

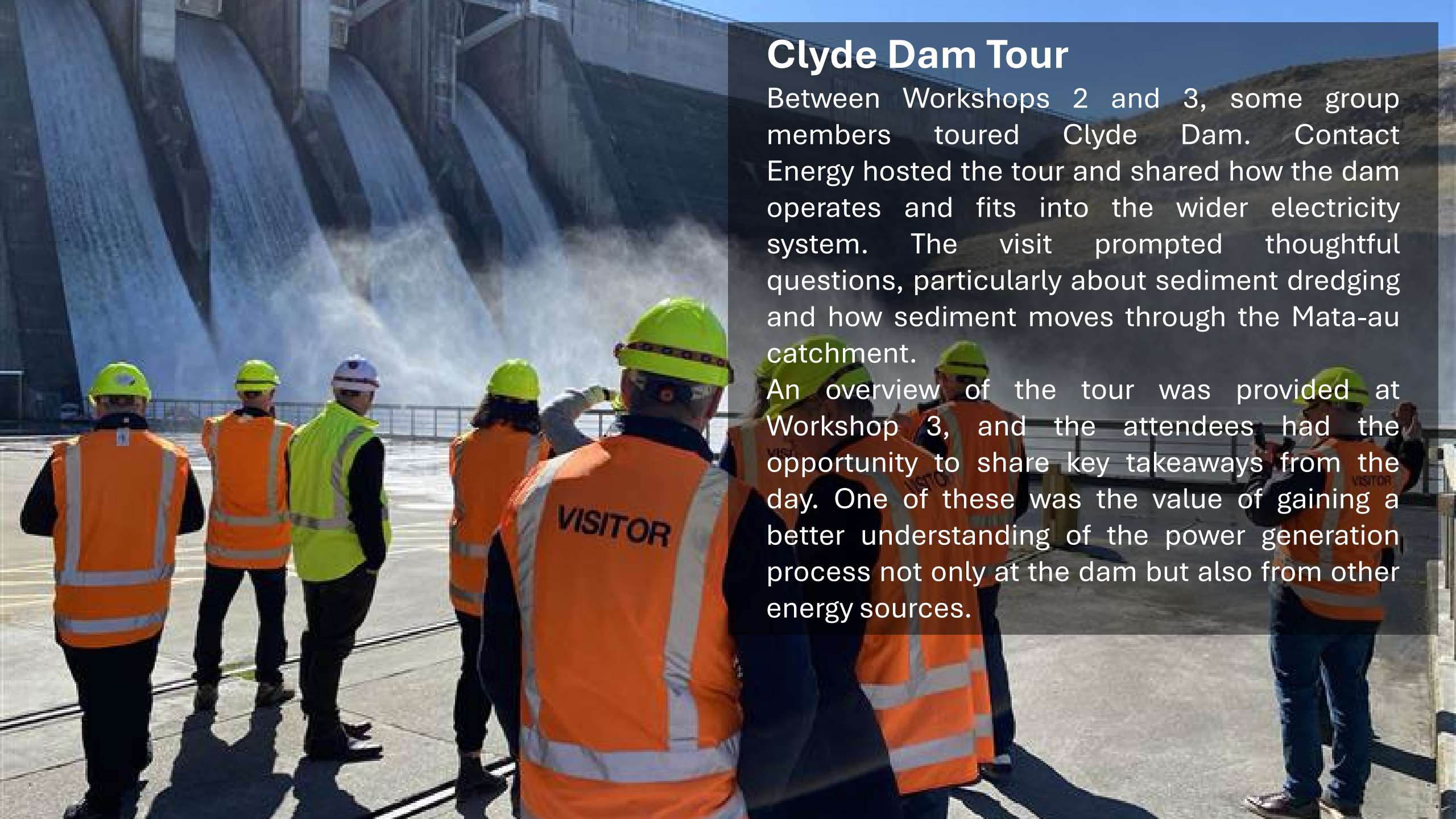


Inland Mata-au/Clutha

Integrated Catchment Group Workshop 3

29 September 2026 – Roxburgh

We gathered at the Roxburgh Service Centre on a sunny, blue-sky day for our third workshop. Thoughtful conversations and a real willingness to share knowledge and different perspectives helped us explore what is affecting the catchment, develop draft goals, and begin shaping a shared vision for its future.



Clyde Dam Tour

Between Workshops 2 and 3, some group members toured Clyde Dam. Contact Energy hosted the tour and shared how the dam operates and fits into the wider electricity system. The visit prompted thoughtful questions, particularly about sediment dredging and how sediment moves through the Mata-au catchment.

An overview of the tour was provided at Workshop 3, and the attendees had the opportunity to share key takeaways from the day. One of these was the value of gaining a better understanding of the power generation process not only at the dam but also from other energy sources.

Clyde Dam Tour



Seeing how things connect

We used "situation diagrams" to explore what is affecting the health of the catchment and why. They helped us trace connections between:

Drivers – the underlying reasons something happens, such as costs, rules or changing weather.

Pressures – activities or processes that affect the catchment, such as vegetation clearance or wastewater discharges.

Stressors – the resulting changes, such as increased sediment in rivers or loss of habitat.

From there, we looked at which parts of catchment health were affected and how several drivers and pressures can compound one another. A diagram can show several connected pathways, rather than a single cause and effect relationship.



We worked in three table groups and we had quite a lot to talk about! The following pages capture the discussion. Detailed diagrams are in production at ORC.



Urban, infrastructure and climate pressures

What's the story?

The group identified the cold climate as a driver of air quality. Poor air quality can result from outdoor burning, including the burning of plastics and other waste, as well as household and industrial emissions. As population grows and development increases, pressures on air quality may also increase, especially if regulations for home heating are not improved. Poor air quality was linked to health impacts and reduced community wellbeing, highlighting the importance of balancing economic activity and environmental health. The group used Christchurch as an example of where incentivising the community to remove their fires has been successful in improving air quality.

Population growth was identified as a key driver of multiple pressures, increasing demand for housing, services and infrastructure. The expansion of urban areas can place additional pressure on natural resources, contribute to the loss of native vegetation and habitat, and increase pressure on wastewater and stormwater systems. The group recognised that development brings social and economic benefits but can also create environmental trade-offs that require careful planning and management.

The group discussed how, historically, there was a lack of understanding of what was needed to provide appropriate fish passage when dams and other structures were built and that the cost of retrofitting existing structures, fish translocation, or other solutions can be significant.

The modification of river channels is a result of efforts to maximise the use of farmland for grazing stock. Willows were used to straighten channels and stabilise banks; however, we now have a better understanding of the environmental impacts they can have, such as how much water they drink. Many issues stem from river modification, including an increased need to remove gravel for flood control.



Urban, infrastructure and climate pressures

Below are the big themes for the situation diagram

Theme: Burning affects air quality

Cold winters, poorly insulated homes and high electricity costs → greater reliance on wood burners, outdoor burning and waste burning. Smoke can become trapped during temperature inversions → poorer air quality, health impacts and increased fire risk. More efficient heating and support for alternative energy sources present opportunities for improvement.

Theme: Demand shapes land use

Population growth, migration and demand for housing → increased subdivision and urban expansion. Development on highly productive soils → permanent loss of productive land. Conversion of natural areas → loss of habitat, reduced biodiversity and impacts on kaitiakitaka. Growth also increases demand for water and other services.

Theme: Pressures on infrastructure

Population growth → greater pressure on wastewater and septic systems. Rising treatment costs, increasing wastewater volumes and limited discharge options → infrastructure underperformance and overflows. Wastewater entering rivers, lakes and groundwater → impacts on water quality, freshwater ecosystems and native fish species.

Theme: River modification

Limited historical understanding of environmental impacts → river channel modification, willow planting and in-stream structures without adequate fish passage. River engineering and willow management → altered river processes, ongoing gravel extraction requirements and barriers to fish movement. The cost of addressing these legacy issues can make change difficult.



Biological pressures

What's the story?

The group explored how past species introductions continue to shape pest and weed pressures today. Many species were originally introduced for river protection, land stabilisation, recreation, commercial purposes or amenity values, often without a full understanding of their long-term impacts. Cultural connections, recreation and tourism interests continue to influence views on which species should be retained, managed or removed, while invasive plants in gardens and nurseries can provide ongoing sources of spread.

Crack and grey willow, wilding conifers and other invasive plants were identified as affecting river systems, wetlands, tussocklands and native habitats. Their spread can reduce native biodiversity, fragment habitats and alter water availability, while unmanaged willows can also create river blockages and maintenance challenges. The group recognised that managing these species involves trade-offs, with control efforts requiring significant investment, community support, and ongoing commitment.

Animal pests, including deer, goats, pigs, rabbits, wallabies and introduced predators, were discussed as contributors to vegetation loss, soil disturbance and declines in native wildlife. Introduced fish species were recognised as providing recreational and food-gathering opportunities, while also creating pressures on native freshwater species in some locations. Participants noted that differing values and perspectives can make management decisions complex.

The diagram highlighted that effective pest and weed management depends on knowledge, funding, planning and community buy-in. As pests and weeds become more widespread, the cost and effort required for control increase, reducing the capacity to respond. The group recognised the importance of coordinated action, clear priorities and strong community engagement to support long-term environmental health, biodiversity and cultural values across the catchment.

Biological pressures

Below are the big themes for the situation diagram

Theme: Introduced species

Species introduced for river protection, recreation, beautification and commercial use → ongoing pest and weed pressures. Limited understanding of long-term impacts at the time of introduction continues to influence the catchment today.

Theme: Weeds affecting waterways

Willows, wilding conifers and other invasive plants → loss of native vegetation, fragmented habitats and reduced water availability. Uncontrolled growth can create river blockages, while control efforts often involve difficult trade-offs.

Theme: Different pests, connected effects

Deer, goats, pigs, rabbits, wallabies and predators → vegetation loss, soil disturbance and declining native wildlife. Introduced fish can provide recreational value but may also compete with or prey on native freshwater species.

Theme: Community support and awareness

Funding, knowledge and community buy-in → successful pest and weed management. Conflicting views, ongoing spread from gardens and rising control costs can reduce the capacity to respond and increase pressures over time.

Productive land and industry pressures

What's the story?

The group explored how rising costs, debt, farm succession, and changing export markets shape land use. Financial pressure can encourage intensification or shifts between farming, horticulture, viticulture and forestry. Past subsidies and irrigation investment still influence today's systems, while carbon credits encourage tree planting. Export requirements can also support better practices, targeted agrichemical use and precision technology.

Both intensive and extensive farming can cause harm when poorly managed. Stocking rates, winter grazing, fertiliser and agrichemical use can damage soils and increase sediment, nutrient and contaminant losses when not managed in the right place, at the right time and in the right way. Purchased feed and higher input costs can create pressure to intensify further to make money back. Forestry can contribute slash and sediment, while mining creates disturbance and contamination risks. Hotter, drier conditions, storms and less snow affect water reliability. Reduced irrigation supply, low flows and water-take restrictions affect farm profitability and town supplies. Culverts, weirs and irrigation structures can restrict fish passage. Housing growth also takes up productive land, places pressure on infrastructure, and can push farming into less suitable areas. Limited landscape knowledge, unclear guidance, ineffective planning and weak accountability reinforce these pressures. Expecting all land to be productive leaves less space for wetlands and nature, with golf courses and four-wheel-driving tracks adding pressure. Habitat loss and declining soil and water quality affect biodiversity and mahika kai. Fencing and restricted access weaken connections to wāhi tūpuna, while limited mana whenua involvement affects kaitiakitaka. Busy businesses may also have little time for stewardship, connecting environmental outcomes with community capacity and financial security.



Productive land and industry pressures

Below are the big themes for the situation diagram

Theme: Costs shape land-use choices

Costs, profitability and market returns → changes in farming systems, investment and land use. Past irrigation schemes and development incentives continue to influence decisions today, while financial pressures can make change difficult.

Theme: Land use affects soil and habitat

Urban growth, forestry and farming intensification → pressure on productive land and natural ecosystems. Loss of wetlands, native vegetation and ground cover → reduced habitat, poorer soil health and increased sediment and nutrient losses.

Theme: Water use influences river health

Irrigation supports communities and production but can reduce river flows. Culverts and irrigation structures → barriers to fish passage. Warmer, drier conditions and less snow → greater pressure on water availability.

Theme: Community involvement builds resilience

Restricted access, financial stress and limited time or knowledge → reduced participation in stewardship and decision-making. Clear guidance, practical support and meaningful involvement can strengthen environmental health and community resilience.



Turning the situation into goals

After exploring what is affecting the catchment and why, we asked what change we want to see. Each group returned to its situation diagram and identified the outcomes that mattered most. The groups then worked together across tables to draft goals for healthier places and stronger communities.

These goals are starting points that will be tested with the wider community before deciding what actions the plan should take.

The goals at a glance.

We will ask the rest of the community what they think via a survey before workshop 4.

Wetlands:

Protected and recovering wetlands supporting unique biodiversity.

Fish:

Thriving native fish alongside valued recreational fisheries.

Habitats:

Connected, resilient ecosystems supporting abundant native species.

Soil: Healthy, resilient soils supporting sustainable land use.

Air quality:

Cleaner air supporting healthier communities across the catchment.

Native vegetation:

More native vegetation, protected habitats and stronger local knowledge.

Mahika kai and cultural connections:

Stronger cultural connections through enhanced mahika kai and taoka.

Knowledge and caring for the environment:

Informed communities actively caring for land, water and nature.

Water Quality:

Healthier waterways supporting biodiversity, recreation and community enjoyment.

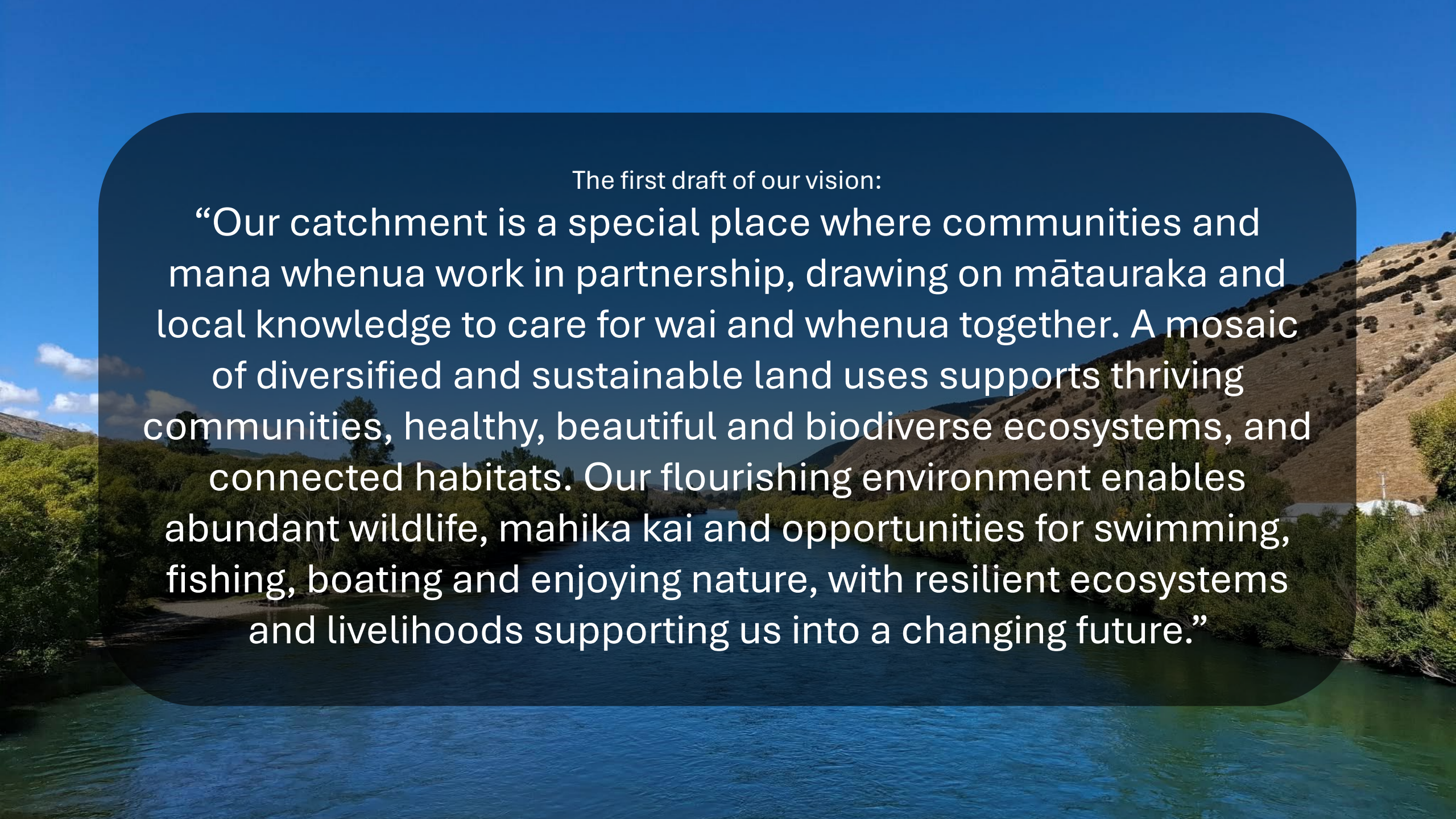
Water Flows and Water Security:

Reliable water supporting ecosystems, communities and livelihoods.

Creating a shared vision

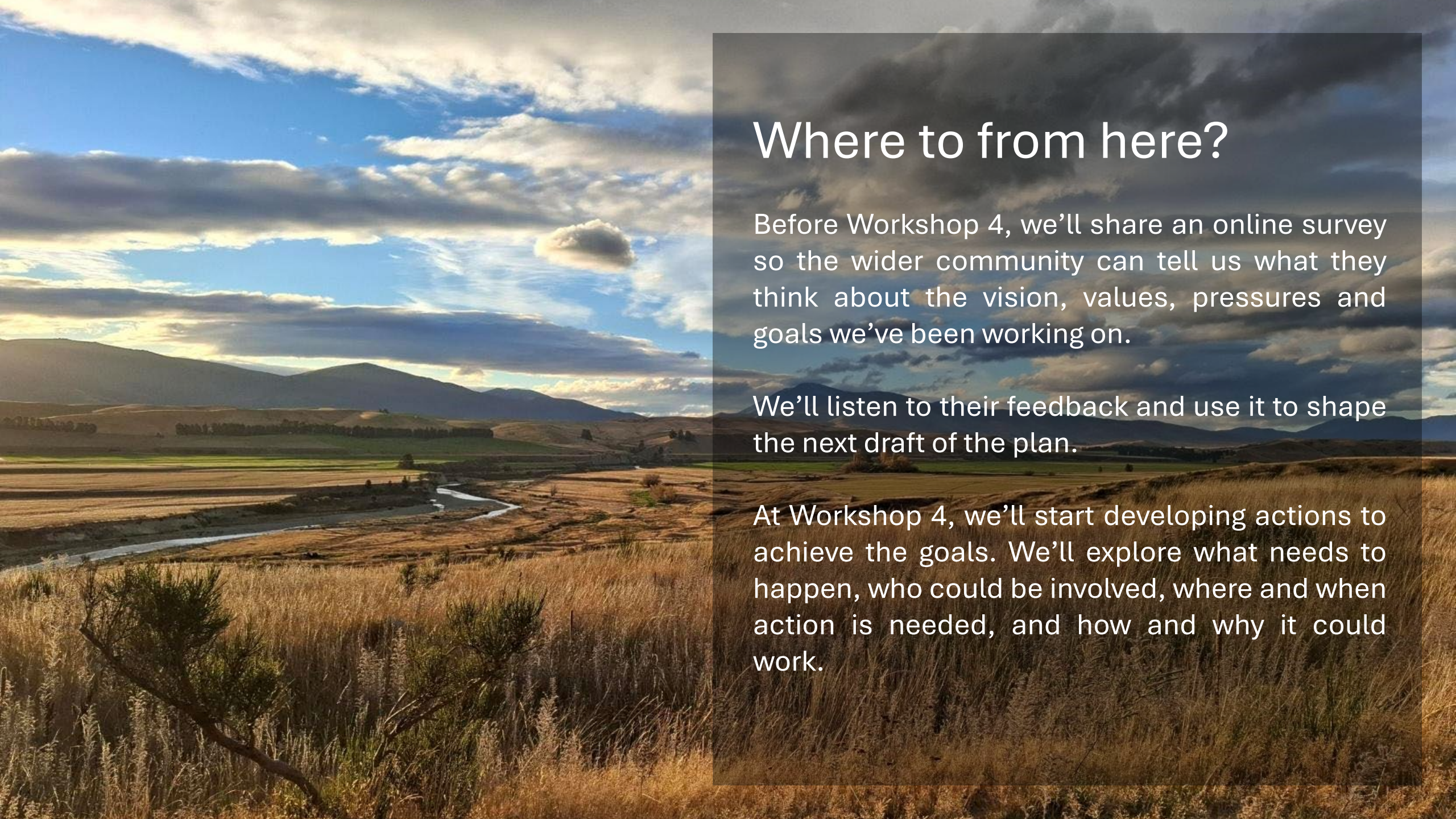
Words and phrases used in other plans within the CAP boundary were used to piece together a vision. Working together, we moved the pieces around, added new ideas and joined them into a draft vision statement for the plan. It captures the future we want to work towards across the catchment.





The first draft of our vision:

“Our catchment is a special place where communities and mana whenua work in partnership, drawing on mātauraka and local knowledge to care for wai and whenua together. A mosaic of diversified and sustainable land uses supports thriving communities, healthy, beautiful and biodiverse ecosystems, and connected habitats. Our flourishing environment enables abundant wildlife, mahika kai and opportunities for swimming, fishing, boating and enjoying nature, with resilient ecosystems and livelihoods supporting us into a changing future.”



Where to from here?

Before Workshop 4, we'll share an online survey so the wider community can tell us what they think about the vision, values, pressures and goals we've been working on.

We'll listen to their feedback and use it to shape the next draft of the plan.

At Workshop 4, we'll start developing actions to achieve the goals. We'll explore what needs to happen, who could be involved, where and when action is needed, and how and why it could work.