



Ministry for Cities, Environment,
Regions & Transport

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Te Kāwanatanga o Aotearoa

Our Atmosphere and Climate 2026: The Stories Behind the Numbers

Tō Tātou Kōhauhau, Āhuarangi Hoki: Ngā Kōrero mō ngā Tau

Our Atmosphere and Climate 2026
Tō Tātou Kōhauhau, Āhuarangi Hoki



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Our atmosphere and climate

Tō tātou kōhauhau, āhuarangi hoki

Over centuries, Aotearoa New Zealand's climate has shaped our landscapes, ecosystems and ultimately our ways of life.

It has influenced where we build our cities and towns, how we make a living, and how communities interact with nature.

However, the climate we have known is changing. As greenhouse gas emissions continue to rise, global temperatures are increasing. This is affecting rainfall patterns and sea levels, and increasing the frequency and severity of extreme weather. We are increasingly seeing the impacts of these changes through flooding, droughts and habitat loss.

New Zealand has experienced several severe weather events this year that have led to states of emergency.

Flooding has damaged homes, isolated communities from essential services, and affected people's livelihoods. These events are impacting our connection to place, how we move people and goods, and how we build homes and infrastructure.

Our Atmosphere and Climate 2026 assesses evidence about the state of our atmosphere and climate, the pressures affecting them, and the implications for New Zealand.

This companion document explains selected findings and uses case studies to show how communities and organisations are responding to climate-related risks and opportunities. Together, they connect the evidence with decisions that can support planning, preparedness and risk reduction.



Environmental evidence to support informed decisions

The Ministry for Cities, Environment, Regions and Transport, in partnership with Stats NZ, reports on different aspects of our environment every six months and provides an overview of the whole environment every three years.

These reports draw on data and knowledge from public research organisations, regional and district councils, mātauranga Māori (Māori knowledge), research literature, and government reports. This comprehensive body of evidence allows us to track human impacts, identify emerging challenges, and support informed decision-making for managing natural resources and adapting to environmental change.

The path ahead

Te ara ki mua

The future impacts of climate change are not set in stone. The path ahead will be shaped by the choices we make today. Those choices can influence both the amount of future warming and how exposed and vulnerable people and places are to the challenges ahead.

How we experience future climate challenges will depend on how well we are able to adapt and how quickly we can transition to a low-emissions economy.

Climate adaptation is like carrying an umbrella when it rains. It does not stop the rain, and it cannot keep us completely dry, but it reduces our exposure. Similarly, adaptation cannot stop climate change, but it can help reduce its effects on people and places.

Adaptation takes different forms depending on the place and the risks involved. It can include restoring wetlands or building rain gardens to manage flooding, changing farming practices in response to heat and drought, and protecting, accommodating or relocating development exposed to coastal hazards.

Climate mitigation is the other opportunity here.

Mitigation is about lowering emissions that already exist and reducing the greenhouse gases entering our atmosphere that alter our climate. This can limit further warming and reduce the scale of future climate risks.

Together, climate adaptation and mitigation can reduce future climate risks and improve resilience to the challenges of a changing climate.

This companion document to *Our Atmosphere and Climate 2026* explores case studies of climate adaptation, including tree planting and efforts to relocate communities away from climate risk, as well as climate mitigation initiatives such as electrification.

Using evidence to prepare for change

Our Atmosphere and Climate 2026 highlights the importance of making climate-informed decisions when shaping how we build our cities and regions, move people and goods, and interact with nature.

Climate information can help communities, businesses and governments identify risks, compare options and make more informed planning and investment decisions.

Auckland urban forest strategy

- ▶ Auckland is using trees to help protect community health and wellbeing from the impacts of our changing climate.
Read about this project on page 5.

Electrification pilot in Queenstown

- ▶ Queenstown's electrification pilot shows how locally generated electricity and electric vehicle batteries may help reduce emissions and support energy resilience.
Read about this project on page 7.

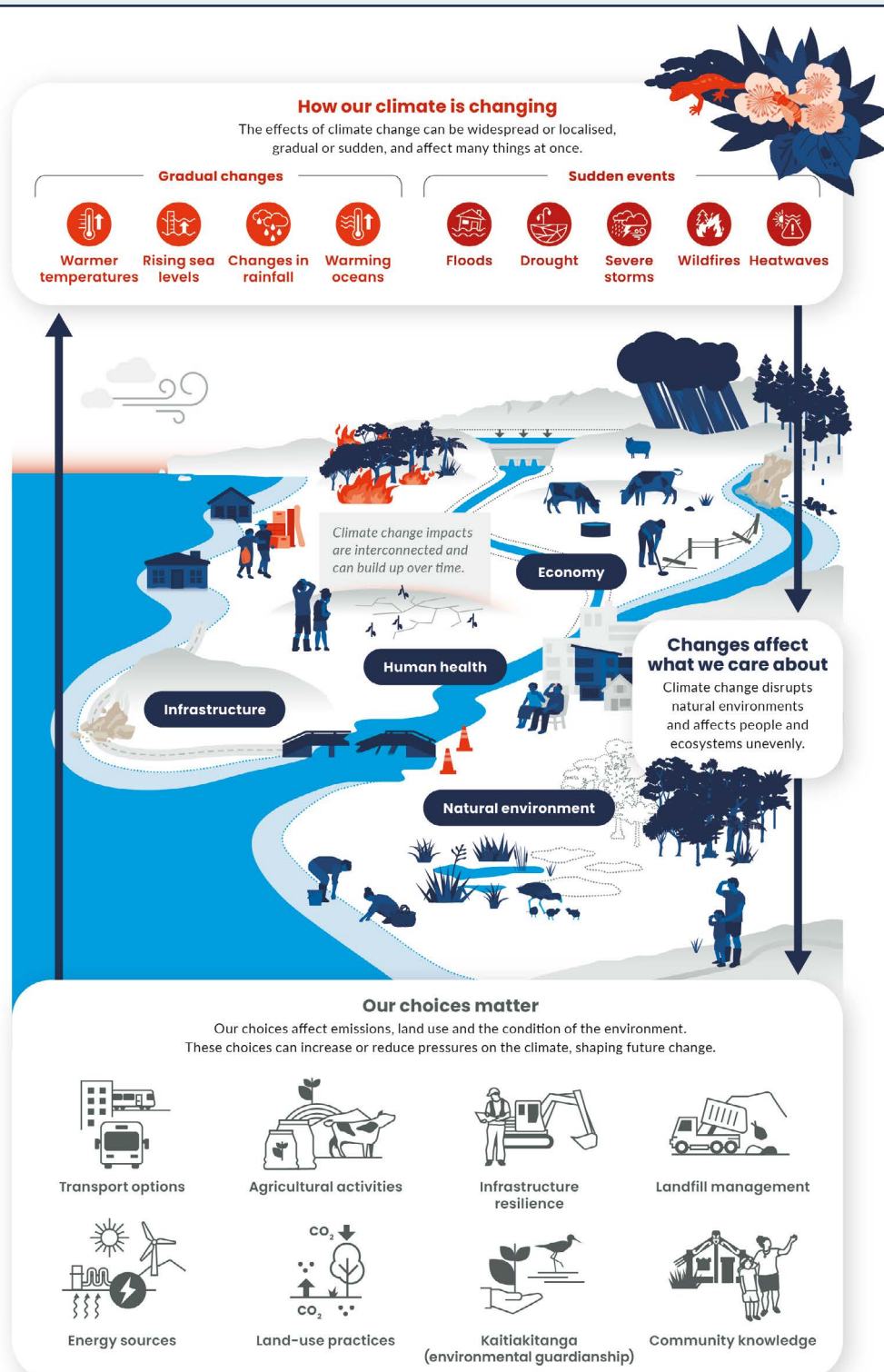
Amberley Beach plans for coastal hazards

- ▶ A coastal community in Canterbury is planning for future coastal hazards by exploring voluntary relocation to higher ground.
Read about this project on page 9.

Our changing climate

Tō tātou āhuarangi huri

Understanding what is changing, how fast, and where, can help communities anticipate and respond to future change.



Our health Tō tātou hauora

Our health is closely connected to the climate and environment.

As the climate changes, it can create new risks to our wellbeing and increase pressure on the systems and services that support our health. We can already see the impacts of rising temperatures and extreme weather on communities across the country.



Climate change can affect the food and water we rely on to stay healthy.



Climate change can impact both physical and mental health through rising temperatures and extreme weather events.



Some people and communities are affected more than others, depending on factors such as age, health, occupation, location and access to resources.



What Our Atmosphere and Climate 2026 tells us

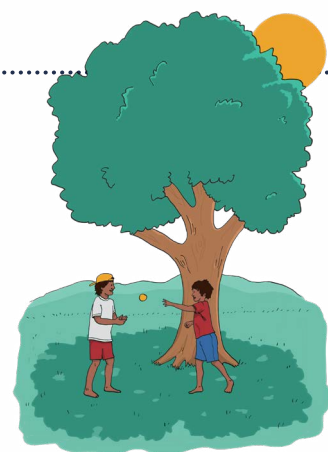


Flood-related infectious disease risks can remain elevated for up to 26 weeks after flood exposure.

14%

In New Zealand, each day of modelled tropical cyclone exposure between 2000 and 2019 was associated with a 14 percent increase in infectious disease hospitalisations over the following two months. For intestinal infectious diseases, hospitalisations increased by 21 percent for each day of exposure.

People who experienced Cyclone Gabrielle in 2023, and civil defence personnel in Westport who dealt with three major floods in 2022 and 2023, report high levels of stress, anxiety, grief and symptoms of post-traumatic stress disorder following the events.



Children are particularly vulnerable to heat-related illness, with New Zealand research finding greater sensitivity to high temperatures among Māori, Pacific and Asian children than European children.

Case study: Auckland urban forest strategy



The Urban Ngahere (Forest) Strategy is helping Auckland know, grow and protect its urban forest and prepare for climate challenges.

Adopted in 2019, it was led by Auckland Council and developed in partnership with tangata whenua. It recognises the relationship between trees, land and wellbeing and coordinates action across public and private land. Urban forests can help reduce heat exposure, provide shade, manage stormwater and contribute to community wellbeing.

The strategy aims to increase tree canopy cover across Auckland's urban area to 30 percent by 2050. Preliminary Auckland Council analysis from 2024 across 16 predominantly urban local board areas shows canopy increased from 18.1 percent in 2013 to 20.1 percent in 2024, mostly after 2016.

The strategy also has a goal for every urban local board area to have at least 15 percent canopy cover by 2050. The preliminary analysis found canopy cover varied across the city, with some local board areas remaining below the target threshold. Five urban local boards currently have less than 15 percent canopy cover.

Approximately 6,000 urban canopy trees are planted each year, prioritising lower-canopy

urban board areas. These larger-grade trees are planted in streets, town centres, parks and civic spaces, with establishment care supporting survival.

Between 2022 and 2025, Auckland Council's 200-hectare permanent forest programme delivered 116 hectares of restoration across 51 sites, with more than 1.2 million native trees, shrubs and grasses planted and monitored as they establish.

"We want to grow a healthy, resilient and well connected urban ngahere that benefits all Aucklanders," says Urban Forest, Arboriculture and Ecology Manager David Stejskal.

"That means protecting the trees we already have, increasing canopy where it is needed most, and making sure newly planted trees and restoration areas get the care they need to thrive.

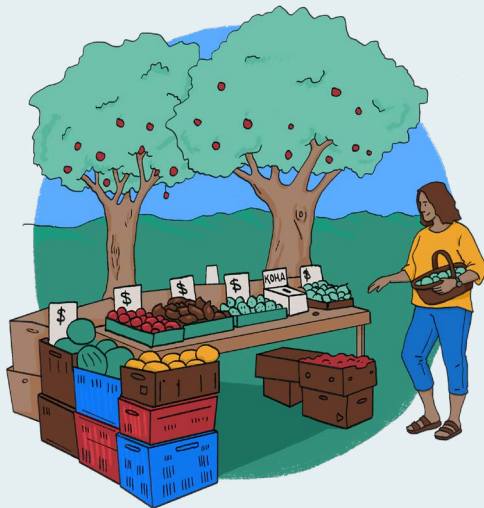
"The increase in canopy cover is encouraging and reflects the sustained efforts of our teams, mana whenua, communities and delivery partners. We still have plenty to do, particularly in areas with lower canopy cover, but by working together we can create cooler neighbourhoods, support biodiversity and strengthen the resilience of Tāmaki Makaurau to a changing climate," says David.

Above: Established London plane trees line Franklin Road, Freeman's Bay. *Photo: Auckland Council.*

Our livelihoods Ō tātou oranga

When the environment feels the pressure from our changing climate, the impacts extend beyond ecosystems, affecting the livelihoods that support our communities and economy.

Many of the lives and livelihoods built across New Zealand over generations have been shaped by a relatively stable climate. The changing climate presents new challenges but also opportunities for our economy.



Climate change can impact the natural resources and weather conditions our livelihoods rely on.



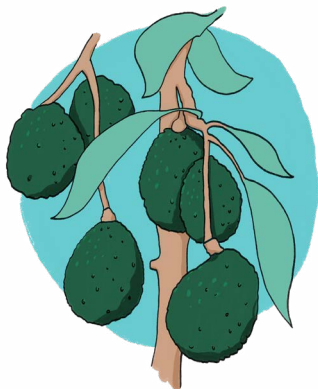
Climate-driven extreme weather can disrupt the movement of people and goods.



Some industries are more vulnerable to climate change than others.

What Our Atmosphere and Climate 2026 tells us

Suitable growing areas are very likely to change for some crops which could lead to new opportunities. For example, viable growing areas are projected to shift for blueberries and expand for avocados.



If ocean temperatures warm by 1.9 degrees by 2060, modelling suggests productivity will drop for about half of the fisheries in Tasman and Golden Bay. Under this level of warming, productivity is projected to decline for around 85 percent of fisheries in the Chatham Rise ecosystem.

New Zealand glaciers lost 26 cubic kilometres of ice between 1997 and 2023, leaving 30 cubic kilometres remaining. For many people, glaciers are iconic parts of New Zealand's landscape and identity.

11%

Some of our infrastructure is already at risk. For example, modelling estimates that 11 percent of electricity transmission structures are exposed to inland flooding, and this exposure is projected to increase.

Case study: Electrification pilot in Queenstown



The Queenstown Electrification Accelerator (QEA) is a community-led pilot project aimed at generating rapid electrification across Queenstown.

The project describes its long-term aim as developing a more electrified local energy system. It is intended to help lower energy costs and emissions while testing ways to strengthen local energy resilience.

A resilient energy system has the potential to help households and businesses maintain some essential services during power disruptions.

The Accelerator is working on multiple innovation projects, like Solar for Renters, Business Battery Deployment, and the country's first community Vehicle-To-Grid trial funded by the Energy Efficiency and Conservation Authority, where electric cars could power homes and businesses when they are parked.

By generating more electricity locally through rooftop solar and batteries, households and businesses may be able to lower their emissions and increase their resilience. It also means if an

extreme weather event or an earthquake makes the region inaccessible, households, businesses and the local economy could still have access to power.



QEA co-lead Josh Ellison says, "We are very focused on innovating to build a fairer, lower-cost, and lower-emissions energy system for New Zealanders. While the technology is there to change this, the practical layers to deliver benefits haven't been built. We want to move fast in one location, so we can be a lighthouse for building a better energy system for communities."

Top: QEA vehicle-to-grid demonstration.

Above: Lowri Swygart (QEA business lead) and Jade Baker-Edwards (QEA community lead) and a solar-powered scooter.

Photos: Queenstown Electrification Accelerator.

Our connection to place

Tō tātou toiwhenua

Climate change is altering some of the places people value and species depend on.

These changes can affect where species live, people's access to nature and cultural places, and the relationships, practices and livelihoods connected to them.



Climate change is re-shaping landscapes, coastlines and ecosystems, affecting the places where people and species live.

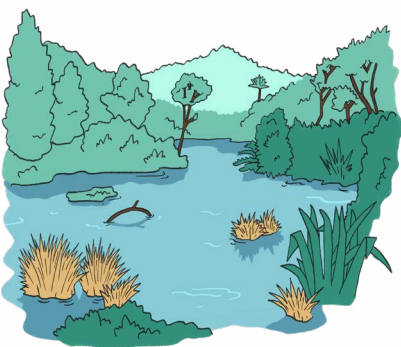


Extreme weather can damage or disrupt access to conservation land and recreation areas.



Changes to species and places can affect cultural practices, identity and the transfer of knowledge between generations.

What *Our Atmosphere and Climate 2026* tells us



Following Cyclone Gabrielle, native forests, wetlands, braided rivers, freshwater ecosystems and threatened species experienced a range of impacts. These included vegetation damage, tree dieback and declines in some bird populations.

Environmental transformation due to the changing climate can reduce access to culturally important places, and can reduce the ability of Māori to uphold values, tikanga (customs and protocols), mātauranga (Māori knowledge), and cultural practices and protection.

Modelling estimates that 32,000 people are already exposed to coastal flooding under a 1 percent annual likelihood flooding event. As coastal flooding becomes more frequent, research indicates coastal properties in some areas may become increasingly difficult to insure as soon as 2035.

Investing in flood risk reduction is more effective and cost-efficient than spending on post-disaster recovery. Every dollar invested in flood management infrastructure is estimated to avoid between five and eight dollars in direct losses.

Members of Tuawhenua Trust and Ngāti Whare have observed a significant decline in native fruit abundance, in particular tawa berries, and the frequency of fruiting events across a variety of species in both the Te Urewera and Whirinaki forests over the past 30 years.

Case study: Amberley Beach plans for coastal hazards



Amberley Beach in North Canterbury is exposed to coastal erosion, inundation, and flooding from rivers and heavy rainfall. Sea-level rise and a changing climate are expected to increase some of these risks over time.

Together, these pressures are likely to threaten homes, infrastructure and community wellbeing, prompting a rethink of the community's connection to a place it has called home for generations.

Alongside the Hurunui District Council, the Amberley Beach community has developed a Coastal Adaptation Plan that outlines how the area will adapt to the changing climate over the next century.

A major part of this plan is to offer owners of the 109 properties the opportunity to move to higher ground. Sections will be made available to affected members of the community for \$11,000 which can be paid in one lump sum or paid off through their council rates.

The land was purchased in early 2025 and work has been carried out since then to prepare for rezoning, including geotechnical, infrastructure, economic studies and road access options.

The Council says any future move will occur only if residents choose to do so and circumstances make relocation desirable. This community-led planning process may provide useful lessons for other places considering how to manage long-term exposure to coastal hazards and climate-related risks.

Planning ahead can help communities compare options, understand costs and risks, and make decisions before hazards become more urgent.

"This project is about giving the Amberley Beach community options for the future," says Hurunui District Council Chief Executive Hamish Dobbie.

"The Coastal Adaptation Plan recognises that hazard risks are expected to increase over time, but managed retreat is not required today and may not be needed for many years.

"By land banking suitable land now, we are creating a pathway that allows property owners to plan ahead, protect equity and make decisions on their own terms if relocation ever becomes necessary. The proposal is entirely voluntary and has been developed alongside the community over several years.

"Our aim is to reduce future financial and social disruption, keep options open for future generations, and support the community to remain connected as it responds to whatever challenges the future may bring," says Hamish.

Above: A bird's-eye view of Amberley Beach, where the community is working with Hurunui District Council to plan for the long-term impacts of coastal erosion, flooding and sea-level rise. *Photo: Kaikōura Hurunui Water Services.*

