

Photo: Ngutu parore / Wrybill



Biodiversity projects snapshot

2018/19

New Zealand's isolation, diverse habitats and climate has resulted in a high number of endemic species – our indigenous biodiversity is internationally recognised and is central to our social and cultural identity. However, this indigenous biodiversity has been affected by humans and continues to decline across Canterbury and New Zealand.

Threats to indigenous biodiversity in Canterbury include introduced pests and continuing land use change and intensification. In response, indigenous biodiversity has been identified by Environment Canterbury as one of the two strategic priorities and this year two new work programmes were added – wetlands and braided rivers.

To achieve a step-change in effort to halt the decline and restore the natural character of degraded indigenous habitats and ecosystems, Environment Canterbury's priority is to focus first on protecting and maintaining what remains. Our guiding principles – how we work – follow four tenets: action for priority ecosystems; smart information use and

management; working with others – future delivery; and leading by example – our land, our people. These principles have all been considered in how we initiate, develop and implement biodiversity projects in Canterbury.

Project summary

- 153 projects completed in 2018/19
- 149 ongoing projects
- 47 projects were initiated in 2018/19 (note: some of these projects were completed in 2018/19)
- 84% of completed projects were protection/enhancement projects. 16% were creation/community engagement projects
- For every \$1 from Environment Canterbury, \$0.91 was contributed from other sources

Key project data 2018/19

Over the 2018/19 financial year the Regional Biodiversity team and Zone Delivery Biodiversity Officers developed and delivered biodiversity projects. The development and delivery of these projects closely followed the tenets; Engagement with willing landowners and strategic partners, use of the best available tools and information to inform our work, and delivery of on-the-ground action on priority ecosystems.

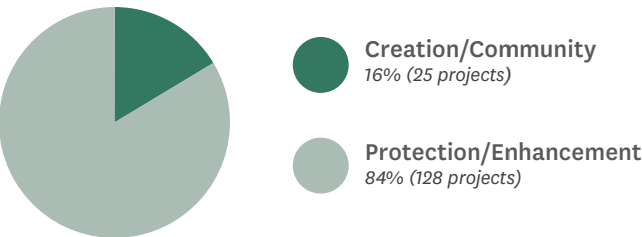
**Braided rivers**
Black-fronted terns are just one of the endangered endemic birds that rely on Canterbury's braided rivers

**Other water bodies**
Canterbury galaxias is one of the rare native species benefiting from biodiversity projects in Canterbury

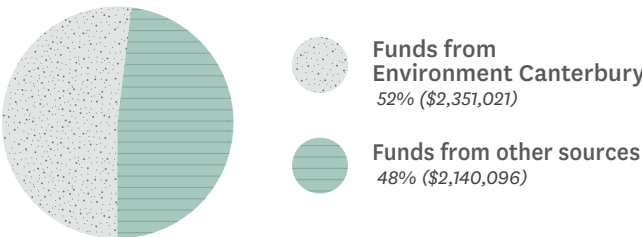
**Terrestrial**
South Canterbury supports the only known long-tailed bat population on the East Coast of the South Island

**Wetlands**
The Australasian bittern/matuku is a critically endangered wetland bird that faces habitat loss due to the loss of wetlands

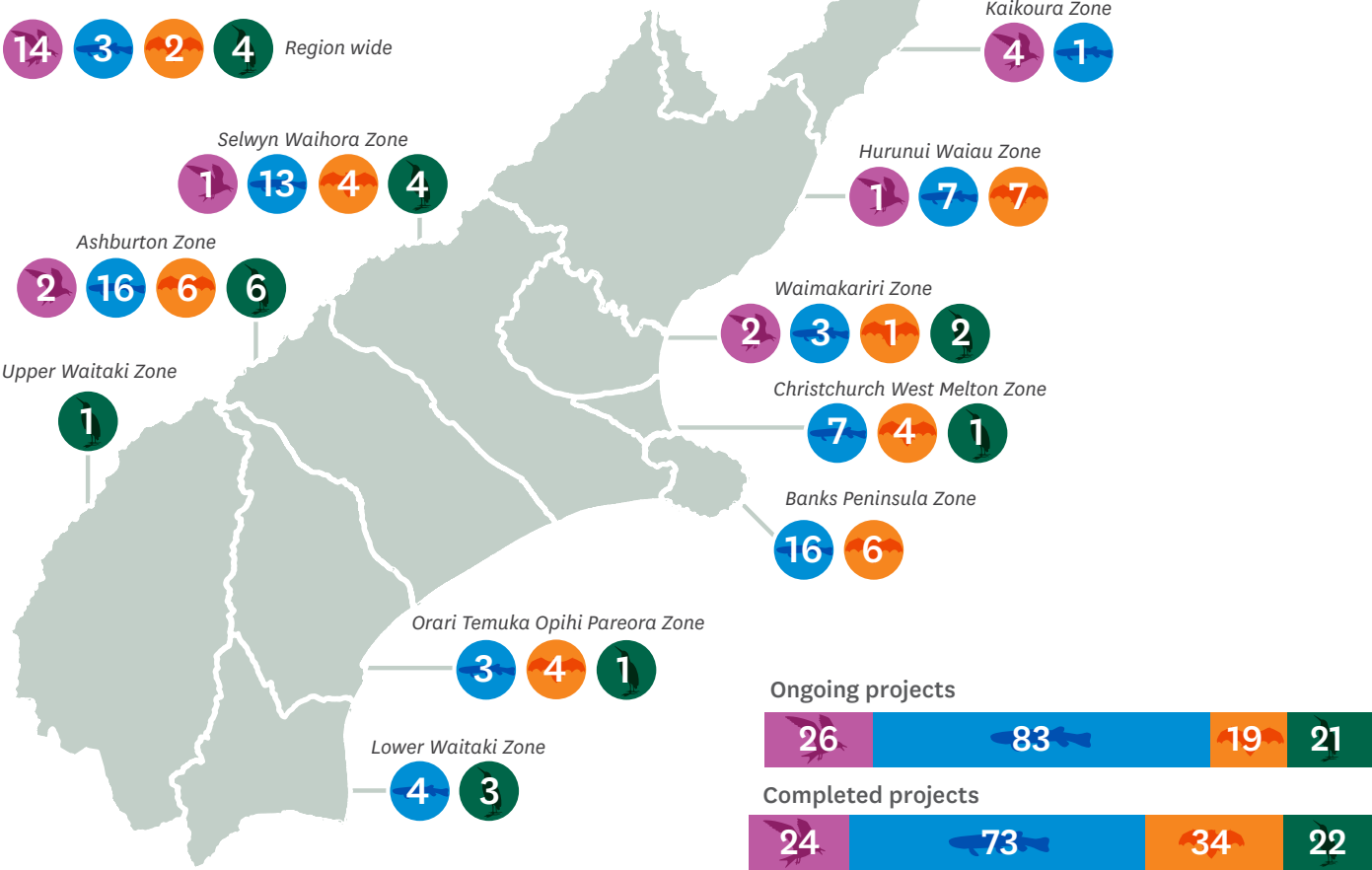
Nature of projects 2018/19



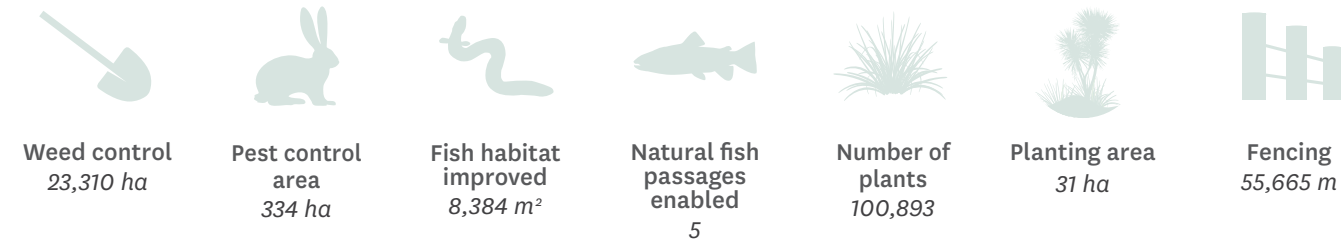
Funding source of projects 2018/19



Number of completed projects by zone 2018/19



Key data from completed 2018/19 projects



Case studies

The below highlights just some of the amazing on-the-ground work that relates to three of our priority areas.

Braided Rivers

Canterbury's braided rivers are home to many threatened species and link the mountains to the sea – ki uta ki tai. Our iconic braided rivers are unique in the world and are an integral part of the landscape that Cantabrians feel passionate about and want to look after.

Waiau Toa/Clarence River Black-Fronted Tern safe-breeding project

This was the fourth year of the Waiau Toa/Clarence River black-fronted tern safe-breeding project. Flooding was a major factor this season. However, despite this, the management helped an additional four to five chicks per 10 nests survive to flying age across the three seasons since full implementation. The project will finish in 2020.

BRaid (Braided River Aid)

The BRaid project helped raise stakeholder awareness and knowledge by developing and maintaining extensive resources (workshops, website, newsletters) and increased support for braided river projects across the region through education materials, predator control workshops, braided river bird surveys, signs, specific projects and awards.

Wetlands

Wetlands once covered large areas of New Zealand. Now they are some of our rarest and most at-risk ecosystems, with approximately 90% having been lost in the last 150 years in Canterbury. Wetlands provide a habitat for a diverse range of plants and animals and are home to many rare and threatened species (eg, Australasian bittern, Canterbury mudfish, whitebait and eels).

Te Waihora Weed Strikeforce

This was the first year of the joint project between Environment Canterbury, Whakaora Te Waihora and the Department of Conservation to deliver co-ordinated weed control in the wetland margins around Te Waihora/Lake Ellesmere. In year one weed control work was undertaken over 794 hectares and focused on grey willow, crack willow, purple loosestrife, phalaris and yellow flag iris, plus control of understorey weeds such as elder, blackberry, gorse and hawthorne.

Wetlands Action Plans

This first year of the wetlands programme provided assistance to 12 wetland projects, with particular attention to fencing and weed control. Wetland Action Plans were developed in consultation with landowners, setting clear expectations for improving and protecting wetland values. A key objective for the development of an action plan is to engage landowners with the values their wetlands hold, in addition to the ecosystem services they provide.

Fish Habitat

Partners from across the region, including landowners, community groups, DOC and Environment Canterbury are involved with the Regional Fish Habitat Initiative. The initiative provides a coordinated regionwide approach to identifying, prioritising and remediating fish habitats, with a focus on tuna/longfin eels and fish passage. This year eight fish habitat/passage projects were delivered, with nine projects ongoing.

Haldon Pastures Mudfish Project

This project in the Selwyn-Waihora zone features a Southern Hemisphere first – a solar-powered electric fish barrier, designed to prevent predation of native mudfish. The electric barrier allows mudfish to expand into the lower reaches of the site – increasing their habitat ten-fold to 8,000m2 in the Selwyn-Waihora catchment. Key to the success was the collaboration between Environment Canterbury, DOC, landowners and industry.

Orari Flood Flaps

This project involved collaboration with river engineers to replace a floodgate and culvert that allows waterflow through a stopbank between the Old Orari lagoon and wetland system and into the Orari River. The floodgate was a barrier to some fish species, including inanga. The replacement flood flaps are fish-friendly and use a counterweight to delay when they are closed. The gate aperture is increased, which ensures it is open wider and for longer, allowing for easier access, especially on an incoming tide.



Biodiversity on our land

Environment Canterbury is determined to lead by example and increase biodiversity protection and restoration on our land. The outcomes we seek are continued examples of biodiversity protection and restoration on Environment Canterbury land; and that Environment Canterbury staff regularly propose projects for biodiversity protection and enhancement across Canterbury, regardless of their role and responsibilities.

Examples of operational project work on Environment Canterbury-owned land:

- Active management of 242 hectares of remnant vegetation and wetland habitat along the Waimakariri River, including the 45-hectare Sanctuary Wetland.
- Lower Waimakariri native braided river bird programme, which aims to promote breeding success using targeted predator trapping, monitoring of specific breeding colonies, controlling public access around colonies, and awareness and promotion campaigns.
- Direct project management and outcome monitoring at key high value sites, such as Kowhai Bush, Stour River Reserves and the West Melton Reserves.
- The Whakaora Te Waihora programme is delivering projects that improve biodiversity values, including on Environment Canterbury land around Te Waihora/ Lake Ellesmere (tewaihora.org/welcome-tautimai/). One such project is the Whakaora Te Ahuriri project, which is creating a constructed wetland that involves the installation of 130,000 plants (tewaihora.org/whakaora-te-ahuriri/).

Working with the community

Environment Canterbury manages Canterbury's natural resources in an integrated, comprehensive and forward-looking way. We work closely with community organisations, mana whenua, businesses, industry sectors, schools, health boards and other organisations and people. When we work together, we can achieve the outcomes we all want for the region.

The Environment Canterbury Community Partnership Strategy sets out how we will work with community organisations and what success looks like.

Key achievements

- Networking - The kaupapa of this cross-organisational approach is to create space for sharing experiences, resources and tips among people working for environmentally focused organisations in Greater Christchurch. This year, four hui were held on managing volunteers, health & safety, fundraising 101, and information and technology.
- Webpage - There is now clear information online for the community on what projects and initiatives Environment Canterbury can offer support for and how funding can be requested (ecan.govt.nz/get-involved/support/).
- Funding - We provided financial support to several community projects, including North Loburn School community trap library.

Photo above: North Loburn School talking about trapping project in QEII covenant at BFEA Field Day 2019 at Whiterock Mains, Rangiora

