Section 32 Evaluation Report for the Proposed Otago Land and Water Regional Plan

Appendix 3: Aukaha report on engagement with mana whenua on freshwater outcomes for LWRP

This Section 32 Evaluation Report should be read together with the Proposed Otago Land and Water Regional Plan

Otago Regional Council

Abbreviations

FMU	Freshwater Management Unit
LWRP	Land and Water Regional Plan
NZTCS	New Zealand Threat Classification System
NES	National Environmental Standard
NPS	National Policy Statement
NPSFM	National Policy Statement Freshwater Management
ORC	Otago Regional Council
pLWRP	Proposed Otago Land and Water Regional Plan 2024
TAMI	Te Ao Marama Inc.

Engagement with mana whenua on freshwater outcomes for development of the Otago Land and Water Regional Plan

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Prepared by Aukaha (1997) Ltd for Otago Regional Council

Aukaha (1997) Ltd.

Level 2, 266 Hanover Street, PO Box 446,
Dunedin 9054, New Zealand
Phone - 03 477 0071

www.aukaha.co.nz

Contents

1. Introduction

The National Policy Statement for Freshwater Management 2020 (NPSFM) requires councils to actively involve takata whenua in freshwater management, including in development of regional plans. Takata whenua must specifically be enabled to identify Māori freshwater values in the region and to be involved in the processes to determine how these values are to be provided for in the regional plan.[1]

1.1 Recognition of mana whenua status

Kāi Tahu whānui are takata whenua of the Otago region. Within Kāi Tahu, customary authority in respect to particular takiwā (areas) is held by whānau and hapū (extended family groups) who are referred to as mana whenua for that area. Mana whenua status is determined by rights associated with whakapapa (genealogical ties), resource use and ahikāroa (the long burning fires of occupation).

Mana whenua are supported by papatipu rūnaka, which are representative bodies mandated to make decisions within their takiwā in matters such as resource and environmental management.

The takiwā of papatipu rūnaka are defined by whakapapa and traditional associations with an area and are not aligned to regional boundaries. Seven papatipu rūnaka have interests in various parts of the Otago region.

Te Rūnanga o Moeraki: The takiwā of Te Rūnanga o Moeraki is centred on Moeraki and extends from the Waitaki River to the Waihemo Shag River and inland to the Main Divide.

Kāti Huirapa Rūnaka ki Puketeraki: The takiwā of Kāti Huirapa ki Puketeraki centres on Karitāne and extends from the Waihemo, Shag River to Purehurehu Heyward Point, and includes an interest in Ōtepoti and the greater harbour of Ōtākou. The takiwā extends inland to the Main Divide sharing an interest in the lakes and mountains to Whakatipu-Waitai with kā Rūnaka to the south.

Te Rūnanga o Ōtakou: The takiwā of Te Rūnanga o Ōtākou centres on Muaupoko Otago Peninsula, and extends from Purehurehu (Heyward Point), to Te Mata-au Clutha River, and inland, sharing an interest in the lakes and mountains to the western coast with kā Rūnaka to the north and south.

Hokonui Rūnanga: The takiwā of Hokonui Rūnanga centres on the Hokonui region and includes a shared interest in the lakes and mountains between Whakatipu-Waitai and Tawhitarere with other Murihiku Rūnanga and those located from Waihemo southwards.

Te Rūnanga o Awarua: The takiwā of Te Rūnanga o Awarua centres on Awarua and extends to the coasts and estuaries adjoining Waihopai sharing an interest in the lakes and mountains between Whakatipu-Waitai and Tawhititarere with other Murihiku Rūnanga and those located from Waihemo southwards.

Waihopai Rūnaka: The takiwā of Waihopai Rūnaka centres on Waihopai and extends northwards to Te Mata-au Clutha River, sharing an interest in the lakes and mountains to the western coast with other Murihiku Rūnaka and those located from Waihemo southwards.

[1] These processes, referred to as the National Objectives Framework or NOF, are described in Subpart 2 of the NPSFM.

Te Rūnanga o Ōraka Aparima: The takiwā of Te Rūnanga o Ōraka Aparima centres on Ōraka and extends from Waimatuku to Tawhititarere sharing an interest in the lakes and mountains from Whakatipu-Waitai to Tawhititarere with other Murihiku Rūnaka and those located from Waihemo southwards.

The papatipu rūnaka-owned consultancy services Aukaha and Te Ao Marama Inc. (TAMI) facilitate Kāi Tahu engagement in resource management processes in Otago.

1.2 Treaty Partnership approach

Otago Regional Council's (ORC) commitment to working in partnership with Kāi Tahu is set out in He Mahi Rau Rika, the Council's Significance, Engagement and Māori Participation Policy. This has been given effect to in development of the Land and Water Regional Plan (LWRP) through involvement of rūnaka representatives at governance level, involvement of Aukaha and TAMI planners in the project control group and ongoing engagement with Aukaha and TAMI in development of policy approaches and plan drafting. Aukaha and TAMI staff and mana whenua representatives also stood alongside ORC in community and stakeholder consultation forums.

Throughout the plan development stage, Aukaha and TAMI have been responsible for facilitating broader engagement with mana whenua. The primary vehicles for this engagement have been:

(a) regular briefings and discussion with mandated rūnaka representatives in order to obtain direction on preferred policy approaches, and
(b) facilitation of discussion with broader whānau groups on their values, concerns and aspirations relating to wai māori.

This report focuses on the second of these.

2. Engagement process

Between December 2021 and April 2022 Aukaha facilitated a series of hui with Kāi Tahu whānau to discuss their concerns and aspirations for freshwater management in each of the Freshwater Management Units (FMUs) in Otago, to feed into policy development for the LWRP. This consultation ran in parallel with public consultation led by Otago Regional Council.

The programme of hui was designed to ensure that whānau from each of the papatipu rūnaka could focus on the aspirations of their own rūnaka for the water bodies in their respective takiwā, while recognising that there are shared interests in some waterbodies, and that all papatipu rūnaka have strong connections to the Mata-au. The programme was as follows:

- 9-10 December with whānau based in Hāwea, Wanaka, Queenstown and Glenorchy. This focused on the Upper Lakes and Dunstan Rohe of the Clutha Mata-au FMU;
- 17 March with Kāti Huirapa ki Puketeraki whānau. This focused mainly on catchments in the North Otago and Dunedin and Coast FMUs, but also included some discussion relating to the upper Taiari catchment;
- 23 March with Ōtākou whānau, focusing on the Taiari FMU and catchments in the Dunedin and Coast FMU;
- 30 March with Hokonui Rūnaka representatives, focusing on the Catlins FMU, the lower Mata-au and its tributaries;

- 31 March with Moeraki Rūnaka representatives, focusing on catchments in the North Otago FMU; and
- A combined hui on 6 April to discuss the Clutha Mata-au FMU as a whole.

TAMI also held interviews with Catlins whānau over the same period.

The discussion in these hui did not occur in isolation. Mana whenua perspectives are grounded in a set of foundational values (described in Section 3 of this report) and informed by mātauraka, which includes the knowledge and understanding of the water bodies built up by whānau from information passed through the generations, observations of changes that have taken place over time, and ongoing monitoring work being undertaken in some catchments. The discussion also drew on:

(a) earlier articulation of wai māori visions and aspirations by individual rūnaka, and
(b) the Kāi Tahu ki Otago overarching vision for wai māori in Otago which was developed as part of input to the Proposed Otago Regional Policy Statement (see Appendix 1).

Work undertaken with mana whenua in 2020-2021 to describe environmental outcomes for Māori freshwater values and to articulate freshwater management principles for the Manuherekia catchment was also integrated with the information obtained in the whānau hui. The appropriateness of these for broader application across the region was tested and confirmed with rūnaka representatives in May 2023.

3. Cultural foundation

The cultural values and concepts that underlie the Kāi Tahu perspective on wai māori and environmental management are described in the MW Mana Whenua chapter of the LWRP as follows:

> Kāi Tahu do not see their existence as separate from te taiao (the natural world), but as an integral part of it. From creation ultimately all things in the universe are interconnected and they share a single source of spiritual authority. This spiritual force is the origin of mana and tapu. **Mana** is the enduring, indestructible power of the atua (deities). All the elements of te taiao – the mountains, the water, the birds, fish and plants, as well as people - are seen to be vessels of this original power. The mana of the people and that of the natural environment in their takiwā are intrinsically linked. In te ao Māori, virtually every activity has a link to maintenance and enhancement of mana. Thus, the failure to secure the sustainability of a resource or habitat is linked to a loss of mana.
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> **Tapu** is the residual impact of mana. Where there is mana, the influence creates an effect that is tapu. The tapu status of people, places, and resources establishes expectations for the behaviour of whānau, requiring the balancing of rights and responsibilities. Tapu operates much as any legal system, with prohibitions and restrictions acting as means of protecting and respecting the tapu of the environment and the people themselves.
>
> All things, including living beings, the natural world, and inanimate objects, have the qualities of wairua (spiritual dimension) and mauri (life force) and have a genealogical relationship with each other. **Mauri** is the life-affirming quality evident in all things. It is a protector of the health of a person or place. The nurturing of all taoka and protection of their mauri is a prime concern and a significant obligation for Kāi Tahu as mana whenua, and as an expression of rakatirataka. Protection of mauri is thus a fundamental resource management principle for mana whenua.

Water bodies with a healthy or strong mauri are characterised by good quality waters that flow with energy and life, sustain healthy ecosystems, and support mahika kai and other cultural activities. Strong mauri is reflected in the ability of the water body to exhibit its natural behaviour and by the absence of unnatural contaminants.

If the mauri is degraded it has an impact not only on the mana of the wai but also on mana whenua. The condition of water is seen as a reflection of the condition of the people - when the wai is healthy, the people are strong and healthy and so too is their mana.

Each water body has a unique mauri related to its whakapapa and characteristics, and each water body has different needs. However, the mauri of different parts of an interconnected catchment cannot be separated. Kāi Tahu believe that the contributions of all parts of the system, including tributaries, riparian areas, springs, wetlands, lakes, estuaries and groundwater, and the natural characteristics and indigenous biodiversity of the catchment, must be considered as part of an integrated whole.

Whakapapa (genealogy) is the foundation upon which all things are built, the anchor which holds all things in place, and the means by which all things link back to the beginning of time. Whakapapa binds Kāi Tahu to the mountains, forests and waters and the life supported by them, and this is reflected in attitudes towards the natural world and resource management.

Water is a central element in Kāi Tahu cultural traditions. It was present very early in the whakapapa of the world, as described by Tiramorehu[2] in this creation account:

Nā te Pō, ko te Ao
Tana ko te Ao-marama, `
Tana ko te Aoturoa,
Tana ko Kore-te-whiwhia,
Tana ko Kore-te-rawea,
Tana ko Kore-te-tamaua,
Tana Ko Kore-te-matua,
Tana ko Māku.
Ka noho a Māku i a Mahora-nui-a-tea
Ka puta ko Raki.

[From the Night comes the Day, the Daylight, the Longstanding Day, the Intangible Voids through to the Parentless Realm who create Moisture. Moisture couples with the Inner Space and gave birth to Raki – the sky.]

In the beginning there was total darkness, followed by the emergence of light and a great void of nothingness. In time Maku (moisture) mated with Mahoronuiatea (a cloud that grew from the dawn) which resulted in great expanses of water. Raki was born of that union. Raki coupled with a number of wives, including Papatūānuku. Papatūānuku and Raki had many children who conspired to force their parents' coupled bodies apart to let the light in. Today, all water is seen to have originated from the separation of Raki and Papatūānuku and their continuing tears for one another. Rain is the tears of Raki for his beloved Papatūānuku, and mist is generally regarded as the tears of Papatūānuku for Raki.

To Kāi Tahu, the whakapapa and spiritual source of water, land and sea are connected, and water bodies are the central unifying feature that connects landscapes together. The whakapapa of mana whenua and water are also integrally connected. There is a close kinship relationship, and mana whenua and the wai cannot be separated. The relationship is based in respect for water's life-giving powers and sanctity and is central to the identity of Kāi Tahu.

All natural resources - air, land, water, and indigenous biological diversity - are **taoka**. Taoka are treasured resources that are highly valued by Kāi Tahu, derived from the atua (gods), linked to the people

[2] Matiaha Tiramorehu was an esteemed 19th century Kāi Tahu rakatira and tohuka.

through whakapapa, and left by tūpuna (ancestors) to provide for and sustain life. The resources in any given area are a source of prestige for mana whenua of that area and are a statement of their identity. Traditionally, the abundance or lack of resources directly determines the welfare of every hapū, and so affects their mana.

Rakatirataka refers to the exercise of mana or authority to give effect to Kāi Tahu culture and traditions across all spheres in their takiwā, including the management of te taiao (the natural environment). Tino rakatirataka is having the unlimited right to make decisions impacting the taoka and resources within a takiwā. This means determining what, from Kāi Tahu perspectives, represents satisfactory environmental conditions and appropriate use. The exercise of these powers in te taiao is through the action of kaitiakitaka.

Kaitiakitaka is fundamental to the relationship between Kāi Tahu and the environment. The objectives of kaitiakitaka are to protect the mauri and life supporting capacity of the environment and to pass the environment on to future generations in an enhanced state. For Kāi Tahu, kaitiakitaka is not passive custodianship, nor is it simply the exercise of customary property rights. It requires an active exercise of responsibility to ensure long-term sustainability of resources as taoka, and for the benefit to future generations. Understanding of what is needed to manage and sustain resources and the environment is inherited from previous generations and has evolved over time.

Whakawhanaukataka, the process of maintaining relationships, embraces whakapapa through the relationship between people, and between people and the environment. The nature of these relationships defines people's rights and responsibilities in relation to the use and management of resources. Whakawhanaukataka encompasses the understanding that all environmental elements are interconnected and must be managed as a whole. This holistic resource management approach is often referred to as **ki uta ki tai**.

Utu is the principle of reciprocity or equivalence. It can be thought of as restoring balance in order to maintain whanaukataka. There are many pathways and responses by which utu is put into practice including, in relation to environmental issues, an obligation to seek mutual benefits to achieve improved environmental outcomes.

Mātauraka is the customary knowledge passed down from one generation to the next. It involves observing, experiencing, participating, studying, and understanding the world from an indigenous cultural perspective. Mātauraka is not static but evolves over time and will continue to be developed for the future. Incorporation of mātauraka in resource management decision-making is important to ensure that cultural interests are appropriately recognised and provided for.

Mātauraka underpins **tikaka and kawa**, the system of beliefs, values, practices, protocols, and procedures that guide appropriate behaviour, including in the relationship between people and the environment. Tikaka and kawa are based on a general understanding that people belong to the land and have a responsibility to care for and manage the land. Tikaka and kawa are based on traditional practices but are dynamic and continue to evolve in response to different situations.

4. Outputs from engagement

This section summarises the information gathered through the whānau hui. The information has been organised into the following categories:

1. Values and uses for water bodies in each FMU
2. Concerns identified about the state and management of freshwater
3. Aspirations and outcomes sought for wai māori.

Whānau were invited to provide feedback on these for each of the water bodies in their takiwā. While discussion focused on the particular water bodies in each FMU, most of the concerns and outcomes identified were common to all or most FMU. For that reason, in categories 2 and 3 the summary mostly does not refer to specific water bodies.

4.1 Water body values and uses[3]

4.1.1 Clutha/ Mata-au FMU

The Mata-au is a very significant waterbody. There is a very deep and broad association of connections with the Mata-au and its tributaries right up to the mauka, encapsulating all of the values from the very beginning, from the time of darkness and then on.

Particular values include:

- The lakes are a feature in the creation stories.
- The purity of the wai in the awa, which starts pristine from its source in the mountains. The purity of the water in the lakes and the rivers that feed them is an important part of their mauri – the water should be good enough to drink and to swim in.
- Mata-au and its tributaries are major connectors to wāhi tūpuna (relating to former campsites and trails). The dams drowned many ancestral sites but the sites are still there - the connection to them remains, and is not altered by the fact they have been flooded.
- River environments, natural springs and wetlands are all important components of wāhi tūpuna.
- The Upper Lakes, especially Lake Hāwea, are important for mahika kai. The Lower Mata-au would also have been a significant mahika kai area for a variety of species. Mahika kai values are also present in other parts of the catchment, including the rivers/ tributaries in the Dunstan and Roxburgh Rohe, but are currently affected by loss of access to many areas.
- The lakes and rivers in the Mata-au catchment are also important habitat for taoka species. Examples of valued habitats include:
    - water birds in the lakes
    - galaxiids in the tributaries
    - in the Lower Mata-au catchment: kākahi in the Waipahi River; kanakana (lamprey), including in the Poumahaka and Waiwera Rivers.

4.1.2 Catlins FMU

The Catlins area has important wāhi tūpuna values. Jacks Bay was a highly used area, and Catlins Lake was the centre of significant activity.

Discussion of values emphasised mahika kai and taoka species:

[3] While discussion in the whānau hui provided a snapshot of values in the water bodies, this is not a comprehensive list. Additional information has been documented in various places, including the Kāi Tahu ki Otago Natural Resource Management Plan 2005.

- Mahika kai resources include huge tuaki (cockle) beds at the mouth of the Ōwaka River, patiki (flounder), inaka (whitebait).
- Wai kākahi (freshwater mussels) and koura are important both ecologically and culturally. These are indicator species that get hammered by reduction in water quality.
- Kanakana (lamprey) are also found in this FMU.

There are some whānau who continue to live on ancestral land in Catlins. These whānau have been raised on Maranuku lands for generations, an unbroken connection going back to the Potiki line, and spoke about what they value:

- "Growing up we could drink out of the creek, but now we think twice".
- Fishing in the rivers and along the coast is an important part of their lives.
- Whitebait, cockles and pipi, mussels and pāua are still available and safe to harvest. Where bush goes to the coast it makes the difference for kaimoana - the beds need to be protected from development.
- Bird life is healthy - parakeets, tui, fernbirds, tomtits, grey warbler, rifleman. There are flocks of kēreru and of tui, with full birdsong down by the coast, by the caves at dusk.

4.1.3 Taiari FMU

The Taiari catchment has significant wāhi tūpuna and mahika kai values. This is highlighted in documentation for the Te Nukuroa o Matamata project that aims to restore the Waihora/Waipōuri Wetlands and rejuvenate mahika kai in this area:

- Matamata is known to the hapū of Ōtākou as the kaitiaki taniwhā who gave protection and guidance to our ancestor, Te Rakitauneke, a Kāti Māmoe chief who lived for a time at Ōtākou and within the lower Taiari area before settling further South. There are a series of traditional placenames and features across the Taiari catchment attributed to the movements of Matamata.
- The wetlands of the Taiari catchment] were utilised by Waitaha, Kāti Mamoe and Kāi Tahu over many generations as a significant mahika kai resource. The Waihora/Waipōuri Wetland complex in the lower Taiari is identified as being of utmost cultural importance to local hapū today.

4.1.4 Dunedin & Coast FMU

- The Tokomairiro River and the streams and rivers in Dunedin City area, while not major rivers, are important to mana whenua as traditional sources for mahika kai and water.
- The streams in Dunedin are also valued because they feed Otago Harbour. The harbour is a highly important part of the network of mahika kai. It was well known for its abundant food supply and at one time provided for up to 12 kaika situated along its edge.

- Kaikarae (corrupted to Kaikorai) is a name connected to the travels of Rakaihautū[4] and his party. They stopped on the beach at this point and karae was a seabird they ate there. The Kaikarae estuary was traditionally a rich mahika kai resource.

4.1.4 North Otago FMU

- All wetlands were used for mahika kai, as evidenced by the archaeological record. The estuaries are rich in life and essential to taonga species.
- The Waitaki RIver river is of paramount importance (see discussion in the Waitaki Iwi Management Plan, Section 1.5 and 1.6). First and foremost, whānau believe a river as important as the Waitaki shouldn't be split in two – they have a strong preference for the whole of the Waitaki River catchment to have its own plan.
- The Waitaki tributaries in the Otago region have associated riparian wetlands where the tributaries meet the main stem. These wetlands have rich biodiversity and mahika kai. Traditional nohoanga were along tributaries, at junctions where they join main stem. The tributaries were particularly important as "the Waitaki is not a cuddly river" that you can swim in – the tributaries were more usable.
- The Kakaunui is a taoka stream to the Moeraki hapū. It is seen as the jewel in the crown for them. There is a strong link with the coast – for example sea koura used to come up onto the beach to shed shells.
- The Kauru is home to threatened galaxiid species.
- Moeraki have a strong cultural connection to the Waimataitai estuary. It is spoken of in pepeha, and there are lots of stories associated with it. There is a strong history of its use for mahika kai.
- The Waihemo has a history of being a rich food basket. It was a source of tuna for the community. The estuarine system is particularly important for mahika kai. There are also archaeological values associated with a moa-hunting site on the river in earlier days.
- The Pleasant River (Te Hakapupu) has wāhi tūpuna and mahika kai values.
- The Waikouaiti River and estuary have important wāhi tūpuna and mahika kai values.
- Matainaka (Hawksbury Lagoon) was once important for īnaka, and is also a rich tuna habitat.

4.2 Concerns identified

4.2.1 Water quality impacts

Agriculture

Widespread concerns about agricultural land use were identified in all FMUs, including the effects of sedimentation, nutrient runoff, and stock intrusion on water quality, and poor riparian

[4] Rākaihautū, captain of the *Uruao* canoe, is one of the founding ancestors of Waitaha. He is a highly significant figure in Kāi Tahu traditions about exploration of the land, naming of its features and formation of the great inland lakes.

management. Particular management issues that whānau consider need to be addressed include:

- Inadequate setbacks from rivers, particularly on sloping land and near sensitive environments such as wetlands and estuaries
- Management of critical source areas and ephemeral streams
- Management of winter grazing.

There is concern that the management focus has been on mitigating effects rather than addressing issues, because the commercial drivers have taken precedence over cultural drivers.

Intensive dairying was most commonly identified as a cause of concern, but also deer farming practices in the Catlins and cattle intruding into rivers in high country environments (e.g. the Matukituki and Hunter Rivers).

Urban/ residential development

Stormwater and wastewater discharges into rivers and lakes are a common concern, as well as contamination from septic tanks into coastal areas.

Other concerns include:

- Poor management of sediment from residential development
- Contaminated run-off from roads and industrial/ commercial land, particularly in the Dunedin & Coast FMU.

Forestry

There is widespread concern about sedimentation from forestry, both after harvest and from activities carried out near streams. Concern was also expressed about sprays getting into waterways, despite buffers being required.

Participants felt there is inadequate regulation of forestry practices. In the Catlins, forestry practices were seen as a bigger concern than agricultural practices because of a lower level of scrutiny.

Weed invasion

There is concern about the effects of didymo, particularly in the Mata-au catchment, as well as oxygen weed.

Monitoring and compliance

There is a general concern that monitoring and compliance of activities affecting water bodies has been inadequate.

4.2.2 Water quantity impacts

Vegetation change

There is widespread concern about change in catchment hydrology and river flow (both flow reduction and increase in flash floods) from:

- Tussock and wetland removal in upper catchments

- Forestry (both plantation forestry and carbon forestry) in upper catchments/ headwaters and close to rivers generally.

There is concern that impacts on flow from forestry are not considered as water takes and so are not managed – there is a need to consider the water that never reaches the rivers.

Irrigation practices

Over-allocation was identified as a concern, particularly in North Otago. Low flows are a risk to tributary and estuary health, and also impact on water supplies and the ability to swim. There is also concern about the effect of water takes from tributaries of the Mata-au and North Otago rivers.

Comments included:

- Flow regimes need to provide sufficient base flow in the rivers to make up for loss of irrigation bywash/ leakage as efficiency increases.
- Irrigation investments have been made on the promise of water that has been allocated but isn't actually there. There is a need to be careful how any move to more water storage is managed, to ensure this doesn't turn water into a commodity.

Industry

There is concern about large footprints of mining and quarrying activities taking water yield out of the broader catchment. Large industrial water takes are also a concern.

Monitoring

Concern was expressed about a lack of measurement and oversight on water takes, and lack of catchment monitoring.

Climate change

With climate change, minimum flows could keep going down. Possible climate change drivers may not be predictable.

4.2.3 Modification of waterways

Obstacles to fish passage

There is widespread concern about blockage of fish passage by dams (particularly in the Mata-au and Deep Stream/ Waipōuri) and by flood control structures such as weirs, culverts and flood gates (particularly in coastal water bodies).

Channel modification and loss of river extent

Concerns were expressed about past and ongoing modification of natural channels and flow by:

- Piping of streams to make land available for farming (e.g. in the Lower Mata-au) or for urban development (e.g. Dunedin)
- Straightening of channels to speed up passage of flood flows
- Diversion of streams.

There was criticism that flood control/ erosion control and other utility values have been prioritised over the value of natural river function - rivers have been managed as flood, drainage

or irrigation channels, and past emphasis has been on constraining flow to maximise available land for grazing rather than providing for river function. There has been a cycle of constraining flow and reclaiming the river bed, then flood control to protect the reclaimed land, thus encouraging further reclamation and further flood control. The reclaimed land becomes a commercial asset rather than a natural asset with multiple values, including sustaining mahika kai.

Other concerns include:

- Loss of springs that feed tributaries
- Management of river/lagoon mouth openings for flood management rather than water quality and habitat needs.

4.2.4 Habitat degradation

Whānau are concerned about loss of indigenous biodiversity, including through:

- Exotic afforestation (including for carbon credits) – vegetation clearance and spread of weed species
- Effects on benthic environments from activities in river beds – gravel extraction and suction dredging
- Channel clearance
- Grazing in areas of indigenous vegetation
- Pressures of residential and tourism development.

4.2.5 Wetlands

There is widespread concern about modification, degradation and loss of wetlands due to:

- Drainage or reduction in water levels for agriculture and flood management
- Grazing and consequent weed growth
- Pollution from effluent and other contaminants
- Sedimentation.

Concern was expressed about poor compliance and enforcement relating to wetland modification.

4.2.6 Estuarine and coastal environment

(see also water quality impacts above)

Whānau have significant concern about the effects of sedimentation on downstream estuarine and marine environments, due to:

- Forestry and agricultural land uses (e.g. in Catlins, Pomahaka, Waipahi)
- The effects of the Mata-au hydro-electricity dams
- Urban stormwater discharges (e.g. effects on Otago Harbour)

There is also concern about the impacts of high nutrient levels on estuaries in all coastal FMUs, and about cattle grazing near estuaries, coastal wetlands and the waterways that flow into them.

In the Dunedin & Coast FMU and North Otago FMU there is concern about the current and potential downstream impacts of industrial activities releasing sediment, oil and diesel, chemicals and heavy metals.

4.2.7 Wāhi tūpuna, mahika kai and connection with traditional practices

(see also concerns under headings above)

Some connections with traditional practices have been lost due to degradation of the mauri of the wai, damming and irrigation, and whānau being forced to leave the rohe to earn a living. There has been significant loss of mahika kai, compared to what was sustained by the water bodies in the past. Mahika kai practices are no longer being sustained and mahika kai practices have been undermined by:

- Loss of fish passage
- Degradation of riparian and aquatic habitat
- Loss of flow and consequential effects on water quality
- Effects of sediment, effluent and nutrients

Reduction in mahika kai populations also means they are less resilient to the effects of commercial harvest and to climate change effects.

The health and condition of the water affects the ability for whānau to carry out mahika kai practices as well as the health of the species – the water needs to be safe to enter and the kai need to be safe to eat. This is undermined by:

- Sedimentation and algal growth
- Contamination of mahika kai species by bacteria and chemicals
- Obstacles to access and use e.g. willows, sediment
- Concern about the effects of climate change on mahika kai, wāhi tapu/ wāhi taoka and cultural practices.

4.2.8 Pest management

Animal pests

Concerns were expressed about the effects of animal pests on water quality, freshwater ecosystems and riparian vegetation, including:

- Effects on generation of sediment. Deer wallowing was particularly highlighted as a concern in the Catlins
- Possums and ungulates eat riparian vegetation
- Mice and rats eat wai kākahi (freshwater mussels) and possums and mustelids are a threat to water birds.

There is also concern about threat of pest fish species establishing, as well as broader concerns about effects of pest animals on indigenous biodiversity.

Plant pests

Concern was raised about the effects of didymo on water quality and the effect of weeds on water flow, and about the spread of pest species from exotic forestry.

Effects of pest control

Some concern was expressed about the effects of herbicides and pesticides in waterways.

Climate change

There is concern about the potential implications of change in distribution of pests through climate change.

4.3 Aspirations and outcomes sought

There was considerable overlap in discussion between about the environmental outcomes sought for water bodies, and the management principles and approach that would be appropriate to achieve these and to address the concerns identified. The outcomes and management principles tended to align with the points of the Kāi Tahu ki Otago overarching vision prepared for the Regional Policy Statement development (see Appendix 1) and are grouped according to these points below.

A general comment was made that there is a need to:

- Recognise the interconnectedness of whenua and wai across all parts of the catchment, and the interconnection of mana whenua to the wai, and
- Ensure an integrated approach across the responsibilities of different councils and other agencies.

4.3.1 The wai is health-giving

Outcomes

Whānau should be able to return to sites to gather mahika kai in future - this is important to maintain ongoing relationship with place. This requires:

- Drinkable, swimmable water
- Improved access for whānau to rivers for mahika kai and other use
- Kai needs to be safe to eat

Management principles and approach

- Start at the source/ springs - protect the source and work down the catchment.
- Dilution is not the solution. It is not appropriate to rely on augmentation to manage water quality. Management needs instead to focus on reducing the level of contaminants.
- Address the problem at the source, rather than dealing with it at the end.
- Stronger controls than national regulations might be needed e.g. for setbacks on sloping land, protection of critical source areas.
- Keep stock out of waterbodies all the way down.
- Nutrient management: there should be no ability to average nutrient losses over areas of intensive and less intensive use, with improvements in one area being used to justify degradation somewhere else.[5] There should also be no grandparenting (allowing existing uses to continue if they are degrading water quality).

[5] An example was given of practice in Canterbury of using DOC conservation land or council land to offset nutrient exceedances elsewhere in the catchment because the rules do not prevent this.

- Reduce and eliminate discharges of wastewater and stormwater into all the waterways.
- Where new infrastructure is planned, all efforts should be made to minimise or eliminate discharges/ sediment entering waterways.
- Better compliance/ follow up of discharges is needed. Water quality should be measured at both inlet and outlet - upstream and downstream of activities.

4.3.2 The waterways are restored to the way they were when tūpuna knew them

Outcomes

- Enable connection with cultural heritage to be maintained and enable reconnection with traditional practices. Where uses are no longer able to be carried out, we need to restore the ability for this.
    - If mauri is restored to the rivers, this will return life to river mouths and estuaries, which will be vital places for food collection and for celebrating our attachment to our awa.
    - Mana whenua must be given the ability to engage with mahika kai in whatever ways they find to be appropriate.
    - There should be a high level of protection of any wai tapu that have been identified, and outcomes need to be able to incorporate allowing associations to emerge from new research about wai tapu and traditional practices that is not currently available.
- Protect sensitive areas including springs, wetlands, lakes and estuaries. Wetlands need to be restored/ regenerated and must be treated as a whole system e.g. Taiari scroll plain (not defining wetlands narrowly as they have been in the past).
- Rivers need to function as rivers, rather than being managed as flood channels or irrigation storage. Rivers are supposed to flood and change their course (e.g. rūnaka lost their reserve at Waitaki river mouth because the braids changed, but this is natural). However we should not impose on the natural function of the river with willows, groynes etc. to narrow it. Prevent straightening, channelisation or infilling of waterbodies, and reintroduce sinuosity, pools and riparian vegetation in straightened waterbodies.

Management principles and approach

- The approach needs to allow whānau to identify connections with particular areas and what is needed to protect the ability for cultural activity, rather than having specific sites identified in the plan.
- Wetlands should not be narrowly defined.

- Water management systems need to respond to climate change impacts on wāhi tapu/ wāhi taoka and cultural practices and support mitigation of these impacts (Moeraki and Ngāti Waewae have been working with GNS to look at these impacts)
- Terms for water permits should be limited so adjustments can be made in response to climate change.

4.3.3 Mahika kai is flourishing, native fish can migrate easily and as naturally as possible, and taoka species and their habitats are protected

Outcomes

- Taiao ora – the right insects, aquatic invertebrates and manu (birds) are present and our taoka species have suitable habitat, mahika kai species are safe to eat.
    - Mahika kai is part of an ecosystem - the ecosystem needs to be healthy first, before mahika kai can flourish. A whole ecosystem approach is needed rather than focusing on target species, including looking after the whole food chain and also the connection between land animals/ coastal birds and the river environment.
    - By restoring riparian vegetation and/or change of catchment land use and riparian margins, our mahika kai species should increase.
- Enhance habitat to support both terrestrial and aquatic indigenous biodiversity. Priority must be given to indigenous species. All taoka species and their habitats must be protected and acknowledged as important, not just threatened species – including tuna (shortfin and longfin eel), kanakana, īnaka, giant kokopu, banded kokopu, pātiki.[6]
- Improved biodiversity in every catchment.
- Indigenous fish can migrate easily and as naturally as possible.

Management principles and approach

- Identify and develop a schedule of whitebait spawning sites, including both existing areas and potential priority areas to adapt to a shift in saltwater wedge with climate change.
- Also provide for the health of taoka species habitat wherever it exists (i.e. not just at scheduled sites).
- For carbon farming, native forest is the preference.

[6] Pātiki is the term for all species of flat fish that may occur in coastal river stretches including *Rhombosolea leporina*, *Rhombosolea plebeia*, *Rhombosolea retiaria*, *Rhombosolea fapirina*, *Pelotretis flavilatus*

4.3.4 Over-allocation is reversed, and water is available and allocated to meet mana whenua aspirations

Outcomes

- The catchment should be viewed as a whole – the amount of water in the river should be related to the amount of rain falling on the catchment.
- Flows in the rivers must be sufficient to provide for resilience in dry periods for the river and the life it supports. The regime should provide for natural seasonal flows that reflect pre-modification, not the post-modification situation (flows now may still be seasonal but not reflect the original nature of the flow because they have been reduced overall).
- Reliable and affordable security of water supply for marae, papakāika and nohoaka should be prioritised over reliability of supply for economic uses. Appropriate allocation of water for mana whenua uses should be available where there is an opportunity (but not at the expense of a healthy river). The health of the river must have first priority, and then health of cultural take, then economic take after that (this would be equivalent to the approach for fisheries).
- For irrigation takes, sustainability of use should be linked to priority. More efficient uses should have higher priority than inefficient uses.
- Part of restoring the natural function of rivers includes ensuring sufficient flow is retained in rivers to offset the loss of irrigation bywash from inefficient systems. Where efficiency is increased, allocation should be reduced to return water to the river to support its natural function.

Management principles and approach

- A reduction programme for water takes should be imposed to enforce increases in efficiency and restore water to the river.
- Water takes must be properly monitored.

4.3.5 The interconnection of freshwater and coastal waters is recognised

Outcomes

In addition to outcomes referred to above:

- The valuable contribution of the awa to the coastal environment needs to be recognised and provided for.
- The estuarine systems must be able to function properly.

4.3.6 The quality and quantity of groundwater is protected, and the interconnections with waterways are recognised

Outcomes

In addition to outcomes referred to above:

- Maintain integrity of groundwater.
- Support the health of all aquifers.

4.3.7 Mana whenua are integrally involved in freshwater planning, implementation and monitoring, and mātauraka is alive and being passed on.

Outcomes

- Rakatirataka and kaitiakitaka roles are recognised by partnership in decision-making
- Mana whenua are engaged in planning - the right conversations with the right people. There need to be opportunities for whānau to be involved across the board in decision making.
- Resourcing is provided for mātauraka, including funding for whānau to carry out ongoing monitoring as part of the kaitiaki role.
- Cultural values and indicators are identified and assessed alongside Western science water quality standards to foster connections with our people and enable transfer of knowledge of their awa, wāhi tūpuna and mahika kai sites.

Management principles and approach

- For all management techniques in the toolkit, ask what cultural outcomes will be delivered to mana whenua. If cultural outcomes are not supported, then the technique should not be used.
- FMU boundaries make mana whenua interaction more complex because they cut across the rūnaka takiwā boundaries. The interests of each rūnaka need to be recognised.
- As part of recognising rakatirataka, there should be provision for transfers and delegations of powers to mana whenua. As well as involvement in decision making, this should allow for mana whenua-led consent auditing, enforcement and environmental monitoring.
- Catchment planning frameworks must be built around rakatira-to-rakatira partnership between mana whenua and ORC at the highest levels of decision-making. For funded catchment group projects, there needs to be a consistent approach that upholds mana whenua values and recognises mana whenua rakatirataka and kaitiakitaka role.

4.3.8 Land users work together to restore catchments

Outcomes

- Practices on the whenua that are ecologically as well as economically sound.

Management principles and approach

- A precautionary approach is needed to ensure values are protected, with the onus of proof on land users to show they are not harming the wai but are protecting and restoring it.
- Better landholder awareness of what is necessary to protect the water bodies e.g. land management needs to take into account slope of land and amount of vegetation between land use activities and water.
- ORC support for lower impact land use alternatives along with associated infrastructure, encouraging a different, better approach with land use matched to environment (e.g. soils suitable for cropping in North Otago).

5. Incorporation of outputs in the Land and Water Regional Plan

The outputs of mana whenua engagement have been incorporated into the LWRP in the following ways:

(a) Foundational values and concepts, and freshwater management principles consistent with these, have been described in the MW Mana Whenua chapter.

(b) The environmental outcomes for Māori freshwater values that were tested and confirmed through the engagement process have been included as objectives in the Area-Specific Matters chapter. These are the outcomes for wāhi tūpuna, taoka species and mahika kai.

(c) The outputs were used by Aukaha to develop a series of mana whenua environmental indicators. These have been included as APP8, and policies and matters for discretion across the LWRP require them to be considered in decision-making. They have also been used to identify the relevant attribute and alternative criteria (in the Area-Specific Matters chapter) for achieving the environmental outcomes for wāhi tūpuna, taoka species and mahika kai.

The feedback obtained through the engagement has also informed Aukaha input into policy development and plan drafting, and much of this is reflected in the provisions of the LWRP. The Kāi Tahu feedback provided to ORC in accordance with Clause 4A of the 1st Schedule of the Resource Management Act identifies where significant concerns remain.

Appendix 1: Kāi Tahu ki Otago overarching vision for wai māori in Otago

Developed as part of input to the Proposed Otago Regional Policy Statement and provided to ORC on 27 November 2020

Underlying principles

The following key principles should be recognised, and should underlie development of freshwater visions:

1. The whakapapa of mana whenua and water are integrally connected. There is a close kinship relationship, and mana whenua and the wai cannot be separated. The mana of the wai is shared with mana whenua through this relationship, and the mana is impacted on if the human connection is not there. Freshwater visions need to ensure that the connection of mana whenua with the water bodies is sustained, including through:
    - Recognition of rakatirataka
    - Enabling exercise of kaitiakitaka
    - Upholding the mauri of the water bodies
    - Providing for practice of mahika kai and other mana whenua aspirations as land and water users.
2. Freshwater visions must recognise interconnectedness across a catchment. The mauri of different parts of the water body system cannot be separated. The water body must be treated as a whole system, with all tributaries and riparian areas, including their natural characteristics and indigenous biodiversity, contributing to the vision.
3. Kawa and tikanga have been developed over the generations, based on customs and values associated with the Māori world view that span the generations. These values are inherent in the kaitiakitaka responsibility of mana whenua and need to be reflected in decision-making, management and monitoring. Recognising and honouring te mana o te wai and upholding the mauri of the wai are consistent with this value base and are the responsibility of both treaty partners.
4. Freshwater management must enable mātauraka regarding freshwater and the resources it supports to be retained, kept alive and transferred to future generations.

Vision

The Kāi Tahu ki Otago vision for all catchments in Otago is that the following outcomes are achieved:

1. The wai is health-giving:
    - The quality where the waterway enters another receiving environment should be as good as at the source
    - We can drink the water and eat the kai.

2. The waterways are restored to the way they were when tūpuna knew them:
    - Water flow is continuous through the whole system
    - There is no further modification of river shape or braided stretches
    - Existing wetlands are restored and the area of wetlands is increased.
3. Mahika kai is flourishing, native fish can migrate easily and as naturally as possible, and taoka species and their habitats are protected from negative water quality and quantity impacts.
4. Over-allocation is reversed, and water is available and allocated to meet mana whenua aspirations.
5. The interconnection of freshwater and coastal waters is recognised:
    - Sea level rise is accommodated in planning for infrastructure and other activities near river mouths, estuaries and hāpua systems
    - Inaka habitats at the salt-water wedge are protected.
6. The quality and quantity of groundwater is protected, and the interconnections with waterways are recognised.
7. Mana whenua are integrally involved in freshwater planning, implementation and monitoring, and mātauraka is alive and being passed on.
8. Land users work together to restore catchments.

Priorities/ additional focus for particular catchments or Freshwater Management Units (FMU)

Mata-au	• Mata-au is one catchment and needs to be managed as such. • Management recognises and reflects that the wai comes directly from Tawhirimatea (the sky) to the top of the mauka and into the awa so is pure at source – the quality along the full length of the waterway should reflect this. • There is no further degradation of lakes. • There are no sedimentation effects on the ocean.

Taieri	• Healthy wetlands are restored in the upper catchment wetland complex and tussock areas. • Waipori/ Waihola wetlands are restored. • There is no sewage discharge to Lake Waihola. • In the long term, the gravel bed of the lower Taieri is restored and sedimentation of the Waipori/ Waihola complex is reversed.
Dunedin Coast FMU	• Waikouaiti River catchment should be included in this FMU rather than North Otago. • Pollution of the harbour is reduced. • Hidden waterways are recognised – in the long term, waterways are naturalised as much as possible, and potentially some piped areas are opened up.
North Otago FMU	• Pollution of the Waihemo (Shag), Waianakarua and Kakaunui Rivers and Trotters Gorge Creek, and their tributaries, is reduced. • Wetlands are restored throughout the North Otago catchments. • Riparian margins are healthy and are protected from the effects of stock grazing and pests.

Timeframes for achievement of vision

- From now:
    - No further loss
    - Consents are granted for a maximum of 10 years
    - Systems and resources are developed to facilitate restoration measures.
- Within 10 years:
    - Management practices have been changed and positive restoration measures are underway.
- By 20 years: Outcomes are being achieved.

Management changes needed to achieve the vision

Water quality	• Improved management of stormwater runoff, including runoff from land development and from roads • Land-based sewage and animal effluent disposal – no disposal to water • No sedimentation effects on ocean, harbour and estuaries • Reduce nutrients and effluent entering groundwater

	• Shorter consent terms – no more than 10 years • Consultation with mana whenua
Water quantity	• Levels and flows support flourishing mahika kai, not minimum requirements • Augmentation by off-stream storage in appropriate locations and circumstances • Shorter consent terms – no more than 10 years • Consultation with mana whenua
River works and structures	• No modification of headwaters • Retain existing braided stretches • No further modification of the shape of rivers • No new instream dams • Rehabilitation of gravel extractions to provide for natural habitat and mahika kai • Removal or modification of flood gates in lower reaches to allow easy fish passage • Dams, headgates, floodgates and culverts are designed and managed to enable easy upstream and downstream migration of fish – this must be a priority in design • Shorter consent terms – no more than 10 years • Consultation with mana whenua
Drainage	• No further drainage, and reverse the effects of existing drainage • Consultation with mana whenua
Habitat	• Bring back diversity of riparian areas and set aside adequate buffers • Reverse loss of wetlands - restoration and increase in area • Removal of aquatic weeds • Consultation with mana whenua
Land use	• No negative land use impacts on wetlands – including their hydraulic connection, taoka species and mahika kai values • Improvement of physical access to mahika kai (including across land to the waterways) • Look at moving to dryland farming systems • Consider implications of sea level rise in 3 Waters infrastructure renewals • Provide for inward migration of estuary and hāpua systems with rising sea level – give them room to move • Consultation with mana whenua