



for a living planet®

CLIMATE CARE

Protecting New Zealand

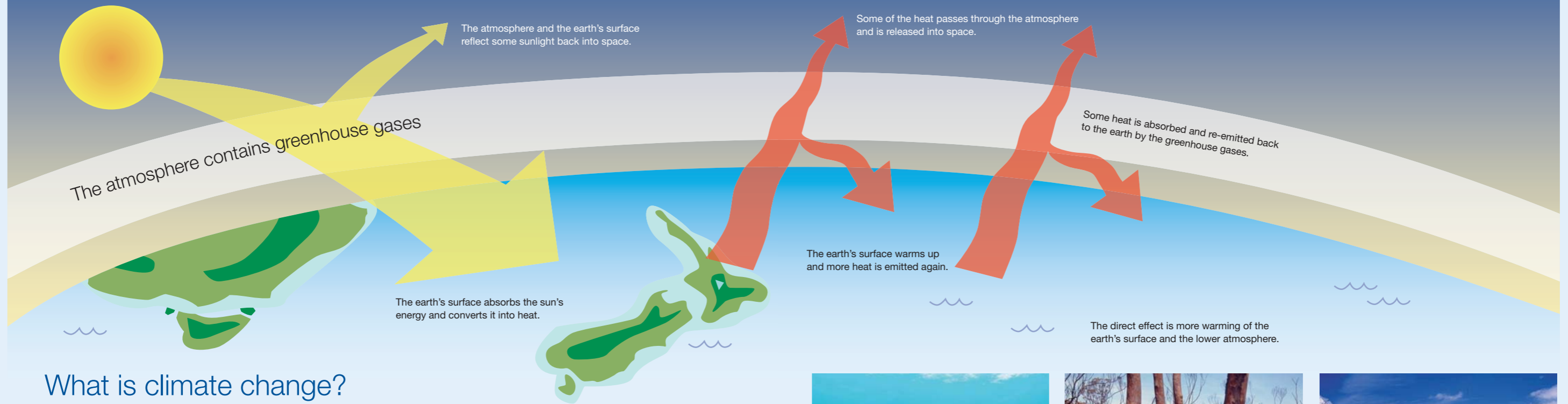
The earth's climate is changing. It's getting warmer faster, because of the choices we make in our daily lives – the cars we drive, the electricity we use, the buildings we construct and the food we grow. The effects of our warming planet are already evident in melting snow and glaciers, rising sea levels, increasing numbers of devastating storms and droughts, and damage to ecosystems that threaten many species with extinction.

These changes are affecting our people and country as well as people and environments worldwide. The pace of change can no longer be ignored. We are at risk in our lifetime. But we still have a choice – a choice about what we do in our lives, about the kind of future we have.

That's helpful.

STATE

The greenhouse effect

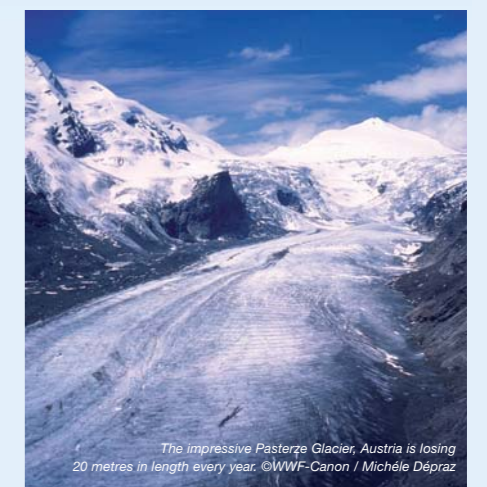


What is climate change?

Greenhouse gases like carbon dioxide, methane and nitrous oxide in our atmosphere help make the planet a warm and habitable place. They act to trap heat from the sun. These gases are emitted naturally from plants and animals, as well as from human activity.

An increase in human activities - like driving cars, farming, burning coal and oil, and cutting down trees - is in turn increasing the volume of these gases each year. While some are stored away from the atmosphere in "sinks" - the vast oceans and forests of the world - much more are emitted into our atmosphere where they are trapping even more heat, causing the planet to warm up and our natural weather patterns to change.

This process is often called 'global warming' but it is better to think of it as 'climate change' because it is likely to bring about a more changeable climate with more extreme events - floods, storms, cyclones and droughts - rather than an increase in temperature alone.



Can we stop climate change?

Despite any measures we take to reduce greenhouse gas emissions now, their levels, especially of carbon dioxide, in the atmosphere are expected to continue affecting and changing the climate. But climate scientists say to avoid triggering large scale events like the breaking up of the Greenland or West Antarctic Ice Sheets, we must reduce our emissions by at least 30% by 2020 and by at least 80% by 2050. Taking action now is like taking out an insurance policy to protect our future.

If we do not reduce our emissions, greenhouse gas levels in the atmosphere will continue to rise and further affect the climate. If we do not have adaptation plans we will be more vulnerable to the effects of climate change.

There are two main ways we can take action: reduce our greenhouse gas emissions; and prepare to adapt to inevitable changes.

Our changing climate

Our climate has undergone many changes over millions of years. It has naturally fluctuated between being very cold and covered in ice when greenhouse gas concentrations in the atmosphere are low, to being very warm when there are higher concentrations of greenhouse gases. Ice ages have devastated plant and animal life only for it to return in abundance with the next warm era. Since the industrial revolution, increased greenhouse gas emissions from human activities have been bringing about a speedier rate of change to the climate.

The effects are measurable:

- 12 of the past 13 years were the warmest since records began.
- The seasonal flowering patterns and timing of bird migration in Europe is changing.
- The USA and Japan experienced record hurricane and typhoon seasons in 2005.
- The severity and frequency of droughts is increasing as we are seeing now across Africa and Australia.
- Sea levels are rising at a rate of almost 2mm a year.
- Glaciers, snow cover and permafrost have decreased in both hemispheres.
- Ocean temperatures are rising.

New Zealand's emissions

We release carbon dioxide (CO₂) when we cut down and burn forests, burn fossil fuels (coal, oil and natural gas) to generate electricity, heat our homes or travel by car and planes.

We release nitrous oxides and methane when we fertilise land, raise farm animals, bury waste, mine coal or make cement and steel.

Although New Zealand contributes less than half a percentage of the world's overall emissions, in 2006 the average yearly emissions produced by each of us puts us as the 12th worst emitters in the world. Or put another way, we would consume 4.3 times the earth's resources if everyone on the planet lived like us.

And our greenhouse gas emissions are increasing more than most countries; by 21.3% since 1990. If no action is taken, it is predicted that our electricity related emissions may increase by 30% by 2030 and transport related emissions by 35%.

Our farming accounts for nearly half of all our emissions.

Ruminant animals like cows and sheep digest food and when they burp, methane is released.

Fertiliser on our soils and animal urine produces nitrous oxide.

Our energy use is the next largest emitter.

Our transport – cars and planes – are some of the biggest carbon emitters.

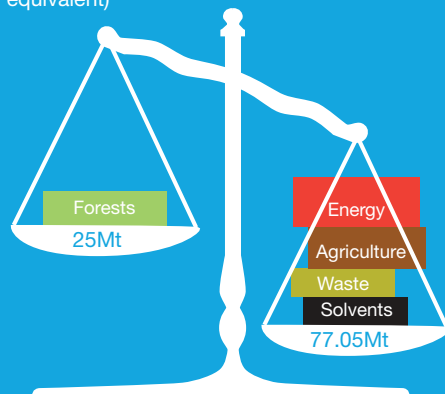
The rest comes from energy production, such as electricity generation from coal-fired and gas power stations and manufacturing.

Greenhouse gas emissions in 2004

(% of millions of tonnes of CO₂ equivalent)

Forest sinks -33%

Absorbed 25Mt carbon dioxide



Energy 48%

- 38Mt carbon dioxide
- Industrial processes 6%
 - Electricity generation 8%
 - Transport 19% (including air travel 1%)
 - Electricity use 15%

Solvents 1%

0.05Mt

Agriculture 49%

- 37Mt methane & nitrous oxide
- Fertiliser 3%
 - Urine 15%
 - Effluent 31%

Waste 3%

- 2Mt methane
- Landfills 3%

Take action tips

“The actions we can take to tackle climate change make environmental as well as economic sense.”

Visit wwf.org.nz/climatechange to find out more.



Around the home

- **Make sure your home is well insulated** – ceilings, walls, floors, hot water cylinders and pipes.
- **Use energy saving light bulbs**, which use one-fifth of the energy of standard bulbs.
- **Wash clothes in cold water and hang in the sun to dry.**
- **Use low flow shower heads and flow restricters to reduce water and power bills.**
- **Switch appliances off at the wall when not in use.**

A changing forecast for New Zealand

The world's climate determines the seasons and regulates the weather patterns.

Even small changes to our climate could have a significant effect on our economy, environment and way of life. In New Zealand, more extreme weather events are expected to happen in the future, including more droughts and more floods. **Average temperatures are projected to increase about 1°C by the 2030s and between 2 to 3°C by the 2080s (compared with 1990 temperatures).**



Native animals and plants

- Changes in or losses of habitat will threaten native species.
- Increased pressure from pests – animal and plant.



Health

- More tropical pests and mosquito-borne diseases.
- Warmer winters bring less cold related illnesses.
- Warmer summers increases heat stress.



Windier

- Increased westerly winds.



Drier

- Sunnier and drier in the east.
- More droughts in already drought prone areas.
- Increased risk of fires.
- Warmer average temperatures.



Wetter

- Wetter and cloudier in the west.
- More very heavy rain.
- Increased frequency and severity of storms.



Frost and snow

- Warmer nights brings fewer cold, frosty nights.
- Ice volume is decreasing in the Southern Alps.
- Snow lines rise.



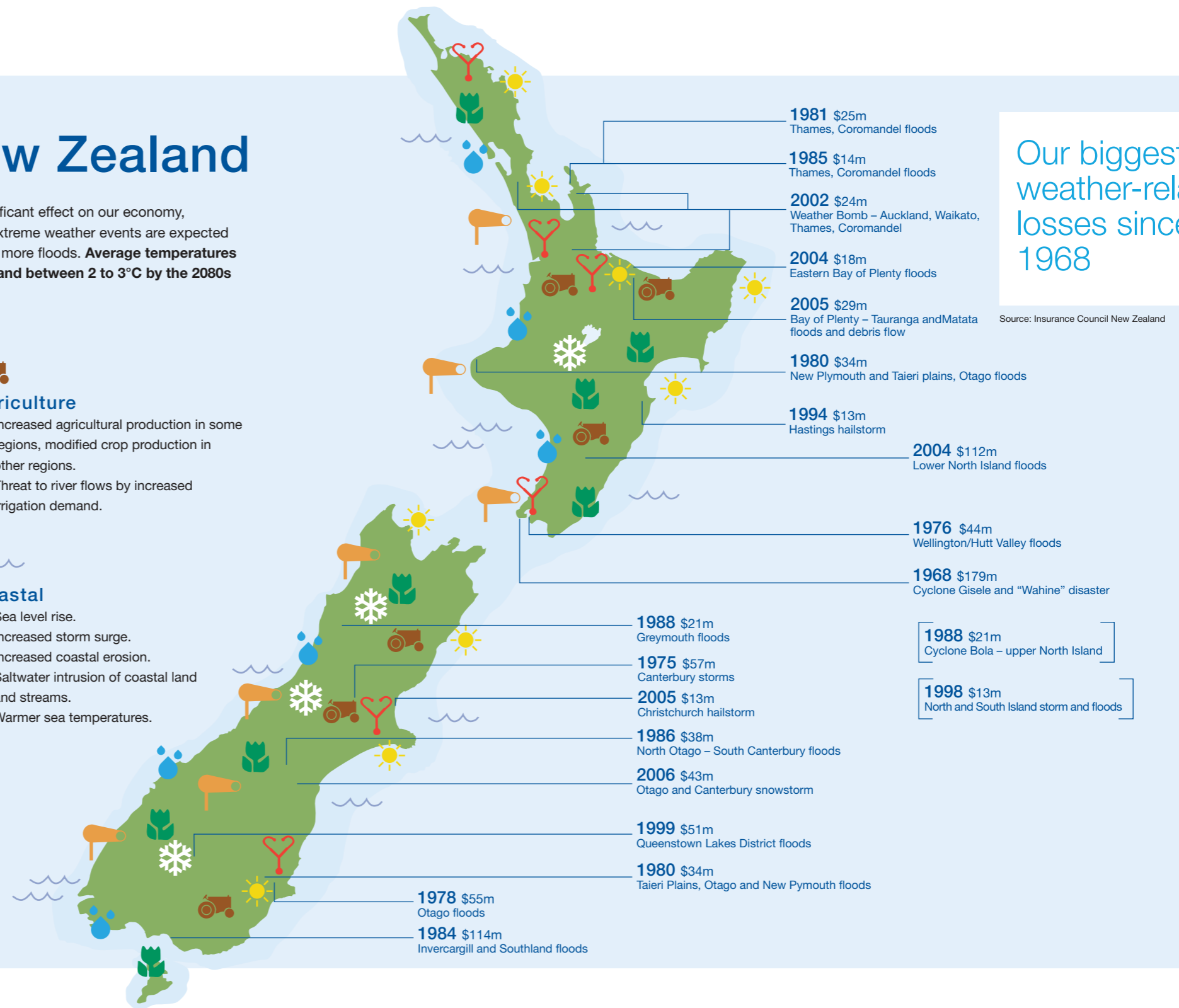
Agriculture

- Increased agricultural production in some regions, modified crop production in other regions.
- Threat to river flows by increased irrigation demand.



Coastal

- Sea level rise.
- Increased storm surge.
- Increased coastal erosion.
- Saltwater intrusion of coastal land and streams.
- Warmer sea temperatures.



Building or renovating

- Source natural, sustainable materials where possible, such as timber from sustainable plantations and bio-paints.
- Maximise the sun's free energy to warm your home with smart building design and the installation of a solar water heating system to reduce water heating costs.



Travelling

- Use public transport or carpool and share the fuel costs.
- Get fit for free! Walk or cycle instead of using your car.
- Keep your tyres inflated to the correct pressure and regularly maintain and tune your car.
- If buying a car, chose a fuel-efficient, low-polluting model.
- Go easy on the accelerator to reduce fuel use.



Purchasing power

- Avoid petrochemical and plastic products.
- Buy appliances with the highest energy efficiency ratings.
- Vote with your wallet and support environmentally aware businesses.
- Where possible choose carbon neutral products – those produced by energy efficient processes with the minimum amount of greenhouse gas emissions.
- Buy the best quality products you can afford that are long lasting and recyclable.



At work

- Recycle paper, plastic, tins and glass.
- Switch off lights and equipment when not in use, especially when the office is empty.
- Use chlorine-free or recycled paper, and reuse the blank sides for rough work then recycle it.

New Zealanders can make a world of difference

It will take a global effort to reduce the greenhouse gas emissions which are causing our planet to heat up.

In the past, New Zealand has been at the forefront of major international change. We were the first country to give women the vote. We were the first country to be nuclear free. And we were one of the first countries to sign up to the Kyoto Protocol, which aims to reduce greenhouse gas emissions.

We pride ourselves on finding innovative solutions to problems and never shirking our responsibilities.

Sensible and creative action by individuals, supported by bigger steps from government and business, will make all the difference in protecting our way of life and influence the rest of the world to reduce greenhouse gas emissions too.

Innovative ways to reduce emissions already exist. This includes using renewable energy resources like wind and solar power, supplementing petrol with biofuels, encouraging reforestation and slowing deforestation, reducing waste, researching how methane from ruminant animals, like cows and sheep, can be reduced or captured, and improving energy efficiency at home and at work.

While there may be costs associated with cutting our greenhouse gas emissions, doing nothing will cost future generations a lot more.

The actions we can take to tackle climate change make social, environmental as well as economic sense, in many cases putting money back in our pockets.

“Sensible and creative action by individuals, supported by bigger steps from government and business, will make all the difference...”



Cut back on waste

- Compost your food and garden waste, which helps cut methane emissions in landfills.
- Use a 'no junk mail, please' sign on your letter box.
- Use re-useable shopping bags and decline plastic bags.



Be informed and inspire others

- Take the interactive house tour for environmental and safety tips at www.state.co.nz/HomeHelp
- Keen to learn? Read the latest insights from real climate scientists at www.realclimate.org/
- Volunteer for conservation and plant restoration projects. Among the many voluntary environmental organisations you can join or support is WWF-New Zealand.





for a living planet®

WWF-New Zealand and State working together

State Insurance and WWF-New Zealand have partnered to increase New Zealanders' understanding of climate change and to encourage action to reduce our individual greenhouse gas emissions.

At WWF-New Zealand we campaign for the environment and wildlife in New Zealand. Our mission is to create a future where people live in harmony with nature. Our campaigns include climate change, environmental education, community support and marine. We play a key role in motivating governments, business and individuals to take action to tackle major threats to our living planet. We form innovative partnerships, conduct critical research and investigations, and propose real, practical solutions.

The weather is a vital concern to the insurance industry. Weather-related disasters represent 19 of the top 20 insurance losses in New Zealand. Severe storms, flooding and higher winds put customers, the community and our business at great risk.

At State we believe that by preparing and adapting to climate change impacts now, it will be possible to reduce the risk of damage caused by more extreme weather.

State and WWF-New Zealand are committed to reducing their own emissions, especially in the areas of transport, waste and energy use. We're already making good progress. In the last three years State has reduced emissions by 15% and its goal is to be carbon neutral by 2012. WWF-New Zealand became carbon neutral in 2006 and aims to reduce emissions annually by 10%.

To learn more about State, visit www.state.co.nz and WWF-NZ at wwf.org.nz

Help to weather the storm

A severe storm can strike at any time, with little warning. The heavy rain, high winds, snow and hail that occur during storms can cause substantial damage to property, but this damage can often be prevented. Here are some steps you can take:

- If you are buying or building a new house, think about how climate change may affect your home in the future. Is flooding, landslip or erosion likely to be a concern? If so, talk to your council.
- Maintaining your home can make all the difference:
 - Clean gutters and downpipes and check inside the roof for leaks.
 - Sweep leaves and debris away from drains and fix any that are blocked to make sure storm water can flow away.
 - Trim tree branches near the house (after first checking with your local council) and tidy up any loose objects that could blow around.
- Put together an emergency kit of everyday things that you'll need if you don't have electricity or water.
- Check that your home and contents are insured for the right amount to cover their replacement cost at today's prices.
- If a storm is forecast:
 - Remove or tie down objects that might get broken or cause damage if they're blown around.
 - Shelter vehicles or cover them with a tarpaulin or blankets – make sure you have a full tank of fuel in case you need to and are able to evacuate.
 - Disconnect electrical appliances to avoid damage from power surges.
 - If floods are likely, move whatever possessions you can to somewhere up high.
 - Check your emergency kit and fill your sinks and bath with fresh drinking water.

For more helpful tips visit:
www.state.co.nz/personal-policies/your-home/storms/

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