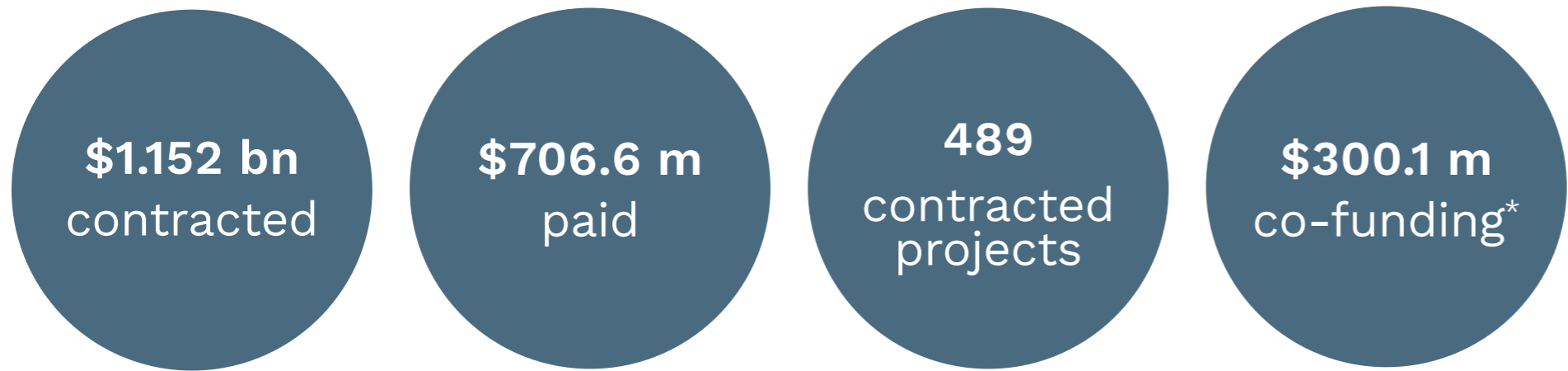


Benefits of Nature-Based Investment

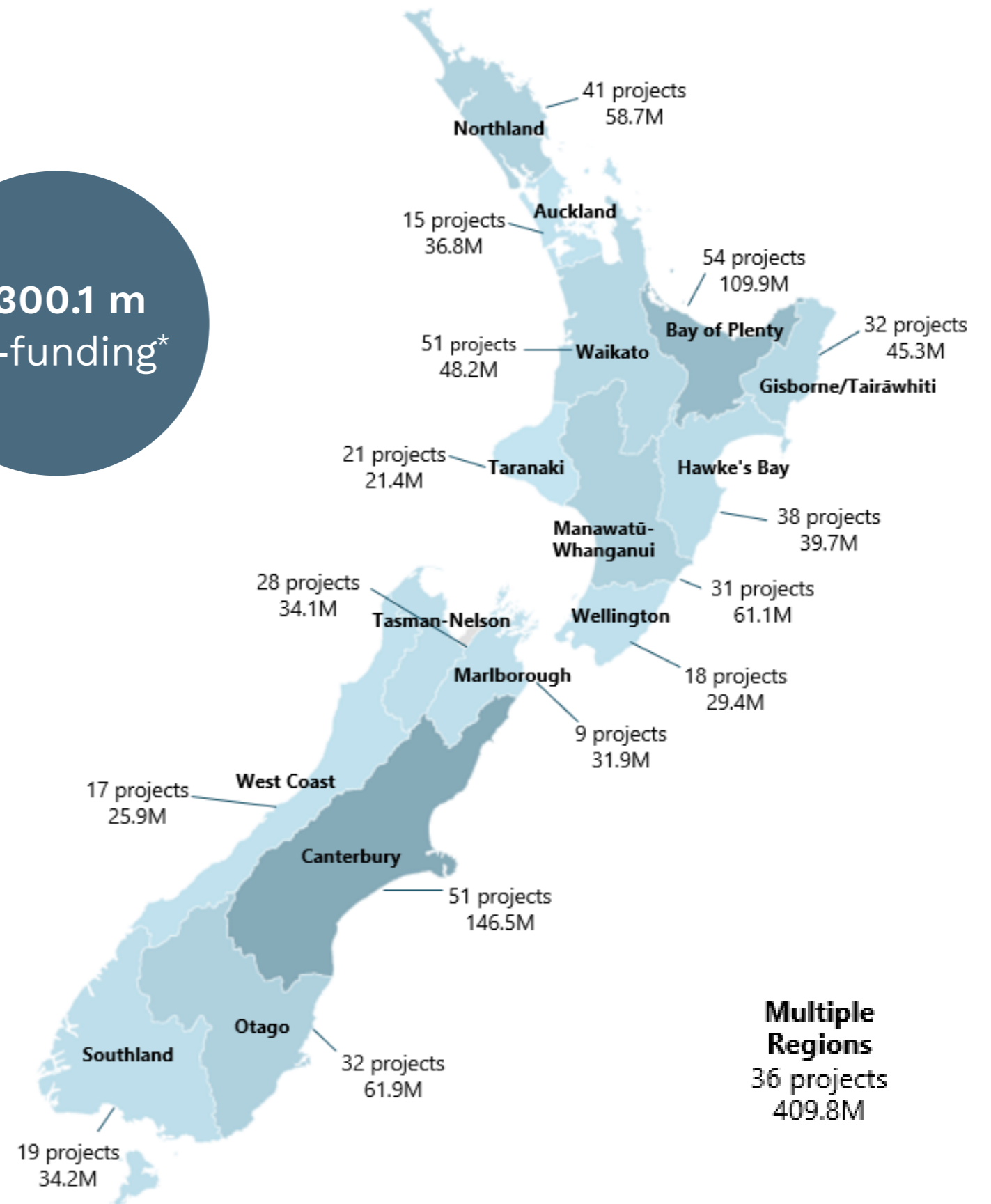
This report provides a snapshot of how the Jobs for Nature (J4N) programme delivers social, cultural, environmental and economic benefits to people and place as at 28 November 2023.

Overview of investment in J4N



*(cash and in-kind support) from landowners, local government, iwi, and philanthropy, other Crown agencies (MSD, NZTA)

Programme objectives



Benefits of Nature-Based Investment



Skills and employment benefits

We've created 13,489 employment starts, with 9.08 million hours worked, and 2,756 people currently employed. Over \$56 million has been invested in providing opportunities to connect people to nature with 2,700 people in training and 1,147 having completed formal training. [Q1 J4N programme quarterly data as at 28 November 2023].

The following long-term benefits are expected:

- Increased skills and capability of individuals to collaborate and respond to environmental management issues
- Improved mental health and wellbeing of individuals and whānau (family) from working in nature
- Development of a highly skilled environmental workforce
- Improved labour market participation of Māori and Pasifika
- Reduced youth unemployment, and improvements in earning outcomes for individuals who were provided a job through the programme.

IMPORTANCE OF CREATING NATURE-BASED EMPLOYMENT IN NEW ZEALAND

Skills development: Nature-based jobs provide opportunities to develop new skills and capabilities in environmental management, improving long-term job prospects and contributing to New Zealand's overall expertise.

Climate change response: Nature-based jobs play a crucial role in transitioning New Zealand towards a low-carbon, sustainable economy, helping the country meet its climate change commitments and reduce greenhouse gas emissions.¹

Supporting sustainable development: Nature-based employment contributes to the protection and restoration of the environment. This helps ensure a sustainable future for New Zealand's natural resources and ecosystems.

Community development: Nature-based employment can help revitalise communities, especially in areas where other work opportunities have dried up, by providing meaningful work and supporting local economies.²



Economic benefits¹

Note: Economic analysis was undertaken using data as at June 30 2023 and the economic benefits section uses this analysis.

The programme had 12,479 employment starts and \$638 million provided to 501 projects across New Zealand. The total investment is expected to provide the following benefits:

- \$2.147 billion of benefits over 30 years are expected to be delivered through its investment
- For every \$1 spent on the programme it is expected to generate \$2.46 in economic, environmental and wellbeing benefits
- The programme directly spent \$786.308 million through projects in individual regions, which was estimated to deliver \$994.5 million in direct economic benefit in those regions, with a benefit-to-cost ratio of 1.20 overall. The remainder was spent in multi-regional and national projects
- The total estimated Full Time Equivalent (FTE) jobs supported by the programme is between 10,774 and 13,555 FTEs
- The payback period for the investments is comparatively long at seven years, due to the long-term achievement profile of environmental outcomes and impacts.

[Understanding economic impacts of the programme Final Report October 2023 Martin Jenkins].

SUPPORTING MĀORI ASPIRATIONS FOR THE ENVIRONMENT

The J4N programme empowers Māori to achieve their environmental aspirations by providing funding and support for projects that protect and restore their whenua. This helps Māori communities balance their kaitiakitanga goals with development aspirations and competing priorities. [Beehive.govt.nz Jobs for Nature enabling Mātāuranga Māori (Māori knowledge) 2022].³

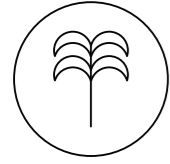
The J4N programme aligns with the holistic Māori view of health and wellbeing, encompassing mind, body, spirit, family, and land. This perspective is reflected in the programme's focus on providing nature-based employment opportunities, which contribute to the overall wellbeing of Māori individuals and their whānau (family)⁴ [South Westland Jobs for Nature outcomes Assessment Evaluation Report 2023].

The J4N programme has increased Māori participation in nature-based employment, helping Māori communities maintain their connection to the land and fulfill their kaitiaki (guardian) roles. We've directly invested \$58,777,941 (approximate) in iwi-led outcomes for the environment.



Image courtesy of Backcountry Trust

Benefits of Nature-Based Investment



Recreation and tourism benefits

Healthy nature is central to human health, wellbeing, and the economy. Natural environments, and the plants and wildlife they support, are part of the Kiwi identity.

Our investments in nature provide green spaces and recreation for wellbeing, supporting primary and tourism industries, and allow for the gathering of kai (food).

Our unique biodiversity and natural landscapes are key attractions, drawing around 3 million international tourists each year bringing in \$16.4 billion per year making up 5.5% of GDP before the pandemic. Tourists spend a total of \$41.9 billion annually, with \$17.5 billion coming from international visitors. [Tourism Industry Aotearoa 2022]⁵

We must seek to protect our natural spaces from the strain of over-tourism which risks damaging sensitive natural ecosystems and local communities, with some areas experiencing congestion, pollution, and degradation of historical sites and natural environments. [Journal of Destination Marketing and Management Volume 5, 2020]⁶

New Zealand has over 14,484 kilometers (km) of public trails, with huts lining these tracks to support hikers and outdoor enthusiasts. So far, the programme has maintained 3.1 thousand km of tracks across the conservation estate and maintained 640 assets including huts.



Images courtesy of Backcountry Trust

Well-maintained tracks and huts attract tourists, boosting local businesses and generating revenue. Tourism is a significant contributor to the New Zealand economy, and maintaining these assets helps maintain the country's reputation as a premier destination for outdoor recreation.⁷

Benefits include:

Improved wellbeing through access to recreation: Natural spaces provide a venue for outdoor activities such as hiking, bird watching, and fishing, promoting physical activity and fostering a connection with nature.

Aesthetic appeal: The beauty of these spaces contributes to urban beautification and improves mental wellbeing.⁸

Contribution to regional economic growth: Domestic tourism is largely based on people wanting to experience nature, and international visitors are attracted by the country's natural beauty.



Cultural heritage benefits

We've invested \$117,286,785 across 61 projects in culture and heritage protection helping to preserve valuable cultural and historical sites, traditions, and practices.

This investment contributes to preserving cultural and natural heritage and supports the well-being of individuals and families through a connection to culture, identity, family, and community.

Investing in culture and heritage protection can lead to improved health and well-being of individuals and whānau (family). This is because a connection to culture, identity, family, and community is built through shared ownership of nature.⁹

[New Zealand Huts Country Study 2018]



Benefits of Nature-Based Investment



Investment in biodiversity

\$301,996,011 Pest/weed control and fauna protection
\$143,263,600 Forest protection and other planting
\$103,355,600 Wilding conifer and pine management
 [Q1 J4N programme quarterly data as at 28 November 2023 these figures are approximate]

BIODIVERSITY AND BIOSECURITY BENEFITS

The J4N programme plays a role in halting biodiversity decline in New Zealand by investing in ecosystem restoration and resilience, animal and plant pest control, and threatened species management.

The programme also contributes significantly to New Zealand’s biosecurity by ramping up pest control efforts to manage biosecurity threats and help protect native birds and other species.

To date:

- We’ve contributed to restoring 6.400 hectares of land and with 2.9 million terrestrial plants now in the ground. This helps improve the habitat quality for our native species, increases biodiversity, carbon sequestration and soil erosion control in some places. [Global Change Forest Management article 2023]¹⁰
- Controlling 1.95 million hectares of wilding conifers, protects native ecosystems and species, reduces land degradation and reduced water availability. For every dollar spent on controlling these trees, the country can expect to save between \$20 and \$34 in avoided economic damages [Benefits and Costs of Additional Benefits of Additional Investment in Wilding Conifer control, Sapere 2022]¹¹
- Controlling 1.56 million hectares of wallabies contributes to reducing damage to productive farmland, forests, and native ecosystems, and contributes to estimated economic benefits by avoiding potential costs of \$84 million a year by 2025 if wallabies are not controlled. [Controlling pest wallabies in New Zealand MPI]¹²

Other benefits from controlling and eradicating wallabies include:¹³

- Increased survival and enduring regeneration of native vegetation
- Increased uptake of atmospheric carbon from regenerating vegetation reduces climate change
- Improved pasture, crops, and plantation forests
- Controlling 6.13.0 thousand hectares for other plant pests and 2.41 million hectares of all other animal pests (including deer, goats, and possums) contributes to greater protection of native ecosystems and species, reduced biosecurity risks and damage to agriculture, forestry
- Invasive species, including pests like rodents, stoats, and possums, were estimated to cost New Zealand about \$170 million per year between 1968 and 2020. [Invasive pests cost NZ Institute of Agricultural and Horticultural Science]¹⁴

IMPORTANCE OF BIODIVERSITY AND BIOSECURITY INVESTMENT

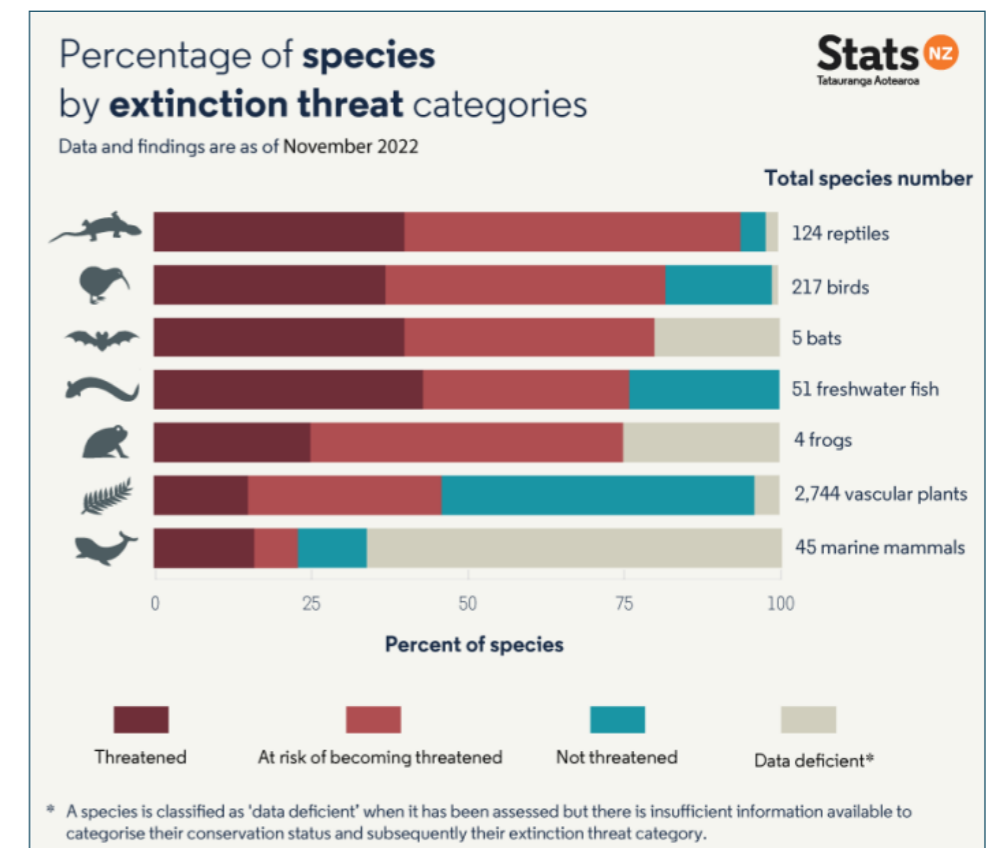
Investment in biodiversity is crucial with New Zealand having an estimated 80,000 species of native animals, plants, and fungi.

Our unique biodiversity provides the cultural, regulating, provisioning, and supporting ecosystem services which underpin New Zealand’s prosperity. It forms the basis for New Zealand’s value as a tourism destination, supports valuable primary industries through fertile soils, and provides diverse forest environments for recreation.

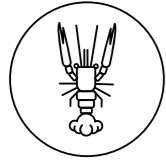
Nearly 40% of New Zealand’s indigenous plant species are either threatened or at risk of extinction. New Zealand has the highest proportion of threatened indigenous species in the world, with around 40% of plants, 90% of fungi, 70% of animals, and 80% of freshwater fish found nowhere else. [Te Mana O Te Taiao – Aotearoa NZ Biodiversity Strategy]¹⁵

To halt global biodiversity loss, an estimated \$722 billion to \$967 billion is needed annually. In 2021, DOC spent \$36 million per year on managing threatened, at-risk, and conservation-dependent species. DOC estimates that fully funding conservation management plans for 547 land-based and wetland species would cost up to an average of \$95 million a year. [MfE. 2023. Helping nature and people thrive: Exploring a biodiversity credit system for Aotearoa New Zealand]¹⁶

Patterson and Cole (2013) estimated that New Zealand’s land-based ecosystem services, which include things like clean air, water, and fertile soil, were worth about \$57 billion for 2012. This amount was equivalent to 27% of the country’s GDP for that year.¹⁷



Benefits of Nature-Based Investment



Investment in freshwater

\$250,448,865 Catchment management and protection

163,022,322 Freshwater management and protection

\$65,348,338 Riparian planting

[Q1 J4N programme quarterly data as at 28 November 2023 these figures are approximate]

FRESHWATER BENEFITS

The J4N programme focuses on projects like freshwater restoration, riparian planting, wetland protection and restoration, fencing waterways, and remediated barriers to fish passages.

To date:

- We've contributed to restoring 4,800 hectares of freshwater area and planted 6.62 million plants in freshwater areas which helps improve our freshwater water quality, supports biodiversity, and provides essential services such as drinking water, recreation, and water for agriculture
- Riparian restoration in New Zealand generates net benefits of between \$2,000 and \$6,000 per hectare per year [Research Gate A national riparian restoration programme in New Zealand: Is it value for money? 2016]¹⁸
- Our Investments to restore freshwater and wetlands are estimated to reduce future water treatment costs by \$1.3 billion. [Understanding economic impacts of the programme Final Report October 2023 Martin Jenkins]
- The total economic value of wetland restoration in New Zealand ranges from \$1.64 million to \$3.78 million per year. Restoring wetlands provides multiple benefits for climate, biodiversity, and people [Economic Analysis and Policy 2017]¹⁹

- 120,534 hectares are now under Farm Environment Plans, with 669 farms having developed their plans. Economic benefits from Farm Environmental Plans include improved productivity, reduced costs, improved market access, and the ability to attract sustainable finance
- 5,000 km fencing protects freshwater ecosystems by preventing livestock contamination, reducing erosion, and promoting riparian vegetation growth. Nearly 168,000 km of waterways in New Zealand are vulnerable to stock. It was estimated that by building fences around streams on all dairy farms and land where dairy cows graze, this would result in a benefit of \$8.10 for every \$1 dollar spent on building these fences for all New Zealanders [National Stock Exclusion Study 2016]²⁰
- 679 barriers to fish passages have been removed or improved, improving connectivity between habitats and contributing to increased biodiversity and a healthier aquatic ecosystem.

IMPORTANCE OF FRESHWATER INVESTMENT TO THE NZ ECONOMY

Freshwater is vital to New Zealand's biodiversity, economy, and cultural identity. The country's unique ecosystems, many of which are centered around freshwater bodies like lakes, rivers, and wetlands, are home to a diverse array of flora and fauna, many of which are endemic and at risk of decline. [The Plight of New Zealand's Freshwater Biodiversity 2016]²¹

Freshwater sources also contribute significantly to the economy. They support fisheries and recreational activities like swimming, fishing, and kayaking, which not only enhance the wellbeing of New Zealanders but also boost tourism. The estimated health benefits of preserving wetlands and excluding livestock from waterways are valued at \$2.4 billion. [MfE Freshwater 2020]²²

Freshwater is central to the cultural practices of the Māori people, supporting customs, traditional food gathering practices, and the transmission of Māori knowledge maintaining the health of these environments is crucial for the preservation of these cultural practices.²⁴



Lower Rangitata project, Canterbury

Benefits of Nature-Based Investment

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