

Coastal Resilience

Restoring Wetlands
to Protect Communities



The Nature Conservancy (TNC) envisions a future with a liveable climate, healthy communities and thriving nature.

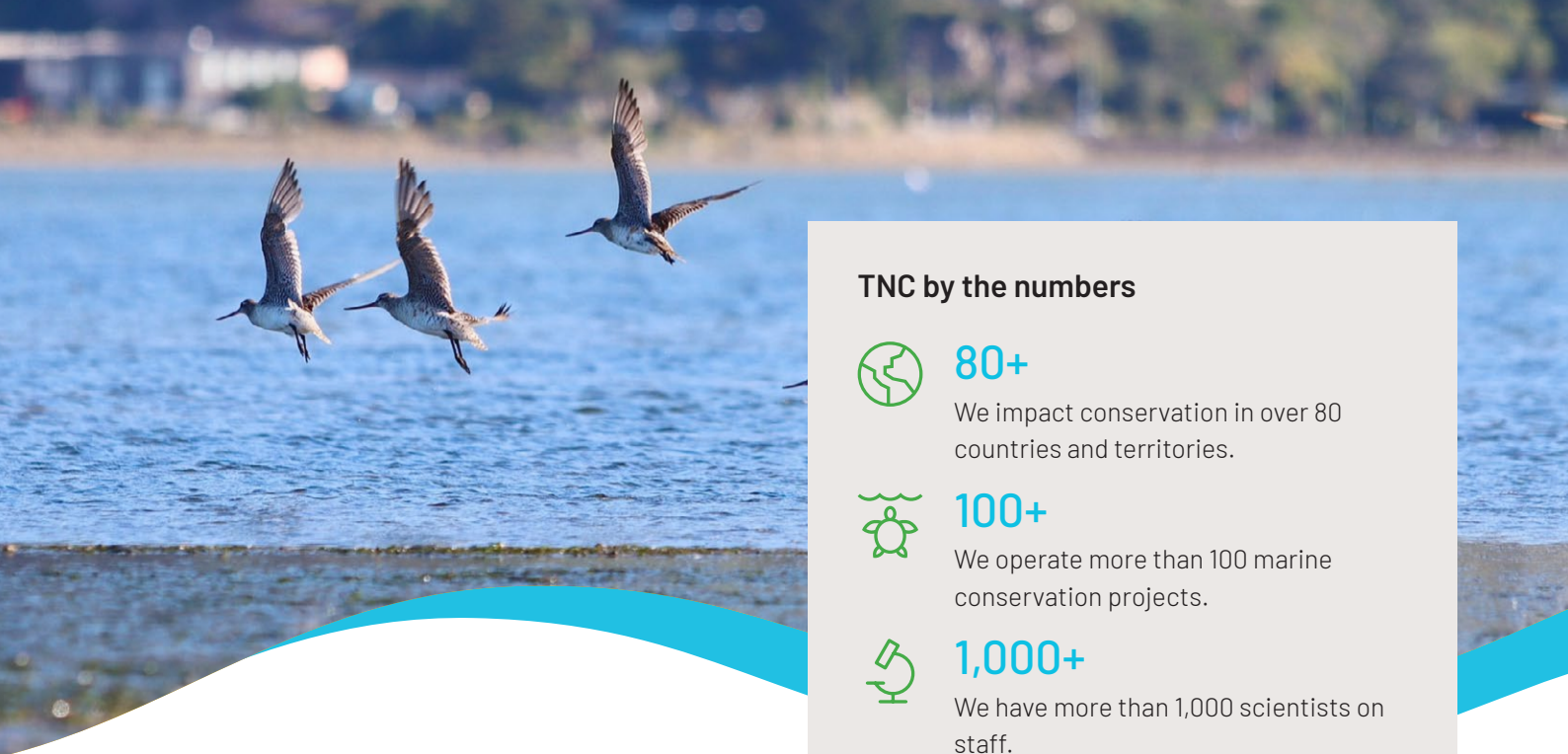
To make this vision a reality, our work is focused on addressing the two interconnected crises of climate change and biodiversity loss.

We address those crises through three global priorities: tackling climate change, protecting ocean, land and fresh water and providing food and water.

Executive Summary

In Aotearoa New Zealand, widespread habitat destruction, invasive species and over-exploitation of natural resources have led to a stark decline in biodiversity and heightened climate vulnerability. In the first two months of 2026, New Zealand experienced eight weather-related states of emergency, matching the total number for 2025. About two-thirds of New Zealanders live within five kilometres of the coast, those areas most affected by more frequent flooding and storm surges.

Coastal wetlands once lined vast stretches of New Zealand's coastline, but now they are one of the country's most threatened ecosystems. Restoration can transform them into a powerful shield against the effects of climate change.



For wetlands to be recognised and invested in as critical natural infrastructure, restoration must be easier and more affordable for landowners and communities while safeguarding the important cultural value wetlands hold.

The Nature Conservancy Aotearoa New Zealand's (TNC NZ) strategy focuses on supporting and enabling restorative land and coastal use change across the country through:

- Evidence-led restoration projects
- High-priority ecosystems restoration
- Innovative financing mechanisms
- Policy research and recommendations

Restoring wetlands in New Zealand needs funding, practical examples and a stronger body of research.

Drawing on successful TNC projects such as seagrass restoration on the Virginia coast in the United States, and saltmarsh restoration in South Adelaide, Australia, we are developing pilot projects to demonstrate restoration in practice and supporting research into the social and economic benefits of restoration. We partner with communities, iwi and hapū (Māori tribes and subtribes) across the motu (country) to address the climate and biodiversity crises, incorporating their local knowledge and aspirations into our joint work.

Implementing the next phase of this programme will require significant investment. With your support, TNC NZ can accelerate coastal wetlands restoration, helping New Zealand restore these critical ecosystems, mitigate climate change and protect local communities while creating long-term opportunities for cultural stewardship, economic development and climate resilience.

TNC by the numbers



80+

We impact conservation in over 80 countries and territories.



100+

We operate more than 100 marine conservation projects.



1,000+

We have more than 1,000 scientists on staff.



125M+

We have protected more than 125 million acres of land.

Benefits of coastal wetlands

Coastal wetlands, including saltmarshes, seagrass meadows and mangrove forests, can help communities adapt to sea-level rise. By trapping sediment and building soil over time, they can increase in elevation and reduce the impact of rising seas, provided they are not degraded by human activity.

In New Zealand, they can also store and capture carbon at a rate that is similar to native forests. This "blue carbon" can remain in the soil for hundreds to thousands of years, making coastal wetlands one of our planet's most durable climate mitigation solutions.

Wetlands support critical ecosystem services such as water filtration and protection from coastal erosion and storms. They also provide vital habitat for endemic plants, invertebrates and bird species, while serving as important nursery grounds for fish and other native wildlife.

They are important breeding, roosting and feeding grounds for endangered coastal and wetland bird populations such as such as matuku-hūrepo/Australasian bittern, moho pererū/banded rail, pāteke/brown teal, mātātā/North Island fernbird, kōtuku/white heron and the threatened-nationally critical tara iti/New Zealand fairy tern. Long-distance visitors the kuaka/bar-tailed godwit also rely on saltmarsh habitats in New Zealand as part of the East-Asian Australasian Flyway reaching across the Pacific from Siberia.



The problem

Many New Zealand settlements hug the coastline with a backdrop of hills and mountains. Rivers braid their way to the sea. Wooden houses are built close to rivers and the sea, and a church and marae (Māori meeting ground) often overlook the town. Early settlers drained wetlands for farming, not realising this heightened the risk of flooding.

Urban development, sedimentation and pollution have also eroded the presence of wetlands, leaving just 10 percent of New Zealand's original wetlands. In places where these ecosystems cannot migrate inland, they also risk being submerged by sea-level rise.

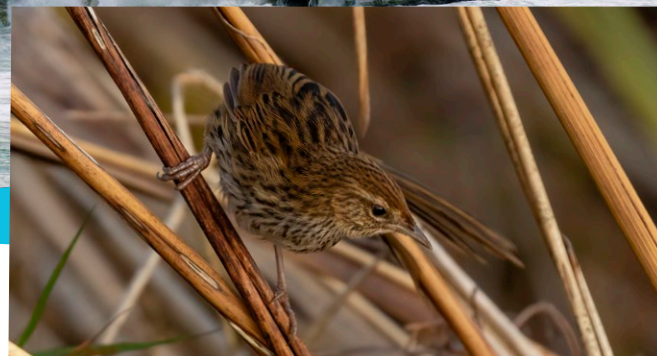
The effects of climate change are likely to affect New Zealand's more vulnerable communities the most.

Traditionally, New Zealand has protected communities and infrastructure using stopbanks and drainage schemes, but this infrastructure is ageing and increasingly vulnerable to storm events. Councils, constrained by shrinking budgets, are finding existing infrastructure harder and more costly to maintain. Economic incentives often favour maintaining existing land uses over restoring coastal wetlands, even though restoration has many ecological and long-term economic benefits.

The solution

By restoring and protecting coastal wetlands, we help to mitigate climate change and protect communities as we adapt to the rising seas.

Restoring marginal agricultural land at risk of flooding and sea-level rise to coastal wetlands provides coastal communities with natural protection from these threats. Using wetlands as natural buffers can help enhance and prolong the lifespan of existing infrastructure as local governments respond to increasing coastal risks through adaptation and, where necessary, managed retreat.



Top: Storm surge in Saint Clair, Dunedin © Ben Pearce / TNC 2025 Oceania Photo Contest; Inset: A mātātā/North Island fernbird © Glenda Rees

Emerging nature markets—including carbon, biodiversity and resilience credit schemes—can play an important role in generating revenue for wetland restoration. However, these mechanisms are unlikely to fully fund restoration on their own. Delivering wetland restoration at scale will require collaboration across local and central governments, iwi and hapū, landowners, communities and the private sector to design bespoke, place-based blended finance pathways.

In practice, this means bringing together public and private finance—combining council infrastructure budgets and government adaptation funding with investment from banks and insurers through innovative risk-sharing and capital mobilisation mechanisms. This could include developing new approaches such as resilience-linked financing, insurance models that recognise risk reduction from nature-based solutions and partnerships that support community transition and land-use change.

Philanthropic capital is critical as a catalytic layer to establish these pathways by supporting early-stage modelling, developing business cases, designing governance and demonstrating restoration principles via pilot projects that de-risk investment, enabling larger-scale public and private finance to flow.

Work to date

We are partnering with local governments, landowners, iwi and hapū to model how coastal wetland restoration can improve resilience, support biodiversity and reduce the cost of coastal infrastructure maintenance. The study will also evaluate the benefits of realigning coastal stopbanks to create space for wetlands and help build the case for investment in restoration.



Areas suitable for restoration are often on privately-owned land. Landowners either maintain their own stopbanks or rely on local government infrastructure to protect their land. Working closely with private landowners, local government and wider catchment residents, we can demonstrate the community-level benefits of restoring wetlands.

Our other work helps build the evidence base for restoration and the crucial engagement and relationships needed for this work.

- ➔ Revenue from blue carbon credits could potentially offset some of the costs of restoring and maintaining coastal wetlands;
- ➔ market demand for voluntary carbon and biodiversity credits from New Zealand (including those generated by wetlands), and the requirements for attracting investment in them (jointly with Bank of New Zealand and Deloitte);
- ➔ the policy, legal and market conditions that would be needed to enable coastal wetlands projects to result in blue carbon credits (commissioned with the Ministry for the Environment (now Ministry for Cities, the Environment, Regions and Transport - MCERT). We continue to advocate for regulatory barriers to be resolved; and
- ➔ the current blue carbon data gaps and a plan to address them (with MCERT)—and this work is underway.

We are also:

- ➔ championing Indigenous knowledge and investing in the next generation by supporting early-career researchers, Māori researchers and kaitiaki (Māori acting in a guardianship role) to attend relevant conferences and capacity building workshops;
- ➔ facilitating a national community of practice for coastal wetland restoration in Aotearoa (next hui in August 2026);
- ➔ developing a collective roadmap with the sector that reflects local aspirations and a practical toolkit for restoration in different places across Aotearoa.

The future

According to recent spatial analysis, an estimated 80,000 hectares of coastal wetlands could be restored across New Zealand (Bulmer, 2024). Much of the restoration potential is in low-lying drained catchments behind stopbanks, in areas such as Northland, Waikato and the Bay of Plenty.

We are working with regional councils to build the case for nature-based solutions to enhance the performance and lifespan of traditional grey infrastructure to meet the adaptation challenge.

This business case aims to show that integrating nature-based solutions into coastal adaptation and managed retreat strategies, in partnership with local community and mana whenua, can reduce long-term capital and maintenance expenditure for expensive and ageing coastal infrastructure. It also aims to provide evidence of the improved carbon storage, biodiversity protection, resilience and quality-of-life that restoration delivers to communities.

Once the business case is established, the next step is to design finance pathways, which could include insurance-linked finance, resilience investment schemes, and local/central government incentives.

Our goal is to enable restoration of 500 hectares by 2030, starting with a pilot project to restore wetlands at one or more sites. A successful pilot would demonstrate the feasibility of restoration alongside coastal stopbank retreat and provide a blueprint to expand efforts nation-wide.

We are seeking funding for a pilot project to build momentum for change, with central Government, local government, iwi, hapū and communities working together. **The cost of adapting increases the longer we delay.**



The opportunity

We are in discussions with a regional council to start an immediate restoration of up to 60 hectares, which will serve as the demonstration site and contribute to the business case, along with modelling work in the same catchment.

This site is typical of many restoration opportunities around the country, with low-lying rural land that is now experiencing regular coastal and riverine flooding due to the increase in sea-level and extreme weather events. The existing stopbanks are deteriorating rapidly and becoming too expensive to maintain.

Many local residents live within a kilometre of the water, putting at risk their housing and social infrastructure. Rewetting the site identified would add a buffer, to protect roads and homes.

Restoring these wetlands would also improve the habitat for local tuna/eels, inanga/freshwater fish and the critically endangered matuku-hūrepo/ Australasian bittern. The local seagrass and mangrove systems also support both resident and visiting species like green turtles, among other species.

Once the initial modelling study is complete, it will inform future design of the business case for a catchment-scale restoration and funding model. The council have also dedicated funding to the restoration of an initial 15 hectares.

However, we are seeking funding to restore up to an additional 45 hectares, design the business case and implement wider catchment-scale restoration initiatives to provide greater protection for wildlife and residents.



Top: Birds flying over Waihi estuary © mountaintosea.org.nz-Lorna Doogan;
Inset: A pair of tuna/eels © Colin Marshall / 2025 TNC Oceania Photo Contest

How you can help

We are seeking donors to participate in funding the initial coastal wetland restoration pilot project.

With your support, we can make a vital and tangible difference for the planet and its people. Thank you for your interest.

Contact

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