note the productivity for each food type. The tables below shows the differences for each of these, to be considered in food production and land use planning.

	Sheep & beef	Diary culls	Deer & goat	Pork	Poultry meat	Eggs
Kg produced per hectare annum	232	133	47	11,441	12,435	31,014

	Milk	Vegetables	Fruit	Crops	Fish	Honey
Kg produced per hectare annum	23,868	41,500	20,801	5,500	4	182

Table 5: Food production for the region per kg per ha per annum

Source: Ahikā Consulting. An Overview of the Regional Food System for Wellington Region and Horowhenua District. 2023. Table 8: Food production modelling data for the Wellington Region and Horowhenua District by food type in kg per hectare per year, p. 26

There are significant contrasts between regional food production and regional demand. This is noticeably more pronounced for some food items than for others. This is illustrated in the graph below (Figure 19).

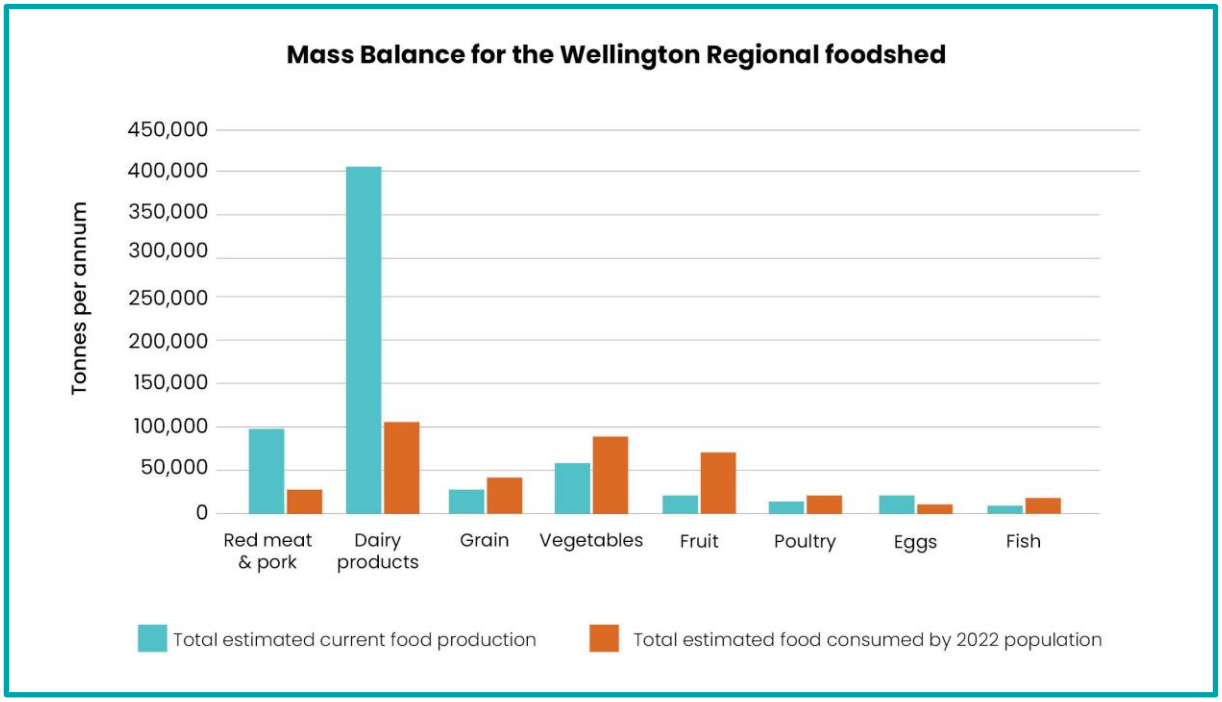

Figure 19: Supply and demand for food produced in the Wellington Regional foodshed

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 27: Supply and demand for food produced in the Wellington Regional foodshed, p. 31

6.2.3 Food production findings

The regional foodshed produces substantial volumes of dairy products and red meat. This output mirrors the export-oriented nature inherent in Aotearoa New Zealand's primary production sector.

- Among the diverse array of food products, milk dominates in terms of sheer productivity despite sheep and/or cattle farming utilising the largest portion (84%) of food-producing land. The surplus of dairy products currently being generated surpasses the local population's immediate demands. Similarly, the current production of meat exceeds the population's present consumption needs.
- Notably, it is the production of red meat that predominantly shapes the landscape and accounts for the majority of land use in this foodshed.
- Conversely the amount of fruit, vegetables, grains, poultry, and fish produced locally is insufficient to meet the needs of the region without additional produce being imported from outside of the region and/or the country.
- On a per hectare per year calculation, vegetable growing is significantly more productive, with 41,500kg/ha compared to free-ranging animals which produce less than 250kg/ha.
- Further research is needed to quantify urban and peri-urban production of food for communities, as well as opportunities for alternative land use.

For further details of the region foodshed supply and food demand see **Section 3: Stage 1: Baseline Foodshed Analysis** (pp. 2-33) of *An Overview of the Regional Food System for Wellington Region and Horowhenua District* (3)

6.3 What does our regional local food economy look like?

This section provides an overview of the region's existing food system with insight into the region's LFE regarding the infrastructure, what food stakeholders think of the current food economy, how the current system operates, and geographic maps of food-related businesses.

6.3.1 An overview of food producers in the region

To understand more about the existing food system, interviews with growers were conducted. The following sections provide a snapshot of what is happening within the food system. We asked 17 food growers a series of questions regarding growing food in the region. Seven were vegetable growers, five farm sheep and/or cattle, three have orchards and two produce eggs or milk. The growers interviewed were based in South Wairarapa (nine), Porirua (two) Masterton (three), Kāpiti (one), Horowhenua (two).

Challenges of supplying locally

The primary challenges in supplying the local market stem from both a lack of demand and outdated regulations, particularly in food safety compliance. A number of growers expressed concerns about "limited growth potential." The "lack of demand" aligns with claims of "limited consumer education," where consumers lack understanding of food seasonality and growing methods. This is compounded by the preference for the convenience and affordability of supermarkets over direct support for local growers. One grower emphasised the insufficient local population to sustain their business, which is designed for export and producing more than what the local demand can accommodate. See Figure 20 below for more detail.

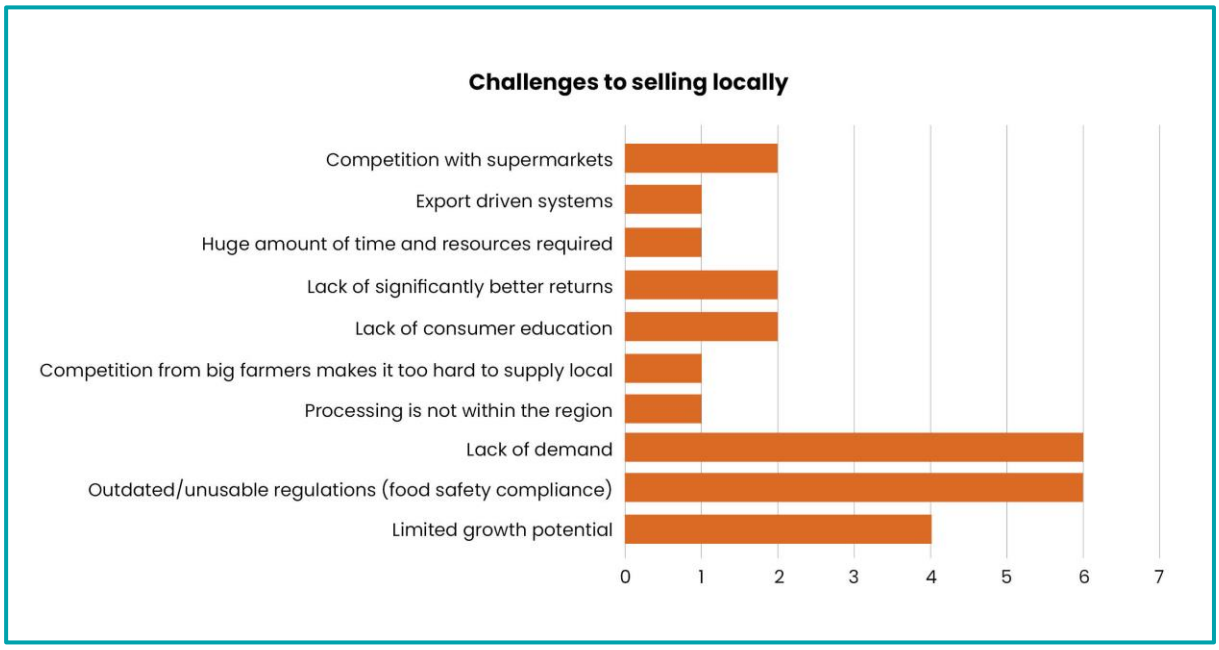

Figure 20: Various answers to what makes it challenging (n=17)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 37: Various answers to what makes it challenging (n=17), p. 40

Opportunities for local supply

A large number indicated farmers' markets provide the biggest opportunity for local supply of produce as seen in Figure 21 below.

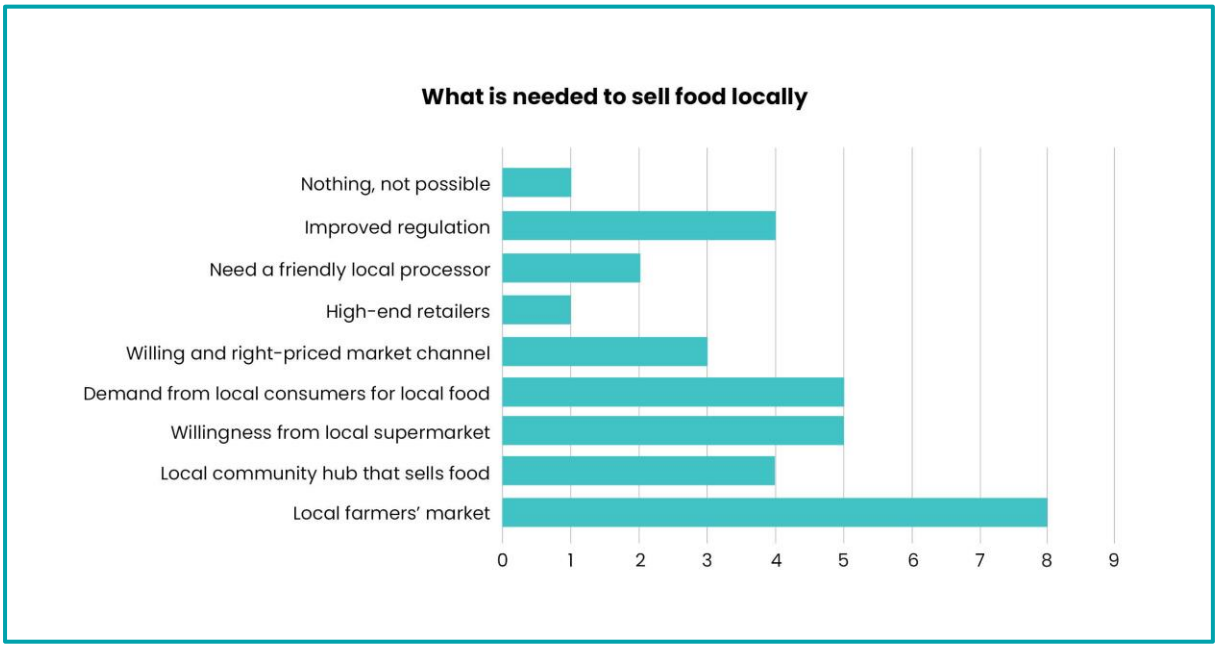

Figure 21: Responses to what opportunities there are to sell locally (n=17)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 41: Responses to what opportunities there are to sell locally (n=17), p. 41

The primary motivations for growers to sell locally revolve around community values and maintaining local relationships, as can be seen in Figure 2 below.

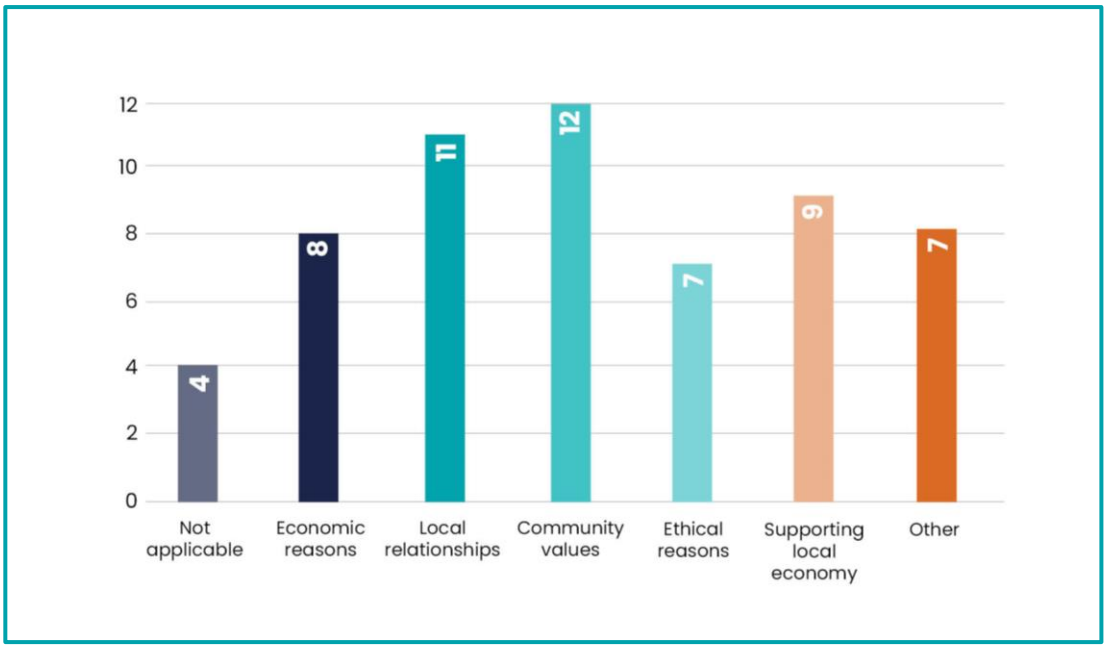

Figure 22: Motivations to supply local (n=17)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 39: Motivations to supply local (n=17), p. 41

Changes needed to enable the local food economy

The changes needed to facilitate local sales are diverse. The most common requests included:

- "Assistance with marketing of produce" – this highlights the challenges of direct-to-consumer sales.
- "Better consumer education" – this was the second most frequently mentioned improvement
- "Easier regulations from paddock to plate"
- "Other support (e.g., Government subsidies)"
- "Emphasising the role of local councils and the Ministry for Primary Industries (MPI) in supporting small and local endeavours.

Additional comments included:

- "Diversifying farming is key."
- "Working together more and interlinking different concepts."
- "Removing supermarkets and transportation to improve direct access to consumers."
- "Optimising current resources and supporting local food."
- "Certified or good marketing and clear country-of-origin labelling to counter large importers selling under a New Zealand label"
- "Direct-to-consumer market channel without third-party involvement, ensuring guaranteed sales".

The sentiment is supported by others calling for assistance with marketing, acknowledging these challenges, whether on a local or international scale.

From a financial perspective, ensuring price consistency and profitability are crucial for farmers, emphasising the need for a fair return for the hours worked. A large-scale food grower emphasised the importance of understanding paperwork, regulations, and ensuring a reliable supply for those selling to established food retailers. This underscores the complexity of regulations while highlighting the significance of a consistent supply for food premises, see Figure 23 below.

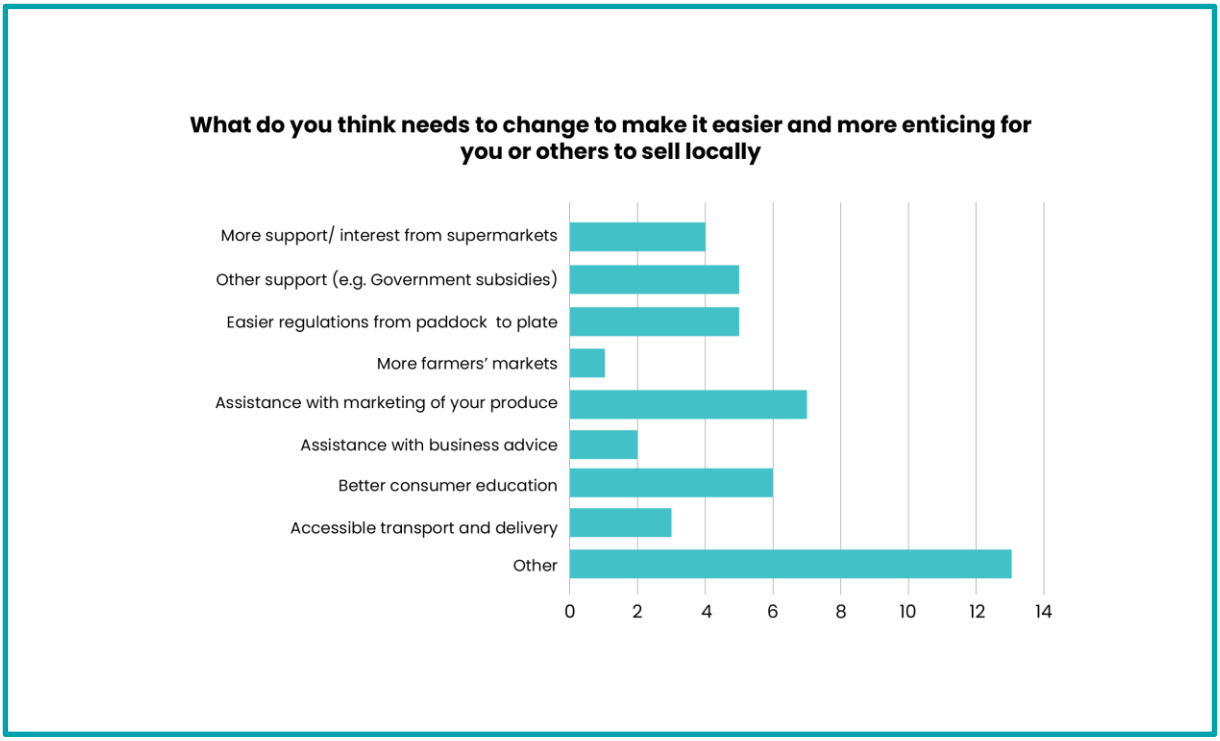

Figure 23: Q: What do you think needs to change to make it easier and more enticing for you or others to sell locally? (n=17)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 40: What do you think needs to change to make it easier and more enticing for you or others to sell locally? (n=17), p. 42

Additional Comments

Some respondents provided additional comments on the potential local food system:

- One participant mentioned desired activities within the current local food economy are hindered by legal restrictions.
- Another emphasised the need for a framework that ensures the end goal doesn't compromise growers, highlighting the importance of a strong, producer-centric economy and suggesting that supermarkets should better support the community.
- A respondent opposed the idea of selling food for "cheap," suggesting a focus on fair pricing that reflects the inputs of its production.
- A large food grower participates in local supply with a butcher, considering discussions about supplying supermarket butcheries.
- An extra-large scale grower discussed the economic challenges of exclusively growing for Wellington due to compliance costs and the lack of economies of scale.

- Concerns about post-COVID impacts on farmers' markets are expressed, noting a decline in business. The logistical challenges of reaching Wellington city markets are highlighted, questioning the value of the effort.

6.3.2 An overview of food processing, distribution, and supply chain in the region

Outlining food distribution supply chains helps us to understand how food is processed, transported, and distributed in our region. Insight into these can help us identify opportunities to modify supply chains to reduce environmental impact and improve accessibility of food.

Food can be processed on farm, such as an orchard, vegetable farms or egg producers. Others must send their produce to a secondary facility for processing, such as animals at an abattoir. The following sections explore these food processing facilities and the connected supply chains.

Animal product processing

Following its time on the farm, the animal proceeds to an abattoir for slaughter and subsequently moves through the chain, reaching a meat trader, wholesaler, or butcher. Typically, this journey culminates at the butcher, who may be situated within a supermarket or a specialised butcher shop as seen in Figure 20 below. Mobile abattoirs (not pictured) may provide more flexibility and localisation of processing on farm.

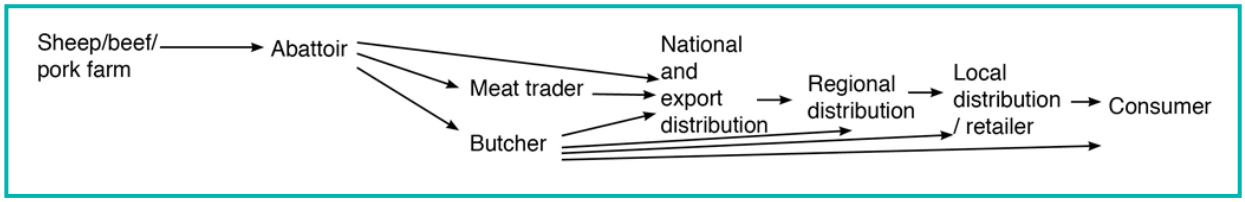

Figure 24: Supply chain for meat

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 41: Supply chain for meat, p. 44

Within the regional foodshed, eight meat processing facilities (abattoirs/meat works) are identified. They range from small processing facilities (e.g. processing 104 tonnes of finished product per year) to large-scale (12,000 tonnes per year) to extra-large processing facilities (processing approximately 36,500 tonnes of finished product per year). The latter takes animals from as far north as Hawke's Bay and West Taranaki. They indicated that while a large amount of product is sold to the region through a meat trader, a larger portion is exported.

A large-scale pork processing company states, "The majority of the product [we process] is pork (95%), we do process a small amount of beef, lamb and chicken". When asked where they source their product from, they responded, "The bulk of our product is imported from Europe and North America. This is received as frozen portioned cuts, which we defrost and process. Approx. 8% of our pork is local, all the non-pork meat used is local".

Dairy processing

From the farm, raw milk is collected by milk processing companies such as Fonterra who heat treat milk and either sell to wholesalers as milk or process further into cheese, yoghurt or milk powder, see Figure 25 below.

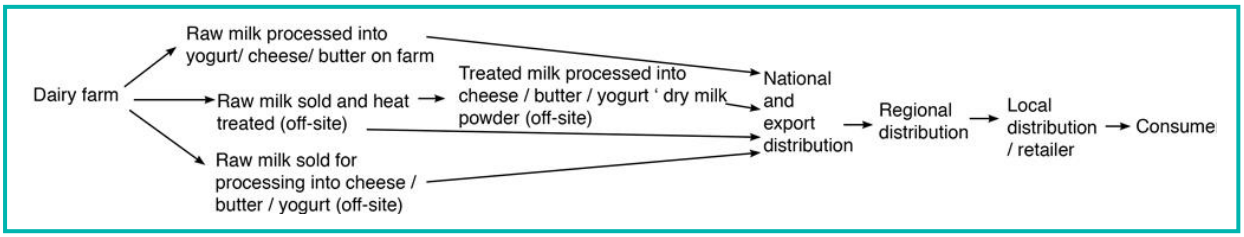

Figure 25: Supply chain for dairy

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 42: Supply chain for dairy, p. 45

Fonterra dominates milk processing in Aotearoa New Zealand at 84%, with other major dairy processors owning 14% of the market. Other large-scale milk processing companies include:

- Open Country Dairy Ltd (6%).
- Synlait Milk Ltd (Synlait) (3%).
- Westland Co-Operative Dairy Company Ltd (3%).
- Tatua Co-Operative Dairy Company Ltd (1%).
- Oceania Dairy Ltd (1%).

The Dairy Companies Association of NZ states there are no significant dairy production factories in our region. The two closest large-scale processing plants are both Fonterra plants, one is in Longburn, and the other is in Pahiatua, in the Manawatū-Whanganui region. This means most of the milk produced locally is trucked outside of the immediate region.

Horticulture processing

Processing of harvested vegetables can include rinsing, trimming, shelling, sorting, packing, storing, and transport; processing of harvested fruit can include sorting, waxing, packing, storing, and transport. There are many different options for how the grower sells their produce; some will do one or more of the options shown in Figure 26 below.

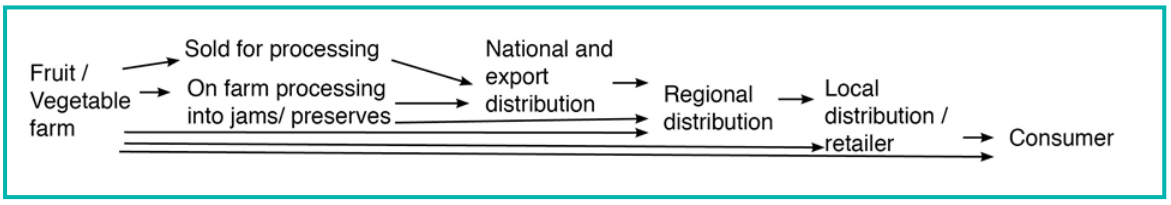

Figure 26: Typical supply chain for horticulture

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 44: Typical supply chain for horticulture, p. 46

One of the large-scale fruit growers within the regional foodshed sells direct for export distribution and all 3,600 tonnes of fruit are exported in 175 x 40-foot containers, every year. For this large-scale grower, no fruit is sold nationally or locally.

Mapping regional food processing

The map in Figure 27 shows the location of all the known food processing facilities, including the two large milk (dairy) processing plants outside of the region.

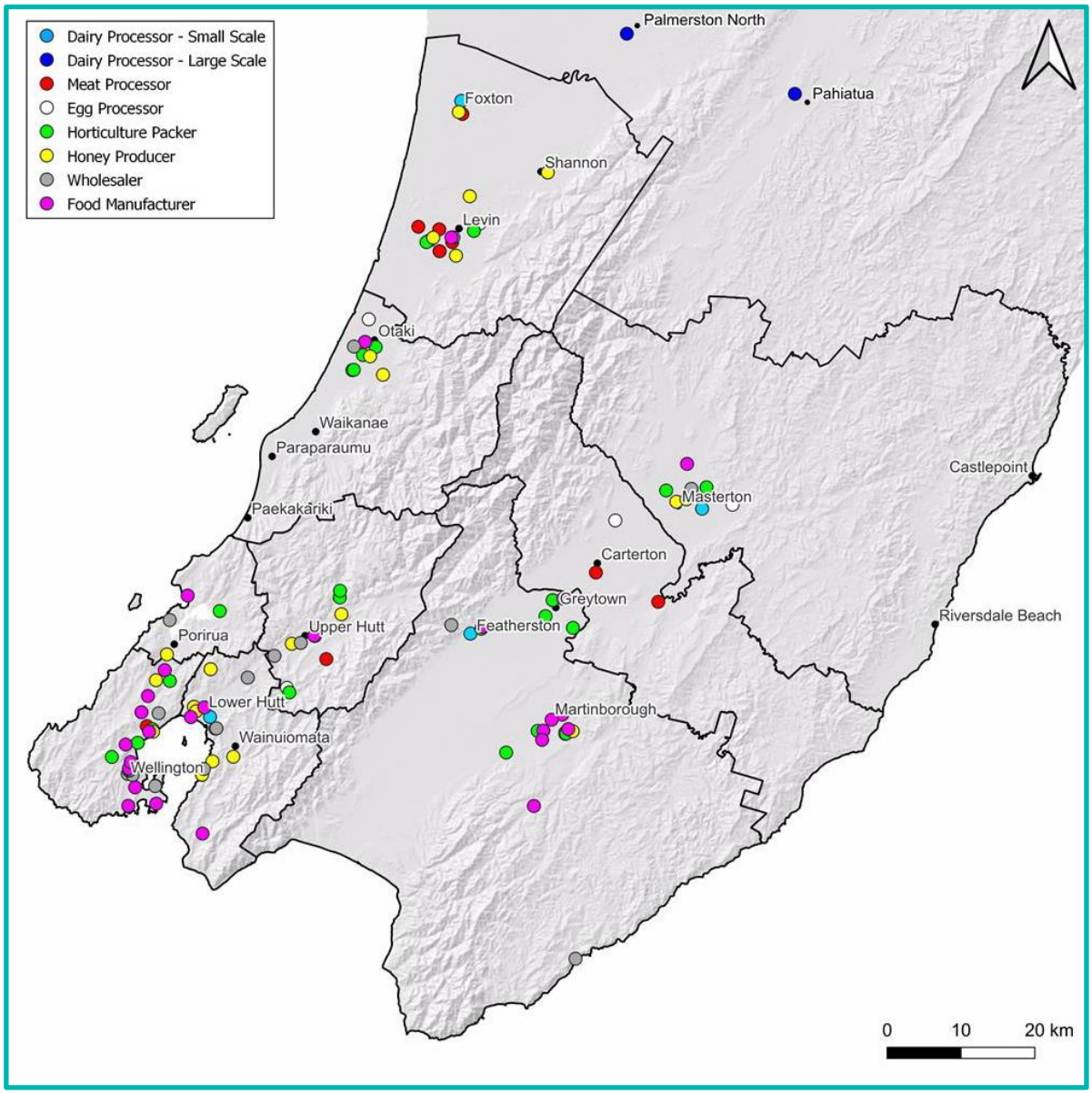

Figure 27: Map of the Wairarapa-Wellington-Horowhenua region showing food processing facilities

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 47: Map of the Wellington Region and Horowhenua District showing approximate locations of processing facilities, p. 48

The large amount of dairy milk produced in Horowhenua and Wairarapa is predominantly transported north for processing - Horowhenua milk to Fonterra's Longburn facility and those around the Wairarapa to Fonterra's Pahiatua facility.

As indicated previously, one of the large-scale meat processors only purchases 8% of their pork from local pig farms. The remaining 82% is imported frozen from Europe or North America. This means 950 tonnes per year of pork meat is purchased for processing locally, while 11,000 tonnes per year comes from overseas.

6.3.3 An overview of food retailers in the region

The following is an introduction to the various food premises across the region.

Mapping food premises

The purpose of mapping food premises is to understand the distribution and types of food premises in the local food economy; helping us to evaluate how people access food. Mapping helps to visually attain how well the region's current food economies could potentially achieve the core requirements of a local food economy, such as:

- Customers having accessible and convenient access to locally produced food
- Producers having reliable distribution options
- Producers having growth opportunities

Figure 28 below shows food premises mapped for the Horowhenua region. Similar maps for each district across the region can be found in **Section 4: Stage 2: Baseline Food System Analysis** (pp. 34-68) of the *Food Economy Report for the Wellington Region and Horowhenua District* (3).

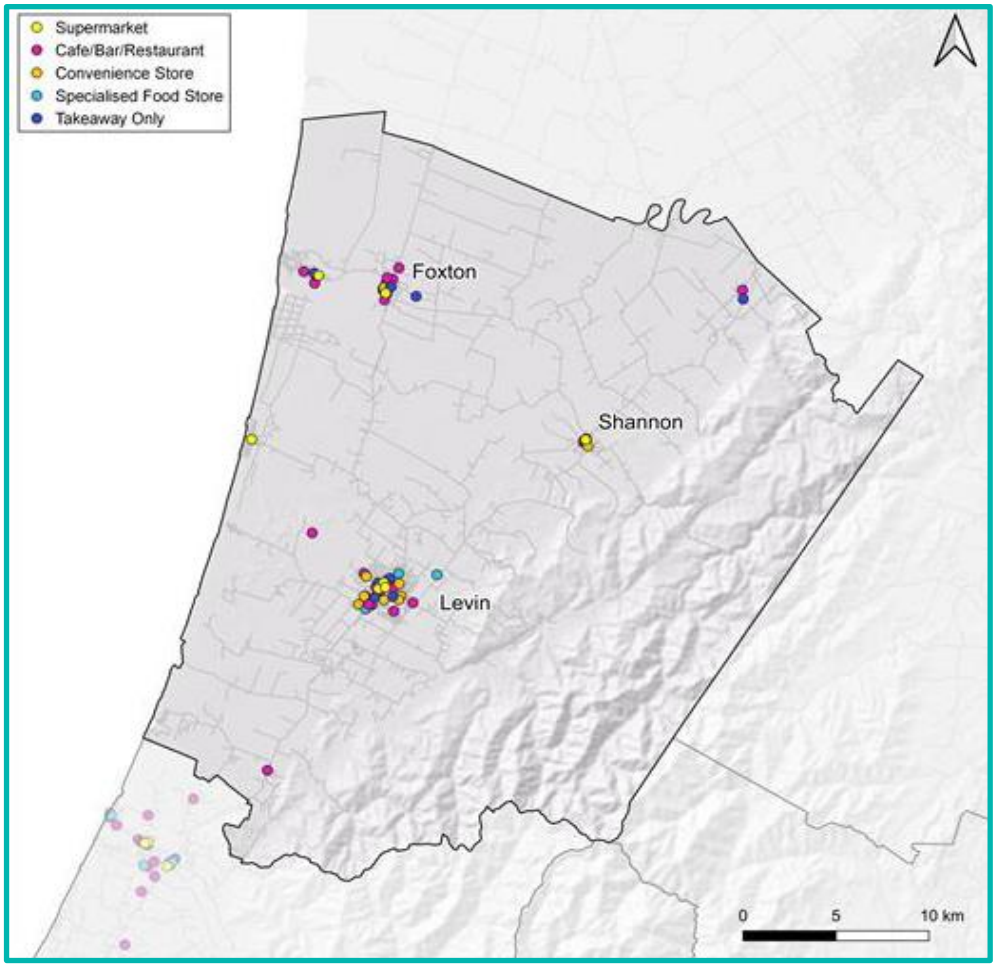

Figure 28: Food premises in Horowhenua region

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 48: Food premises in Horowhenua District, p. 51

How food retailers source their food

To understand how food retailers source their food, data was gathered from food premises across the region via in-person surveys. The majority of responses came from either cafes, restaurants, or wholesale distributors. It is important to note the relatively small sample size. Further research is needed to gain a more comprehensive insight into retailers across the region.

The graph in Figure 29 below describes how respondents source the majority of their food products. Of these, cafés and restaurants are predominantly the ones that shop at the closest supermarket for ingredients.

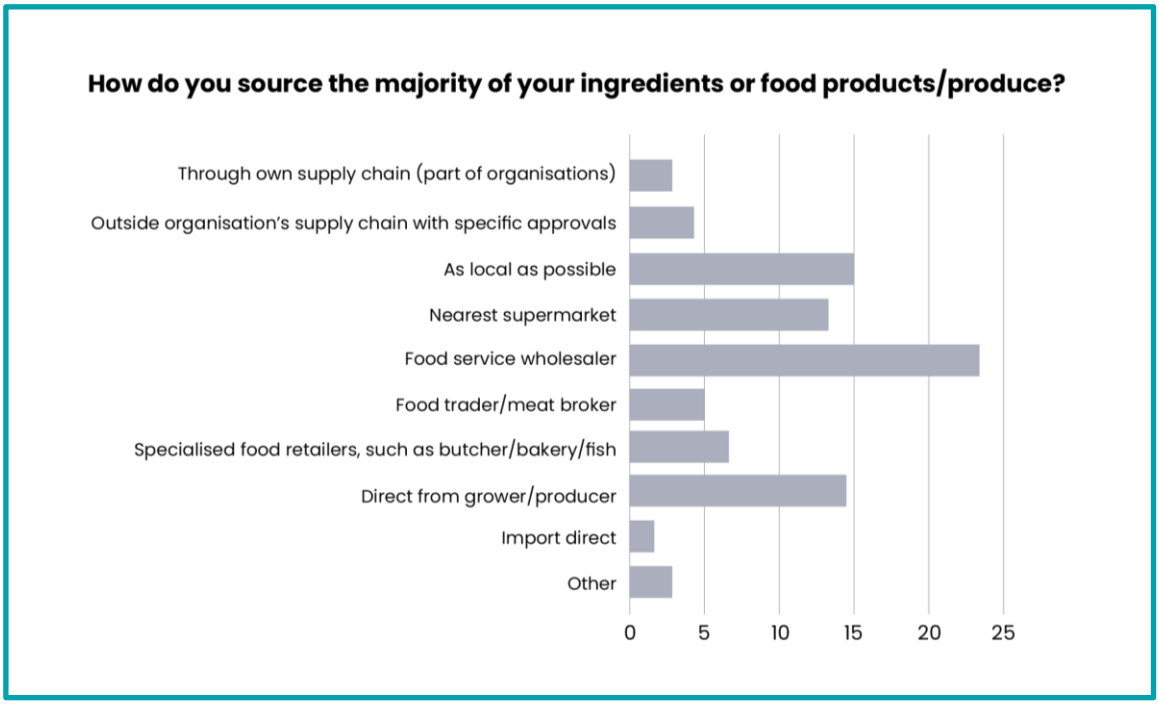

Figure 29: Question asked, "How do you source the majority of your ingredients or food products/produce?" (30)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 60: Question asked, "How do you source the majority of your ingredients or food products/produce?" (n=30), p. 61

When asked if they source any of their food products locally, a large number indicated they do. Among the establishments that did not source locally, reasons included unavailability, high costs, and a lack of consistent supply or volume. Regarding supply chain preferences, 73% of respondents emphasise the importance of reliability in their responses, see figure 30 below.

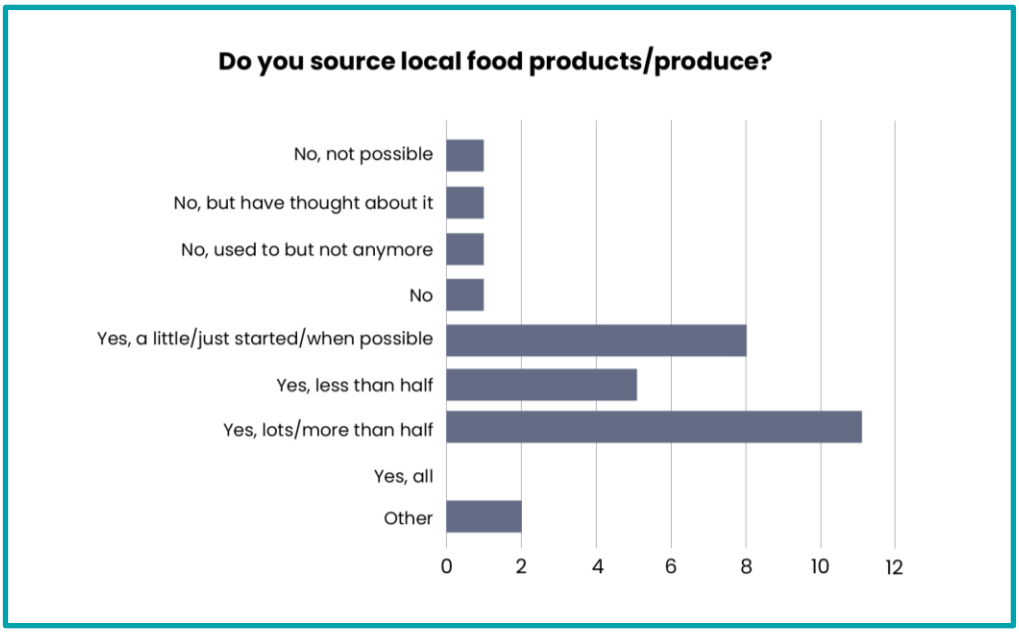

Figure 30: Question asked, "Do you source local food products/produce?" (n=30)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 62: Question asked "Do you source local food products/produce?" *(n=30)*, p. 62

What is stopping retailers sourcing local food?

Regarding primary barriers to local food sourcing, lack of available produce, lack of consistent supply and logistics complications were the most common barriers for those that chose not to source locally, as can be seen in Figure 31 below.

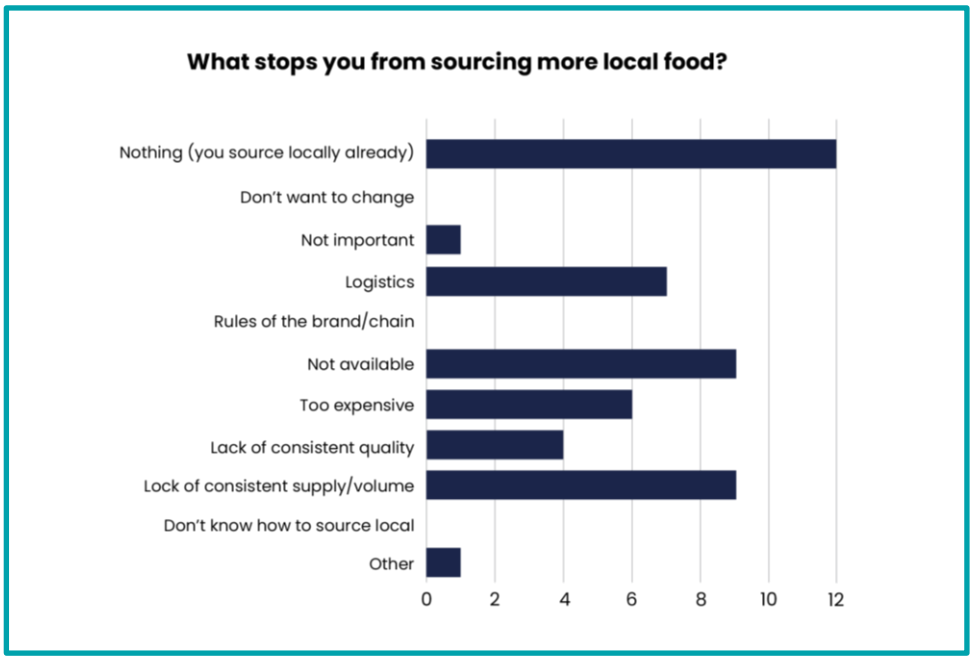

Figure 31: Responses to what stops you from sourcing more local food (n=30)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 63: Responses to what stops you from sourcing more local food (n=30), p. 63

Barriers to sourcing local food

Nearly half of the food retailers identify steep pricing as the biggest obstacle. The second most common barrier is the perception that big business controls the market. Consistent supply problems were the third-highest barrier as can be seen in Figure 32 below.

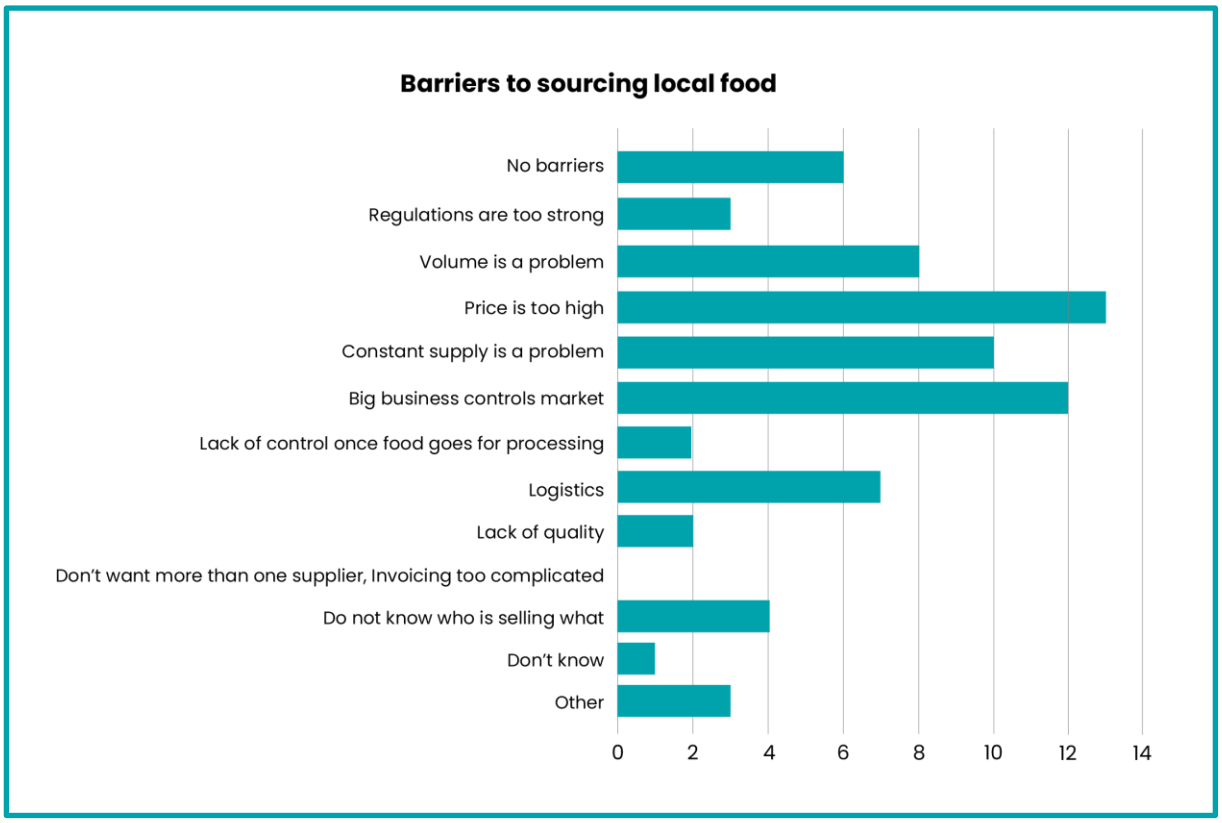

Figure 32: Barriers to sourcing local food (n=30)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 64: Barriers to sourcing local food (n=30), p. 63

Opportunities to sourcing local food

When asked about the positive impacts of sourcing local food, the majority of food retailers highlight supporting local people/economy as the top benefit. Additionally, two-thirds of the responses mention 'fresher produce,' while more than half emphasise that 'customers are more receptive to local food' and appreciate 'knowing the supplier.' This can be seen in Figure 33 below.

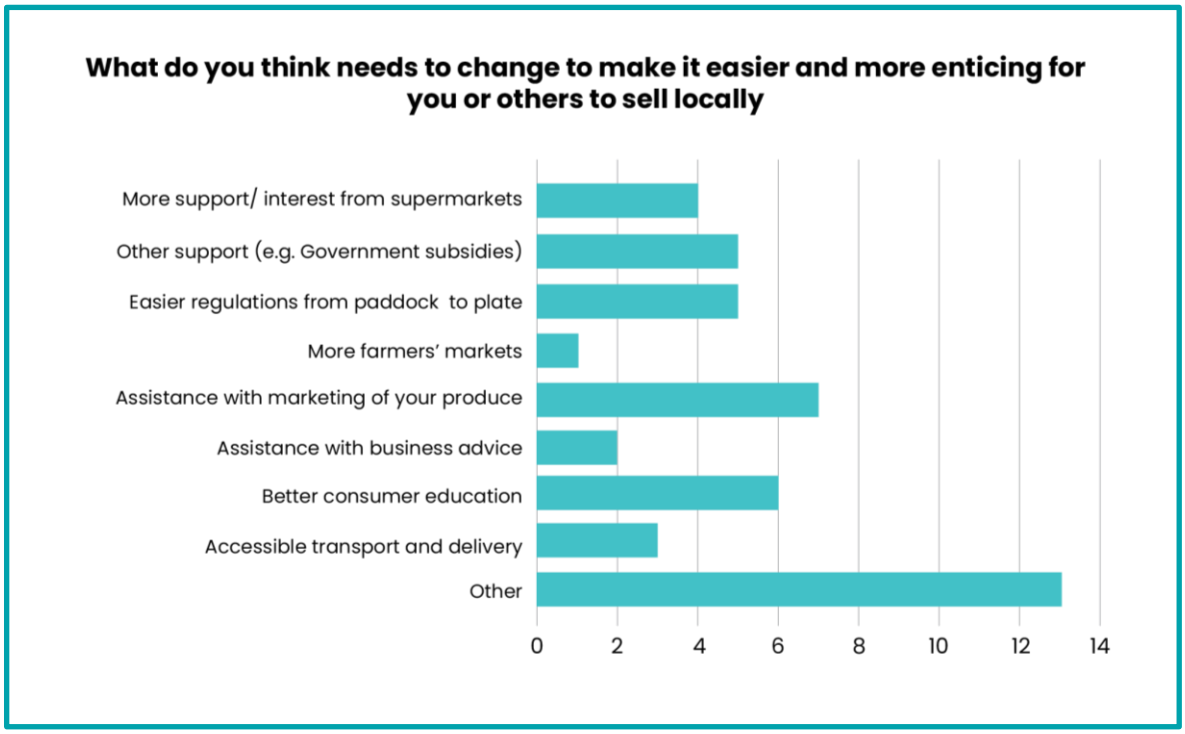

Figure 33: Positives to sourcing local food (n=30)

Source: Ahikā Consulting. *An Overview of the Regional Food System for Wellington Region and Horowhenua District*. 2023. Figure 65: Positives to sourcing local food (n=30) p. 64

6.3.4 Local food economy findings

- Small and mid-scale food growers in the region struggle to access distribution through supermarkets, so alternative systems or strong changes within supermarkets are required.
- Food safety regulations are complicated; guidance exists to help food producers through the compliance needs (see MPI website: www.mpi.govt.nz). However, achieving compliance can be costly and doesn't always favour local selling. Supermarkets and central distributors often require further significant compliance, which can be too onerous/costly for small and mid-scale food producers.
- Finding ways to support growers to get their food to the consumers, in a safe and legal manner, is essential for strengthening the local food economy. This is a role that agencies such as councils and iwi can lead.
- For small and mid-scale food growers, producing food in the conventional food economy is not necessarily profitable. Often, much of the profitability within conventional supply chains is claimed by the large distributors (e.g. supermarkets) and/or large wholesalers.
- Local food economies offer small-medium scale producers with considerable opportunity to capture more value from the supply chain.
- To support the LFE, we need to increase demand for buying locally. This could be done through procurement and/or consumer knowledge and income.
- For cafés and restaurants, purchasing local food on a regular basis needs consistency and reliability of supply; they need the same or very similar types of food on a regular basis to provide to their customers.

- Supermarket scale/location/pricing means many consumers seek out convenience over provenance (knowing where their food comes from, who has grown it and processed it) which often occurs when buying at local markets.
- Consumers expect consistency of the foods they eat, regardless of seasonality and availability
- Community hubs can be an important part of an LFE, providing an opportunity to sell food locally, strengthen producer/consumer relationships, and providing skill-based workshops for consumers.

For further details of the region foodshed supply and food demand see **Section 4: Stage 2: Baseline Food System Analysis** (pp. 34-68) of *An Overview of the Regional Food System for Wellington Region and Horowhenua District* (3).

Section 7: Proposed future state of our food system and key shifts

The grounding truths and future state framework below presents the culmination of ideas and key themes that emerged during Phase One. This framework serves as a projection of our envisioned future for the regional food system. It charts a course forward, aiming to effectively integrate the diverse voices and input from our communities while addressing the unique challenges and opportunities in our region. The framework was informed by hui with the iwi/hapū rōpu and CAB and shaped with the support of Litmus, Wellington-based evaluation and design specialists.

Our grounding truths:

- Our taiao and the tangata who work with te taiao to produce food are the foundations of our food system. When they are not thriving, our food system is at risk.
- Kai is a taonga. In Aotearoa New Zealand, our kai system needs to uphold Te Tiriti o Waitangi.
- Many elements of our current food system undermine oranga taiao (healthy environment), oranga tangata (healthy people) and Te Tiriti o Waitangi.
- We need to transform our food system to ensure a safe food future for generations to come.
- Transformation of our food system requires everyone.

7.1 Our future state of the regional food system

Vision: A regional food system that is sustainable, equitable and locally-led.

Our future state of the Regional Food System

Future State	**Oranga taiao (healthy environment)** Te Taiao is flourishing with healthy soils, seas, freshwater bodies and climate.		
How we'll know we got there	Sustainable/ Agroecology is the norm, powered by a skilled growing workforce	Food production supports biodiverse, thriving ecosystems and high animal welfare	We have a de-carbonised, zero-waste food system operating on 100% renewable energy
Future State	**Oranga tangata (healthy people)** Tangata are thriving with resilient livelihoods and access to good kai.		
How we'll know we got there	Our food system supports and builds capacity of small/ medium scale and locally owned food operations. They are enabled to access land, produce and distribute good food	All communities can easily access good food, including local and home-grown produce	Strong food literacy across our population and institutions
Future State	**Mana motuhake (locally-led)** The mana of our region is strong with a self-determined and resilient regional food system.		
How we'll know we got there	Mana Whenua are key leaders and decision-makers in our regional kai systems	We meet most of our regions kai needs with kai that is grown, farmed, and processed locally	We invest in, share, and celebrate the kai traditions and stories unique to our region

The framework above presents a summarised consolidation of Phase One of this work. The next step is for WRLC and Te Whatu Ora to continue discussions to determine the direction and scope of the RFSP alongside WRLC's other regional projects. The Regional Food System Plan is set to refine on and further develop the initial priorities outlined in this report, in collaboration with partners and stakeholders. This plan is scheduled to be finalised in late 2024.

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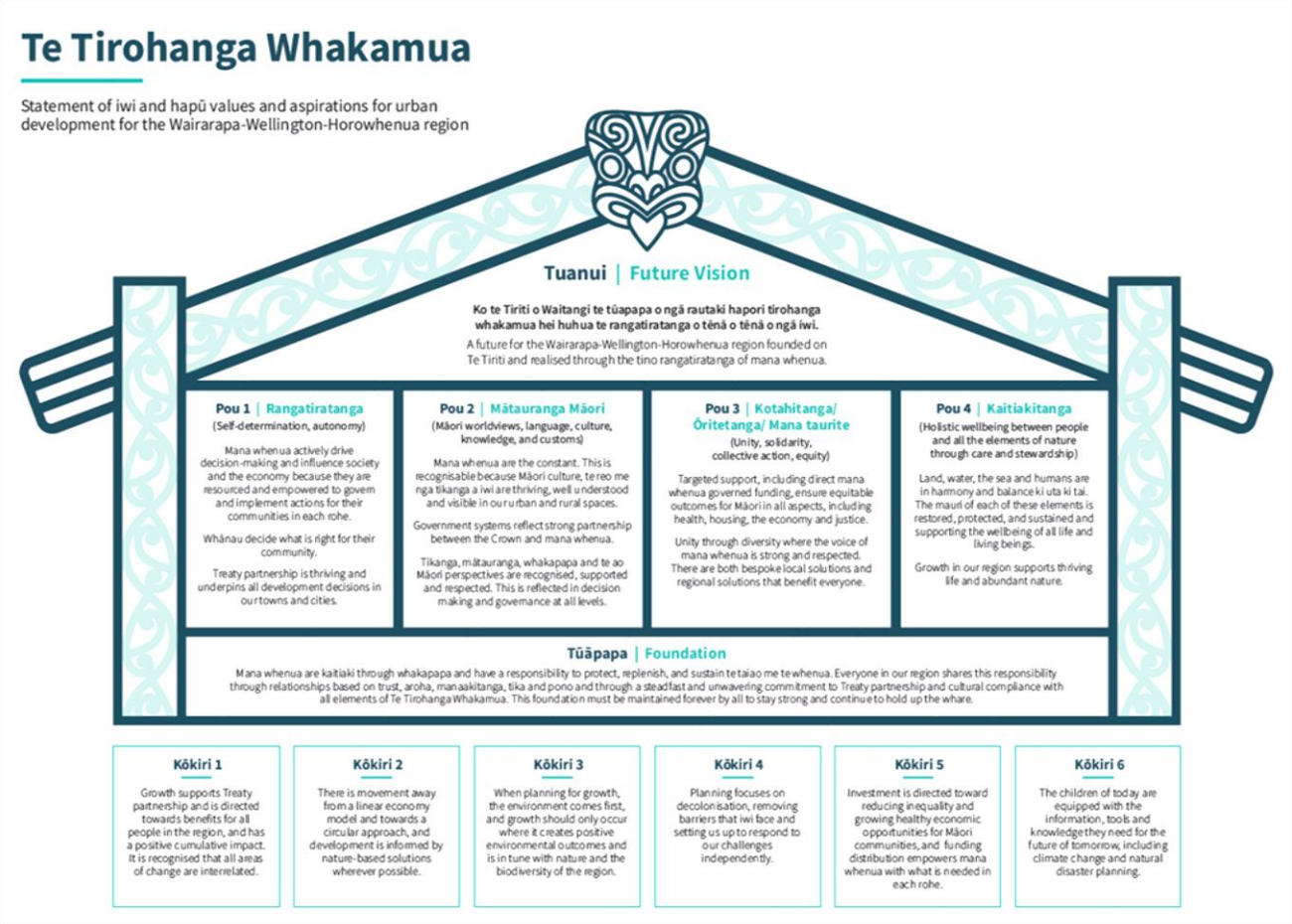
Section 9: Appendix

9.1 Te Tirohanga Whakamua



Te Whatu Ora
Health New Zealand

Food Security in the Greater Wellington Region

Evidence Summary for Regional Food System Plan
Te Whatu Ora | National Public Health Service – Capital, Coast, Hutt Valley and Wairarapa

2023

EVIDENCE SUMMARY FOR REGIONAL FOOD SYSTEM STRATEGY PROJECT

KEY FINDING

National data show significant inequities in food security, particularly for Māori, Pacific and people living in high deprivation areas, which is good evidence for regional action to reduce these inequities.

SUMMARY OF FINDINGS

Research Question	Key Findings
What is the current state of food security?	• Most recent snapshot data from the Growing Up in New Zealand study show that one in six 12-year-olds experienced food insecurity (1). • Results from the 2020/21 and 2021/22 New Zealand Health Survey (NZHS) suggested a decreasing trend in food insecurity for all children across New Zealand; however, 2022/23 data shows an increase across all indicators (2). The previous years' figures may have been diminished by the impact of COVID-19 and Ministry of Social Development (MSD) grants on data collection and food security status. • Food security fluctuates over time (1) and heavily depends on household income (3,4,5,6,7)
What inequities in food security exist?	• Significant food security inequities for Māori, Pacific, and people living in high deprivation areas across the country (2). • Inequities in nutrition for Pacific people and people in high deprivation areas in Wellington (8). • Food insecurity impacts cultural and spiritual wellbeing (6,9).
What are the data gaps in food security?	• Quality, up-to-date, region-specific food security data. • Qualitative data on Pacific experiences of food insecurity. • National data on food security in adults.

Food insecurity in Aotearoa is defined as "a limited or uncertain availability of nutritionally adequate and safe foods or limited ability to acquire personally acceptable foods that meet cultural needs in a socially acceptable way." (10,11). The effects of food insecurity include poor nutritional intake, which in turn can increase the risk of obesity, cancer, and cardiovascular diseases (5,12), experiences of emotional distress (13,14), declined cultural and spiritual wellbeing (6,9) and

negative impacts on child health, schooling, behaviour, and development (15,16).

Food security evidence summary

NZHS data from 2022/23 (2) show that in the past year nationally:

- 21.3% of New Zealand children aged 0 – 14 years lived in a household that ran out of food often or sometimes; the percentage is higher for Māori children at 35.1%, higher again for Pacific children at 39.6%, and higher for children living in the most socioeconomically deprived areas at 36.1%.
- There has been a spike across all indicators of food security; the lower figures over the previous COVID-19 years may have been reflecting the effects of MSD food grants (17,18), and a shorter window for data collection (19).
- 14.4% of children lived in households that often or sometimes relied on food grants or food banks; higher for Māori children at 25.6%, higher again for Pacific children at 34.0%, and 31.9% for children in the most deprived areas.
- Children living in the most deprived areas were three times more likely to run out of food or to eat less often or sometimes and six times more likely to rely on food banks or grants often or sometimes compared to children living in the least deprived areas.

Nutrition evidence summary

NZHS nutrition data for 2017–2020 (8) show that for children aged 2-14 years and adults aged 15 years and over in the Wellington region:

- 74.2% of all children eat the recommended daily fruit intake of two servings, but only 47.2% eat the recommended daily vegetable intake (two-three servings depending on age); for Māori children this is 73.8% and 46%, and lower for Pacific children at 68.4% and 32% respectively.
- 51.8% of all adults eat the recommended daily fruit intake, and 56.2% eat the recommended daily vegetable intake; for Māori adults this is 46.6% and 55% and for Pacific adults 46.2% and 52.6%
- Results by ethnicity are overall on par with the national picture of nutrition.

- 38.1% of adults living in the most deprived areas of Wellington eat the recommended daily fruit intake, and 44.4% eat the recommended daily vegetable intake (lower than the national figures for those living in the most deprived areas).
- The regional picture for nutrition may have changed since 2020, particularly with COVID-19 and the near 20% increase in fruit and vegetable prices in the year ending May 2023 (20).

Despite the lack of regionally specific evidence, the available Wellington nutrition data are similar to national findings and the demographic profile of Wellington is comparable to that of Aotearoa as a whole. Therefore, we can extrapolate national food security data for a picture of what regional food security might look like, and we can conclude that public health action to reduce inequities in food insecurity is important to take.

RECOMMENDATIONS FOR NEXT PHASE OF REGIONAL FOOD SYSTEM STRATEGY ACTION

1. Wellington region food security data collection: To meet the aim of the strategy to be responsive, equitable, and sustainable, quality local level data is necessary both to inform the strategy's development and to evaluate its effectiveness.
2. Mana whenua representation at decision-making and leadership levels for the development and implementation of the strategy to ensure the strategy is Te Tiriti responsive, culturally appropriate and safe, and addresses inequities.
3. Pacific representation at decision-making and leadership levels for the development and implementation of the strategy: to ensure the strategy is culturally appropriate, responsive and safe, and addresses inequities.
4. Pacific qualitative data collection: understanding how Pacific populations are impacted by food insecurity in the Wellington region is important to reduce inequities and build a strategy that is responsive to Pacific peoples' needs.

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