

TARANAKI

2050

FOOD & FIBRE

TRANSITION PATHWAY ACTION PLAN

FEBRUARY 2020

venture
TARANAKI
Te Puna Umanga

FOOD & FIBRE

TRANSITION PATHWAY ACTION PLAN

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Executive Summary

“Starting now, we will cooperate and collaborate to drive innovation and individual/collective opportunities to establish Taranaki as a respected region for premium, sustainable/low-emissions food and fibre by 2040, to achieve prosperity, environmental and social success, with the collective value of kaitiakitanga.”

Theme	Actions
<p>Accelerate innovation & introduction to low-emissions product/practices/systems</p>	<p>Action: Investigate economically viable diversification/complementary options for Taranaki food and fibre sector. Share outcomes and leverage through collateral and events to encourage investment both locally and nationally.</p> <p>Action: Taranaki as a leading-edge low-emissions food and fibre region through:</p> <ul style="list-style-type: none"> • Undertaking national and international market-scans • Forming partnerships and collaborative trials with national and international centres, including science and research • Showcasing and piloting latest technologies • Better understanding of market demand and opportunities • Fostering product development strategies, practices, value chain initiatives • Investigating circular economy and other system developments, as well as waste minimisation opportunities • Cross-functional interfaces with other elements of the 2050 workstreams, such as sustainable energy, low-emissions transportation, people and talent, etc. <p>Action: Leveraging Government and national industry plans pertinent to food and fibre through the following avenues:</p> <ol style="list-style-type: none"> a) The Government’s national Food and Beverage Industry and Forestry Transformation Plans through investigating: <ul style="list-style-type: none"> • The scope for devolving certain government functions, including funding, to regional entities (contingent on quality of local capability and agreed deliverables) • Ways to bolster local capability in order to undertake devolved functions • How to enable the development of transformation initiatives and roadmaps for the food and fibre sector at the regional level. b) Working with national players to further develop key parts of the food manufacturing ecosystem in Taranaki, in order to support: <ul style="list-style-type: none"> • The establishment of New Zealand (and Taranaki) as the leading location for food innovation and manufacturing in the Asia–Pacific region • Regional food manufacturers, particularly small and medium enterprises, to easily access scientific, technical and commercialisation expertise located, for example, at Food HQ in the Manawatū • Investigating the scope for government support for firms in Taranaki for the “discovery” process • Aligning science investment in Taranaki to create sustainable development pathways for farmers and manufacturers and ensuring this knowledge is accessible. c) Capitalising on government-funded research on food and fibre in line with the latest trends, food and fibre opportunities and investment prospects pertinent to Taranaki.

	<p>d) Leveraging Industry Plans from major Primary Sector and Food & Fibre Groups such as:</p> <ul style="list-style-type: none"> • Primary Sector Council: https://fitforabetterworld.org.nz • Dairy NZ • Fonterra • Beef & Lamb NZ • Other sector plans and initiatives e.g. sea/marine, horticulture, etc.
<p>Food & fibre story</p>	<p>Action: Develop a regional food and fibre story to promote the region’s unique points of difference and to encourage farmers, growers, producers and other food and fibre professionals and the community, to start the journey towards low-emissions practices.</p> <p>Action: Showcase Taranaki food and fibre businesses, systems, innovations in low-emissions practices.</p> <p>Subsequent action: Pilot/innovation site land use/complementary farming demonstration with low-emissions technologies and/or enterprises; low-emissions innovation site.</p>
<p>Driving evidence-based data to underpin food & fibre story</p>	<p>Action: Investigate/pilot Taranaki/NZ brand of accreditation.</p> <p>Subsequent action: If investigation and pilot shows value-gain, introduce and incentivise uptake throughout Taranaki food and fibre value chain.</p> <p>Action: Instigate/pilot Green House Gas (GHG) emissions footprint assessments that can be placed on Taranaki food and fibre products, so consumers are aware of the emissions footprint from land to consumer.</p> <p>Action: Funding/resourcing to de-risk pioneering low-emissions enterprises and/or collaborations.</p>
<p>Capability development, workforce, etc.</p>	<p>Action: Investigate the skills gap that currently exists within our food and fibre workforce around new ways of working/new low-emissions practices and education and process training opportunities and link to vocational institutions.</p> <p>Action: Leverage the Food and Fibre Skills Action Plan, so that Taranaki benefits in proportion to its needs.</p> <p>On the knowledge section, farmers and stakeholders in Taranaki will contribute to:</p> <ul style="list-style-type: none"> • Developing a pan-sector skills and employment dataset • Developing a workforce supply and demand model and improve forecasting capability • Commissioning research into the current state of degree-level tertiary education • Undertaking research on the benefits of great workplace practices. <p>On attraction, farmers and stakeholders for the food and fibre sector will commit to:</p> <ul style="list-style-type: none"> • Strengthening support for initiatives that attract more people into food and fibre education, training and employment • Supporting a pan-sector approach to investment in, and evaluation and delivery of, attraction initiatives • Improving the alignment of tertiary education curriculum resources with regional industry needs • Supporting teachers to improve their knowledge of the food and fibre sectors and available careers

	<ul style="list-style-type: none"> • Supporting the Tertiary Education Commission’s food and fibre careers hub and inspiring the Futures Programme • Developing a targeted marketing campaign. <p>On employment matters, farms and food and fibre stakeholders will commit to improvements in workplace employment practices that attract, develop and retain a skilled and productive workforce, through:</p> <ul style="list-style-type: none"> • Contributing to a workplace, employment and skills resource hub serving the Taranaki region • Strengthening existing social and employment networks • Expanding and promoting programmes that upskill rural women and rural professionals • Encouraging the adoption of excellent workplace practices throughout the food and fibre sector in Taranaki. <p>Action: To realise Taranaki’s potential as a leading, innovative food and fibre region, and contribute to New Zealand’s food and fibre transformational goals, collaborations will be fostered/strengthened involving the New Zealand Institute of Skills and Technology (@WITT), universities, Food HQ, as well as national and international food and fibre innovation centres, education and training centres, and Wānanga to serve the region.</p> <p>Action: Vocational research and development will be fostered to serve both urban and rural food and fibre industry needs and opportunities and contribute to sustainability goals.</p>
<p>Social inclusivity</p>	<p>Action: Undertake a feasibility study/audit of ways to develop community self-sufficiency with food and fibre needs. For example, this could explore the use of community gardens on Marae, as well as local market options.</p> <p>Action: Support iwi, Māori, hapū and whanau by providing funding for a full-time co-ordinator to ensure the Māori worldview is properly reflected across food and fibre-related initiatives in this Transition Pathway Action Plan.</p>
<p>Food & fibre investment</p>	<p>Action: Develop a food and fibre funding landscape gap analysis and map for Taranaki, including what funds are available and for whom.</p> <p>Action: Study of how cross-party investments work in other regions around the world.</p> <p>Action: Create a food and fibre fund.</p>

Context

New Zealand, as a nation, is moving towards a low-emissions economy.

In April 2018, the coalition Government announced it would grant new petroleum exploration permits only for onshore Taranaki and nowhere else. This decision has the potential for significant negative impact on the economies of both Taranaki and New Zealand if we do nothing. This is particularly true for Taranaki, given the energy sector represents 28% of the regional economic output¹.

The exploration decision is part of a much wider picture. The world has committed to taking action to lower greenhouse gas emissions. In 2016, New Zealand ratified the Paris Agreement. Under this agreement, New Zealand needs to reduce emissions to 30% below 2005 levels by 2030.

Both the New Zealand Productivity Commission², in its final report on transitioning New Zealand to a low-emissions economy in August 2018, and the Interim Climate Change Committee, in its reports³ released in July 2019, recommend a series of actions that can be taken to reduce emissions.

In 2016, New Zealand's two largest contributing sectors for emissions were agriculture and energy (including transport)⁴. These sectors are a key part of Taranaki's economy, and while forestry has considerable potential to offset emissions, a significant transition to a low-emissions economy will be required.

The past shows us that the impact of large transitions, such as what we need to do to lower our emissions, can lead to a legacy of negative impacts for some. A just transition is about managing these effects to continue to build a fair and inclusive New Zealand. For Taranaki it means ensuring we keep what is great about our region while planning for more people to share in this. A just transition requiring system-wide behavioural and institutional change to ensure more parity in outcomes for people is needed. Co-creation with communities, iwi, local and central government, businesses, educators, unions and workers is the cornerstone of the approach we are taking in Taranaki.

Our vision for 2050: a low-emissions economy

Our vision for Taranaki in 2050 has been co-designed by the region. It considers not just how our economy will change, but all aspects of our lives, and provides the opportunity to plan for inclusive growth as we transition to a low-emissions economy.

The Taranaki 2050 Roadmap was launched as a draft on 9 May at the Just Transition Summit in New Plymouth and issued in its final form in August 2019 after input from the public.

The Roadmap is the first step taken as a region in developing a just transition plan to a low-emissions economy. The draft was the culmination of 29 workshops on 12 transition topics, plus surveys and community outreach, as well as a creative challenge and specialist workshops/engagement for youth. More than 14,000 people viewed the introductory online video, and the process engaged

¹ *Tapuae Roa: Make Way for Taranaki Strategy, August 2017, p.52*

² *The New Zealand Productivity Commission, Low-emissions economy: Final report, August 2018, p.2.*

³ <https://www.iccc.mfe.govt.nz/what-we-do/agriculture/agriculture-inquiry-final-report/> and <https://www.iccc.mfe.govt.nz/what-we-do/energy/electricity-inquiry-final-report/>

⁴ *The New Zealand Productivity Commission, Low-emissions economy: Final report, August 2018, p.30.*

ideas from more than 1,000 people. The workshops mixed the diversity and talent of our region with specialist expertise from around the country.

Following the launch of the draft Roadmap, public consultation included visits to more than 40 locations with over 1,000 people. Twenty-five separate email submissions were received from individuals and organisations that represented thousands of individuals, as well as 135 submissions via our online interactive tool.

Themes

The people of Taranaki have a vision for 2050 that includes:

- *A strong sustainable environment;*
- *Education options that move and flex with a changing world;*
- *Attractive jobs;*
- *A similar lifestyle to the one we enjoy now;*
- *Leading the way in sustainable, low-emissions energy; and*
- *A region that looks out for and cares for itself and its people.*

While there were some divergent views for the future of Taranaki across participants, there were also many common themes. What unites us as a region is stronger than what divides us as a region. The main consistent themes were: sustainability, inclusivity and enterprise.

These themes reflected the Māori values of guardianship of people and our environment (similar to kaitiakitanga), the importance of community and caring (similar to manaakitanga), and the need for collective action in our move forwards (similar to kotahitanga). They also signified a focus on long-term outcomes that span generations.

To read more about the co-design process used for creating the Taranaki 2050 Roadmap, visit www.taranaki2050.org.nz

Taranaki 2050 Roadmap

The following is an excerpt from the Taranaki 2050 Roadmap – our just transition to a low-emissions future, specifically from the section on “Food & Fibre”.

To read the full introduction, vision, co-design themes and emerging opportunities that were co-designed by the region in the Taranaki 2050 Roadmap, visit [http://about.taranaki.info/Taranaki2050/Taranaki-2050-Roadmap-\(1\).pdf](http://about.taranaki.info/Taranaki2050/Taranaki-2050-Roadmap-(1).pdf).

Food & Fibre and the Taranaki 2050 Roadmap

Introduction

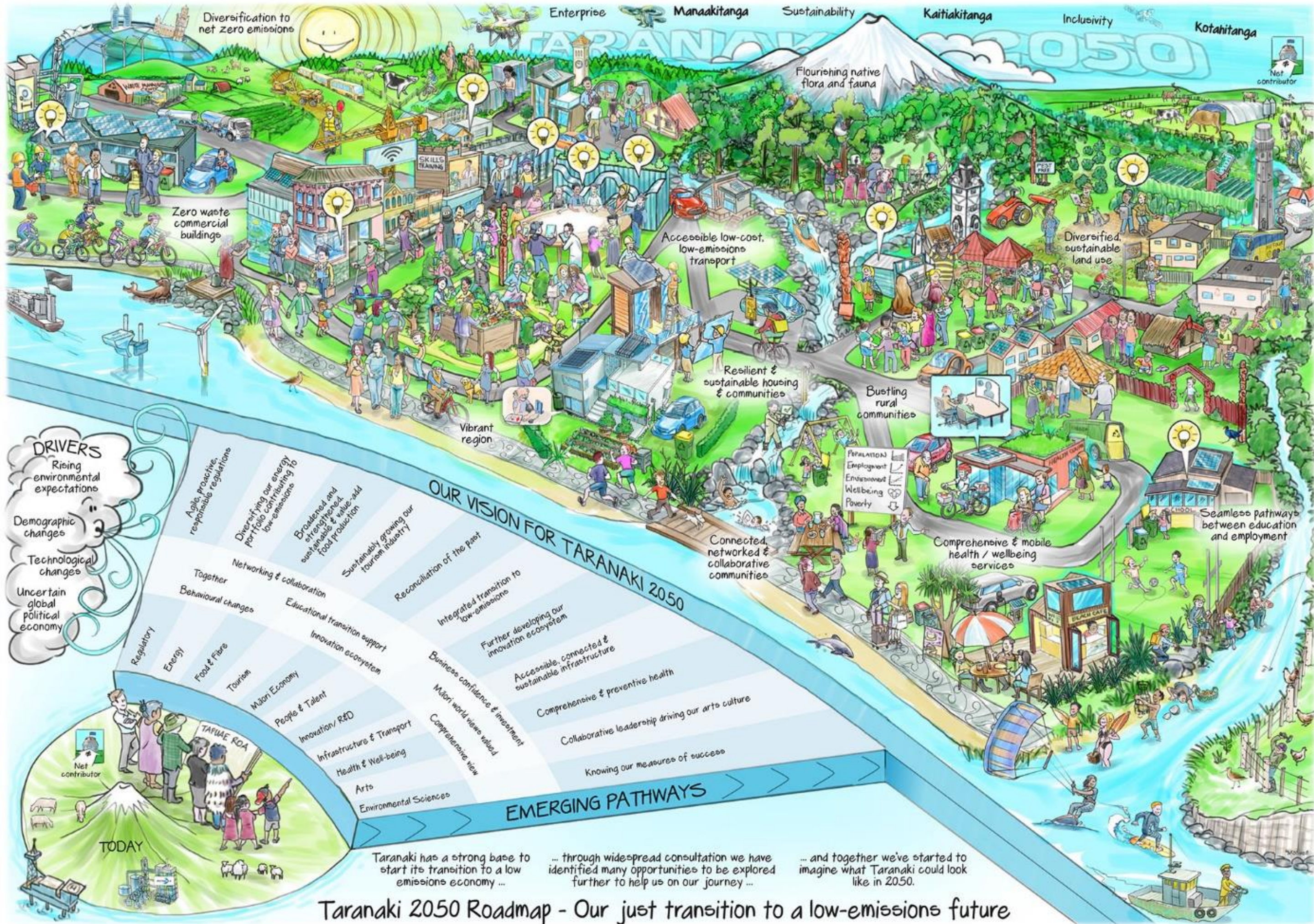
- *Taranaki's economy has a significant food and fibre industry. It contributes more than \$1.5 billion annually to Taranaki's economy, sustains over 10,200 jobs in 3,813 businesses and comprises more than half of Taranaki's manufacturing base⁵. Taranaki has the second highest food production GDP per capita in New Zealand.*
- *However, agricultural emissions, methane and nitrous oxide make up about half of New Zealand's reported emissions, which needs to be addressed⁶.*
- *The efficient use of resources will be critical to the sustainable production of food as land usage, water availability, emissions, processing and food packaging are increasingly challenged by climate change, consumer and public expectations, and population density. Ensuring the environmental sustainability of food production will need to underpin our research and development activity.*
- *It is important for New Zealand and Taranaki producers to understand what the global food industry might look like in the future, and the opportunities this presents. Innovation will play a significant role in the future success of the food sector in New Zealand.*
- *Current protein production in New Zealand, including Taranaki, is largely focused on those sourced from dairy and meat. Discussions must be had on the role plant-based proteins could play in our future foods. Taranaki starts from a good place, with our grass-based systems being some of the best for low-emissions in the world. This will continue to evolve, to further reduce our emissions footprint.*

Food & Fibre vision for Taranaki 2050

- *Taranaki in 2050 includes many different types of land use. There is a sustainably balanced mix of sheep, beef, poultry, dairy, forestry, wetlands, food crops, native bush, and farms. The changes to land use were supported by information that enabled people to identify low-emissions land use options. The changes were also supported by having the necessary finance and investment required to make the transition. The land use changes occurred in a way that ensured the practices used and the products being grown are sustainable, marketable, and support the protection and restoration of the natural environment.*
- *Taranaki in 2050 has farms with multiple farm outputs that promote diversified land use, provide long-term stable employment opportunities, and use low-emissions practices. Investment in appropriate technology supports improvements in productivity and secure, high-wage employment.*
- *Taranaki's food and fibre sector in 2050 is made up of a collaborative community that shares ideas, best practice, and lessons learned. The sector works together to ease the risk of entry into new markets and help grow market share in existing market*

⁵ Statistics from Infometrics, 2018 Taranaki Economic Analysis

⁶ Interim Climate Change Committee – Action of agricultural emissions, Evidence, analysis and recommendations, 30 April 2019, p. 6



Taranaki 2050 Roadmap - Our just transition to a low-emissions future

National strategies and plans

Wider national strategies⁷ and plans will reflect and influence what happens through the Taranaki 2050 Roadmap and the subsequent Transition Pathway Action Plans (TPAPs).

Primary Sector Council

The Primary Sector Council was established in April 2018 by the Minister of Agriculture for an initial period of two years. This group of agribusiness leaders aims to help the primary sector get more value from its work by:

- Providing strategic advice to the Government on issues, opportunities and challenges facing the primary industries
- Developing a sector-wide vision
- Working with each sector to develop individual strategic plans.

The Primary Sector Council has released its vision⁸ setting out the challenges facing the sector, the approach to take and the roles that everyone in the sector can play.

Food and Fibres Aotearoa New Zealand is a new partnership between Government, industry and Māori, working together to deliver meaningful change and to deliver a plan to provide consumers, both in New Zealand and internationally, with excellent quality, ethically produced food, natural fibres, drinks, co-products and bio-products.

Food and Beverage Industry Transformation Plan (ITP)

The Food and Beverage ITP is part of a series which includes forestry and wood processing, agritech, and digital technologies. The ITPs are intended as vehicles to plan for stronger long-term outcomes to deliver productive, sustainable and inclusive growth that delivers on the Government's zero carbon objective. They also draw on a wide range of existing work that is underway e.g. the Primary Sector Council workstream. The ITPs are still in-progress and are at various stages of development.

A key focus of the Food and Beverage ITP is to drive the generation and uptake of innovation to accelerate value and improve productivity.

⁷<https://www.beehive.govt.nz/release/govt-plan-productive-sustainable-and-inclusive-economy>
<https://www.mbie.govt.nz/assets/868e03d347/transitioning-to-more-affordable-and-renewable-energy-the-energy-markets-work-programme.pdf>
<https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/>

⁸ <https://fitforabetterworld.org.nz/our-vision/>

Forestry and Wood Processing Industry Transformation Plan (ITP)

The Forestry and Wood Processing ITP is focussed on the role that the forestry and wood processing industry will play as a major platform for the productive and inclusive net-zero economy envisaged for New Zealand by 2050. It will support the transition of the forestry and wood processing sector over the next thirty years from one configured to producing lumber and a relatively narrow range of products, including a significant log export industry, to one configured (at least partially) to producing fibre as a feedstock for a wide range of products, including, chemicals, biofuels and bio-plastics.

Transition Pathway Action Plans (TPAPs)

Following the finalisation of the Taranaki 2050 Roadmap, the Lead Group (20 volunteers from the seven pou of local business, iwi, community, unions, education, and local and central government who guided the co-creation of the Roadmap), and a sub-group known as the Design Council, developed an 'action framing' process, commonly used in the energy sector, for use in workshops to determine the short term actions and medium term strategy needed to meet the goals and vision of the Roadmap.

Action Framing process

Action Framing is a process of gaining alignment on 'where do we want to be?' and 'how to get there'. It's a structured dialogue that creates common understanding on what the opportunity is and commitment on the path forward.

To read more about the action framing process, please visit:

<https://about.taranaki.info/Taranaki2050/What-is-a-just-transition>

Food & Fibre Transition Pathway Action Plan: Outputs

Action Statement

The Action Statement developed at the Food & Fibre TPAP workshop was:

“Starting now, we will cooperate and collaborate to drive innovation and individual/collective opportunities to establish Taranaki as a respected region for premium, sustainable/low-emissions food and fibre by 2040, to achieve prosperity, environmental and social success, with the collective value of kaitiakitanga.”

Critical Success Factors

Critical Success Factors are the supporting activities or requirements that need to happen for the Action Statement to be released. Participants at the Food and Fibre TPAP workshop defined the following Critical Success Factors:

1. Governance and leadership that ensure ownership and accountability for committed outcomes
2. An agreed vision, approach and targets against which progress can be monitored and evaluated
3. An environment that supports retention, attraction and development of skills in Taranaki, as well as participation, ownership, collaboration, trust and commitment from all stakeholders
4. Research and Development (science and technology, local IP, knowledge transfer and expertise to drive change)
5. Community engagement with equitable access to information and opportunity – building a community (having vibrant community events)
6. ‘Agile’ (testing, trialling information) approach to developing new economic opportunities
7. Ensuring resources are available such as land, water, finance, labour and markets
8. Appropriate government support through policy, legislation and funding of pilot projects and programmes
9. Education (tamariki, primary, secondary, tertiary and those in the workforce). Having best practice living examples
10. We will need and have scientific evidence of the value of our natural food
11. We must take a multi-generational approach
12. To succeed, we’ll have to work together as a sector and as a region
13. We must give people the tools to diversify their business.

Givens

Givens are elements known that will not change. Participants at the Food and Fibre TPAP workshop identified the following givens:

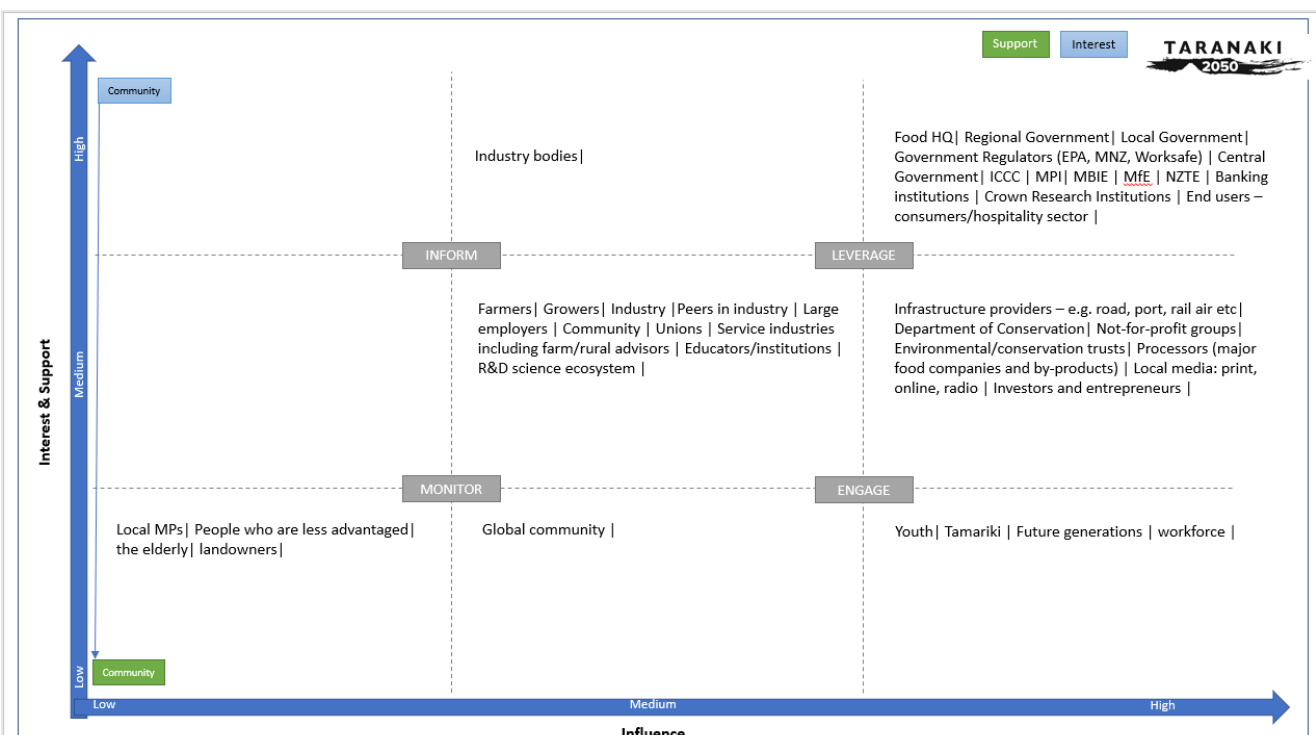
1. Funding is limited and constrained
2. Central and local Government will significantly impact the transition to low-emissions in the food and fibre sector
3. There are challenges that people must face in making changes to low-emissions practices
4. As well as challenges there are new opportunities within the transition for food and fibre
5. People continue to shift their consumer habits to more sustainable/low-emissions products
6. Taranaki has unique natural resources
7. There is a lack of skills, capability and knowledge around low-emissions practices/new ways of working
8. The circular/regenerative economy could positively impact the way the sector operates
9. There are current challenges to harness labour for seasonal enterprise
10. Innovation/R&D will enable change in the sector and needs to be supported
11. Businesses/people will need support to diversity and transition to low-emissions operations.

Stakeholders

It is important to identify all the relevant stakeholders in the Food & Fibre Transition Pathway Action Planning process. The workshop participants spent time collectively:

- Identifying all internal and external stakeholders
- Assessing their influence on the project
- Assessing the issues and needs for each of the key stakeholders
- Developing an engagement plan to obtain all necessary approvals from them.

The stakeholders and their expected interest in the work and their influence on it are documented in the plot below:



Qualifications of some of these stakeholders are captured below:

- Farmers/large employers (businesses)
- Regional government (local environmental regulations)
- Consumers (public)
- Unions (representing workers)
- Lobby groups (representing landowners, businesses).

A key step in the process is to review each of these stakeholders and build an engagement plan with each to ensure the right level of engagement is attained throughout the Action Planning timeframe. It should be noted that over time some stakeholder's levels of influence and interest/support will change, and the stakeholder engagement plan will need to be updated.

Threats and Opportunities

At the workshops, participants worked collectively to think about the project as defined in the Action Statement and identified all the potential opportunities and threats that would need to be addressed in order to deliver a successful project. Each were reviewed through the lens of PESTEL (Political, Economic, Social, Technological, Environmental and Legal). 226 post-its were collected in this phase of the workshop and have been summarised into 22 common opportunities and 14 common threats with corresponding mitigations.

During the workshops, participants broke into three areas to build an agreed high-level action plan for each of the major areas:

2 groups – Threats and mitigations

2 groups – Opportunities.

Opportunities

The Opportunities identified are summarised as per below:

Political

- Government to support trial areas on existing farms for research and low-emissions farming
- To work together across councils to recognise regional efforts and support initiatives
- GHG emissions reporting by region and sector
- Information to inform consumers on product purchases knowing their respective GHG emission impact
- Leveraging national strategies and plans and initiatives to support and accelerate regional growth and low-emissions initiatives.

Economic

- Sufficient funding is critical for investment in the transition to low-emissions food and fibre
- Investigate food and fibre processing facility
- Develop food and fibre tourism opportunities
- Introduction of complementary enterprises to build/extend the value chain
- Diversification of land-use and value chains
- Growing a regional brand and/or accreditation to incorporate the low-emissions story
- Consumers increased appetite for sustainably produced food and fibre
- Leverage and encourage innovation, through improved connections with science, food and beverage specialists, production facilities, showcasing examples and pathways of creating innovative, sustainable, market-led successful food and fibre products.

Social

- Investigate what other countries are doing and how they lead the way
- Building a regional story to encourage the transition to low-emissions
- Showcase examples of innovative, sustainable Taranaki food and fibre products
- Educate NZ on the transition required and how it will occur and why it needs to occur to achieve a low-emissions economy
- Skills and capability development for food and fibre – future focussed
- Leverage existing skills in Taranaki.

Environmental

- Instigate formal and informal levers to ensure sustainability practices within the region are accelerated and rewarded
- Development and celebration of a unique Taranaki story
- Complementary enterprises investigated/promoted/piloted that showcased pathways to enhanced sustainability for landowners and other food and fibre value chain.

Threats

A significant number of Threats were identified for all categories of the PESTEL. These are captured in separate spreadsheets and are summarised in the table below:

Taranaki 2050: Threat and Mitigation Summary

Type	Threat	Mitigation
Political	<ul style="list-style-type: none"> Funding process is convoluted and over-subscribed 	<ul style="list-style-type: none"> Understanding funding streams and working to unlock them
	<ul style="list-style-type: none"> Nation-wide regulations don't take into consideration efforts underway in Taranaki 	<ul style="list-style-type: none"> "Team Taranaki" approach to government partnerships
	<ul style="list-style-type: none"> How can government/local councils reduce barriers to innovations? 	<ul style="list-style-type: none"> Local government to support innovation ecosystem
	<ul style="list-style-type: none"> Inconsistent Government policy that doesn't incorporate regional efforts 	<ul style="list-style-type: none"> Build relationships with central government to identify regional efforts
Economic	<ul style="list-style-type: none"> The cost of the transition to businesses and growing enough niche products that are viable long-term 	<ul style="list-style-type: none"> Government support in transition and market-research needed to understand product viability
	<ul style="list-style-type: none"> Mainly reliant on food and fibre and energy sectors which are both going through a transition 	<ul style="list-style-type: none"> Plan together as a region
	<ul style="list-style-type: none"> There is a cost to change which could be inhibitive for some 	<ul style="list-style-type: none"> Ensure support is available to transition food and fibre industry in Taranaki
Social	<ul style="list-style-type: none"> If we don't get farmers on board with the vision it may not be achieved 	<ul style="list-style-type: none"> Telling a regional story to encourage the transition to low-emissions
	<ul style="list-style-type: none"> Taranaki doesn't transition and becomes irrelevant 	<ul style="list-style-type: none"> Working together to de-risk strategies to transition to low-emissions
	<ul style="list-style-type: none"> People not understanding the need to transition 	<ul style="list-style-type: none"> Educate NZ on the transition required and how it will occur and why it needs to occur to achieve a low-emissions economy
	<ul style="list-style-type: none"> Current lack of skilled people to implement low-emissions opportunities 	<ul style="list-style-type: none"> Skills and capability development for food and fibre – future focused
	<ul style="list-style-type: none"> Not every initiative will be successful 	<ul style="list-style-type: none"> Build a connected community within the food and fibre sector
Environment	<ul style="list-style-type: none"> Rising environmental expectations 	<ul style="list-style-type: none"> Working together to plan, monitor and implement low-emissions initiatives
	<ul style="list-style-type: none"> People are unaware that Taranaki farming practices are unique 	<ul style="list-style-type: none"> Development and celebration of a unique Taranaki story

Food and Fibre Actions

The following high level 'next stage' actions have been proposed through a combination of the workshop participants and subsequent refinements involving the Lead Group, and this will enable the region to move towards the Taranaki 2050 Roadmap vision and to give effect to the workshop Action Statement. Over time the actions will be reviewed, monitored and extended to ensure ongoing progress and that the 2050 Roadmap remains a relevant, living vision:

- **Food and Fibre Industry Low-emissions Acceleration: Diversification/Expansion/Introduction of new and complementary industries, enterprise, products and practices:** We will have strategies to de-risk the transition to low-emissions for our food and fibre sector in Taranaki, on behalf of New Zealand. We will have identified how to diversify/extend into new complementary products/practices and successfully implemented this in a way that is economically viable, market-led innovative, high value and will have developed strategies to help business owners and people transition to low-emissions. Taranaki will become a leading region renowned for its progressive, proactive, successful food and fibre industry.
- **Regional Food and Fibre Story:** We will have a regional food and fibre story that will be used to tell a low-emissions food and fibre story to the rest of New Zealand and the world, while also being used to help farmers/businesses/community transition to low-emissions.
- **Capability development, Education and Workforce Development:** Our farmers, growers, producers, youth, community and businesses understand and are skilled in new ways of working in a low-emissions food and fibre sector:
 - Tertiary institutions and schools offer tools and training to people in preparation for low-emissions practices. Taranaki is a leader in positive collective behavioural changes, with highly skilled workers in sustainable, secure, well-paid jobs.
 - Support the implementation of national strategies that will play to Taranaki's strengths and opportunities.

Acceleration, transformation and leading-edge low-emissions food and fibre industry

Food and Fibre land and value chain diversification/extension

Food and fibre value chain diversification/extension into complementary industries is an important initiative in Taranaki's move to a low-emissions economy. New Zealand has one of the lowest percentages of farmed land in horticulture of any food producing country – and could significantly extend the amount of land in crops, fruit, vegetables. This should also be part of the region's diversification story, leveraging fertile soils and climate. Existing practices require incremental or even disruptive change, to foster transition, such as the introduction of new complementary enterprises, potentially new systems of farming, products or value chain developments that could help foster lower emissions.

However, change, especially early adoption, is not without risk, and the Taranaki 2050 Roadmap and our workshops identified a need for a strategy to de-risk the move to low-emissions, and support.

- **Action:** Investigate economically viable diversification/complementary options for Taranaki food and fibre sector and publish results to assist farmers, growers, producers and businesses in de-risking their transition to low-emissions practices.
- **Subsequent Action:** Share outcomes and leverage through collateral and events to encourage investment both locally and nationally.

Accelerate innovation and introduction of low-emissions product/practices/systems

- **Action:** Host regional events, capability development sessions, develop initiatives and form clusters/networks to build momentum, accelerate information sharing, de-risk first movers, foster mindsets and actions that accelerate the shift towards a prosperous, innovative and lower-emissions food and fibre industry in Taranaki.
- **Action:** Taranaki as a leading-edge low-emissions food and fibre region through undertaking national and international market scans, forming partnerships, collaborative trials with national and international centres, including science and research to underpin the introduction of latest technologies, better understanding of market demand and opportunities, awareness of the latest science and innovations, foster product development strategies, practices, value chain initiatives, circular economy opportunities and other system developments concerning food and fibre low-emissions.
- **Action:** Establish Taranaki as the centre for Food and Fibre innovation in New Zealand through collaboration with the New Zealand Institute of Skills and Technology (@WITT), universities, and Wānanga to serve the region.
- **Action:** To realise Taranaki's potential as a leading, innovative food and fibre region, and contribute to New Zealand's food and fibre transformational goals, through collaborations involving the New Zealand Institute of Skills & Technology (@WITT), universities, Food HQ, national as well as international food and fibre innovation centres and Wānanga to serve the region, and beyond.
- **Action:** Enable local vocational research and development to serve both urban and rural food and fibre sustainability.

Leverage the national Food and Beverage Industry Transformation Plan:

- **Action:** Investigating:
 - The scope for devolving certain government functions, including funding, to regional entities (contingent on quality of local capability)
 - Ways to bolster local capability in order to undertake devolved functions
 - How to enable the development of transformation initiatives and roadmaps for the food and fibre sector at the regional level.
- **Action:** Working with national players to further develop key parts of the food manufacturing ecosystem in Taranaki, in order to support:
 - The establishment of New Zealand as the leading location for food innovation and manufacturing in the Asia-Pacific region
 - Regional food manufacturers, particularly small and medium enterprises, to easily access scientific, technical and commercialisation expertise located, for example, at Food HQ in the Manawatū.
- **Action:** Investigating the scope for government support for firms in Taranaki for the “discovery” process, such as identifying profitable alternative land uses, access to advisory services to assist farmers to adopt best practice and/or sustainable farming systems (through, for example, harnessing the knowledge and capabilities within the Crown Research Institutes) and appropriate support for on-going development of post-gate manufacturing.
- **Action:** Aligning science investment in Taranaki to create sustainable development pathways for farmers and manufacturers and ensuring this knowledge is accessible.

Leverage the national Forestry and Wood Processing Industry Transformation Plan:

The New Zealand wood processing sector is facing several issues. Around half of New Zealand’s total forestry harvest is exported. This in part is driven by high demand and prices in the Chinese market and in part by the current configuration of our domestic wood processing sector which is constrained by path dependencies and a focus on serving the domestic market with traditional products. In exporting such a significant volume of forestry harvest without adding value through further processing, New Zealand is missing out on opportunities to increase exports and attract valuable investment and jobs into the regions.

The forestry and wood processing ITP is focussed on the role that the forestry and wood processing industry will play as a major platform for the productive and inclusive net-zero economy envisaged for New Zealand by 2050.

It will support the transition of the forestry and wood processing sector over the next thirty years from one configured to producing lumber and a relatively narrow range of products, including a significant log export industry, to one configured (at least partially) to producing fibre as a feedstock for a wide range of products, including, chemicals, biofuels and bio-plastics, as well as high value, innovative value-add products.

MBIE and the Forestry Ministerial Advisory Group have agreed to jointly fund research that seeks to identify the most viable commercial opportunities for investment in biotechnologies and bio-based products that utilise wood and wood fibre, and facilitate New Zealand to transition to a bioeconomy. This will provide an assessment of potential opportunities for investment in New Zealand in the near term (5-10-year horizon) and long term (30-year horizon).

- **Action:** Engage with national players to understand opportunities as they emerge from the ITP research.
- **Action:** Align the Taranaki forestry and wood processing sector with commercial opportunities, including through the development of skills needed to realise opportunities.
- **Action:** Consider the long-term implications on planting and harvesting, including species, quantity and harvesting schedules.

Leverage the national Agritech Industry Transformation Plan

The agritech ITP is focused on growing the agritech sector as an economic sector in its own right, with particular emphasis on high-value export opportunities and further diversifying our economy. Secondary objectives for the work are improving the productivity and sustainability of the primary sector and contributing to global challenges, such as meeting global nutritional needs and reducing greenhouse gas emissions.

While New Zealand holds a number of advantages in this area, including our strong complementary food and fibre industry, our world-class research system, and an existing reputation for agricultural expertise, agritech exports have been stable for the last five years, while competitor countries have seen significant increases in activity. Some explanations for this are the fact that our expertise has been in relatively specialised areas, with limited international applicability; a disconnected flow of commercialisation activity and a shortage of growth capital for New Zealand agritech firms.

Key areas of action for the agritech ITP are:

- Strengthening international connections
- Improving commercialisation flows
- Improving investment flows
- Examining industry approaches to data and regulations
- Meeting skills needs for creators and users of agritech
- Streamlining government support for agritech.

- **Action:** Input into ongoing development of the agritech ITP action plan.
- **Action:** Work with national players to further develop the Taranaki agritech sector, including:
 - Identifying and sharing global opportunities
 - Showcasing the sector through the New Zealand Agritech Story
 - Strengthening connections to global capital pools and VCs
 - Strengthening connections between agritech firms and the science system
- **Action:** Strengthen connections between the innovation ecosystem and Taranaki farmers to ensure products and systems developed are meeting the needs of the food and fibre sector.
- **Action:** Engage in opportunities to showcase technologies to Taranaki farmers.
- **Action:** Educate members of Taranaki's food and fibre sector on the benefits offered by agritech.
- **Action:** Investigate how to enable the development of transformation initiatives and roadmaps for the agritech at the regional level.

Leverage Industry Plans from major Primary Sector and Food and Fibre Groups

- **Action:** Review plans and low-emissions initiatives from Dairy NZ, Beef and Lamb NZ, Primary Sector Council, etc, and other Food and Fibre Groups and seek opportunities for leveraging, piloting or other support.

Regional Food and Fibre story

Taranaki is known for farming. While dairy, cheese, red meat and poultry are cornerstone contributors to the Taranaki economy, there are smaller, innovative food producing businesses emerging and putting Taranaki on the map.

Niche sectors like honey, coffee, craft alcohol, ice cream, chocolate, fresh and baked goods, are growing year-on-year and increasingly adding a new dimension to the makeup of Taranaki's food industry. Employment in food manufacturing was up 2.4% in Taranaki in 2018 relative to the previous year (NZ = 1.2%); numbers of businesses grew 8% (NZ = 0.9%) and GDP was 5.4% higher (NZ = 2.7%)⁹.

With our rich, volcanic soil and the start of our low-emissions journey already underway, Taranaki can leverage a low-emissions story to not only grow the economy, but to help bring local people on the journey.

⁹ Source: Infometrics, 2018

- **Action:** Develop a regional food and fibre story that can be used nationally and internationally to promote Taranaki's unique food and fibre offerings. The story will also be used to encourage farmers, growers, producers, and other food and fibre professionals and the community, to start the journey towards low-emissions practices.
- **Subsequent action:** Showcase of Taranaki food and fibre businesses, systems, innovation in Taranaki's low-emissions practices.
- **Subsequent action:** Pilot/innovation site land use/complementary farming demonstration with low-emissions technologies and/or enterprises; low-emissions innovation site.
- **Action:** Fostering enterprise collaborations based on sustainable practices.
- **Action:** Investigate/pilot Taranaki/New Zealand brand of accreditation. Introduce and incentivise uptake throughout Taranaki food and fibre value chain.
- **Action:** Investigate/pilot GHG emission footprint assessments which can be placed on Taranaki food and fibre products, so consumers are aware of the emissions footprint from land to consumer.
- **Action:** Funding/resourcing to de-risk the entering into of pioneering low-emissions enterprises and/or collaborations.

Capability development, education workforce development

The transition to low-emissions practices in Taranaki's food and fibre sector will require businesses and enterprise owners, and workers to learn new skills and techniques that support new ways of working, or making incremental changes to existing practices, and will require employers to enhance job security, terms and conditions accordingly.

Education needs to start within the school system, flowing through to vocational and tertiary training options that move and flex as the sector changes and develops with new technologies and innovation.

- **Action:** Investigate the skills gap that currently exists within our food and fibre workforce around new ways of working/new low-emissions practices.
- **Subsequent action:** Investigate primary sector/food and fibre and environmental education and process training opportunities and link to vocational institutions for design and implementation.

Leverage the Food and Fibre Skills Action Plan, so that Taranaki benefits in proportion to its needs.

- **Action:** Regarding the knowledge area, farmers and stakeholders in Taranaki will contribute to:
 - Developing a pan-sector skills and employment dataset
 - Developing a workforce supply and demand model and improving forecasting capability
 - Commissioning research into the current state of degree-level tertiary education
 - Undertaking research on the benefits of great workplace practices.
- **Action:** Regarding attraction, farmers and stakeholders for the food and fibre sector will commit to:
 - Strengthening support for initiatives that attract more people into food and fibre education, training and employment
 - Supporting a pan-sector approach to investment in, and evaluation and delivery of, attraction initiatives
 - Improving the alignment of industry curriculum resources
 - Supporting teachers to improve their knowledge of the food and fibre sectors and available careers
 - Supporting the Tertiary Education Commission's food and fibre careers hub and Inspiring the Futures programme
 - Developing a targeted marketing campaign.
- **Action:** Regarding employment matters, farmers and food and fibre stakeholders will commit to improvements in workplace employment practices that attract, develop and retain a skilled and productive workforce, through:
 - Contributing to a workplace and employment resource hub servicing the Taranaki region
 - Strengthening existing social and employment networks
 - Expanding and promoting programmes that upskill rural women and rural professionals
 - Encouraging the adoption of excellent workplace practices throughout the food and fibre sector in Taranaki.

Social Inclusivity

In order to meet the goals of the Roadmap that include lifting outcomes for people and raising parity across the region, and building community resilience, the following actions were identified:

- **Action:** Undertake a feasibility study/audit of ways to develop community self-sufficiency with food and fibre needs. For example, this could explore the use of community gardens at schools, retirement homes or on Marae, as well as local market options.
- **Action:** Support iwi, Māori, hapū and whanau by providing funding for a full-time co-ordinator to ensure the Māori worldview is properly reflected across food and fibre-related initiatives in this TPAP.

A range of government agencies could play a role in supporting Taranaki businesses and communities in undertaking these actions, given their capability and capacity.

Food and Fibre investment

A key issue raised throughout the planning process is how the plans for the food and fibre future will be funded. The next steps to mature this conversation are to identify what funding is needed, for what initiatives, and how it can be accessed.

In keeping with the principles of a just transition, this action plan is premised on co-contributions from those pou who are able to contribute.

- **Action:** Develop a food and fibre landscape gap analysis and map for Taranaki including what existing funds are available, and for whom.
- **Action:** Study of how cross-party investments work in other regions around the world.
- **Action:** Investigate the design and purpose of an investment fund for developing and/or sharing food and fibre technologies and practices.

Taranaki 2050 Transition Pathway Action Plans implementation from 2020

Work to date has been part funded through the Provincial Growth Fund (PGF) and supported with some resource from the Ministry of Business Innovation and Employment (MBIE). The work has been carried out by a large number of volunteers, as well as a small amount of private funding from local businesses to support workshops, facilitation, printing etc.

Future work needs to be funded at two levels:

1. Core co-ordination resourcing (to drive implementation)
2. Funding for the specific projects and initiatives that each action plans set out.

Funding needs to be through:

- Government (central and local) funding – new and existing
- Private sector.

Taranaki Food and Fibre Project and Initiative Funding

The following investigatory projects have been identified as ready for kick off in 2020/21:

Opportunity	Description	Cost
Food & Fibre Regional Story	<ul style="list-style-type: none"> • Develop regional story to tell Taranaki's low-emissions story nationally/internationally and help move our farmers, growers and producers to low-emissions through engagement activities and support. • For use in attracting talent to, and supporting initiatives for, training in food and fibre disciplines. 	\$750K each year over three years.
Support for existing pilot farms/trial areas on existing farms	<ul style="list-style-type: none"> • Funding to support extending pilot farms/trial areas on existing farms to encourage new ways of working, and support in the de-risking of new practices. 	\$200K each year over three years.

Taranaki 2050 funding – Core co-ordinating resourcing

Resourcing needs are required for five people to facilitate and drive workstreams, as well as measure and track progress over five years.

Resources are to be Taranaki-based, with the suggested positions:

3. 1 x leader
4. 1 x administrator
5. 3 x workstream leads

As well as facilitate and drive workstreams and measure/track progress, the team would be tasked with refreshing the Taranaki 2050 Roadmap in 2024.

Funding required for core co-ordination and resourcing: \$3.75m over five years.

Requests will be submitted to government for funding.



Acknowledgements

The Food and Fibre Transition Pathway Action Plan process has been a significant undertaking. We would like to acknowledge the Provincial Growth Fund and the Ministry for Business, Innovation and Employment for their financial and resource support.

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As a final acknowledgement, the Taranaki 2050 team would again like to thank everyone who has been part of the process – many people gave up significant hours to participate in workshops.

The team has been overwhelmed with people's passion and commitment to this region. It is clear there is an excitement and energy to achieve our vision for Taranaki 2050.

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