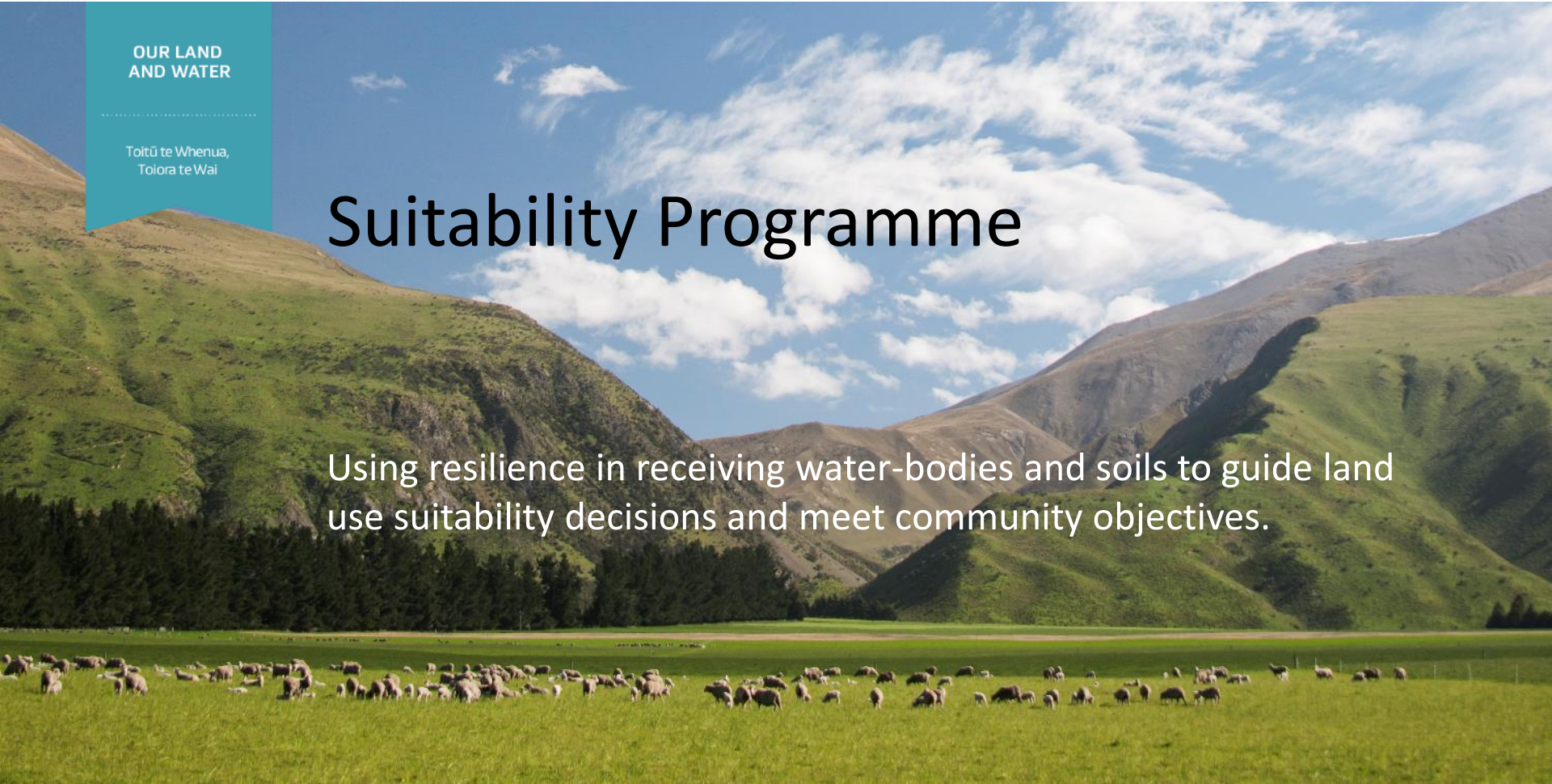


OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

Suitability Programme

Using resilience in receiving water-bodies and soils to guide land use suitability decisions and meet community objectives.



Why we need this work

- Land use planning and long-term land investment currently focuses on land capability: the best use of land for sustained productivity.
- Land use planning needs an expanded perspective that accounts for limits on resource availability and assimilation capacity, as well as land capability.
- The National Policy Statement – Freshwater Management formalises this need with limits on resource use.
- Achieving (or exceeding) production targets while maintaining (or improving) conditions in receiving environments (i.e., managing within limits) will require a shift from the land capability perspective to the land use suitability perspective.

Why we need this work

Land use suitability means regional-, catchment- and subcatchment-scale planning that incorporates information about...

- land use pressures & their sources,
 - receiving environments & their resilience to land use pressures,
 - connectivity between sources & receiving environments,
 - potential for mitigation systems to increase attenuation,
 - potential for intervention systems to increase resilience,
- ... in addition to land capability.

Impact of the programme

Overarching aim: by incorporating LUS in planning, adverse effects of land use pressures on receiving environments are reduced.

- The use of LUS in planning will be facilitated through the use of a land use suitability framework based on national-scale environmental classifications, or catchment-scale quantitative models.
- The use of intervention systems to increase resilience in receiving environments will increase, and associated risks will decrease through the use of a risk-assessment framework.
- Options associated with LUS will be increased through collaborations with the Targeted Solutions Programme.

Impact of the programme

Outcomes

The LUS system will help

- Land owners & operators run profitable enterprises while reducing adverse effects on environmental, social & cultural wellbeing
- Collaborative groups understand land use choices & tradeoffs, and achieve multiple objectives
- Regional councils set defensible limits on resource use
- Councils & community/sector groups use intervention systems effectively.

Research stretch

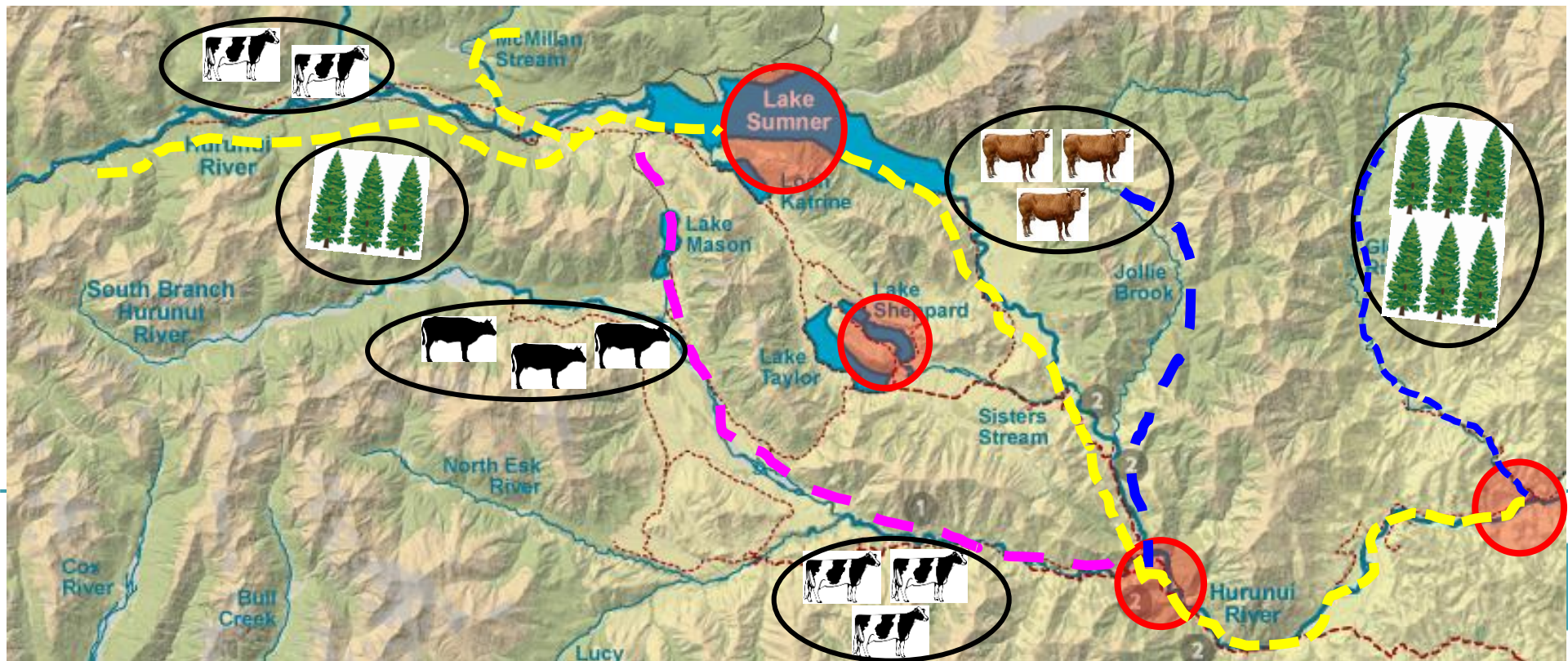
- Complex conceptual and socioeconomic problems (e.g., optimisation with multiple objectives and constraints)
 - Intensive conceptualisation phase
- Shortage of data and pressure-state-response relationships
 - Case studies in data-rich catchments
 - Classification-based approach based on integration of receiving environment, land capability, connectivity, mitigation and intervention classifications
- Incorporation of Māori cultural values & mātauranga
 - Te Tumu Paeroa case study – intersecting LUS & TTP GIS & DSS

Research stretch: our complex environment

Multiple sources of land use pressures... ○

Multiple receiving environments that vary in resilience... ○

Separation of sources from receiving environments & complex connections... ~



Suitability Programme

Where & with whom will we work

Classification-based LUS system

- All of NZ

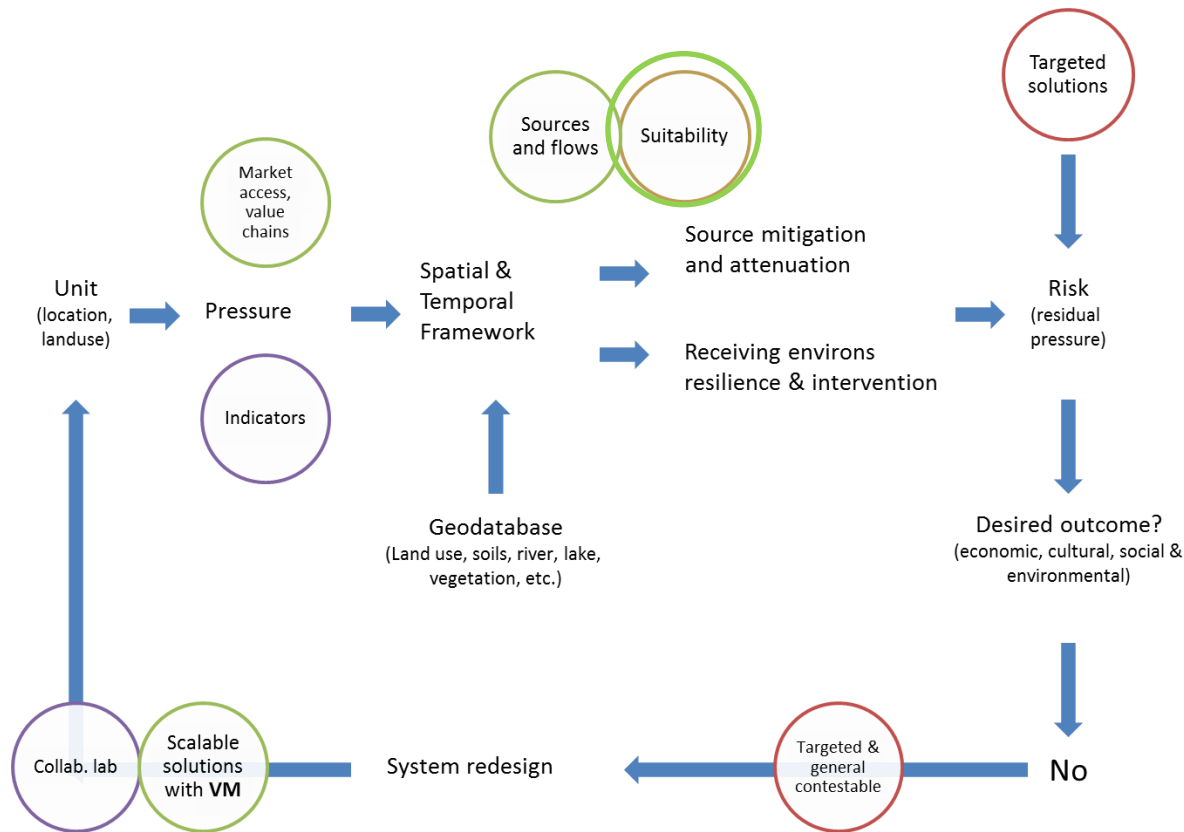
Case studies

- Southland, with Sources & Flows Programme & Environment Southland
- Canterbury, with Environment Canterbury
- Northland, with Mauri Whenua Ora Programme & Te Tumu Paeroa

Stakeholders

- Ministry for the Environment, Land & Water Forum, DairyNZ
- Regional Councils: Southland, Canterbury
- Iwi: Te Tumu Paeroa

Linkages between land use pressures and the receiving environment





Why we need this work

