Environment Canterbury
Regional Council
Kaunihera Taiao ki Waitaha

Mahinga kai:
A GUIDE FOR RURAL CONSULTANTS AND AUDITORS

The industry-agreed Good Management Practices are available at www.ecan.govt.nz/your-region/farmers-hub/gmp

Introduction:

Are there freshwater crayfish in that drain? Lizards in that flax? Whitebait in that creek?

There is a term for these treasures and the habitats that support them – in Māori, it is mahinga kai. Today, under the Canterbury Land and Water Regional Plan, farmers have responsibilities to protect and enhance mahinga kai values as part of their work on water quality and stream health.

Mahinga kai is about the value of natural resources – our birds, plants, fish, and other animals and resources that sustain life, including the life of people.

For Ngāi Tahu, it is critical to manage these resources to allow people to continue gathering kai (food) in the way the ancestors did, and about mana and manaakitanga - the ability to welcome and host visitors by providing bountiful produce, as a demonstration of hospitality and respect. These things are the essence of kaitiakitanga, or what many people today call guardianship.

This practice remains a foundation of Ngāi Tahu values today, although it has become increasingly difficult as sites, species, and habitats are lost, degraded, or compromised.

Why is it important today?

Te toto o te tangata, he kai; te oranga o te tangata, he whenua.

Food supplies the blood of the people; their welfare depends on the land.

These days, farmers and landowners are the custodians of the land and the resources they contain. For many, an affinity for land and resources ensures that they now assume responsibility for protection of mahinga kai, as Ngāi Tahu tūpuna or ancestors did before them.

Mahinga kai literally means 'to work the food' – which is basically what farmers do – just often with domesticated plants and animals versus their wild cousins.

Watch the short video at www.ngaitahu.iwi.nz/culture/mahinga-kai for an overview of the ongoing importance of mahinga kai to Ngāi Tahu people.

What is mahinga kai?

Mahinga kai areas are likely to be those special areas on a property that are already actively being taken care of for their environmental or biodiversity significance - but it could also be for things that a farmer is not aware of - the small and little things.

Because it refers to numerous species and inter-relationships rather than something specific, there is no one list of exactly what is and isn't mahinga kai for any given property. Mahinga kai includes things such as species, natural habitats, materials and practices used for harvesting food, and places where food or resources are, or were, gathered.

This includes:

- All waterways, drains (with water), wetlands, and springs
- Native vegetation and riparian areas
- Areas with specific mahinga kai species and their habitats.

Mahinga kai species largely relate to indigenous plant, bird and fish species and their ecosystems and habitats. Search for 'mahinga kai species guide' at ecan.govt.nz to view mahinga kai species found in and around Selwyn Te Waihora (Lake Ellesmere). Many of these can also be found right across the region.

What is Good Management Practice for mahinga kai?

Farmers implementing the Industry-agreed Good Management Practices will already be starting to manage effects on water quality and helping to protect mahinga kai.

Now, farmers also need to consider how they will implement GMP practices to specifically address risks on mahinga kai values.

For auditors, the risks on mahinga kai are no different from the environmental risks you are aware of on farm. However, the 'level' of risks can become less acceptable where the resource is mahinga kai.

A simple way of understanding this risk is to ask the following questions:

Would I be happy to tell my family that it was safe to eat from that site?

Am I happy with the health of the area if it is used to produce, procure, or protect food?

In practice, farmers need to think about the risks that exist, with an appreciation that in the context of mahinga kai those risks may be higher. Practices may require adjusting to reflect this.

Nutrient management

Mahinga kai habitat and species are sensitive to nutrient inputs. Nitrogen and phosphorus losses to waterways can cause undesirable plant or algal growth, degrade habitat, and create risk for human consumption of mahinga kai species.

The proximity of farming land-use to sensitive environments like rivers, lakes and wetlands and drains is important to manage. High groundwater levels and flood prone areas can increase the risk of overland flow of nutrients into water, as well as leaching because of oversaturation of soils.

Intensive winter grazing can result in increased risk of sediment, effluent and nutrients entering lakes, rivers, streams and drains. This can impact on mahinga kai habitat, species, and sites, and the ability of people to access, gather, and eat mahinga kai safely.

Collected effluent management

The discharge of stock effluent to land or waterways can impact on water quality, and therefore river, lake and wetland health, mahinga kai habitat, species and sites.

The presence of effluent in lakes, streams and wetlands is also inconsistent with the use of these environments and their associated species for food gathering.

Waterbody management: drains, springs and wetlands

Riparian and wetland areas provide buffering, shade and habitat for mahinga kai species, and can help protect water quality by reducing and absorbing overland flow of nutrients and sediment.

Good stewardship over waterways, springs, lakes and wetlands is key to managing the health of mahinga kai values.

The network of waterways is particularly important for indigenous fish species, and can be a receiving environment for nutrient, effluent and sediment run off.

How water courses are managed has a direct impact on water quality, and mahinga kai habitat. This can also directly impact the safety of mahinga kai for food gathering.

Wetlands and their associated springs are highly valued by Ngāi Tahu as they can contain the most diverse range of mahinga kai species. Wetlands also function to protect water quality of the rivers and lakes, by buffering and filtering the effects of land use before it reaches these environments.

Protecting remnant wetlands as well as developing new or constructed wetlands to help mitigate or treat land-use impacts is a key method in protecting and enhancing mahinga kai values.

Vegetation clearance

Vegetation clearance for farm expansion, drain cleaning, or other land use can lead to the loss of indigenous and mahinga kai plants, birds and fish, as well as habitats that are an integral part of the lake environment and ecosystem.

Vegetation clearance can also contribute to soil erosion, and sediment and chemical inputs to waterways or the lake, impacting on water quality and mahinga kai habitat.

Indigenous plant and animal communities and their habitats are essential to the value of mahinga kai. Managing the effects of land use on biodiversity enables lakes and rivers to support a healthy diversity and abundance of mahinga kai species.

Irrigation management

Mahinga kai habitat, species and sites are dependent on sufficient water quality and quantity. Irrigation, particularly inefficient irrigation systems, can reduce flows in spring fed waterways, such as those around Te Waihora, which reduces the available habitat for fish species, and can also result in ponding, run off, and leaching of contaminants into surface water.

Soil management

Maintaining or improving the conditions of soils to avoid the movement of sediment, phosphorus and other contaminants into water protects lake health and mahinga kai habitat and species.

Point source management

Water quality can be degraded as a result of leaching or run off from poorly designed or located silage, rubbish or offal pits, and this impacts on mahinga kai habitat, sites and species.

Managing drains

Drains are part of the network or waterways important for fish species. Drains are required to drain land, but also function as mahinga kai habitat. Most drains were once natural waterways or former wetland areas.

Drain cleaning to maintain drainage functions can impact on mahinga kai values, by causing fish stranding and death, as well as increased downstream sedimentation. How drains are managed has a direct impact on water quality, lake health and mahinga kai habitat. Their management can also directly impact on how safe mahinga kai is for food gathering.

For more information see ecan.govt.nz/your-region/farmers-hub/fep/mahinga-kai under ‘Managing your drains’.

Enhancing mahinga kai and biodiversity values on farm

Actions to enhance mahinga kai and biodiversity values on farm may include:

- Protecting natural wetlands and springs from stock and farm activities
- Protecting areas of remnant native vegetation and habitat, particularly trees and shrubs, as well as any riparian, wetland and forest vegetation
- Maintaining sufficient riparian buffers alongside waterways including drains, wetlands, lakes and springs to manage risks on mahinga kai species
- Using native vegetation to restore areas of vegetation disturbance and to stabilise banks and control erosion
- Considering development of new or constructed wetland areas to treat and filter runoff, absorb nutrients and trap sediment, and to provide habitat for mahinga kai species as well as a buffer between land use and waterways.

For more information see ecan.govt.nz/your-region/farmers-hub/fep/mahinga-kai

Regional Responsibilities

1. Selwyn Te Waihora Cultural Landscape Values Management Area

For generations, Te Waihora/Lake Ellesmere, and its associated wetlands, springs and tributaries, have been an abundant food basket of local Ngāi Tahu. The ability of the lake to provide food and resources for the people living around the lake continues to be important, not just for Ngāi Tahu, but for everyone.

The lake is internationally recognised for its wetland values, as well as having national significance for its mahinga kai, particularly its customary indigenous fishery. It is also an important commercial fishery for both tuna (eel) and pātiki (flounder).

Today, however, Te Waihora is also one of New Zealand's most degraded lakes, while its tributary waterways often don't meet both national and regional requirements for water quality.

If any part of a farm property is within the Selwyn Te Waihora Cultural Landscape Values Management Area (Lake Area or River Zone), the farmer is required to implement the following objective and targets alongside any existing Farm Environment Plan (FEP) objectives and targets.

Objective:

To protect mahinga kai and manage waterways and drains, recognising their cultural and ecological sensitivity to discharges of contaminants.

Targets:

1. Mahinga kai values are protected by implementing all other Farm Environment Plan objectives and targets taking mahinga kai values into account.
2. Mahinga kai species and habitats are protected when waterway (including drain) management and vegetation clearance occurs.
3. Mahinga kai habitats and species are sustained through management of remnant native vegetation and wetlands.
4. Properties within the Selwyn District Council Drainage Scheme comply with any District Council Discharge of Land Drainage Water resource consent.

To help farmers to implement this objective and these targets, a mahinga kai guide and checklist is available at ecan.govt.nz/your-region/farmers-hub/fep/mahinga-kai

The mahinga kai checklist can be used alongside an existing FEP or included as an FEP is developed.

2. Waitaki Catchment

The importance of the Waitaki area to Ngāi Tahu was acknowledged by the Crown through the Ngāi Tahu Claims Settlement Act (1998) which identifies Aoraki/Mount Cook and eight waterbodies within the Waitaki sub-region as Statutory Acknowledgements.

Mahinga kai values are present in surface waterbodies throughout the Waitaki catchment, where farmers are required to implement the following objective and target alongside their existing Farm Environment Plan objectives and targets.

Objective:

To protect mahinga kai values.

Target:

1. Mahinga kai values of surface waterbodies on the property are recognised by achieving other objectives and targets in the FEP, and in addition by:
   a. Maintaining existing indigenous vegetation in accordance with the relevant regional and district council rules or any granted resource consent;
   b. Identifying opportunities to undertake additional plantings of indigenous vegetation and on any additional plantings of indigenous riparian vegetation; and
   c. Managing pest plants in accordance with regional council rules.

3. The rest of Canterbury

Farms with land use consent to farm under the Canterbury Land and Water Regional Plan now also have more to think about around mahinga kai.

Land use consents issued since mid-2017 require farmers to implement the following new target alongside their existing Farm Environment Plan objectives and targets around waterbody management.

Target:

1. Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health.

To help farmers to implement this objective and these targets, a mahinga kai guide and checklist is available at ecan.govt.nz/your-region/farmers-hub/fep/mahinga-kai

The mahinga kai checklist can be used alongside an existing FEP or included as an FEP is developed.

A gradual journey

Many farmers will already be on the right track. Now, they also need to be aware of the mahinga kai values and risks on farm, and address them in the application of Industry-agreed Good Management Practices.

Farmers also need to be more aware of how drains are being managed, and cleaned, and how mahinga kai and biodiversity values on farm can be proactively managed over time.

Doing so will ensure that the farming activities meet today's community expectations around good management practice, while also protecting mahinga kai values, and sustainability for generations to come.

Further advice

Environment Canterbury now has Cultural Land Management Advisors available in North Canterbury (covering Kaikoura to Waimakariri) and central Canterbury (covering the Selwyn Te Waihora catchment, Christchurch West Melton and Banks Peninsula) and will shortly have an advisor in South Canterbury (covering Rakaia through to Waitaki).

Their role is to help farmers, rural consultants and auditors understand the new requirements for Farm Environment Plans and audits.

Contact your local Cultural Land Management Advisor by calling Customer Services on (03) 353 9007 or 0800 324 636.

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Facilitating sustainable development in the Canterbury region

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