

Kia māori mai ngā wai o Parawhenuamea

The waterways exist in a healthy, natural state

Recommendations for freshwater fish management

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Fish Futures

Fish Futures - Reimagining freshwater ecosystem management in Aotearoa is a five-year research programme funded by the Ministry of Business, Innovation and Employment (CAWX2101). The programme aims to improve freshwater ecosystems in Aotearoa New Zealand and the lives of those who depend on them by fostering local relationships, empowering fishery managers, enhancing the mana of kaitiaki and developing approaches integrating mātauranga Māori and science.

Healthy waterways and enduring relationships

Why change is needed

Despite a decade of policy reform, freshwater fish governance remains narrowly focused on individual species, while Māori (specifically, iwi and hapū) voices are underrepresented in decision-making, policy responsibilities are spread across agencies, and diverse community values are not reflected in policy objectives.[1] The prevailing approach poses a significant issue for all New Zealanders due to declining indigenous fish populations, often referred to as taonga species.

Importantly for iwi, the protection of taonga species is integral to kaitiaki responsibilities and the enduring nature of Treaty settlements. It therefore forms an operative part of their continuing Treaty settlement redress arrangements with the Crown and other stakeholders in freshwater fish governance.

Government decision makers and policy makers have a clear mandate to protect and promote healthy indigenous freshwater fish populations. New approaches to freshwater fish management are needed that uphold Māori rights, interests and kaitiaki responsibilities, reverse the decline in indigenous fish populations, and better reflect what New Zealanders care about.

Purpose and scope

This document sets out fifteen recommendations for more holistic, just and sustainable freshwater fish management and governance. The recommendations were developed by the Fish Futures Working Group and reflect their analysis of the challenges and opportunities in freshwater fish management and governance, members' expertise and organisational knowledge, and the priorities of rohe partner groups. The recommendations build on the shared understanding developed through regular Working Group wānanga, and members' awareness of the mandates and changes that can be advanced through their respective organisations. The Department of Conservation's (DOC) and Fish & Game's role in the Working Group was to provided technical advice and support; accordingly, the policy recommendations in this report do not represent agreed DOC or Fish & Game policy.

The recommendations are intended to identify pathways for policy makers and practitioners within DOC, Fish & Game New Zealand, the Ministry of Primary Industries (MPI), regional councils and other agencies to protect and restore indigenous fish populations while giving effect to Te Tiriti o Waitangi. They are informed by the current legislative and regulatory framework for freshwater fish management and governance, including Treaty settlements, and the opportunities available within that framework.

The recommendations focus on three pathways for impact:

- Changes in legislation, policy, plans or government agency operations
- Relationship building and partnership with iwi and hapū
- Actions to improve freshwater fish management in practice.

Together, the recommendations are intended to move us towards our shared vision:

Kia māori mai ngā wai o Parawhenuamea
The waterways exist in a healthy, natural state

Guiding principles

All recommendations should be implemented in line with three guiding principles:

Rangatiratanga – the right to exercise authority, self-governance, and self-management. Iwi and hapū must be able to exercise rangatiratanga in

freshwater and fisheries management in their rohe. Treaty settlements are an expression of rangatiratanga. Redress provided under a Treaty settlement can take many forms and often includes commercial, cultural and relational redress.

Tikanga – the system of law underpinning traditional and contemporary Māori life. Relationships between Māori and stakeholders must be guided by an understanding of tikanga and kawa. The understanding of certain tikanga and kawa varies depending on context, with their application often being place-based.

Mātauranga – the body of knowledge, experience, values and philosophy of Māori (in this context, iwi and hapū), including their unique knowledge and understanding of the environment. Mātauranga Māori must be recognised and applied as a foundational knowledge system.

Rangatiratanga, tikanga and mātauranga Māori are integral components of Treaty of Waitangi settlements. There is an enduring obligation on the Crown to ensure the 'integrity of the settlement' is upheld. Within the context of this report, these principles provide some practical guidance for policy makers and practitioners to help ensure that the integrity of existing Treaty settlement commitments is upheld under any proposed amendments to resource management, conservation or fisheries law.[i]

This report uses 'mana whenua' to refer to iwi and hapū whose whakapapa, tikanga and customary authority give rise to enduring relationships of mana and kaitiakitanga for the whenua, wai and taonga within their rohe.

Fish Futures Working Group

The Fish Futures Working Group is a key component of the Fish Futures research programme, which seeks to drive change towards holistic and just freshwater fish management in Aotearoa New Zealand. The Working Group was established to identify key issues and a forward trajectory for freshwater fish management and develop proposals for transformative fish management and governance. It draws on insights generated across the research programme to make practical recommendations for change.

The Working Group comprises representatives of Te Wai Māori Trust; rohe partner groups Te Rūnanga o Arowhenua, Te Arawa Lakes Trust and Ngāi Tahu ki Murihiku; DOC; and Fish & Game New Zealand, together with Fish Futures researchers.

The Working Group is a collaborative forum with a commitment to consensus decision-making, with whakawhanaungatanga and strong, durable relationship building at its core. Thirteen wānanga were held between 2022 and 2026. This included hui hosted by Te Rūnanga o Arowhenua, Te Arawa Lakes Trust and Ngāi Tahu ki Murihiku who showcased their issues, hopes and aspirations for freshwater fish within their respective rohe.[ii]

Working Group meeting with Te Arawa Lakes Trust. Photographer: Chanelle Murphy; September 2023.



Fifteen recommendations for change

01. Prioritise freshwater fisheries management so that the needs of indigenous species and the conditions they require to be healthy and abundant are met.

02. Establish enduring, fish-centred and mātauranga-informed freshwater monitoring and research.

03. Implement and further develop management tools and policies under the Conservation Act 1987 to protect freshwater taonga species and habitats.

04. Remove barriers to iwi and hapū accessing public conservation land to undertake mahinga kai practices and monitor and manage sites, species and areas of significance.

05. Develop an effective regulatory system for the whitebait fishery to ensure it is sustainable and includes decision-making and governance roles for mana whenua.

06. Suspend the commercial harvest of longfin tuna and protect tuna as taonga.

07. Establish a coordinated interagency system for preventing and responding to mass fish kill events.

08. Remediate and prevent the creation of new fish passage barriers and manage waterbodies to facilitate the movement and migration of freshwater fish.

09. Streamline species translocation processes for mana whenua where translocation or restocking is needed to protect or restore indigenous freshwater fish populations.

10. Establish introduced-fish-free areas and protect existing areas to restore indigenous fish species.

11. Dedicate a portion of sports fishing licence income and organisational resources to reduce and mitigate the negative effects of sports fish on indigenous freshwater species.

12. Recognise the authority of mana whenua to utilise introduced species as an opportunity for reconnection, including as part of mahinga kai and pest control programmes.

13. Partner with mana whenua to develop a proactive coordinated response to freshwater biosecurity incursions to protect indigenous species.

14. Establish tikanga-led collaborative decision-making across freshwater governance and management organisations.

15. Strengthen local partnerships between government agencies and mana whenua through joint place-based initiatives supported by national-level relationships.

01. Prioritise freshwater fisheries management so that the needs of indigenous species and the conditions they require to be healthy and abundant are met

Why this matters

Most indigenous freshwater fish species in Aotearoa New Zealand are classified as threatened or at risk of extinction. Their populations are affected by interacting pressures, including habitat loss and modification, barriers to migration, altered flows, degraded water quality, fine sediment, introduced species, harvest and climate change.[2,3]

Many indigenous fish use different habitats during different life stages. Their persistence therefore depends on suitable flows, water quality, temperature, instream habitat, connectivity, spawning and rearing areas, and access to refuges.[4] Some species exhibit pan-regional metapopulation dynamics – including populations that are panmictic at the national scale (e.g., longfin tuna) – and require the coordination of management actions at the scale of the wider population.[5,6] Managing individual pressures, locations or harvested species in isolation is unlikely to protect the complete life cycles of indigenous fish or the wider ecosystems of which they are part.

What needs to happen

- Priorities should be established at rohe and catchment scales with mana whenua, in accordance with Treaty settlements (including any existing and / or future participation arrangements, provision for Treaty settlements in national policy statements and regional combined plans, and iwi environmental management plans). This may include recognising the whakapapa, population status and ecological requirements of locally important indigenous and taonga species (as defined by mana whenua).
- The Ministry for Cities, Environment, Regions and Transport (MCERT), DOC and Fisheries New Zealand should place indigenous fish outcomes at the centre of freshwater and fisheries management in all new and amended legislation, national direction, policies and plans.
- Regional councils should incorporate the requirements of indigenous fish into regional plans, environmental limits, consent decisions, monitoring and restoration programmes.
- DOC, Fisheries New Zealand and Fish & Game councils should ensure that their freshwater fisheries responsibilities contribute to the protection and recovery of indigenous fish populations, including through the management of harvesting and introduced sports fish and threatened species recovery planning and implementation.
- Regional councils, infrastructure operators and landowners should identify, protect and restore critical spawning, rearing, feeding, migration and refuge habitats across land uses and tenures.
- Agencies should assess and manage cumulative pressures across habitats and regions (in the case of panmictic populations) to provide for the fish across their entire life cycle, rather than addressing individual pressures or sites in isolation.

Examples of what organisations are doing

- Te Rūnanga o Arowhenua and Ngāi Tahu ki Murihiku support a whole-of-community approach to restoration, in which improving conditions for species such as waikākahi / freshwater mussel is intended to benefit other indigenous and taonga species.
- DOC has sought to protect indigenous freshwater fish communities through habitat protection and enhancement, fish passage management, monitoring and advocacy, and by collaborating with other entities on freshwater restoration and fisheries initiatives.
- Te Rūnanga o Arowhenua illustrates how collaboration with a range of local organisations promotes holistic fisheries management, including managing the opening of the Ōpihi Lagoon, enhancing instream and riparian habitat, protecting fish during heke (migrations), identifying matamata / whitebait spawning periods, and maintaining mātauranga-based and observational monitoring.[7]



Working Group visit to matamata spawning restoration site on lower Rakitata River, led by Te Rūnanga o Arowhenua. Photographer: Vanessa Tipoki; June 2023.

2. Establish enduring, fish-centred and mātauranga-informed freshwater monitoring and research

Why this matters

Important knowledge gaps remain for many indigenous freshwater fish, particularly concerning spawning, larval and juvenile habitats and the effects of cumulative pressures and climate-change.[3] Existing environmental monitoring focusses mainly on water quality or habitat condition, seldom assessing indigenous fish population health, life cycle completion, or whether management actions achieve recovery.

Mātauranga-based monitoring provides place-specific knowledge of species, mahinga kai, relationships and environmental change. Approaches such as the Cultural Health Index, Mauri-o-meter and Mauri Compass enable mana whenua knowledge, values and priorities to inform freshwater assessment alongside biophysical monitoring. Their use must retain mana whenua authority over monitoring design, knowledge, data, interpretation and application; institutionalisation can otherwise decontextualise mātauranga and constrain rangatiratanga.[8,9]

Because iwi values and waterbodies differ, monitoring needs sufficient consistency to assess change through time while remaining responsive to local whakapapa, priorities and environmental characteristics.[10]

What needs to happen

- Central government should prioritise funding for coordinated, long-term research on poorly understood species, critical life stages, cumulative pressures and climate-change effects.
- Regional councils and other agencies carrying out monitoring should include indigenous fish populations, critical habitats and life-cycle requirements within freshwater monitoring programmes.
- Iwi and hapū should be funded and supported to set monitoring priorities and develop, lead and maintain mātauranga-based systems. This may include customary-based monitoring regimes and / or fisheries bylaws issued by iwi authorities under certain Treaty settlements or appointed tangata kaitiaki / tiaki under the customary fisheries regime.
- Monitoring agencies should combine consistent measures of change over time with rohe and waterbody-specific indicators reflecting local whakapapa, values, species and environmental characteristics.
- Central government and regional councils should set clear thresholds and targets, backed by robust monitoring, reporting and response frameworks to identify emerging environmental issues and trigger prompt management action.
- Cultural monitoring led by mana whenua, and informed by mātauranga Māori, should be funded as an enduring component of freshwater management, rather than as a short-term or project-specific addition.
- Universities and government agencies should support mana whenua capability in both mātauranga Māori and science through educational pathways, dedicated research funding, scholarships, internships and opportunities beyond tertiary institutions.
- Research organisations should respect mana whenua authority over mātauranga and culturally sensitive information when supporting co-designed monitoring and research through methods development, data analysis and knowledge-sharing.

Examples of what organisations are doing

- Te Rūnanga o Arowhenua advocates for an approach that recognises each awa as having its own whakapapa. Monitoring should therefore be responsive to differences among waterbodies while providing information that can guide management and track change over time. As cultural monitoring methods and approaches are developed for a specific place and people, they cannot be applied to other locations.[9,11]

- Te Arawa have adapted whakaweku / fern bundles, a traditional fishing method, to monitor kōura / freshwater crayfish populations in their waterways. This cultural monitoring innovation demonstrates the multiple outcomes that can be achieved when mātauranga Māori is used alongside science: it sustains mātauranga for future generations, promotes community participation, provides habitat for native species, and has enabled an effective, long-term, low-cost lake kōura monitoring programme that is not prone to biases affecting mainstream sampling methods.[12–14]

- Ngāi Tahu ki Murihiku have developed a mixed-methods Kaupapa Māori Monitoring approach that combines mātauranga Māori, whānau knowledge, wānanga, hīkoi, interviews, cultural value mapping, historical research, and scientific assessments. The framework provides a way to understand and describe the health of waterways and spaces according to mātauranga and how whānau would use them, as well as ensuring whānau stay connected or reconnect to place.[15]



Demonstration of whakaweku used in the tau kōura monitoring method on Lake Rotoiti by Te Arawa Lakes Trust. Photographer: Vanessa Tipoki; September 2023.

03. Implement and further develop management tools and policies under the Conservation Act 1987 to protect freshwater taonga species and habitats

Why this matters

DOC is the central government agency responsible for preserving indigenous freshwater fisheries and freshwater fish habitat. Section 4 of the Conservation Act 1987 (the Conservation Act) requires that it be interpreted and administered to give effect to the principles of the Treaty of Waitangi.

Management tools and policies under the Conservation Act should be considered as possible mechanisms to deliver on commitments in Treaty settlements.

What needs to happen

Management tools and policies under the Conservation Act that should be considered for further development and implementation include:

- declaring spawning sites under section 26ZJA of the Conservation Act to prevent activities that disturb or are likely to disturb a spawning site;
- using section 48B of the Conservation Act to support customary Māori freshwater fishing rights in the South Island;
- developing freshwater fisheries management plans to allow customary harvest while preventing commercial depletion of indigenous species; and
- using regulatory closures where necessary to support the implementation of rāhui by mana whenua and promoting community education on how a specific rāhui is intended to operate for the benefit of the fish species and the public.

Examples of what organisations are doing

DOC is working on the process for how spawning sites are scheduled, i.e., how they are defined and mapped, so that the legislation can be implemented. DOC could use these tools to support mana whenua-led fishery protection where legal protection or enforceability is desired by mana whenua. Te Rūnanga o Arowhenua are already identifying, monitoring and protecting matamata / whitebait spawning areas in their rohe.



Map of īnanga spawning habitat on the Ōpihi River recorded in the Canterbury Land and Water Regional Plan. Source: Canterbury Maps; October 2026.

04. Remove barriers to iwi and hapū accessing public conservation land to undertake mahinga kai practices and monitor and manage sites, species and areas of significance

Why this matters

The creation of national parks and other public conservation land has negatively impacted Māori rights to access, govern and use their freshwater fisheries. Use of natural resources was prohibited to preserve the special character of national parks and other reserves, limiting access to mahinga kai throughout the 20th century. Even where legislation permitted Māori access to resources, officials generally prohibited customary harvesting.[16,17]

Today, public conservation land is administered primarily by DOC, including national parks, wildlife areas, conservation areas, and land classified as a reserve under the Reserves Act 1977 (the Reserves Act).[18] However, not all reserves are held and managed by DOC and can be vested in iwi authorities under sections 30 and 35 of the Reserves Act.

Current legislation and permitting processes continue to create barriers to mana whenua access to and use of traditional materials and indigenous species on conservation land, including for monitoring, research, management and customary use. In particular, legislation governing national parks and scientific reserves continues to prevent customary use. Historical and contemporary barriers to mana whenua access to public conservation land are described in detail in the Wai262 claim and subsequent report 'Ko Aotearoa Tēnei'.

These concerns were reflected in the Partial Reviews of the Conservation General Policy and General Policy for National Parks regarding the Treaty of Waitangi. The Partial Reviews identified limitations within the legislative and policy framework and proposed recommendations to better recognise Te Tiriti obligations, including ensuring mana whenua access to and use of all lands, waters, species and resources managed within the conservation system, including within the context of permissions and concessions.[19]

Mahinga kai practices fall within the current Conservation General Policy's definition of customary use. Similarly, the National Policy Statement for Indigenous Biodiversity (NPS-IB) provides for sustainable customary use of indigenous biodiversity in accordance with tikanga. Despite this, process barriers remain that can constrain the exercise of customary use and limit the effective implementation of the NPS and General Policy.

Removing such barriers to customary access and use enables mana whenua to exercise kaitiakitanga of taonga species and places and sustain cultural practices.

What needs to happen

- DOC, Fish & Game New Zealand and other conservation agencies should implement the recommendations of the Wai 262 report concerning access to taonga and the conservation estate.[16] Such recommendations include:
    - Strengthen and formalise the DOC–iwi partnership, including through statutory Kura Taiao governance structures, and address legislative barriers to the exercise of kaitiakitanga.
    - Ensure the Conservation General Policy and General Policy for National Parks reflect the full range of Te Tiriti / Treaty principles recognised by the courts and Waitangi Tribunal, including their capacity to evolve over time.
    - Establish statutory co-management of customary use between DOC and pātaka kōmiti (iwi committees), with a

presumption in favour of customary harvest and access where appropriate conditions are met.
    - Reform the Wildlife Act 1953 to remove Crown ownership of protected wildlife and provide for shared management and lawful mana whenua ownership of taonga derived from protected wildlife.
    - Give greater recognition and preference to mana whenua interests in taonga when making decisions about commercial activities on the conservation estate, and formalise consultation with mana whenua regarding concessions within their rohe.
- DOC should implement the recommendations made in its Partial Reviews.
- The Minister of Conservation should progress the return of public conservation lands to mana whenua, including through:
    - the return of stewardship land to iwi authorities, either by reclassification (section 18 of the Conservation Act), disposal (section 26) or exchange (section 16A);
    - the appointment of iwi authorities as administering or joint administering bodies in respect of public reserve land using sections 35 or 30 of the Reserves Act; and
    - where appropriate, the vesting of reserves in iwi authorities under section 26 of the Reserves Act.
- DOC should streamline and simplify approval processes to enable mana whenua to access public conservation land for mahinga kai and to exercise kaitiakitanga, including monitoring and managing sites and freshwater species. This includes provision and funding for the research and monitoring aspects of mahinga kai programmes, particularly as this relates to public conservation land classified for scientific reserve purposes.
- DOC and iwi authorities could enter into access arrangements to public conservation land, and certain species therein, as a form of continuing settlement commitments. This could include, for example, securing Ngāi Tahu whānau access to and use of Deed of Recognition areas and nohoanga located within national parks and scientific reserves. Such discussions could take place as part of the transition period under the Natural Environment Act 2026 and the Planning Act 2026.
- Current conservation reforms, including changes to permitting, conservation legislation, national policy and area planning, provide an opportunity to resolve access barriers. Conservation legislation, fisheries regulations and the Conservation General Policy must continue to provide for customary use of traditional materials and indigenous species by mana whenua.

Examples of what organisations are doing

- There are few examples where mana whenua have been able to secure access to public conservation land to undertake mahinga kai outside of a Treaty settlement process. The disestablishment of Te Urewera National Park through the Ngāi Tūhoe Treaty of Waitangi settlement remains the most notable example of a legislative change to enable customary use.
- There are opportunities to facilitate mana whenua access to conservation land through existing legislative and policy levers and DOC processes. For example, Te Awarua-Waituna Wetlands is a scientific reserve. There is scope for DOC (as the administering body) to make provision for, and fund, a mahinga kai programme led by Ngāi Tahu ki Murihiku that incorporates data collection and other scientific monitoring to give effect to the scientific purpose of the reserve. However, changes in legislation and land classification are required to enable mana whenua management of customary use.
- The Minister of Conservation has (on at least one occasion) vested a reserve property in a post-settlement governance entity that was not provided for at the time of settlement. In 2023, the Minister vested the Morning Star Beach Recreation Reserve in Te Rūnanga o Ngāi Tahu, subject to a right of way, and delegated certain powers to Te Rūnanga o Ngāi Tahu under the Reserves Act.[20]
- In 2021, the Stewardship Land Reclassification Project was established to accelerate the reclassification of stewardship land. This involved the creation of independent national panels to recommend revised classifications for South Island stewardship land, and a Ngāi Tahu-appointed mana whenua panel to work alongside the national panels for areas in the Ngāi Tahu takiwā. In 2025, the Minister of Conservation publicly notified intentions to reclassify 513,042 hectares of stewardship land within the western South Island based on the panels' recommendations.[21]





The mahinga kai pā constructed by Awarua Rūnaka alongside the Waituna Wetlands Scientific Reserve to enable mana whenua to continue their mahinga kai practices. Photographer: Dave Allen; March 2025.

05. Develop an effective regulatory system for the whitebait fishery to ensure it is sustainable and includes decision-making and governance roles for mana whenua

Why this matters

DOC manages the whitebait fishery under the Conservation Act and the Whitebait Fishing Regulations 2021. The whitebait fishery targets the juvenile life stages of six native fish species, all classified as threatened or at risk of extinction. Habitat loss and degradation remain the primary drivers of decline, but fishing pressure is an additional stressor. Under the Whitebait Fishing Regulations, there are no rules to regulate the volume of whitebait that fishers can catch and sell, nor is there any requirement for fishers to record or report their catch. The lack of reliable data on catch, fishing effort, stock status and harvest trends makes it difficult to manage the fishery or assess whether the fishery is sustainable.[22]

Further, the current legislative settings create barriers to adaptive management of the fishery. For example, it is not possible to alter the whitebait fishing season without a full regulatory review process. In contrast, trout fishing seasons and catch limits can be varied annually via a notice approved by the minister. The whitebait fishery is a recreational fishery with no licensing structure and therefore, no dedicated funding source.

Whitebait is the only recreationally caught wild food that can legally be sold in New Zealand. The sale of whitebait is largely ungoverned and untraceable; unlike hunters that supply game meat for human consumption, there are no requirements for whitebait suppliers to be verified or provide information such as the location of harvest.

The lack of catch reporting requirements has made it difficult to detect trends in the fishery, estimate the economic value of the fishery, manage food safety and collect tax on whitebait sales. MPI's recent guidelines for commercial game hunters could provide a model for improving the traceability and safety of the commercial fishery.[23]

What needs to happen

- DOC should explore the policy options available to improve the Whitebait Fishing Regulations 2021 to ensure a sustainable fishery that enables decision-making and governance roles for mana whenua.
- Policy options such as notice making powers and a licensing framework should be explored with mana whenua.
- DOC should use its regulation making powers under the Conservation Act to make customary fishing provisions to prioritise mana whenua-led customary harvest. These provisions are currently in place for marine fishing.
- MPI should strengthen the traceability of commercial whitebait sales by applying similar standards to those used for other commercial wild-harvest foods. This could include a supplier verification system that requires clear documentation of whitebait harvesting, handling, and sale. Commercial whitebait sellers could also be required to operate under a Food Control Plan under the Food Act 2014, ensuring traceability, accountability, and food safety throughout the supply chain from harvest to consumer.

Examples of what organisations are doing

Te Rūnanga o Arowhenua has its own customary permit system in place that elevates tikanga, kawa and whakapapa to inform matamata / whitebait governance. This includes rules and processes to manage cultural harvest of matamata so that it is sustainable. Fishers must have whakapapa in order to fish; they cannot sell matamata and they are expected to provide koha back to marae. This approach is enabling whānau to reconnect to waterways and their inherent whakapapa.



Arowhenua kaumatua whitebaiting at the Ōpihi River mouth. Photographer: Dave Allen; October 2024.

06. Suspend the commercial harvest of longfin tuna and protect tuna as taonga

Why this matters

Tuna / freshwater eels are an important taonga to iwi and hapū across the country and have long been valued as a source of food, recognised for their significance in whakapapa, and as tohu and kaitiaki of waterways. Mana whenua seek to protect and manage tuna as taonga for the benefit of future generations and in accordance with whakapapa, mātauranga and cultural practices.[24,25]

Tuna are the only freshwater stocks that are included in the quota management system (QMS). There are widespread concerns that populations of longfin tuna are declining and at risk of extinction, due to a combination of historical overexploitation and the ongoing cumulative effects of harvesting, habitat loss, reduced connectivity, climate change and pollution.[26,27] Longfin tuna have a number of characteristics that make them vulnerable to overexploitation, including their catadromous life history, one-time spawning behaviour, slow growth, and environmentally determined sex.[28] They are easily caught – in particular large females – and their habit of extensive upstream migrations means that colonisation can take many years in large catchments and that they are highly impacted by hydro dams and weirs. Together with limitations to monitoring data and population information, these characteristics make it difficult to assess the status of tuna stocks or the sustainability of the fishery.[29]

While Treaty settlements provided for commercial and customary tuna harvesting by Māori, many iwi have ceased commercial harvesting due to concerns about the health of eel populations and to assist in revitalising customary harvest.[30]

What needs to happen

- The Ministry for Primary Industries (MPI) should suspend commercial harvest of longfin tuna until the fishery's long-term sustainability is better understood, mana whenua agree on whether tuna should remain in the QMS and, if so, settings are in place to sustain customary harvest and preserve the species. Suspension should occur in partnership with mana whenua for each quota management area, potentially facilitated by Te Mana o Ngā Tuna advisory group, through:
  - Reducing the Total Allowable Commercial Catch (TACC) for longfin tuna stocks to a practical level of zero, or
  - Imposing a temporary closure on fisheries waters to replenish longfin tuna stocks and provide for mana whenua non-commercial use and management.
- MPI and DOC should undertake a comprehensive tuna population assessment that integrates information from diverse methodologies across a wide range of freshwater environments and accounts for all human impacts and threats to tuna populations.[29] This should involve:
  - collaborating with mana whenua to explore incorporating their research and monitoring data.[31]
  - identifying metrics to assess long-term population health and support sustainable tuna harvest.
- Te Mana o Ngā Tuna should lead discussion among iwi and hapū to develop further recommendations on protecting and managing tuna as taonga, and whether tuna should remain in the QMS.

Examples of what organisations are doing

Te Rūnanga o Arowhenua has put in place a freshwater mātaitai reserve on the Ōpihi River to prevent commercial tuna harvesting and restore the longfin population and customary harvest.[32,33]



Netting tuna in South Canterbury. Photographer: Dave Allen; February 2024.



Preparing tuna as part of a mahinga kai wānanga at Arowhenua marae. Photographer: Dave Allen; February 2024.

07. Establish a coordinated interagency system for preventing and responding to mass fish kill events

Why this matters

Mass fish kill events are occurring with increasing frequency, endangering populations of highly valued and threatened species. They have multiple causes, including pollution, adverse weather events, disease, fish passage barriers and deoxygenation, which are compounded by climate change and land-use intensification.[2,34]

Responsibilities for mass fish kill events are spread across regional councils, DOC, MPI and Fish & Game, which presents a significant communication and coordination challenge. There is currently no nationally standardised approach for reporting or responding to mass fish kills, and no national database to record all events.[34]

What needs to happen

- DOC and MPI should develop a national database for recording all mass fish kill events to enable identification of fish kill hotspots, trend analysis and cause-effect diagnostics. Analysis of this information should inform preventative actions.
- Regional councils, DOC, MPI and Fish & Game should work with mana whenua to develop regional standard operating procedures that set out:
  - agency roles and responsibilities (e.g., regional councils lead coordination of response and information sharing, MPI leads disease investigation, mana whenua and DOC lead recovery and long-term response);
  - interagency communication channels, such that 'no door is the wrong door' when a potential mass fish kill event is reported by the public;
  - key contacts within each organisation;
  - guidelines for 'emergency' fish rescue and translocation operations; and
  - post-event review and reporting requirements.

  This approach could be trialled in one region, before being implemented nationally.
- Agencies should identify and prepare for periods of elevated risk (e.g., El Niño) and increasing stressors due to climate change.

Examples of what organisations are doing

Following a mass kanakana / lamprey mortality event in the Waikawa River (Murihiku) in 2020, DOC and mana whenua developed a mortality response framework to guide reporting, specimen collection and MPI notification, and promote coordinated responses among agencies and rūnanga.[35]

08. Remediate and prevent the creation of new fish passage barriers and manage waterbodies to facilitate the movement and migration of freshwater fish

Why this matters

Instream structures and diversions remain significant barriers to the movement of threatened and taonga fish species, including tuna / freshwater eels and kanakana / lamprey. Weirs, culverts, fords, dams, flood gates, pump stations and diversions block upstream and downstream movement, preventing migratory species from completing their life cycle.[36]

Poorly planned mitigation and remediation can fail to improve habitat connectivity for target species and could facilitate invasive species spread. For example, fish exclusion screens widely used to prevent entrainment at irrigation intakes and pump stations often fail to exclude small-bodied and juvenile fish, resulting in fish removal and mortality.[37,38]

DOC and regional councils are responsible for managing fish passage in waterways under the Freshwater Fisheries Regulations 1983, Fast-track Approvals Act 2024, and Resource Management Act 1991 and associated national policy instruments. This legislation requires infrastructure owners and operators to provide for, maintain and monitor fish passage at their structures. Mana whenua and environmental entities play important roles in promoting and undertaking fish passage barrier remediation.

What needs to happen

- All agencies, community groups and environmental entities should use tools such as the Fish Passage Assessment Tool to identify, assess, and record instream structures and barriers to aid prioritisation and management decisions.
- Infrastructure owners should remediate existing fish passage barriers and ensure all new instream structures provide appropriate fish passage in accordance with best practice guidelines. Ongoing management should include monitoring and maintenance to ensure that fish passage solutions are effective. Regional councils should expand fish passage remediation and management, including by:
  - developing and implementing fish passage action plans to undertake place-based remediation and mitigation of existing barriers;
  - working collaboratively with infrastructure owners and operators to identify, prioritise, remediate, and improve the management of floodgates and pump stations to support upstream and downstream fish passage;
  - undertaking compliance monitoring and enforcement action for consented structures; and
  - supporting and participating in the regional council-led group created to coordinate fish passage management.
- DOC should adopt a coordinated and collaborative approach to improving fish passage management by partnering with mana whenua, councils, infrastructure owners, industry, landowners, researchers, and communities. This includes:
  - recognising and supporting the work mana whenua undertake in fish passage remediation and management;
  - developing and sharing practical fish passage guidance and tools with people and organisations whose activities affect fish passage; and
  - requiring improved fish passage management at hydroelectric power stations, in partnership with mana whenua.

Examples of what organisations are doing

Mana whenua are currently working with agencies and infrastructure operators to undertake fish passage remediation and mitigation in many areas. Ngāi Tahu ki Murihiku and Te Rūnanga o Arowhenua whānau have been leading tuna trap-and-transfer programmes above and below hydroelectric power stations on the Waiau and Waitaki Rivers for many years.[39,40]



Hokonui kaimahi undertake trap and transfer to assist fish migration upstream of a barrier. Source: Hokonui Rūnanga; September 2026.

09. Streamline species translocation processes for mana whenua where translocation or restocking is needed to protect or restore indigenous freshwater fish populations

Why this matters

Mana whenua have a long history of moving species between waterways to create mahinga kai and restore populations impacted by adverse events. Today mana whenua engage in conservation translocations to preserve and protect fish populations (for example, moving fish in drying river reaches up or downstream to areas with permanent flow), to reintroduce species to areas where they have been extirpated, and to introduce species to newly created or restored habitat.[41]

Translocations can create risks for species and ecosystems, including changes to food webs, accidental introduction of invasive species, the transmission of disease and impacts on population genetics. Iwi and hapū use their mātauranga – in particular, the whakapapa of fish populations – alongside scientific information to assess and manage these risks.

The legislative framework for translocation of fish species is fragmented. Current permit requirements and processes under the Conservation Act (26ZM) create regulatory barriers to conservation translocations, including excessive paperwork and delays.[41]

These regulatory barriers inhibit mana whenua from protecting and restoring indigenous species. Timely approval for translocation is critical to protect indigenous species from the effects of climate change, including waterways drying up, changes in water temperatures and the spread of invasive species through weather events.

What needs to happen

- DOC should work with mana whenua and MPI to develop a streamlined partnership-based process that enables efficient, timely approval for mana whenua-led translocations while retaining appropriate biosecurity and ecological safeguards.
- DOC could work with appointed administering bodies (such as Te Arawa Lakes Trust) and tangata kaitiaki / tiaki to ensure the recommendation of bylaws authorising the relocation of taonga species to enhance stocks (under settlement legislation or customary fisheries regulations) is supported by departmental practice under s26ZM of the Conservation Act.

Examples of what organisations are doing

There is a clear precedent for translocating indigenous species. Hokonui Rūnaka relocate kanakana / lamprey in the Mataura River for the purpose of enhancing stocks in the upper catchment. The authority to translocate kanakana is derived from the Fisheries (South Island Customary Fisheries) Regulations 1999, and Hokonui Rūnaka have a role in appointing tangata tiaki / kaitiaki within the Mataura Mātaitai reserve.

DOC worked with Kāti Huirapa Rūnaka ki Puketeraki to develop a partnership-based approach for the collection and translocation of kōura / freshwater crayfish. This approach provides a model for future translocations; Ōraka-Aparima Rūnaka is working with DOC to streamline translocations in their rohe based on the work by Kāti Huirapa.



Hokonui kaimahi gathering adult kanakana from the rocky outcrops below the weir on the Mataura River. Source: Hokonui Rūnanga; 2025.

Hokonui kaimahi release kanakana into the upper Mataura River. Source: Hokonui Rūnanga; 2026.



10. Establish introduced-fish-free areas and protect existing areas to restore indigenous fish species

Why this matters

Introduced species like trout, carp and rudd have caused widespread reductions in the distribution and abundance of indigenous freshwater fish in Aotearoa.[42–44] Reducing, removing or excluding introduced species from specific areas is critical to safeguarding and restoring indigenous fish communities.[45–47]

What needs to happen

- Iwi and hapū must be involved in decision-making and management of introduced-fish-free areas to exercise and uphold mana motuhake.
- DOC should map and prioritise protection of areas that support healthy populations and full assemblages of indigenous fish species.
- Where introduced species are widespread and harming indigenous fish populations, it may be necessary to create introduced-fish-free areas. This could involve installing barriers to exclude introduced species or ceasing sports fish hatchery stocking. This should include:
  - Fish & Game, DOC and mana whenua working together to identify priority areas for removing, excluding or reducing introduced species.
  - Carefully designed trials to reduce or remove introduced fish, with monitoring to assess ecological and cultural outcomes and manage potential unintended consequences (for example, introduced fish may help to control invasive species through predation).

Examples of what organisations are doing

Te Arawa advocates for a destocking trial for trout at Lake Ōkataina, Rotorua, with Te Arawa Lakes Trust and Fish & Game, coupled with monitoring of kōura / freshwater crayfish, kōaro and other priority species to determine their response.

Fish & Game and DOC collaborated with the regional council and landowner to install an electric fish barrier on Haldon Pastures Farm to protect a population of the nationally critical kōwaro / Canterbury mudfish. By installing the barrier on Bealey Stream and translocating any trout and tuna present downstream, the parties have created a sanctuary that expands habitat for kōwaro tenfold while having negligible effect on other fisheries.[48]

DOC and Fish & Game collaborated on a research project to understand the effects of trout removal on native galaxiid populations in high country streams. Trout were translocated to nearby fishable waterways, enabling analysis of how galaxiid populations differ in streams with reduced trout density and, therefore, which mechanisms and conditions facilitate galaxiid persistence.[49]

11. Dedicate a portion of sports fishing licence income and organisational resources to reduce and mitigate the negative effects of sports fish on indigenous freshwater species

Why this matters

Fish & Game generates income through the collection of sports fish licence fees, which must be used to fulfil its statutory functions. Some of this is spent on species management and habitat protection. Ring-fencing a portion of income and organisational resources for indigenous fish restoration would recognise the effects of introduced fisheries on indigenous species and support shared stewardship of freshwater ecosystems.

Dedicated resourcing would require legislative amendment to Fish & Game's empowering Acts (currently the Conservation Act and Wildlife Act 1953).

What needs to happen

- A Minister should consider introducing a dedicated freshwater habitat restoration fee that is charged in addition to adult sports fish licence fees. The fee's purpose should explicitly include restoring habitat for indigenous freshwater species.
- Ring-fenced income could be used to restore lowland wetlands (critical spawning habitat) and create and maintain trout barriers to protect intact indigenous fish communities.
- In addition, Fish & Game councils can support indigenous fish restoration by contributing their organisational resources, such as staff time, expertise and advocacy.

Examples of what organisations are doing

Fish & Game set up the Game Bird Habitat Stamp Programme to raise funds for the protection and enhancement of game bird or other wildlife habitat. Under the Wildlife Act 1953, a game bird habitat stamp must be affixed to every game licence, with the stamp fee (currently $5) approved annually by the Minister of Conservation. The stamp programme has raised over a million dollars for game bird habitat since it began in 1993. As many game birds are native species, habitat enhancement has benefited native birds and ecosystems.[50]



Group visit to Waituna Lagoon, where Fish & Game staff provided expertise on wetland restoration to improve habitat for freshwater fish. Photographer: Dave Allen; 2025.

12. Recognise the authority of mana whenua to utilise introduced species as an opportunity for reconnection, including as part of mahinga kai and pest control programmes

Why this matters

Introduced fish and game species have displaced traditional mahinga kai species in many areas, in some cases exacerbated by historical culls of indigenous species or the introduction of invasive species via fishing equipment.[17] Introduced species can provide an important mechanism for mana whenua to connect to freshwater places and sustain cultural practices and mātauranga.[51,52]

Current legislation does not allow Fish & Game to adequately recognise mana whenua authority to undertake and manage customary harvest of introduced species. Limited information sharing regarding the management of introduced species (e.g., stocking rates) impacts the ability of mana whenua to steward their taonga species.

What needs to happen

- DOC and Fish & Game should enable iwi and hapū to manage the customary harvest of introduced fish species. This would require changes to legislation.
    - This should include information sharing by Fish & Game so that iwi and hapū have access to relevant monitoring data and other information to manage customary harvesting.
- Mana whenua could consider opportunities to exercise their stewardship role and authority, undertake cultural practices or revitalise and transmit mātauranga through activities involving introduced species.
- Government agencies should support mana whenua to exercise their authority over waterways and sustain their cultural practices through harvesting and management of introduced species. This could involve:
    - enabling mana whenua to take on contracts for species monitoring, management or eradication;
    - supporting and promoting mana whenua-led biosecurity initiatives;
    - facilitating mana whenua access to introduced species for mahinga kai, including through permits, licences or agreements; and
    - identifying and addressing barriers to the use of cultural practices and mātauranga as part of biosecurity and species management.

Examples of what organisations are doing

- Mōrihana / introduced goldfish became an important mahinga kai for Te Arawa whānau during the 19th and 20th centuries, which led to them being recognised as a taonga species in Te Arawa Lakes Fisheries Bylaws.[53]
- Te Arawa and Tūwharetoa hold sports fishing licences that they can distribute among whānau, although these arrangements are limited to a small number of individuals and require annual licence renewals.
- Te Arawa Lakes Trust have demonstrated the potential to use introduced-species management as a pathway for reconnection:[52]
  - Te Arawa Lakes Trust's catfish removal programme enables rangatahi to connect with their lakes and exercise stewardship of indigenous species, as well as providing employment opportunities for whānau;
  - Te Arawa Lakes Trust has taken on contracts for aquatic weed control and monitoring, enabling them to undertake regular surveillance and work towards the restoration of lakes as mahinga kai.
- In Murihiku, the Rangatahi Tumeke Charitable Trust uses introduced species to enable rangatahi to learn about traditional mahinga kai practices and reconnect with their environment, including by harvesting and preparing local wild foods such as trout, deer and pigs.[54]



Te Arawa Catfish Killas retrieving catfish caught using fyke nets. Source: Te Arawa Lakes Trust; July 2025.

13. Partner with mana whenua to develop a proactive coordinated response to freshwater biosecurity incursions to protect indigenous species

Why this matters

Ministry for Primary Industries leads the prevention, control and eradication of harmful pests and diseases, while DOC, regional councils and Fish & Game have responsibilities for managing and preventing the spread of pest species under the Conservation Act, Freshwater Fisheries Regulations 1983 and Biosecurity Act 1993.

Mana whenua involvement in biosecurity benefits all of Aotearoa, as iwi and hapū whakapapa to and have enduring relationships to their waterways and are well positioned to monitor and respond to emerging issues. Mana whenua have taken action to protect their waterways from the spread of invasive freshwater species such as didymo and gold clam, including through rāhui and implementation of 'clean, check, dry' policies. The Tūwharetoa Māori Trust Board, which owns the bed of Lake Taupō, prohibited a boating event from occurring on the lake in 2024 due to the risk of a gold clam incursion.

However, mana whenua authority and actions have not always been upheld by government agencies, resulting in public division and confusion over the biosecurity response. A more proactive approach to partnership is needed, focused on building relationships, capacity and communication pathways to enable a more effective joint biosecurity response.

What needs to happen

- Government agencies and mana whenua should work together to develop a proactive approach to biosecurity that builds local capability to prepare for, identify and respond to incursions. This should involve putting appropriate monitoring systems in place and ensuring there are kaitiaki in roles where they can respond to emerging issues.
- Where new species or disease incursions are predicted or detected in a region, agencies should partner with mana whenua to develop and implement a coordinated biosecurity response that safeguards indigenous freshwater species and upholds mana motuhake. This could include:
  - development of action plans for likely biosecurity incursions (e.g., zebra mussel incursion in the Waikato), to enable organisations to prepare their response;
  - early and proactive information sharing with mana whenua to enable assessment of biosecurity risk and consideration of options;
  - joint or coordinated public messaging by agencies and mana whenua about the threat and necessary actions;
  - coordinated use of agency powers and tikanga-based management practices (e.g., rāhui) to implement biosecurity protections; and
  - development of monitoring and clear communication channels to ensure timely information about the threat and response.
- There is also a need for greater regional coordination of pest management plans and actions between agencies and mana whenua. This may involve, for instance, pest management initiatives within a mātaitai reserve that are led and / or developed by the tangata tiaki / kaitiaki.

Examples of what organisations are doing

There are several examples of a coordinated biosecurity response for the Te Arawa Lakes. The Bay of Plenty Regional Council's Pest Management Plan sets a strategic direction to work in partnership with other parties that have pest management responsibilities and interests.[55] The plan records that the council will achieve this, in part, by supporting Māori pest management initiatives. For example:

- The regional council engaged in early and sustained collaboration with Te Arawa Lakes Trust once catfish were detected in Lake Rotorua, leading to the establishment of the celebrated Te Arawa Catfish Killas programme.
- When gold clams were detected in the Waikato River, concerns about their potential spread via fishing equipment led Ngāti Tarāwhai to place a rāhui on Lake Ōkataina. MPI supported this response by placing a temporary closure on the lake. The iwi, regional council and MPI have since worked together to install a gate at the lake entrance and put a check, clean, dry process in place.

Iwi-led initiatives demonstrate the value of locally grounded biosecurity responses:

- Monitoring of kanakana / lamprey populations by Hokonui Rūnaka has provided valuable data and insights on lamprey reddening syndrome, resulting in research to understand the emergence of this disease and a local biosecurity response plan.[35]
- Te Arawa Lakes Trust drew on mātauranga Māori to develop an innovative approach to aquatic weed suppression (uwhi / flax mats) that also provides habitat for native species. A dive team monitor the effectiveness of the mats and their aquatic weed spraying programme, providing opportunities for regular biosecurity surveillance.[56]



A large uwhi mat created to suppress aquatic weeds in Te Arawa lakes. Source: Te Arawa Lakes Trust.

14. Establish tikanga-led collaborative decision-making across freshwater governance and management organisations

Why this matters

Responsibility for freshwater fish is distributed across MCERT, DOC, Fisheries New Zealand, regional councils, Fish & Game councils and iwi. Their mandates and activities overlap – for example, in fish passage remediation, habitat restoration, environmental monitoring, introduced-species management and fisheries regulation – but their decisions are not always coordinated.[1]

Collaborative processes can improve information sharing, learning and alignment across organisations. However, successful collaboration requires clear purpose, appropriate representation, committed leadership, adequate resourcing and processes that recognise differences in authority and power.[57] Where mana whenua participate, tikanga-led processes and enduring relationships provide a stronger basis for meaningful engagement and shared decision-making.[58,59]

What needs to happen

- Organisations with freshwater fisheries responsibilities should convene enduring cross-agency forums involving mana whenua to coordinate policy, management actions and public messages at national, regional and rohe scales. The scale of forums should align with their purpose (e.g., national for legislation review) and facilitate mana whenua involvement.
- Forums should use tikanga-led processes, agreed with participating mana whenua, to build relationships, support shared learning and develop durable agreement on indigenous freshwater fish priorities.
- Forums should identify shared priorities, clarify agency responsibilities, coordinate work programmes and develop consistent messages where this is appropriate.
- Agreements should record responsibilities, timeframes and reporting requirements so that collaboration results in action rather than discussion alone.
- Forums should communicate beyond its immediate membership and provide opportunities for affected communities and organisations to contribute. Collaborative groups cannot assume that their decisions will automatically gain understanding or trust.[60]

Examples of what organisations are doing

There are a number of examples of tikanga-based frameworks or primary direction-setting documents that have been developed for the management of natural resources. In particular, Te Awa Tupua (Whanganui Awa) and Te Ture Whaimana (Vision and Strategy for the Waikato Awa) are examples of integrated frameworks that establish a whole of catchment approach to the management and governance of significant waterbodies in Aotearoa, comprised of mana whenua and Crown representatives, as well as other key stakeholders including district and regional councils and Fish & Game.

The Working Group provides one possible model. It used consensus-based discussion, whakawhanaungatanga and tikanga-focused learning to develop shared recommendations across organisations and perspectives. Subject to agreement from its members, a clear mandate and ongoing resourcing, the group, or a successor body could provide an advisory forum for future cross-agency collaboration.



Working Group meeting with Te Arawa Lakes Trust. Photographer: Chanelle Murphy; September 2023.



Working Group visit to Bealey Stream electric fish barrier. Photographer: Vanessa Tipoki; November 2024.

15. Strengthen local partnerships between government agencies and mana whenua through joint place-based initiatives supported by national-level relationships

Why this matters

Relationships between mana whenua and agencies are strengthened through sustained collaborative work in particular places. Joint projects can create practical opportunities to share knowledge, understand responsibilities and constraints, demonstrate mutual accountability and build trust.

Where local relationships are absent, limited or strained, national-level relationships can help open dialogue, secure organisational commitment and address institutional barriers. They can also provide local staff and mana whenua with access to senior decision makers, resources and wider networks.

Evidence from freshwater planning shows that meaningful collaboration depends on enduring relationships, appropriate tikanga and adequate resourcing for iwi and hapū.[58] National-level relationships should be used to enable and strengthen, rather than substitute for, direct partnerships between mana whenua and the staff who make or implement local decisions.

What needs to happen

- Regional councils and the local branches of central government and fisheries agencies should establish and adequately resource enduring, place-based partnerships with mana whenua. These partnerships should be built through jointly designed initiatives that address mana whenua priorities and provide for shared learning, decision-making and action.
- MCERT and the national leadership of relevant agencies should support these partnerships by removing institutional barriers and providing resources, guidance and escalation pathways.
- Mana whenua should determine their representatives, priorities and preferred ways of working and should be resourced for their governance, technical and mātauranga contributions.

Examples of what organisations are doing

Te Rūnanga o Arowhenua has built relationships with several organisations to increase its direct involvement in freshwater decisions. Relationships developed with Fish & Game at the national level through Fish Futures helped enable more constructive local engagement, including acknowledgement of and an apology for past practices, opportunities for joint projects, rangatahi pathways into freshwater science and potential iwi fish-ranger roles.

Te Arawa iwi continue to experience local relationship pressures associated with competing interests, invasive species and entrenched institutional positions. In these circumstances, established national relationships can be used to engage senior agency leaders and support more constructive engagement between mana whenua and local staff.

Endnotes and references

i. It is important to note that the rohe partner groups each operate within a unique Treaty settlement context. For the purposes of this report, the relevant Treaty settlements include the Te Arawa Lakes Settlement and the Ngāi Tahu Settlement. Each Treaty settlement is an expression of rangatiratanga and includes multiple forms of redress that intersect with, culturally inform, and set the primary direction for freshwater fish governance within a particular rohe or takiwā from an ao Māori perspective. Importantly, each Treaty settlement contains protections for and promotes sustainable levels of indigenous fish populations (taonga species).

ii. Working Group hui focused on decolonising freshwater fish science and management; fundamental issues in fish governance; opportunities to align with Te Tiriti, freshwater policy and resource management reform; and alternative governance models. This included presentations by Oceanlaw New Zealand and Kāhui Legal on the implications of current environmental, fisheries and Treaty law for freshwater fish management in Aotearoa.

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