

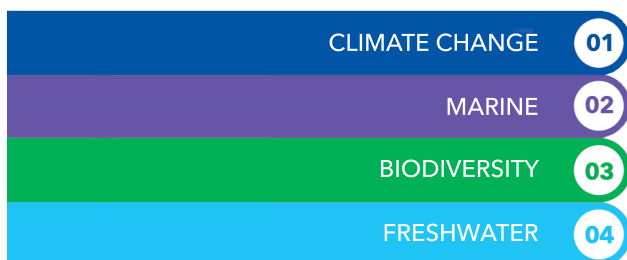
ENVIRONMENTAL STATEMENTS

"Why bother? It's too important not to, for all of us." - Sir Peter Blake

SUMMARY

Human activity has a direct and lasting impact on the climate and living systems of Earth. Currently, we are taking more than we give back. Protecting the environment is everyone's responsibility, and we all must play a part to reduce the impact. We urgently need to work smarter, and faster, to solve the climate and ecological crisis, and be guardians of the future. But what can we all do? And what does Aotearoa New Zealand need to do collectively to protect New Zealand's living systems?

At BLAKE, our core purpose is to inspire people to lead a sustainable future, which we do through our environmental leadership and communication programmes. But we know inspiration is not enough. We need action. In 2019, we established our Sustainability Initiatives, which we continue to develop and improve. Some examples include the use of four plug-in hybrid electric cars; we joined Air New Zealand's Fly Neutral programme to offset our carbon emissions when staff and programme delegates fly; we choose suppliers of sustainable materials; and where possible, our staff use video conference calling for delegate selection and meetings rather than travel by air.



Our four initial environmental statements – climate change, marine, biodiversity and freshwater – identify critical environmental issues and risks in New Zealand and outline the actions we need to take to address the climate and ecological crisis.

They inform the content in our programmes and set a baseline from which we communicate. The need for action is obvious and immediate, now we must empower people to act.



"Our watchword is sustainability – there are better ways of doing things so that planet Earth can sustain our presence. Our approach, where possible, is to offer solutions rather than simply condemn." - Sir Peter Blake

CLIMATE CHANGE

"There's been a greater thirst for fuel, for power, for your air conditioning, your motor car, and your airplane. You can jump on a plane today and fly from A to B, and it doesn't cost very much; or does it? Because I think environmentally it costs a huge amount, far more than we're having to pay in today's terms." - Sir Peter Blake

Keeping carbon emissions in check is critical to keep the planet from further warming. Failure to limit warming to 1.5°C will have substantial consequences on land and sea. In New Zealand, these include increased dry days throughout the North Island; and in inland parts of the South Island, increased severity, and frequency of droughts and increased extreme daily rainfalls. New Zealand's marine environments are getting warmer and more acidic, directly impacting marine ecosystems.

Current government policies from all nations on Earth commit the planet to 3.0 to 3.4°C of warming above pre-industrial levels by 2100. Global progress can be tracked on the *Climate Action Tracker*. Shifting to a low-carbon economy will create new opportunities and jobs that benefit everyone. The transition is not cost-free, but to not act puts an enormous burden on future generations.

In New Zealand, the Climate Change Response (Zero Carbon) Amendment Bill aims to develop and implement clear and stable climate change policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5°C above pre-industrial levels.

WHAT CAN YOU DO?

- Reduce high emission human activity including air travel. Embrace public transport, cycling, ride-sharing, or use an electric vehicle.
- Buy local, fresh and in season food. The further the food has travelled or has been stored, the more carbon it has used to arrive in the supermarket.
- Reduce food waste. Food produces about 17 per cent of your total emissions profile.
- Reduce meat and dairy consumption. Agriculture is responsible for a quarter of global greenhouse gas emissions.
- Plant trees. Trees are the best technology we have to offset carbon emissions.
- Talk about climate and environmental issues. We need to be having these conversations all the time.
- Donate to environmental organisations. The environment represents less than 3 per cent of donations to charities.
- Quit plastic. Use reusable bags, refuse plastic straws and bags, do not buy plastic gimmicks.
- Manage your personal supply chain. Research the sustainability credentials of the product and the company that produces it. Buy second-hand whenever possible.

"...we have to look for the new fuel, and it's sitting around us. It's in the water - it's hydrogen. It's blazing out of the sky - it's the Sun. It's the wind power that covers the Earth, it's the trade wind, the strong winds of the northern and southern hemispheres, in the wild parts of the world. It's all those huge waves, the wave power! There's power there to be had!" - Sir Peter Blake

WHAT DOES NEW ZEALAND NEED TO DO?

- Continue transitioning towards 100 per cent (or close to 100 per cent) renewable electricity, primarily through increased use of wind and solar.
- Improve power storage during peak periods using localised and new directional energy storage technologies.
- Create new energy infrastructure to accelerate transitioning non-renewable operations (e.g. stop using coal-powered boilers to dry milk into milk powder).
- Capitalise on high levels of renewable energy through use of electricity where possible, including incentivising low emissions vehicle uptake, use and charging.
- Improve zero emission public transport (i.e. buses and trains).
- Develop circular principles to reduce greenhouse gas emissions through reuse, remanufacturing, and recycling.
- Invest in technology to reduce agricultural emissions and begin a transition towards more sustainable alternatives.
- Establish and promote carbon sequestration projects such as restoration of marine ecosystems including mangrove forests, sea grass meadows, saltmarshes and kelp forests, as well as sequestration projects in terrestrial settings.
- Utilise market forces through a strengthened emissions trading scheme or introduction of a carbon tax.
- Offset emissions through the purchase of high-quality certified carbon credits, as a last resort.
- Some level of warming and sea-level rise is already locked in. Adapting to climate risks requires the risks to be factored into development plans, including protecting coastlines, shoreline encroachment, flood protection, water availability, resilient crops and protecting infrastructure.

MARINE

"We all live on a water planet, that's what Earth is.

So, water is life, that's where life started, it started in the sea." - Sir Peter Blake

The ocean absorbs 93 per cent of Earth's heat trapped by greenhouse gases, creates more than half of the oxygen we breathe, drives weather systems and regulates global climate. Marine environments provide commercial, recreational and cultural value to society through harvesting kaimoana, tourism, transportation and for recreation (fishing, swimming, diving, and sailing). But, increasing human pressures from rising greenhouse gas emissions, unsustainable fishing practices, sedimentation, pollutants and plastics all cause significant and cumulative threats to marine environments.

Globally, increasing ocean temperatures, ocean acidification and pollution are causing significant stressors on marine ecosystems and the ocean. Biodiversity is in steep decline, and nearly 80 per cent of fish populations are fished at unsustainable levels. Only 2 per cent of the ocean is fully protected globally. Studies report protecting 30 per cent of the world's oceans from human influence would not only be good for conservation, but would address challenges regarding overfishing, pollution and climate change. Changing heat distribution in the ocean (from increasing ocean temperatures) is the single biggest driver of short-term climate variability influencing rainfall, temperature, and wind patterns around the world (e.g. El Niño and La Niña).

New Zealand has less than half a per cent of our marine environment fully protected, compared with a third of our land. New Zealand has one of the largest Exclusive Economic Zones (EEZ) in the world - 93 per cent of New Zealand is underwater. Well-managed, properly designed marine protected areas with appropriate boundaries can result in restored habitats, help recover fish populations and reduce pollution. Currently, the impact of recreational fishing compared with commercial fishing is not well understood due to a lack of robust measurement tools. For example, in the Hauraki Gulf, recreational catch likely exceeds commercial catch.

In rural and urban environments, land activities can pollute the marine environment and decrease health and diversity of marine habitats. When sediment, pollutants, nutrients and plastics enter a catchment on land, in rivers, or in coastal ecosystems; these inputs can smother benthic communities, reduce light penetration, impair juvenile organisms and filter feeders, and introduce metals and chemicals. These all impact the health of marine species and lead to reductions in environmental oxygen levels. Carbon emissions are causing significant changes in New Zealand waters. As waters warm and ocean currents change, animals and plants may migrate southward, resulting in modified or lost habitats. The changing heat distribution in New Zealand waters have significant influence on rainfall, temperature, and wind patterns. As waters become more acidic (from increased carbon dioxide absorbed in the oceans), shellfish, cold-water corals and some algae and plankton struggle to produce shells and have affected fertility.

Invasive marine pests can cause significant damage to marine ecosystems and species. Many invasive marine pests are established in New Zealand and are an ongoing issue. These marine pests spread by hull fouling and getting into ballast water.

WHAT CAN YOU DO?

- Fish and eat fish responsibly. Do not treat the catch limit as a target, only catch what you need and keep your catch size legal. Purchase fish from suppliers who use the most sustainable fishing practices.
- Reduce high emission activity. Use public transport, cycle, or drive electric vehicles, offset, or reduce flights, reduce food waste, and reduce meat consumption.
- Plant trees, flaxes, and long grasses to keep waterways clear, and prevent sediment and pollutants going out to sea.
- Talk about ocean issues and marine protection. Less than half a per cent of New Zealand's marine environment is fully protected, compared with a third of our land.
- Donate to marine conservation organisations. The environment represents less than 3 per cent of donations to charities.
- Reduce pollution. Refuse and reduce plastic use and products that contain microplastics. Use reusable bags, refuse plastic packaging, drink bottles and bags, don't buy plastic gimmicks.

WHAT DOES NEW ZEALAND NEED TO DO?

- Fully protect 30 per cent of New Zealand's marine environment and/or place under rāhui by 2030.
- Reduce or eliminate the use of harmful fishing practices such as dredging, bottom trawling and Danish seining, especially in areas of high conservation value.
- Promote restoration of and create new mussel beds and mussel farms to filter sediment, improve water quality and increase abundance and diversity of marine life.
- Restore sea grass meadows, kelp forests, and riparian planting to reduce sediment runoff from land.
- Promote and advocate for mangrove forest protection to absorb and store carbon, trap sediment, and provide important habitats for juvenile organisms.
- Increase capacity of stormwater networks and Gross Pollutant Traps and encourage naturalised streams.
- Encourage connection with the ocean through sustainable marine tourism.
- Ensure the hulls of boats are cleaned and well maintained to reduce the spread of invasive marine pests.

BIODIVERSITY

"When I look back 25 years, the first time I raced around the planet, our boats used to be surrounded by wandering albatross. In 25 years they're nearly all gone, through poor fishing practices. We're going to outline that." - Sir Peter Blake

New Zealand's biodiversity is currently in freefall. Habitat loss and fragmentation, introduced mammalian predators such as rats, possums and stoats, invasive pest plants, and to a lesser extent diseases such as kauri dieback and myrtle rust have caused the extinction and decline of many native species. New Zealand has the highest rate of threatened or at-risk native species of any country in the world. This includes 90 per cent of all seabirds, 84 per cent of reptiles, 76 per cent of freshwater fish and 74 per cent of terrestrial birds. Changing land use can lead to habitat loss, and landscape degradation – including erosion of high value nutrient-rich topsoil.



Restoring ecosystems and boosting numbers of native species improves genetic resilience and improves system performance through processes such as pollination, water retention and soil conservation. Eradication of introduced predators is a key component of ecosystem restoration. Predator Free 2050 is an ambitious goal to eradicate the most damaging introduced predators from New Zealand, restore the nation's unique native species (natural taonga) and reduce impacts on New Zealand's economy and primary sector. Restoring New Zealand's biodiversity also offers benefits to mental health (spending time in nature decreases feelings of depression and anxiety and reduces stress).

WHAT CAN YOU DO?

- Support and contribute to backyard, school, and community predator trapping and planting initiatives and remove invasive pest plants.
- Ensure cats are kept indoors in the evenings.
- Plant native plants rather than exotic species. Native trees support multiple ecosystems and life cycles.
- Support restoration projects such as restoring wetlands and waterways by encouraging riparian planting to mitigate the effects of land use on our waterways and retain soil moisture.

WHAT DOES NEW ZEALAND NEED TO DO?

- Continue the use of 1080 until new poisons, traps and biotechnologies are viable.
- Continue to invest in new trapping and bio-controls to improve the efficiency of pest eradication activity.
- Continue habitat restoration through native planting and predator control initiatives.
- Establish effective soil conservation measures in areas of significant national value.

FRESHWATER

"Good water, good life. Poor water, poor life. No water, no life." - Sir Peter Blake

Water is the most valuable resource we have. Freshwater environments provide commercial, recreational and cultural value to society through harvesting kai, irrigation, hydroelectric energy, tourism, and for recreation (fishing, swimming, kayaking and rowing). But, increasing human pressures from clearing of native forests, draining wetlands, farming practices, exotic forestry, urbanisation and urban water infrastructure cause significant impacts on freshwater environments. The *Our Fresh Water 2020* report reveals around three-quarters of native freshwater fish, and around two thirds of native freshwater birds are threatened with, or at risk of, extinction. More than 25 per cent of native freshwater invertebrates assessed, and one third of native freshwater plants assessed, are also threatened or at risk. The government aims to halt the decline in freshwater quality and ecological health and restore them within a generation.

In rural and urban environments, water quality and the health of streams, rivers and lakes can become degraded when excess sediment, nutrients, faecal contaminants and other pollutants entering the water bodies. Excess nutrients from fertilisers can drain into waterways and aquifers. This can negatively impact the health of freshwater ecosystems by promoting algal blooms, adverse plant growth and eutrophication. These can lead to reduced oxygen levels and change the composition of plant and animal communities. Erosion and slips can result in higher amounts of sediment entering freshwater environments. When excess sediment enters the waterways, it can smother riverbed communities, reduce light penetration and impair the gills of small fish and filter feeders. In urban environments, retaining, restoring and enhancing existing elements of the natural drainage system, and integrating these elements into the urban landscape will reduce flow rates and prevent pollutants from entering the waterbodies.

Forty per cent of people in New Zealand rely on groundwater for their drinking water, yet that water is vulnerable to contamination and poor management – partly because we don't know enough about our natural groundwater reservoirs. Increasing temperatures and climate variability will result in increased flooding and longer or more frequent droughts. These changes will place added pressures on water resources and freshwater ecosystems. Extended dry periods will also put pressure on water resources.

WHAT CAN YOU DO?

- Support restoration projects such as restoring wetlands and waterways by encouraging riparian planting to mitigate the effects of land use on our waterways and retain soil moisture.
- Reduce the risk of pollutants going into waterways. Rainfall runoff picks up plastics, motor oils, heavy metals and other pollutants from roads and drains, and carries them into waterways and out to sea. Refuse and reduce plastic use and when washing your car, try to let the water pass through soil rather than wash down the drain.
- Reduce water wastage (through lowered water pressure and usage when required) and improve water storage systems.

WHAT DOES NEW ZEALAND NEED TO DO?

- Implement effective management of fertiliser application to minimise nitrogen and phosphorous entering waterways.
- Implement effective exclusion of stock from waterways.
- Restore wetlands and waterways by encouraging riparian planting to mitigate the effects of land use on our waterways.
- Protect native freshwater fish, including minimising fish barriers.
- Eradicate freshwater pest animals and plants such as koi carp, didymo, and oxygen weed and prevent introduction of new pests.
- Repair and upgrade stormwater and wastewater networks and treatment infrastructure, and encourage naturalised streams and water-sensitive urban design.
- Develop sustainable water allocation and maintain aquifer health that safeguards water supplies and water treatment to mitigate drought and health risks.
- Establish comprehensive tree and forest cover, to promote transpiration and to mitigate drought and health risks.