

Freshwater Species and their Habitat

Freshwater environments and their inhabitants have considerable ecological and cultural value. Several of our native freshwater species are in decline, or are nationally threatened. Other introduced species are of significant value to recreational fisheries but can pose a threat to native freshwater fish. A regional habitat restoration programme is underway and takes a catchment-based approach to restoring the habitat of freshwater fish species.

Targets

From 2010:

Implement actions to correct the decline in freshwater species, habitat quality or ecosystems.

By 2015:

Target 1: No further reduction in the number and areas of existing salmon spawning sites.

Target 2: Increasing annual trout spawning counts in identified important areas (based on a 5-year average) as an indicator of habitat availability for salmonid and indigenous fish species.

By 2020:

Target 3: An upward trend in diversity and abundance of native fish populations.

Target 4: Increased the length of waterways with riparian management appropriate to aquatic ecosystem protection by 50% from 2010 figures.

Progress to 2020

	T1,2	T3,4			
	Not started	Started	Progress	Good progress	Achieving
<ul style="list-style-type: none"> Target 1 & 2: Salmon spawning sites have been mapped and are set out in Schedule 17 of the Land and Water Regional Plan. The annual Fish & Game NZ Salmon Monitoring Programme is focused on maintaining sustainable populations of harvestable species and monitoring spawning numbers in important areas. Fish & Game NZ data shows that across the range of spawning surveys completed over the past 9 years, there continues to be a significant downward trend in spawning numbers. Through Plan Change 4, Canterbury now has a comprehensive set of rules for stock exclusion from waterways. Fish & Game NZ is working with high country landowners, to protect and restore riparian areas and minimise intensive farming practices upstream and adjacent to spawning streams. The LWRP has identified 'Inanga Spawning Habitat' on the planning maps and contains specific rules for excluding stock from inanga spawning habitats on the bed and banks of lakes, permanently or intermittently flowing (but not ephemeral) rivers, artificial watercourse, coastal lagoons or wetlands. Under the direction of the Zone Committees, the Immediate Steps Biodiversity programme invested in 60 projects aimed at improving fish habitat. Between July 2014 and June 2017, Environment Canterbury coordinated a regional fish habitat initiative. 15 key projects leveraged over \$340,000 support from landowners and partners to protect mudfish and 					<p>inanga spawning sites and erect fish barriers. The next phase of the initiative will focus on long-finned eel/tuna. Monitoring has helped to understand the impact of these projects.</p> <ul style="list-style-type: none"> Target 3: Environment Canterbury has a comprehensive monitoring programme for water quality and invertebrates which does not include a native fish monitoring programme; it falls across several agencies (e.g. DOC, Fish & Game, NIWA). Invertebrate monitoring, done as part of ecosystem health monitoring (see page 20) tells us about aquatic biodiversity but is not designed to specifically target biodiversity. Environment Canterbury has begun discussion with Zone Committees to scope fish monitoring requirements. Target 4: Over 50% of the Immediate Steps Biodiversity projects since 2010 are dedicated to fencing and planting, see fig 4. DairyNZ and Environment Canterbury have developed guidelines for land management in riparian margins. Fonterra are currently developing technologies for farmers to report progress on fencing waterways and planting riparian margins. Synlait's certified Lead with Pride farms programme sets procedures for riparian management. The Water Accord includes commitments for riparian planting plans, effluent management, comprehensive standards for new dairy farms and measures to improve the efficiency of water and nutrient use on farms.

Fig 4: Immediate Steps Projects by Zone

Immediate Steps Programme

Launched in 2010, the Immediate Steps biodiversity protection and restoration programme continues to be an integral part of the CWMS.

Through Immediate Steps, \$2 million is available annually for protecting and restoring biodiversity in and around freshwater habitats.

Funding is allocated to on-the-ground actions aimed at halting or reversing the decline in indigenous biodiversity.

Project recommendations are considered by Zone Committees and the Regional Committee, with guidance from Environment Canterbury’s biodiversity officers working in zone delivery teams and working alongside Canterbury Biodiversity Strategy partners.

Why is Immediate Steps needed?

Freshwater ecosystems provide an important habitat for many fish, insects, plants and birds. They act as corridors and ‘stepping stones’ that connect different habitats and ecosystems. Native biodiversity has declined over many years. Increased intensive land use such as vegetation clearance, water and gravel abstraction along rivers and streams, has degraded the natural habitat and caused pollutants to enter these freshwater ecosystems. The CWMS has highlighted declining health of the region’s freshwater ecosystems and the loss of native biodiversity as a key community concern for which specific targets have been set.

Immediate Steps flagship projects

The Regional Committee has decided on three flagship projects to support over the next five years: Te Waihora/ Lake Ellesmere enhancement project; The Braided River Flagship with a focus on enhancement of the upper catchments of the Rakaia and Rangitata rivers; and the Wainono Lagoon project.

Progress to date

By May 2017, more than 400 projects had been awarded funding totalling \$6.8 million through the Immediate Steps Fund. These projects will see more than 480,000 native plantings and the erection of almost 420km of fencing to protect 1,700ha of stream riparian margins, wetlands, lagoons and native bush.

