

Land & Water Regional Plan for Otago

Community consultation on
environmental outcomes and
actions



Dunstan Rohe
November 2022

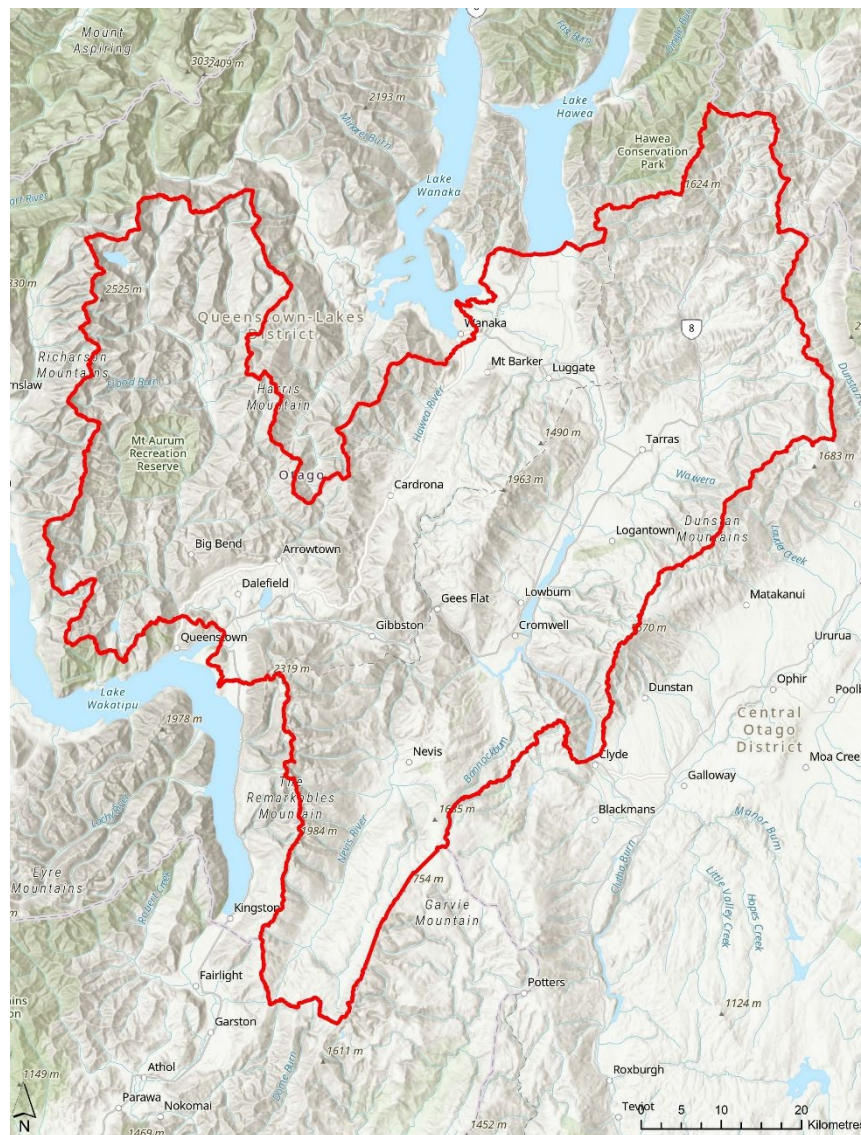


Meeting outline

- ▶ Presentation: background
- ▶ Group discussion: possible environmental outcomes
- ▶ Group discussion: possible actions

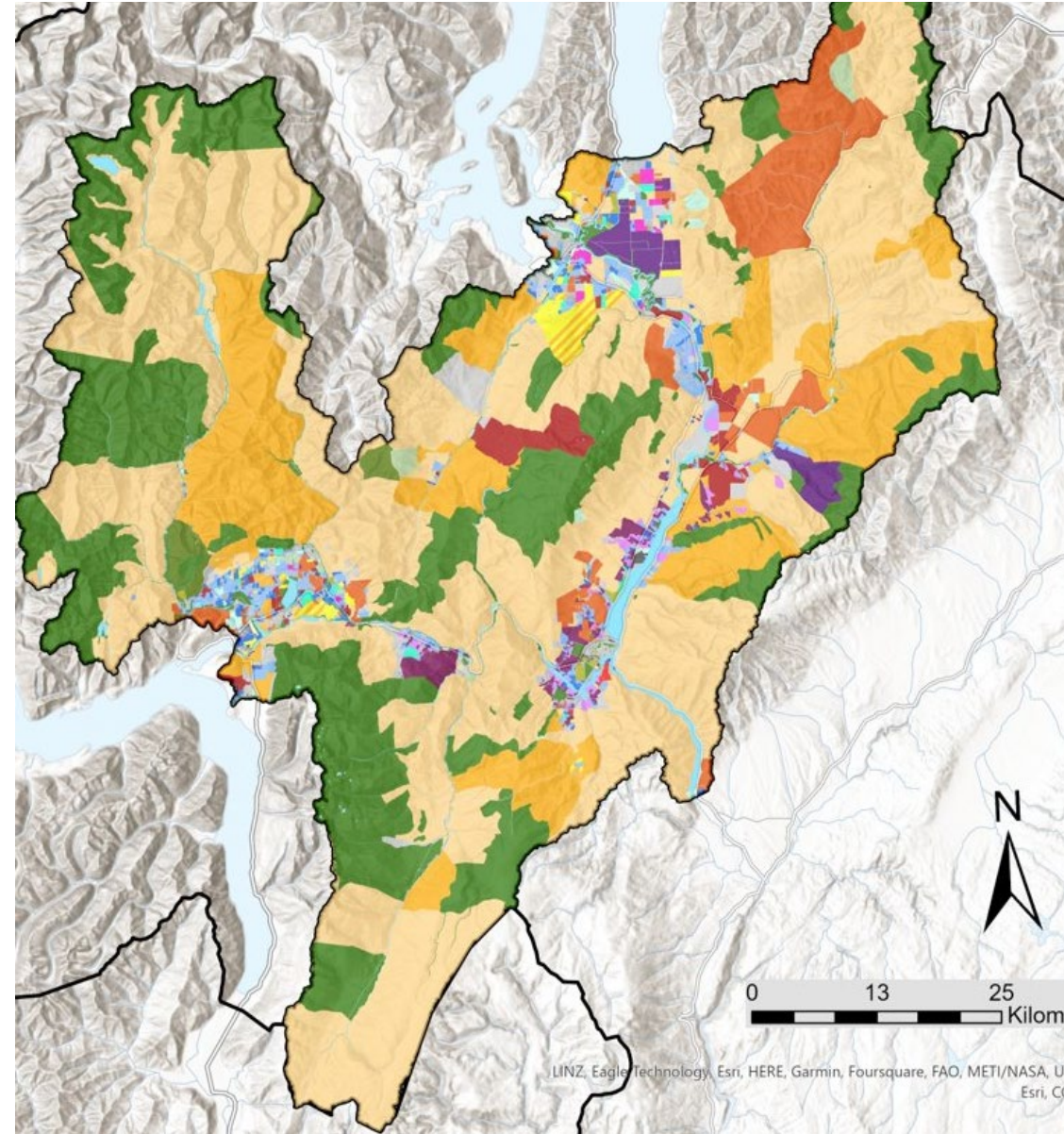


Dunstan Rohe



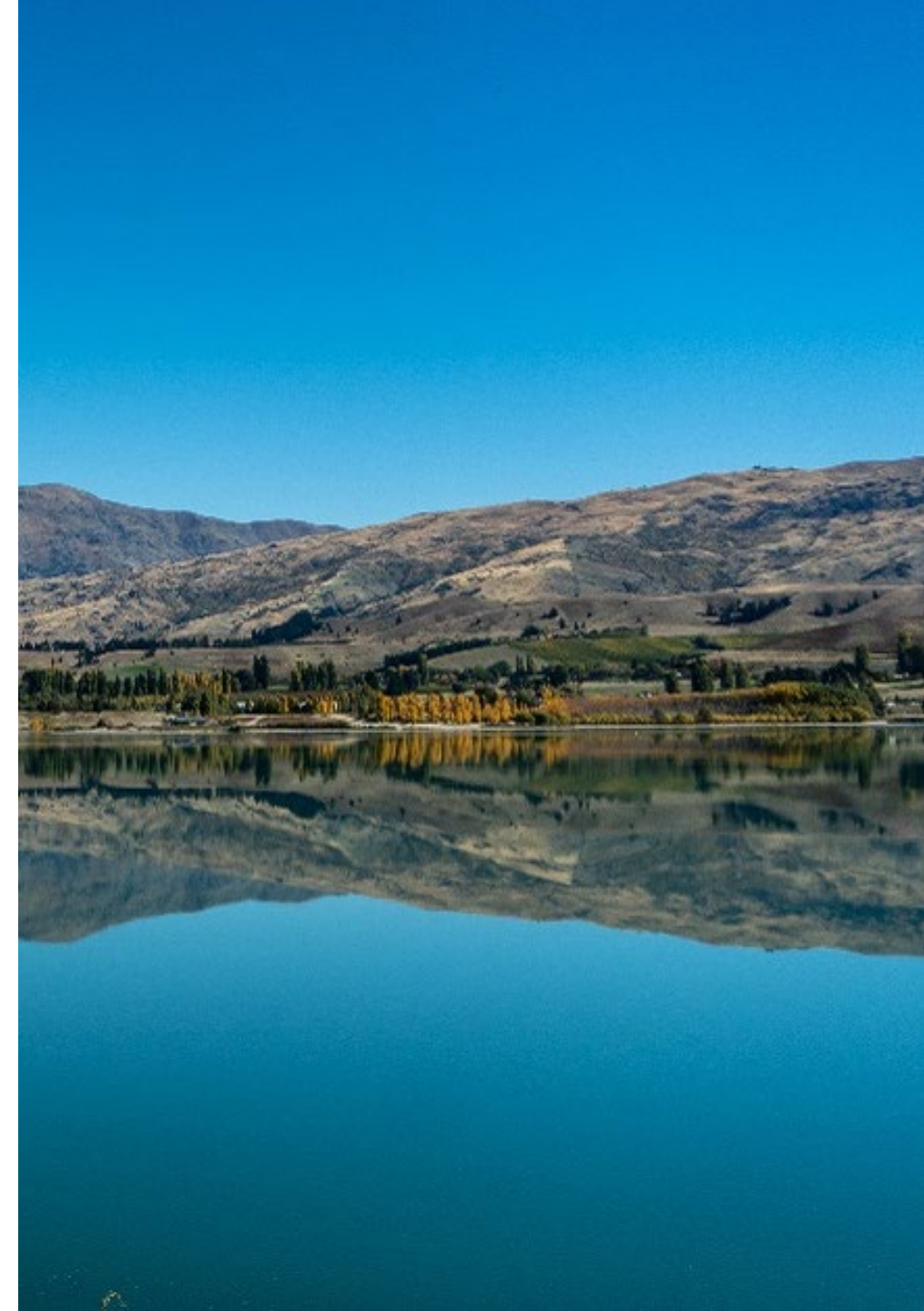
Land use overview

- ▶ Dry-stock farming: ~ 65%
- ▶ Conservation: ~ 23%
- ▶ Notable trends (1990-2018):
 - ▶ Growth of nurseries, vineyards & orchards by 33% (~ 1%)
 - ▶ Establishment of dairy (~1%)
 - ▶ Doubling of urban area (~0.5%)



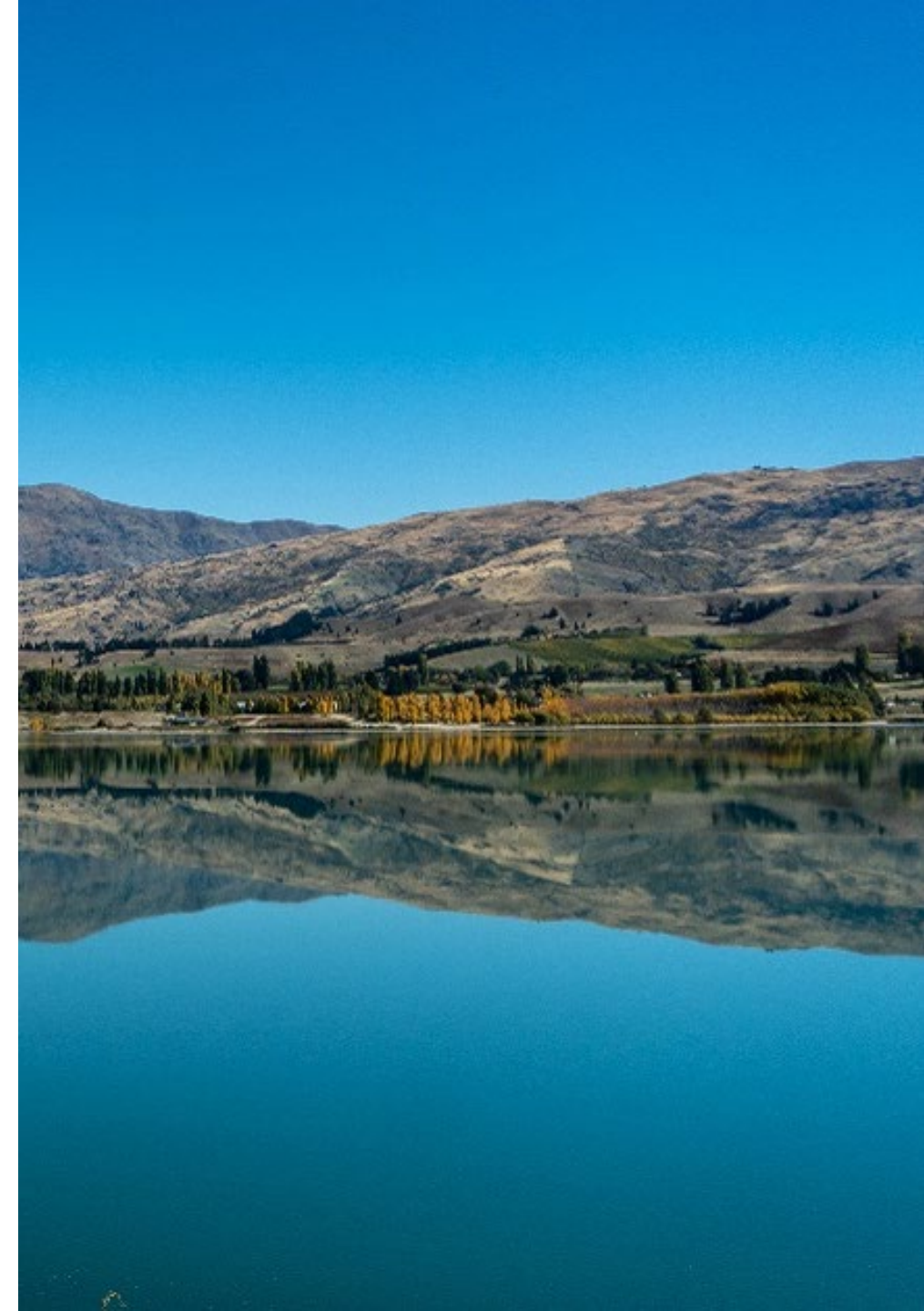
Water quality

- ▶ Most sites (particularly upper reaches): very good
- ▶ Lower reaches of some rivers: poorer (influenced by urban & agricultural land uses)
- ▶ Trend analyses for monitored sites mixed:
 - ▶ Improving trends for ammoniacal nitrogen and phosphorus
 - ▶ Degrading trends for several parameters Including Nitrate over past decade for ~50 % of sites

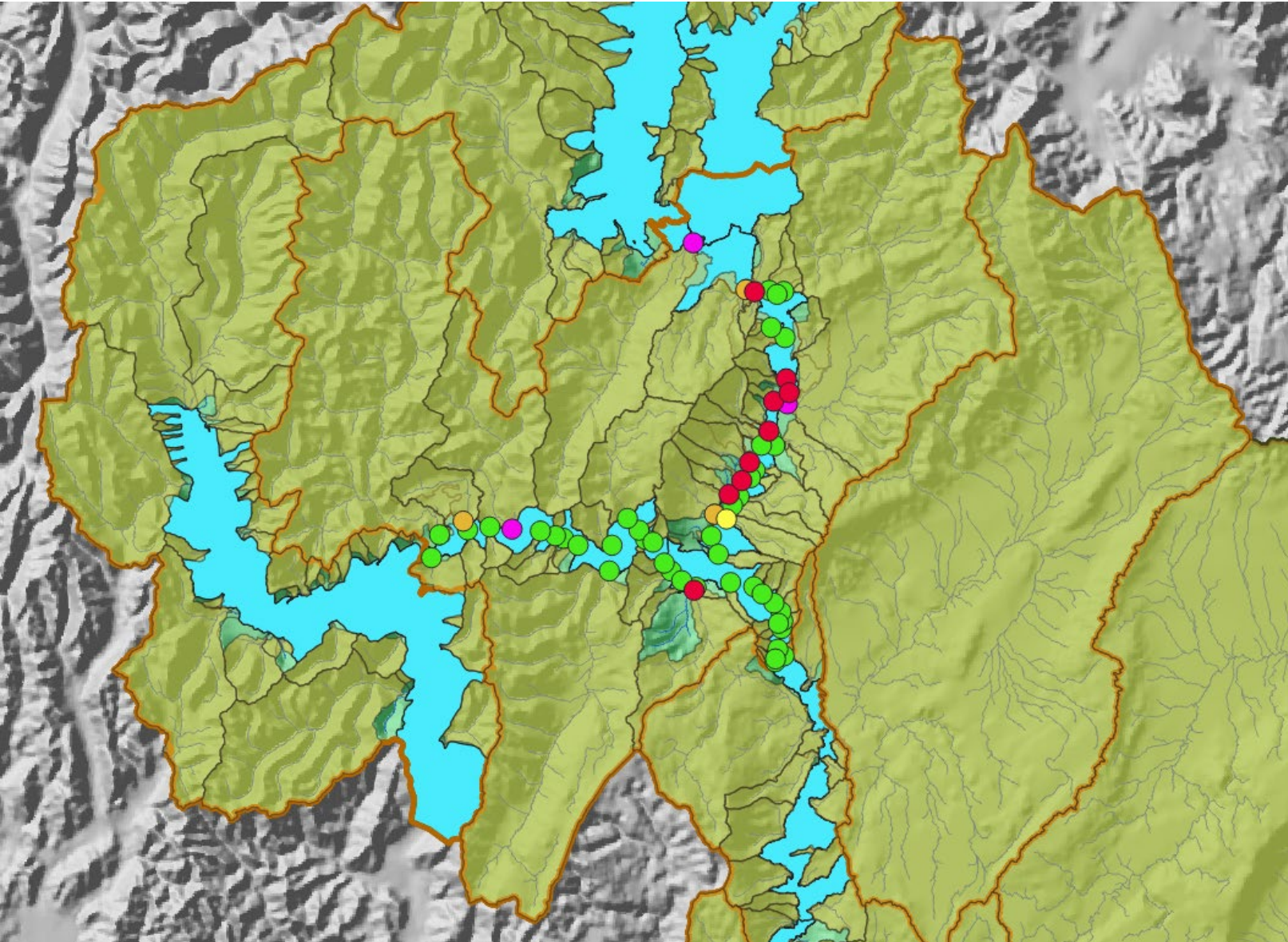


Water quantity

- ▶ Application of technical guidelines for ecological flow setting to modelled flows:
- ▶ Majority of catchments no environmental concerns
- ▶ Smaller number have potential for environmental concern
- ▶ Some catchments need further investigations



Water quantity



Management Scheme

No environmental
concern



Bespoke



Modeling with
limit setting
(Hayes et al., 2021)



Residuals



Needs investigation



Land & Water Regional Plan

- ▶ Notified by December 2023
- ▶ Key concepts
 - ▶ Te Mana o te Wai (health of the water)
 - ▶ Integrated management
 - ▶ Holistic (ki uta ki tai/ Mountains to sea)
 - ▶ Future proof (climate change)





Te Mana o te Wai

National Policy Statement for Freshwater Management

Te Mana o te Wai

- Te Mana o te Wai approach asks: “How are we supporting the health and wellbeing of the water body?”
- Recognises that protecting the health of freshwater (**te hauora o te wai**) protects the health and well-being of the wider environment (**te hauora o te taiao**) and of people (**te hauora o te takata**)
- Protects the mauri of the wai

National Policy Statement for Freshwater Management

Respect the mauri of each water body

- Mauri is distinctive for each water body.
- Flow regimes should reflect natural form and function, letting the river be itself.
- Changes in water quality along the river should only be due to natural causes and the river should not be used to dilute contaminants from land use.
- Provide for healthy resilience rather than managing to bottom lines
- Cross-mixing of the mauri of different waterbodies is not appropriate.

National Policy Statement for Freshwater Management

Integrated management/ ki uta ki tai

- Sustain and restore connections throughout catchment.
- Recognise connections between surface water and groundwater
- Sustain and restore habitats of mahika kai and indigenous species
- Recognise and manage relationships between land use, water use, and water quality.
- Have regard to cumulative effects and climate change risks.

Examples: Water supply takes

Supports te mana o te wai/ ki uta ki tai	Inconsistent with te mana o te wai/ ki uta ki tai
Sustainable abstraction occurs from main stems or groundwater in preference to tributaries.	Abstraction from permanent or ephemeral tributaries
Abstraction proportionate to natural flow	Abstraction takes all or most of natural flow
Maintains connections between surface water and groundwater	Treats surface water and groundwater as different resources
Ensures continuity of flow from mountains to sea	Considers only flow at point of take
Considers habitat needs holistically	Considers habitat factors narrowly

Examples: Intakes and structures

Supports te mana o te wai/ ki uta ki tai	Inconsistent with te mana o te wai/ ki uta ki tai
Structures located away from sensitive areas	Structures located close to mahika kai or areas of dynamic river/ wetland processes
Riparian buffers established and maintained	Structures built right next to river/ wetlands
Fish are able to migrate naturally	Structures interrupt natural migration
Design for changing environment (especially due to climate change)	Reliance on structures/ system designs that are no longer fit for purpose

Mahinga Kai



Ability to fish at preferred sites, ki uta ki tai (catchment scale)

Food for whānau

Manaakitanga - Food for manuhiri

Ability to trade between whānau

Ability to use preferred harvest & storage methods

Ability to support intergenerational knowledge transfer activities

Ecological integrity of habitat

Fish condition

Access

Available in sufficient numbers

Safe to eat

Safe & desirable to harvest

Taonga species

Whakapapa & identity

Values for the Dunstan Rohe

FIRST PRIORITY – health and well being of water bodies and freshwater ecosystems

Ecosystem
health

Threatened
and taoka
species

Natural
form and
character

SECOND PRIORITY – health needs of people

Drinking
water
supply

THIRD PRIORITY – social, economic, and cultural well being

Animal
drinking
water

Food
production

Commercial
& industrial
use

Recreation
(human
contact)

Fishing

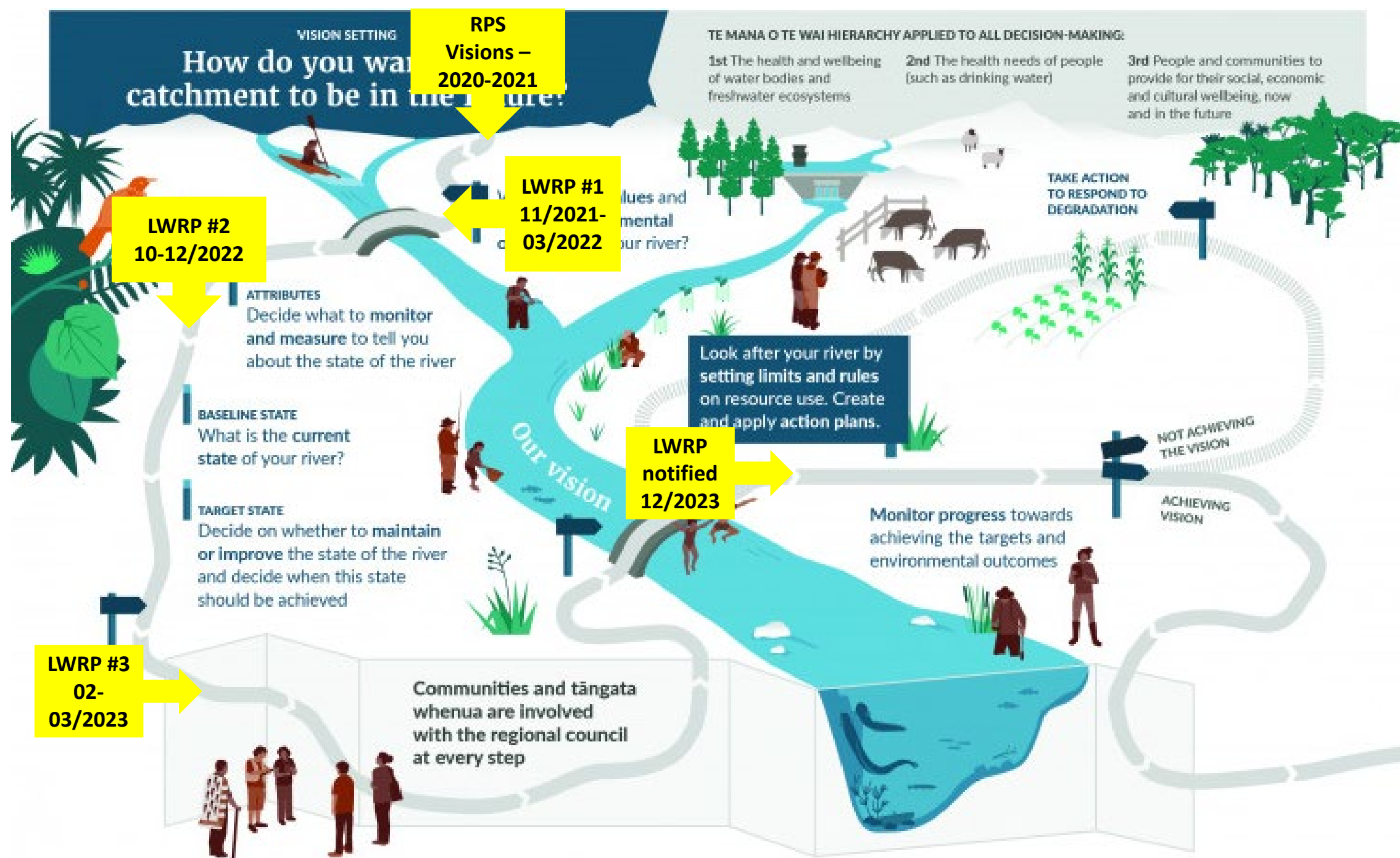
Hydro

Wāhi tūpuna

Mahika kai



The process we're following



Environmental Outcomes



Otago
Regional
Council

Environmental Outcomes

- ▶ Must be set in the Plan for all values identified
- ▶ Describe what a value should look like
- ▶ Guides decision-making on:
 - ▶ Limits, rules and policies in the Plan
 - ▶ Resource consent applications
- ▶ ORC must set target states for attributes (indicators)

Environmental outcomes - group discussion



Do you agree or disagree with them?



Why?



What other environmental outcomes (for other values) we should include?



Types of actions

Actions

- ▶ Things we can do to achieve environmental outcomes
- ▶ Can be developed into rules and controls in the plan or initiatives like education campaigns
- ▶ Everyone has to play their part. Actions for everyone

E.g.:



Actions - group discussion



Are the possible actions we've identified practicable in your area?



What other actions should we consider?



What issues or unintended consequences do you see in any of these actions?



Closing

- ▶ Thanks for all your input today!
- ▶ We're adding lots of great info on our website
- ▶ We'll be back in early 2023 to update you on this work