

OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

Phase 2: First wave of research

Strategic areas and outcome goals





FUTURE LANDSCAPES

In the future landscapes contain mosaics of land use that are more resilient, healthy and prosperous than today.

Strategic Area 1

Be able to see what diversity is possible and match land use to what it is suitable for.

Strategic Area 2

Understand and model the management of land and water quality.

Strategic Area 3

Provide the novel production systems that use healthy land and water to generate high-value products.

Line of Enquiry 1

- Dr Scott Larned (AgResearch)
- Dr Ross Monaghan (NIWA)

Land use suitability tools that are nationally tested and verified with stakeholders, supporting a mix of land uses that have their productive potential quantified, and deliver better outcomes than currently.

Output 1.1: Productive potential quantified for most prospective and existing land use practices

Output 1.2: Land use suitability (LUS) tools are nationally tested, modified and verified

Outcome goal for 2024: A diverse mosaic of land uses delivers better economic, environmental, social and cultural results than the current mix of land uses



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Line of Enquiry 1

- Builds on research undertaken in the Land Use Suitability (LUS) programme.
- Developing a 'productive potential' metric to feed the LUS framework with diverse productive enterprise options for varying soils, landscapes and climates.
- Including other effects of land use and social and cultural metrics in the LUS framework.
- Testing the LUS tool across all New Zealand agricultural regions.



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Line of Enquiry 2

- Dr Seth Laurenson (AgResearch)

A visualisation tool that helps land managers, and policy and land-use decision-makers, understand the opportunities and implications associated with their land use practices and choices.

Output 1.4: Visualisation tool developed to provide land managers and policy agents with land use options to deliver well-beings via value chains and transition pathways.

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Line of Enquiry 2

- Builds on research undertaken in the Land Use Suitability (LUS) programme.
- Developing a visualisation tool that will simulate the wide variety of viable productive enterprise options available for a given piece of land.
- Identifying the risks of different land use activities on multiple well-beings, allowing the land user to envisage enterprise options and make informed land use decisions.



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Line of Enquiry 3

- Dr Chris Phillips (Manaaki Whenua)
- Dr Paul Johnstone (Plant and Food Research)

Innovative new production systems are developed with stakeholders that yield food and non-food products that are valued by consumers.

Output 3.3: The performance of stakeholder-led new production systems (NPS) is identified.

Outcome goal for 2024: New Zealand farmers produce a diversity of food and non-food products that they, their community and consumers value.



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Line of Enquiry 3

- Analysing “alternative” land use or enterprise options (working closely with rural entrepreneurs developing NPS) to understand their impact and viability.
- Deriving the critical traits that constitute desirable attributes on-farm and scaling these across domains and at landscape scale.
- A Stakeholder Fund will assist this research to help survey and assess stakeholder-led production systems.



INCENTIVES FOR CHANGE

New Zealand's primary producers are well-rewarded for producing high-value products in sustainable ways.

Strategic Area 4

Capture and share with the producers more of the value consumers associate with our products.

Strategic Area 5

Increase and share value based on mechanisms that rewards sustainable land use and high-value products.

Strategic Area 6

Enable communities to identify and adopt sustainable land use practices.

Line of Enquiry 4

- Professor Paul Dalziel (Lincoln University)

Market-oriented collaborative value chains are developed that fairly reward sustainable land use practices.

Output 4.4: Market-oriented collaborative value chains are developed that fairly reward sustainable land use practices.

Outcome goal for 2024: New Zealand is producing high-value products across all sectors that capture and share more value from consumers to producers.



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Line of Enquiry 4

- Builds on previous research in the Integrated Value Chains programme.
- Identifying case studies of NZ producers developing new value chains to deliver high-value agri-food products to market segments that offer a premium for attributes.
- Includes research into how ngā āhuatanga Māori (Māori characteristics) can be represented by brands and capture value for producers in a way that is consistent with iwi or hapū defined tikanga.
- Deliver new knowledge on how global value chains can be constructed and sustained.
- Work with key stakeholders to identify, define and interpret, by market, the values of attributes that can be applied to a range of value chains.



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Line of Enquiry 5

- Dr Roger Young (Cawthron Institute)

An online register of actions to improve water quality will be in use by individuals and communities to restore catchments.

Output 6.2: Online register of sustainable land use actions.

Outcome goal for 2024: Sustainable practices are the norm in primary production.



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Line of Enquiry 5

- Collating, assessing and reviewing the efforts of individuals and groups who have acted over the last 20 years to improve water quality.
- Identifying what actions have worked, where they have worked and why, to provide the confidence to invest for those who are wanting to act.
- To be implemented within Land Air Water Aotearoa (www.lawa.org.nz) so that actions can be linked to outcomes via the nearest water quality indicator site.



CAPACITY FOR TRANSITION

We understand what it will take, and have the tools to help us, transition to resilient, healthy and prosperous futures.

Strategic Area 7

Increase our social capital so that we can have well informed debate about alternative futures.

Strategic Area 8

Act as kaitiaki, being responsible for our actions within enterprises, in a catchment and beyond.

Strategic Area 9

Manage pressures and remove the barriers to a transition.

Line of Enquiry 6

- Dr Jim Sinner (Cawthron Institute)
- Dr Merata Kawharu (University of Otago)

Guidance for decision-making processes will reflect deeper understanding of social and cultural values, and promote a wider sense of ownership in land use decisions.

Output 8.1: Business models developed to promote wider sense of ownership in land use decisions.

Outcome goal for 2024: There is more evidence of kaitiakitanga leading to improved environmental outcomes.



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Strategic Area 9

Manage pressures and remove the barriers to a transition.

Line of Enquiry 6

- Builds on previous research in the Mauri Whenua Ora programme.
- Investigating how to generate among landowners a sense of collective responsibility and accountability for action.
- Deliver new knowledge on alternative decision-making processes and management arrangements for Māori and non-Māori (eg collective responsibility and management).
- Identifying case studies of decision-making processes and management arrangements, evaluated on sense of ownership of land use decisions and improved outcomes.
- Identifying institutional barriers and enablers to promoting this wider sense of ownership.
- Prototyping and evaluating novel decision-making processes and management arrangements in live case studies co-designed with catchment communities.