ENGLISH

TE MANA O TE TAIAO

AOTEAROA NEW ZEALAND BIODIVERSITY STRATEGY 2020

New Zealand Government

Te Mana o Te Taiao - Aotearoa New Zealand Biodiversity Strategy 2020
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COVER: Giant Kauri tree (Tane Mahuta), illuminated by person with torch. *Photo: Rob Suisted*

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Tauparapara

Whakarongo rā te taringa ki te hau e papaki mai nei ki tōku kiri karamū

He manawa whiti, he manawa rere, he manawa kapakapa

Taku manawa whenua e hika nei

Ee! Ko te ngawekitanga o te whenua, te ngahuetanga o te moana

Waiho ake nei ko ngā tamariki a Rangi me Papa

I tukua mai ki au te puna o te ora.

Ko te wai te toto o te whenua, te whenua te toto o te tangata

I herea ki te tapu, ki te mana, ki te mauri o te ora

Te tātai o taku ora, te matū o te ora, he korerehū o te mātāmuri

Ka ohotū ki te ao, rapu noa nei au

Ki te angiangi, ki te memeha, ki te momotu Taku whenua kura

He matawara nōku ki taku ahurea i whītikihia e te tipua

Nō wai te mana? Nō Te Tiriti te mana, nō te Kōti te mana, nō te mana Māori motuhake

Nō Te Mana o te Taiao tonu

E ohu koutou ki te whakapai ake.

Hei whakamōmona i te whenua. Kei mate ai ōku tamariki

Ka warea te ware, ka area te rangatira,

Hongihongi te whewheia, hongihongi te manehurangi, kei au te Rangatiratanga.

Harken thine ears to the winds that cause the hairs on my skin to rise

My heart is startled, flits and palpitates

It is my beloved land alight with life

Manifest by the abundance of land and seas

Let alone the children of Sky and Earth

Given up to me the fountain of life

For the water is the blood of the land, and the land is the blood of the people

Lashed together by the hallowed and precious thread of life

This is my life's lineage, a mirage of the past

Waking to the world, searching in vain

Lean and degraded, a severed connection

My treasured land

I longed for my culture secured to me by my ancestors (by the supernatural)

Under who's authority? By the authority of the Treaty, the authority of the Courts, the authority of Māori

From the authority and power of the environment

Gather ye together to make it right.

To fatten the land. So my children will not suffer

Ignorance is the oppressor, vigilance is the liberator.

Know the scent of your enemy, know the scent of your vision, so that you may achieve liberation.

Composed by Puke Timoti

Kupu whakataki
Foreword

Many of Aotearoa New Zealand's indigenous plants and wildlife are found nowhere else on Earth. They are ancient and unique – we have giant invertebrates, flightless birds, penguins that live in the forest, trees that can live for over a thousand years, and the smallest dolphin in the world. Many of these creatures and plants have been isolated to the islands and waters of Aotearoa New Zealand since the days of the dinosaurs.

Healthy nature is central to human health, wellbeing and our economy. Here in Aotearoa New Zealand our natural environments, and the plants and wildlife they support, are part of our Kiwi identity. Nature provides us with green spaces and recreation for wellbeing, supports our primary and tourism industries, and allows us to gather kai. When nature is thriving, people are thriving. This has long been recognised in Māori culture, where nature and people are interwoven through whakapapa. People are kaitiaki (guardians) of nature, and nature is kaitiaki of people.

But nature in Aotearoa New Zealand is in trouble and it desperately needs our help.

Despite all that we are doing to try to protect and restore habitats and assist species, Papaptūānuku and Aotearoa New Zealand's indigenous biodiversity is in crisis. Around 4000 species are threatened or at risk of extinction. Many plants and wildlife continue to decline or are just hanging on. Biodiversity in Aotearoa New Zealand, the strategy's companion report presents the sobering evidence. It's not just a crisis for our country, but for global biodiversity – any indigenous species that we lose from these islands is gone forever.

We need to act urgently to ensure that nature is healthy and thriving for its own sake and for current and future generations. Taking action to protect and restore biodiversity now will also create nature based jobs and support our nation's economic recovery.

Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy - comes at a time when nature needs us the most. In order to halt the decline of biodiversity and protect and restore our ecological taonga, we need to build capacity and capability so that our actions make the biggest impact possible.

I would like to acknowledge all those who were involved in developing this strategy. It has been a collaborative effort involving Treaty Partners, whānau, hapū, iwi and Māori organisations, regional and central government and statutory bodies,

landholders, communities and organisations involved in conservation, research and science institutions, and a wide variety of industries. Your contributions have ensured that the strategy is aspirational and representative of all of Aotearoa New Zealand.

The release of *Te Mana o te Taiao* is one step towards better addressing the biodiversity crisis. We need to make some changes to the way we work and support each other. Collaboration will be at the heart of how *Te Mana o te Taiao* is implemented, and this starts with working together to design a plan for action.

We all depend on Papaptūānuku, and we all have a responsibility to safeguard nature. If everyone is involved and has a clear role to play – whānau, hapū and iwi, central and local government, industry and businesses, researchers, community organisations, landholders and individuals – we can make the biggest difference.

Hon Eugenie Sage

Minister of Conservation

Tākiri mai ko te ata, korihi te manu
Ka pō! Ka ao! Ka awatea!

Our relationship with te taiao is special and when we draw on a Māori world view the interconnected and holistic relationship between all living things build a profound respect for our natural world. Sadly our biodiversity is under threat, there are 4000 species across Aotearoa New Zealand that are now considered threatened or at the risk of extinction. We must not sit idle, what we do now can make a difference for the next generation.

Last summer I helped to launch the consultation on what will be one of the most ambitious plans for our natural taonga in this country, the National Policy Statement for Indigenous Biodiversity (NPSIB). The development of a proposed NPSIB will be one of the key tools for achieving Te Mana o te Taiao. The NPSIB proposes a solution of working together to ensure that nature can thrive on public, private and Māori land. By providing clear direction at the national level, the proposed national policy statement aims to help us increase our efforts to protect our most significant biodiversity and encourage restoration of what has been lost. We are proposing a toolkit with a range of measures to assist our efforts.

I am pleased that the important work of iwi and community groups in protecting and restoring biodiversity has now been recognised in Te Mana o te Taiao. Our local conservation champions play a significant role in inspiring the actions of others in their communities. Resourcing to help community groups grow, connect with others, and gather and share knowledge will bolster the fantastic work already being done to protect and restore our taiao.

I am also encouraged with the work undertaken across councils and regions to incorporate planning practices of working with landowners to improve biodiversity outcomes.

Indigenous biodiversity is found not only on public land, but also on private and Māori owned land where many of our threatened species, habitats, and ecosystems are also found.

Starting with strengthening the Treaty Partnership between Māori and the Crown, it is my hope that Te Mana o te Taiao will also help to create and support partnerships throughout local government and iwi. Coming together, sharing and using knowledge, especially mātauranga Māori, will have great positive impacts on our work to protect and restore nature.

Te Mana o te Taiao includes goals that will make the roles and actions of local government clearer and easier. Over time, this will also add to the quality of life attributes in our communities and regions – we have a beautiful country.

Together, all New Zealanders are responsible for protecting and restoring our unique nature. The responsibility we share today will be the reward that our children will benefit from.

And finally remember we can achieve the seemingly impossible. There were only five black robins in this world in 1980, with just a single breeding pair left. The outlook was really bleak, but a dedicated team of New Zealand Wildlife Service staff took the daring step of cross-fostering eggs and the young to boost numbers. The result is that there are now 250 black robins in Aotearoa New Zealand. Let birdsong of the great forest of Tāne remind us of our challenge, to protect and restore our precious biodiversity.

Pai Mārire

Hon Nanaia Mahuta

Associate Minister for the Environment

Mō tēnei rautaki
About this strategy

What does Te Mana o te Taiao mean?

Ko te mahere rautaki e kīia nei ko Te Mana o Te Taiao, he mahere kōtuitui i ō tātou whakaaro ki te whakaora, ā, ora rawa atu nei o ngā momo koiora kei roto i ō tātou taiao. Me te mōhio hoki ki te whakaora tātou i ērā mea, me whakaora hoki tātou i ngā taura here a te tangata ki ōna whenua, mai i ōna maunga, tae noa ki te moana. Kei te kī tātou he mana tō te taiao, he whakapapa tō te taiao, he mauri tō te taiao. Kei noho tātou ka memeha tōna mana. Amo akehia e tātou ki roto ki te ao tūroa.

The strategic plan, called Te Mana o te Taiao, is a plan which weaves together our ideas for restoring the biological species in our natural world, and ensuring their survival. We know full well that if we restore those things, we must also reinvigorate the kinship ties of people to their lands, from the mountains to the sea. We say that the natural world has its own power, genealogy, and life force. We can't allow that power to wane. Let us carry it with us into the natural world.

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Some key technical terms

Biodiversity, or biological diversity, means the variability among living organisms from all sources, including land, marine and freshwater ecosystems and the ecological complexes of which they are a part; this includes diversity within species (including genetic diversity) between species and of ecosystems (based on the definition of the Convention on Biological Diversity).

- **Indigenous biodiversity** is the diversity (or range) of indigenous species. This includes diversity within and between species.

Nature is a holistic term that encompasses the living environment (te taiao), which includes all living organisms and the ecological processes that sustain them. By this definition, people are a key part of nature. This strategy uses the term 'biodiversity' to refer to biological diversity and 'nature' when considering the wider processes, functions and connections in the natural environment, of which biodiversity is a part.

Species means a group of living organisms consisting of similar individuals capable of freely exchanging genes or interbreeding. In this strategy, the term 'species' also includes subspecies and varieties.

- **Indigenous species** refers to species that occur naturally in Aotearoa New Zealand.
- **Non-indigenous species**, or introduced species, refers to species that have been brought to New Zealand by humans, whether intentionally or unintentionally.
- **Valued introduced species** are introduced species, including sports fish, game animals and species introduced for biocontrol, which provide recreational, economic, environmental or cultural benefits to society.

Additional definitions are provided in the Glossary of technical terms at the end of this strategy.

Some key te reo terms

Kaitiakitanga is the obligation to nurture and care for the mauri of a taonga, or the ethic of guardianship or protection.

Mātauranga Māori, or Māori knowledge, is the body of knowledge originating from Māori ancestors. This includes the Māori world view and perspectives, Māori creativity, and cultural practices.

Mana is prestige, authority, control or personal charisma.

Mauri is the life principle, life force or vital essence.

Rangatiratanga means chieftainship, the right to exercise authority, sovereignty or self-determination.

Taonga refers to a treasure or something that is prized.
The term can be applied to anything that is considered to be of value, including socially or culturally valuable objects, resources, phenomena, ideas and techniques.

Te Mana o te Taiao is the mana of the living environment.

Tikanga is a custom, practice or correct protocol. It refers to the customary system of values and practices that have developed over time and are deeply embedded in the social context.

Whakapapa means genealogy, genealogical table, lineage or descent.

Translations of all Māori words and phrases used in this strategy are provided in the Glossary of te reo terms.

1.1
Te wawata – Te Mauri Hikahika o te Taiao The vision – the life force of nature is vibrant and vigorous

The vision provides inspiration and motivation for Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy (hereafter Te Mana o te Taiao – ANZBS) It paints a picture of the future we aspire to for biodiversity in Aotearoa New Zealand

Te Mauri Hikahika o te Taiao – the life force of nature is vibrant and vigorous.

The vision we set out for this strategy is not only for the return of health to the natural world in a way that we can measure but also for the return of a health and vibrancy that we can feel, touch, smell and hear, as well as an emotional reconnection with nature.

Central to this vision is the recognition that people are a part of nature – and that we can only thrive when nature thrives.

Achieving *Te Mauri Hikahika o te Taiao* is possible if we all work together. There is a place for everyone living in Aotearoa New Zealand to help restore the mauri (life force) of nature, ensuring that it is healthy for ourselves, our families, communities and cultures, as well as for future generations.

Mauri can be understood as the life force or life essence and is intrinsically linked to whakapapa (genealogy). Everything has a mauri and it plays a crucial role in the interconnectedness and ordering of elements within whakapapa. Connections that foster your emotional experiences are critical to understanding mauri, as Te Mahururangi Te Kaawa shares:

> "Te ihi, te wehi, te wana. Those are your emotions. Those are your indicators in a Māori worldview to assess the vitality of the mauri and the mana. When you travel in different areas, you feel the essential energy."
>
> (Te Mahururangi Te Kaawa 2015; Mātauranga o te taiao workshop; translated from Māori, Ruatāhuna)[1]

One way of visualising *Te Mauri Hikahika o te Taiao* is through the stories of kaumātua (elders) and their emotional response to experiencing a thundering flock of kererū within their rohe (region). The ihi (thrill) that emanates from experiencing large flocks of 300 kererū gathering in the forest during autumn to feast on the fruit of the toromiro is described by kaumātua as reflecting the vibrancy of the mauri of the forest – or *Te Mauri Hikahika o te Taiao*.

> "No sooner had I finished my prayers, I heard this thundering coming up the valley like a jet and I thought, 'Oh! I'm in trouble here'. Then I heard this sound, 'Whooooooosh!!!'. By crikey, the trees are moving and it was white everywhere. There was a constant cooing all over the place. I was in awe and shivering with fear. I was so afraid I could feel my hairs standing. Some time went by and my excitement finally settled."
>
> (Poai Nelson; Mātauranga o te Tuawhenua 2011, translated from Māori, Ruatāhuna)[1]

[1] The above section is drawn from the paper cited below and is used with permission from Puke Timoti. Timoti, P.; Lyver, P.O'B.; Matamua, R. Jones, C.J.; Tahi, B.L. 2017: A representation of a Tuawhenua worldview guides environmental conservation. Ecology and Society 22(4): 20. **https://doi.org/10.5751/ES-09768-220420**

We are connected with nature through the places where we spend our time. *Photo: Rob Suisted*

2.1
Ngā take e hiahiatia ana Te Mana o te Taiao – he rautaki kanorau koiora ā-motu
Why we need Te Mana o te Taiao – a national biodiversity strategy

Biodiversity is in crisis globally, including in Aotearoa New Zealand. A strategy is needed to address the complex issues causing biodiversity loss.

2.1.1 The world is in a global nature crisis

> "Biodiversity and nature's contributions to people are our common heritage and humanity's most important life-supporting 'safety net'. But our safety net is stretched almost to breaking point."
>
> (IPBES global assessment 2019)[2]

Nature is essential for our livelihoods, health, economic wellbeing and food security. Clean air and water, the food we farm, catch or hunt, and our tourism- and primary industry-based economy all depend on nature. We are also connected with nature through our many different cultures and the places where we live and spend our time, and nature is part of our identity.

Nature can only thrive when biodiversity thrives. Nature can better provide the benefits we rely on when environments are rich in biodiversity. However, biodiversity is rapidly declining around the world, with around one million animal and plant species currently facing extinction – more than ever before in human history. The rate of extinction appears to have been accelerating over the last 40 years and does not show any signs of stopping.[3] This loss of species and ecosystems, and the services they provide, threatens people's existence.

There are many causes of biodiversity decline. Direct pressures include the historical and ongoing impacts of invasive species, changes in land and sea use, direct exploitation of species, climate change, and pollution. Biodiversity can also be impacted by the different values people hold about nature and the ways we use it.

2.1.2 Nature in Aotearoa New Zealand is also in trouble

Papatūānuku (Earth mother), Ranginui (sky father) and their offspring are in serious trouble, and we urgently need to do a better job of looking after them. The state of nature is a legacy that we leave for future generations.

Nature in Aotearoa New Zealand is unique in the world and makes a significant contribution to global biodiversity, with our country being internationally recognised as a biodiversity 'hotspot'. Therefore, we have a duty of care to make sure that the unique animals, plants, fungi and microbes that are found in our country are healthy and thriving.

---

[2] IPBES 2019: Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Brondizio, E.S.; Settele, J.; Díaz, S.; Ngo, H.T. (Eds). IPBES secretariat, Bonn, Germany. **https://ipbes.net/news/Media-Release-Global-Assessment**

[3] Information in this section has been taken from the IPBES global assessment 2019: **https://ipbes.net/global-assessment**.

However, nature in Aotearoa New Zealand is in trouble. Biodiversity is declining in the face of the same direct pressures as are affecting other parts of the world. And these direct pressures are caused or exacerbated by a number of indirect pressures, including not having the right systems in place in terms of policy, legislation and leadership, people not having enough knowledge or resources to act, and a disconnect between people and nature.

Here in Aotearoa New Zealand we are already successfully taking action to protect and restore nature. There is now an opportunity to further invest in our successes and firmly place nature at the heart of all we do, which will benefit both nature and our livelihoods. Te Mana o te Taiao – ANZBS sets out how we can expand and build on the strong foundation we have already built to allow our natural world, and the people in it, to thrive.

2.2 Scope of Te Mana o te Taiao – ANZBS

Te Mana o te Taiao – ANZBS sets a strategic direction for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in Aotearoa New Zealand.

The scope of Te Mana o te Taiao – ANZBS includes all domains – land, fresh water, estuaries and wetlands, and the marine environment from the coastline to the outer edges of the Exclusive Economic Zone and the extended continental shelf. It also includes all types of tenure, including public lands, private land and Māori-owned land, and covers all indigenous and non-indigenous species, as well as migratory species that swim or fly between Aotearoa New Zealand and international waters or other countries.

Introduced (or non-indigenous) biodiversity is an ecological reality in Aotearoa New Zealand that is neither 'all good' nor 'all bad', with the benefits or impacts of introduced species to their surrounding environment often depending on the situation. In Te Mana o te Taiao – ANZBS, we recognise and prioritise the special responsibility we have towards indigenous species, while still recognising the recreational, economic and cultural benefits and human sustenance of valued introduced species.

Protecting and restoring biodiversity can, in some cases, be compatible with its sustainable use. Therefore, while Te Mana o te Taiao – ANZBS is focused on the protection and restoration of biodiversity, its scope also includes aspirations around customary harvest and sustainable use.

'**Sustainable use** means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.'

(Convention on Biological Diversity)

2.2.1 Strategic direction for all of Aotearoa New Zealand

Te Mana o te Taiao – ANZBS provides the overall strategic direction for biodiversity in Aotearoa New Zealand for the next 30 years. It is intended to guide all those who work with or have an impact on biodiversity, including whānau (family groups), hapū (clans) and iwi (tribes), central and local government, industry, non-government organisations (NGOs), scientists, landowners, communities, and individuals.

As well as setting an aspiration and direction, a strategy needs to set out a pathway for meeting the goals and objectives and specify who will be working on these. Now that Te Mana o te Taiao – ANZBS is in place, the next phase of strategy development will be to collaboratively design an implementation plan for 2021–2022. Together, Te Mana o te Taiao – ANZBS and the implementation plan form the Aotearoa New Zealand Biodiversity Strategy.

Progress and new discoveries we make along the way will influence the pathways we take towards the vision of *Te Mauri Hikahika o te Taiao*, so a new implementation plan will be developed for 2023–2025. After this, implementation plans will be produced every 5 years.

As a national strategy, Te Mana o te Taiao – ANZBS is closely connected to and guides local and regional biodiversity action. While some aspects of the strategy will be implemented nationally, much of the implementation will need to happen locally. This recognises that local aspirations and the most appropriate approach will vary from place to place so it is important that implementation is driven by those who know a place best.

Te Mana o te Taiao – ANZBS acts as a 'canopy' strategy, providing overarching direction and guidance to related strategies and work programmes (see Fig. 1 on page 15). These could include plans for specific parts of the biodiversity system (e.g. the control of specific pests or management of threatened species), iwi or hapū environmental management plans, large-scale programmes (such as Predator Free 2050), and industry or sector strategies.

2.2.2 Placing the Treaty partnership at the centre of biodiversity work

Te Mana o te Taiao – ANZBS recognises the Crown's legislative accountability to actively engage with iwi, hapū and whānau to acknowledge the Treaty of Waitangi. Te Mana o te Taiao – ANZBS aims to guide collaboration to actively give effect to legislation, such as section 4 of the Conservation Act 1987, demonstrating a collaborative expression of the principles of the Treaty of Waitangi. Crown agencies, through Te Mana o te Taiao – ANZBS, will act in good faith with iwi, hapū and whānau to achieve Treaty settlement obligation outcomes. This includes both those that have been settled and those that are yet to be settled.

These obligations and directions will need to be considered at all levels of implementation for the strategy and will need to be resourced.

Whānau, hapū and iwi have strong connections with their whenua (land), awa (rivers) and moana (sea) and as kaitiaki (guardians) have a strong interest in the management and wellbeing of the natural world. Throughout the development of this strategy, iwi, hapū, whānau and Māori organisations showed a strong interest and willingness to participate in and deliver on goals for protecting and restoring both nature and mātauranga Māori (Māori knowledge).

Relationships, responsibilities and practices can be sustained when iwi, hapū and whānau exercise rangatiratanga (authority) and carry out kaitiakitanga (guardianship). Te Mana o te Taiao – ANZBS includes values, objectives and goals to achieve this, including the Government sharing knowledge and helping to build capacity and capability to support iwi, hapū, whānau and Māori communities in their aspirations.

The release of Te Mana o te Taiao – ANZBS is just the first step towards finding better ways to work together. Planning and implementation of the strategy will provide an opportunity to elevate partnerships and improve how we all work together to deliver on our shared goals. Beginning with strengthening the Treaty Partnership between Māori and the Crown, Te Mana o te Taiao – ANZBS will also help to create and support wider partnerships, including with local government and communities.

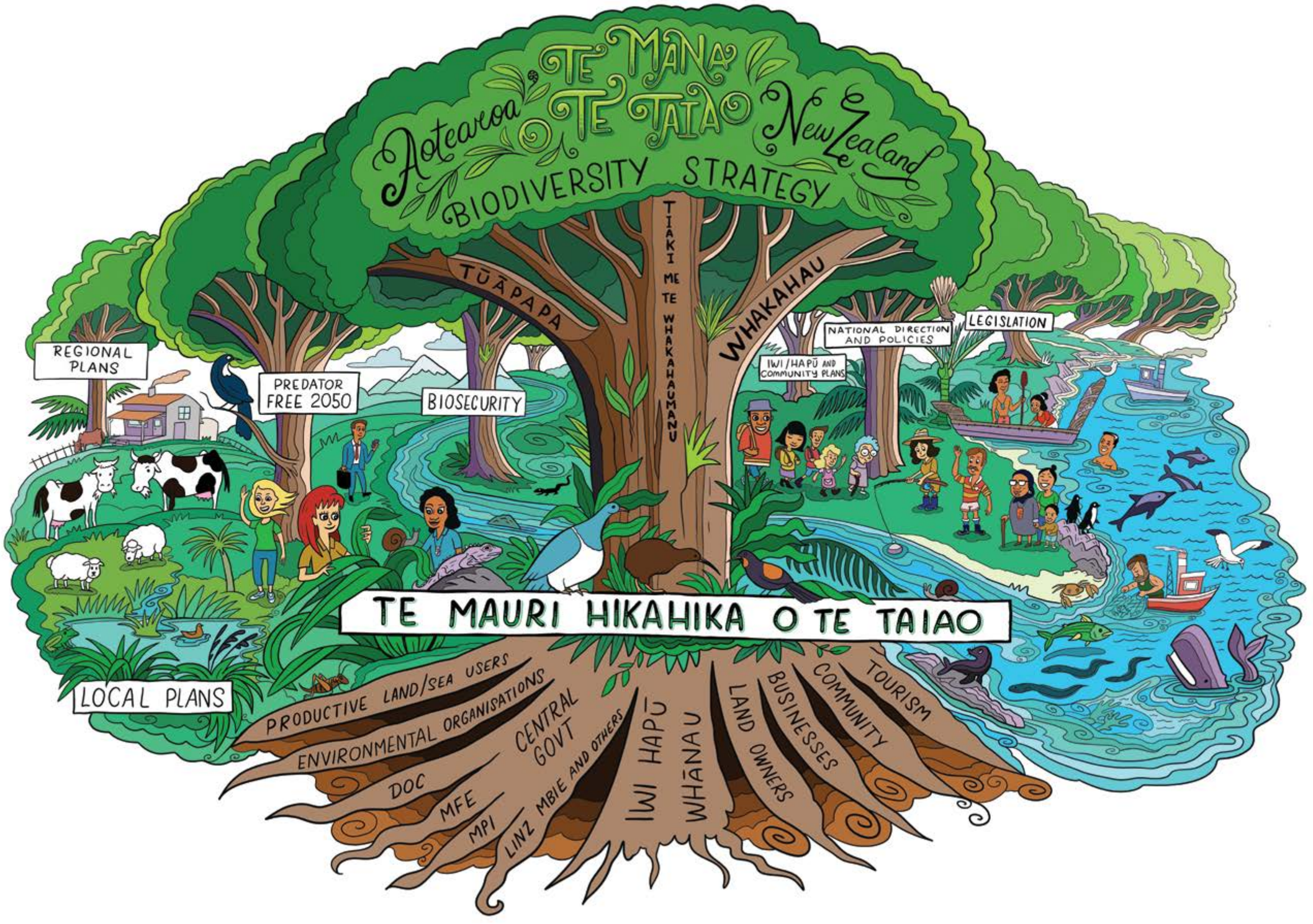

Figure 1.

Who is involved in Te Mana o te Taiao – ANZBS?

Te Mana o te Taiao – ANZBS is intended to be owned and implemented by all people who live in Aotearoa New Zealand. There is a place for everyone to be involved, no matter how big or small their contribution. By working together towards common goals, we can achieve much more than we would alone.

3.1
Ngā raru kei mua i te aroaro o te ao tūroa
The problems nature faces

Several key pressures and issues are contributing to the ongoing biodiversity loss in Aotearoa New Zealand. These are the areas we need to focus on in order to improve biodiversity

3.1.1 Current state of Aotearoa New Zealand's unique biodiversity

The companion report to this strategy, *Biodiversity in Aotearoa*, provides an overview of the state and trends of New Zealand's indigenous biodiversity. It draws on key national datasets and published accounts of scientific research to present and explain the evidence we have as a snapshot in time. The information in this section is drawn from that report.

We live among a mix of species that have recently evolved and those that are truly ancient, creating a biodiversity that is unique in the world.

Aotearoa New Zealand comprises a thread of isolated islands that are little more than dots within a vast ocean. The surging of the Earth's crust over millions of years left them here, stranded in time and space. Aboard these lifeboats from the wreck of Gondwana were plants and animals that are today found nowhere else on Earth (fig. 2).

Proportion of New Zealand indigenous species found nowhere else on Earth

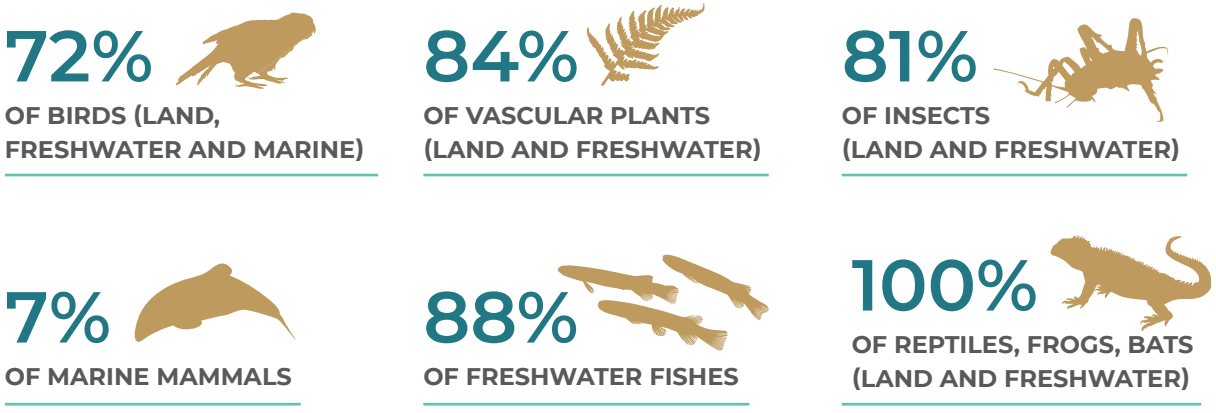

Figure 2.

Note: These data do not include extinct, exotic or non-resident native (Coloniser, Migrant or Vagrant) species. *Source*: Biodiversity in Aotearoa.[4]

[4] **https://www.doc.govt.nz/anzbs-biodiversity-report.**

Up until the arrival of humans, the oceans surrounding Aotearoa New Zealand kept out predatory mammals that were common everywhere else. Aside from three species of bats, Aotearoa New Zealand was a land of birds, ancient reptiles such as the tuatara, and areas covered by forests and tussock.

Some species in Aotearoa New Zealand are exclusively found in very small homes, such as on a single island or mountain, while others are restricted to highly specific habitats, such as hot springs. And our marine life is also distinctive – for example, Aotearoa New Zealand has the highest number of endemic seabirds globally.

Since the arrival of humans, 79 species have been recorded as lost to extinction, including 59 birds, as a result of changes to the landscape and the introduction of predatory mammals. But this biodiversity decline is not only historical – many elements of Aotearoa New Zealand's biodiversity continue to be threatened today. The New Zealand Threat Classification System[5] is used to assess the conservation status of Aotearoa New Zealand's native species. However, these threat rankings may not tell us the full story, as many species are ranked as 'Data Deficient', meaning we don't know enough about them to assess their risk of extinction. For example, of our 45 indigenous marine mammal species, 16% are listed as 'Threatened' and a further 4% as 'At Risk',[6] but the great majority (67%) are classified as 'Data Deficient', so we cannot be certain whether these species are declining or stable.

Environmental scientists have also identified that many ecosystem types are naturally uncommon and/or heavily reduced in extent and health – particularly those in lowland, freshwater and coastal marine environments. And mātauranga Māori monitoring practices have tracked a decline in the cultural health indicators of ecosystem integrity. For example, among 41 waterways that were tested between 2005 and 2016 for their cultural health from a te ao Māori (Māori world view) perspective, which interweaves environmental and socio-cultural aspects by assessing cultural health indicators and mauri, 11 were very good or good, 21 were moderate and 9 were poor or very poor.[7]

There is variability in the health of our nature between and within domains, ecosystems and species, and some successes have been achieved where individual species have received active/intensive management. However, areas of ecosystems or the biodiversity in them are continuing to be lost, fragmented or degraded each year, and many populations of threatened species are continuing to decline. Therefore, although the picture is incomplete, it is clear that our biodiversity is still declining overall.

[5] Molloy, J.; Bell, B.; Clout, M.; de Lange, P.; Gibbs, G.; Given, D.; Norton, D.; Smith, N.; Stephens, T. 2002: Classifying species according to threat of extinction. A system for New Zealand. Threatened Species Occasional Publication 22. Department of Conservation, Wellington. 26 p.

[6] Threatened' means that a given species faces the threat of extinction, while 'At Risk' means that a given species would likely become 'Threatened' should pressures on its populations worsen. Data exclude extinct, exotic or non-resident native (Coloniser, Migrant or Vagrant) species.

[7] Ministry for the Environment & Stats NZ (2019). New Zealand's Environmental Reporting Series: Environment Aotearoa 2019, p20.

State of biodiversity

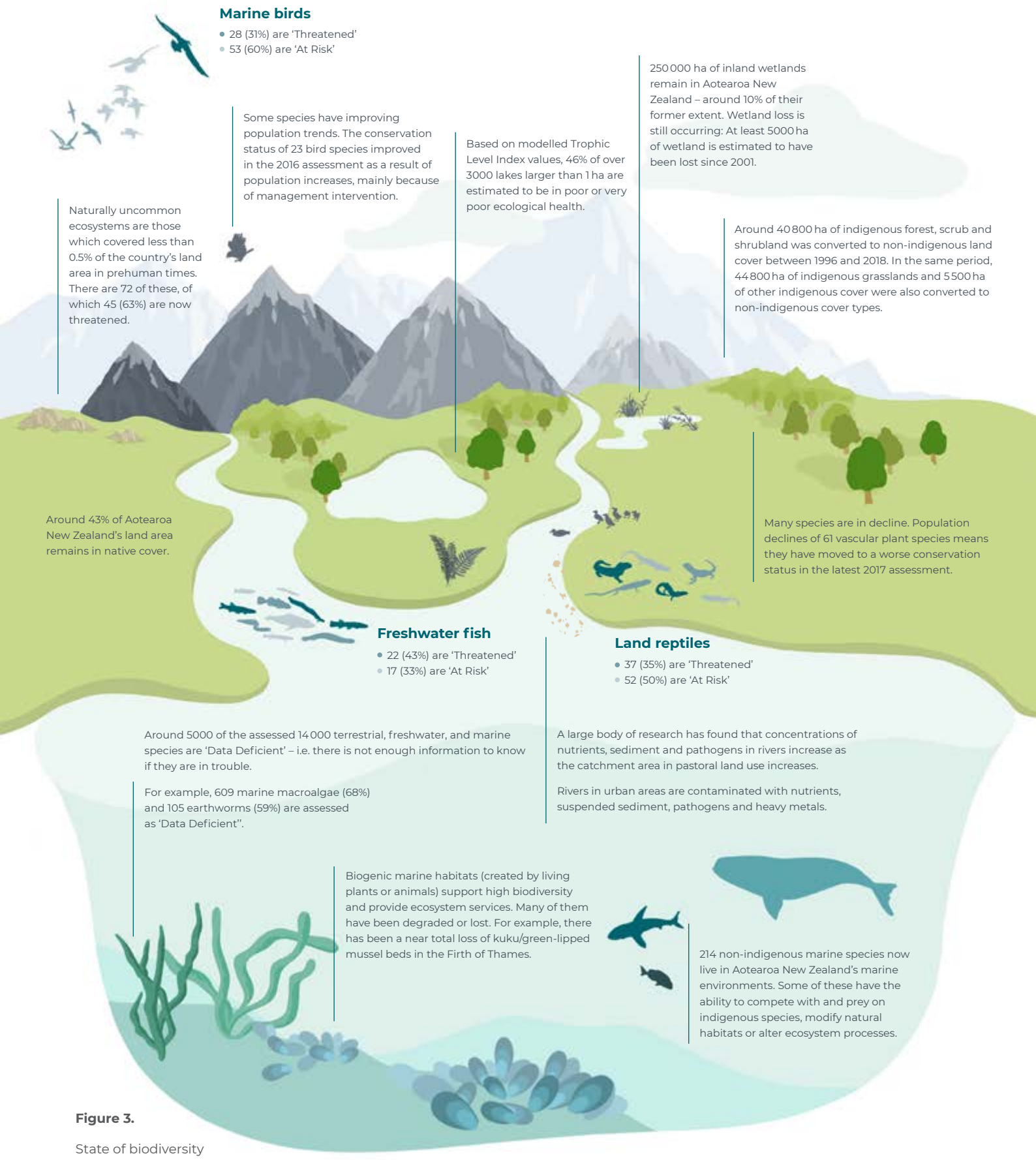

Figure 3.

State of biodiversity

3.2 Pressures and their impacts on biodiversity

The *IPBES global assessment 2019*[8] outlined five global pressures on biodiversity: historical and ongoing impacts of invasive species, changes in land and sea use, direct exploitation of species, climate change, and pollution. All of these pressures are also key factors driving the loss of biodiversity in Aotearoa New Zealand. In addition, because ecosystems are connected, the decline or degradation of biodiversity and ecosystems on land can have negative impacts on marine and freshwater environments, and vice versa.

Below is a high-level overview of these pressures and how they are affecting indigenous biodiversity in Aotearoa New Zealand, more details on which can be found in *Biodiversity in Aotearoa*.[9]

3.2.1 Introduced invasive species

- A suite of predators and browsers that have been introduced to Aotearoa New Zealand threaten many indigenous species. These introduced species include possums, stoats, ferrets, weasels, rats, mice, cats, hedgehogs, pigs, rabbits, deer, goats, invasive introduced fish and wallabies.
- Invasive invertebrates such as wasps prey on indigenous insects and out-compete birds for nectar.
- Invasive plants and algae (e.g. didymo) can have severe effects on indigenous vegetation and ecosystems in both freshwater and marine environments.
- Invasive microorganisms pose significant concerns. Kauri dieback and myrtle rust are two recent examples that are having widespread and devastating impacts on iconic flora and the ecosystems they support.
- As well as the invasive species that are already here, there is the constant biosecurity threat of new invasive species arriving and becoming established, and this threat is likely to increase with climate change.

3.2.2 Climate change

- We don't yet know what many of the ongoing effects of climate change on biodiversity will be, but we do know that they are likely to be significant. Many ecosystems are already being adversely impacted, and some species and ecosystems will be more vulnerable to climate change than others.
- Sea level rise, ocean acidification and increased sea temperatures are among the largest threats, as they will compromise the extent and health of coastal and marine ecosystems and species.
- Hydrological alteration (e.g. an increased prevalence of low flows, droughts and flooding) and altered water temperatures will affect freshwater ecosystems.
- Introduced invasive animals, plants and pathogens may become more widespread on land, and storms, droughts and floods are likely to increase in frequency.
- Actions we take to respond to and mitigate the effects of climate change may also have impacts on biodiversity. Examples include the construction of infrastructure such as coastal defenses and accessing resources (minerals and metals) that are needed to transition to a low-emissions economy.

[8] **https://ipbes.net/global-assessment**

[9] **https://www.doc.govt.nz/anzbs-biodiversity-report**

3.2.3 Changes in land and sea use

- Historical clearing of forests was carried out by Māori and then European settlers, and the further clearance of indigenous forests remained legal on public land up until 1987. Stricter controls on forest clearance on private land were imposed in 1991 through the Resource Management Act.[10] However, forests, streams and rivers, wetlands, indigenous grasslands, and shrublands still continue to be reduced in extent or condition, often as a result of land use intensification and urban development.
- Fragmentation, pollutants, and changes in the nutrient and water cycles impact on indigenous biota within urban ecosystems.
- Levels of erosion, sedimentation and eutrophication have increased as a result of land use changes, each of which affects the quality of water and the health of the species that live in aquatic environments.
- Changes in the hydrological regimes of freshwater ecosystems is a pervasive issue. The allocation of surface and groundwater for irrigation has the most widespread influence on seasonal flows and water levels, while engineering works, such as flood protection works and gravel extraction, can alter or completely destroy habitats.
- Increased coastal development causes habitat degradation, while increased shipping traffic can affect marine species and ecosystems by introducing invasive species, pollution, noise and ship strikes.

3.2.4 Direct exploitation of organisms (harvesting)

- The commercial, recreational and cultural harvest of indigenous marine and freshwater species has the potential to impact on the health of populations.
- Fishing can also have unintended impacts on biodiversity, including the bycatch of non-target species and causing damage to habitats on the sea floor.

3.2.5 Pollution

- Many forms of pollution affect New Zealand's biodiversity, including liquid and solid wastes, light and noise pollution, chemicals, and sediment.
- Sediment and run-off from intensive agricultural and urban activities can damage the quality of freshwater and marine habitats (including estuaries).
- Plastic pollution is a significant issue for marine biodiversity, even in remote areas of Aotearoa New Zealand.

Marine ecosystems are vulnerable to the effects of climate change. Poor Knights Islands Marine Reserve. *Photo: DOC*

[10] **www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html**

Saharalee with kūtai (mussels) on Mitimiti Beach. *Photo: Papa Taiao Earthcare*

Young people caring for nature

Papa Taiao Earthcare is a sustainability and ecological restoration training organisation that enables young people to lead enterprising social, cultural and environmental projects while gaining National Certificate of Educational Achievement (NCEA) qualifications and earthcare skills.

Pyura is a biosecurity threat in Aotearoa New Zealand and is smothering kūtai (mussel) beds on Mitimiti reef in the Hokianga. Kūtai is an important mahinga kai (traditional food source) for the community. When the Papa Taiao class of year 12 and 13 taiohi (young people) from Te Kura Kaupapa Māori o Panguru learned about the situation, they got angry. They demanded “What are you gonna do about it?” The Papa Taiao facilitator's response was, “This is your place, what are you going to do about it?”

The students’ first response was “Let’s get rid of it!” But after a couple of hours of picking pyura off the rocks and still only having 20 kg in the bucket, the students declared “This is useless! How can you do it better?” We turned the question back on them, “How can you do it better?” This stimulated the students to come up with the idea of a competition that inspired their community to help clean up the reef. Students raised $800 to give away as prize money. Of the approximately 100 people in the Mitimiti community, 68 participated and managed to clear half a tonne of pyura from the reef in one day.

Next, the student group researched how to make fertiliser from the pyura. They sold a few bottles, made a few dollars and then received an order for 1000 litres, earning them thousands of dollars. The project not only gave the students a sense of success through problem-solving but also linked in enterprise, encouraging them to think about how they can make money through doing positive work for their environment.

3.3 Key gaps and issues with the current system and management approaches

The biodiversity system is the structure that provides methods for maintaining and managing Aotearoa New Zealand's biodiversity on behalf of all New Zealanders. However, several aspects of our current biodiversity system, including decision-making and regulatory processes, act as barriers to protecting and restoring biodiversity.

People, organisations and agencies involved in the biodiversity system include:

- Whānau, hapū, iwi, Māori organisations and Treaty partners.
- Members of society, including individuals, community conservation and recreation groups, kaitiaki rōpū (conservation guardianship groups), landowners, and environmental organisations working in rural, urban and coastal areas.
- Industry, including productive land or sea users, the tourism sector, electricity generators and the mining sector.
- Government and statutory bodies, including the Department of Conservation, Ministry for the Environment, Ministry of Foreign Affairs and Trade, Ministry for Primary Industries (including Te Uru Rākau, Fisheries New Zealand and Biodiversity New Zealand), Land Information New Zealand, New Zealand Fish and Game Council, Game Animal Council, Māori statutory bodies and Treaty settlement entities.
- Local government, including local, territorial, regional and unitary councils.

See Appendix 1 for further details on the roles and responsibilities of these players.

3.3.1 The current system is complex

The current biodiversity system includes legislation, governance and leadership, science and monitoring, and a range of players, including those with statutory roles and responsibilities, such as central and local government, as well as the community, industry and NGO organisations, iwi and hapū, and individuals – i.e. everything and everyone that delivers something for biodiversity.

The system delivers:

- On-the-ground action
- Policy and strategy
- Science, data and knowledge
- Tools and support
- Monitoring, reporting and stories about biodiversity
- Regulation and legislation

However, the current biodiversity system isn't working as well as it should be, as it is failing to tackle issues at the scale needed to address the ongoing and cumulative loss of indigenous biodiversity.

As can be seen in the table of roles and responsibilities of those who are involved in the biodiversity system presented in Appendix 1, the current system has no single, overarching point of governance, leadership or coordination. Because of the vast number of players (each with their own governance and leadership structures), strategic policy, planning and implementation are for the most part carried out independently. This also means that there is no overarching accountability for any of the players, or at least no single body that actively monitors and polices the system and those in it. In any system, all players must play their roles

effectively for the whole to be effective. Therefore, the challenge in the first instance is to try to link these structures.

3.3.2 Our regulatory and policy frameworks for biodiversity are also complex

Legal protection, such as public conservation land and marine reserves, is an important tool for managing some of the pressures on biodiversity. A number of Māori tools, such as rāhui (temporary prohibitions), can also be used to put temporary bans or prohibitions in place to protect the environment. However, legal protection doesn't solve all of the problems within these areas. For example, introduced invasive species and external impacts (such as water extraction, excessive nutrients and sediment, and direct human impacts) cause significant damage to indigenous ecosystems and habitats even in protected areas.

The regulatory and policy frameworks we have in place for protecting biodiversity in Aotearoa New Zealand have been criticised for being inconsistent, disjointed, under-resourced and poorly enforced, resulting in a failure to achieve many biodiversity outcomes. There is no clear and universal mandate to protect or manage species or ecosystems across all environments, and there are inconsistencies in how species and habitats are managed under different legislation. See Appendix 2 for a list of key current legislation relating to biodiversity.

3.3.3 Competing interests and values can affect biodiversity

There are a wide range of values and interests around biodiversity, some of which compete. People making decisions about land/sea and resource management have to consider difficult trade-offs and costs, especially when considering the possible effects of productive land, sea or other resource uses on indigenous habitats.

Our decision making and economic systems often fail to account for the value of nature – both in terms of money and other benefits, such as the physical, cultural or social wellbeing of people. If the full value of biodiversity and mātauranga Māori are not recognised or reflected in decisions about resource use in land, freshwater and marine environments, biodiversity is more likely to be negatively impacted.

These trade-offs will only be resolved with more accurate valuing of biodiversity and ecosystem services and the social, cultural, economic and environmental benefits they provide to people. Finding ways to work together and achieve win-wins for biodiversity and prosperity will mean that protecting and restoring biodiversity doesn't need to come at a cost to wellbeing and sustainable livelihoods.

4.1
Ngā hononga i waenganui i te ao tūroa me te tangata
Connections between nature and people

People can only thrive if the natural world is thriving, as nature is essential for our health and cultural and economic wellbeing.

4.1.1 Nature and health

Many different types of plants, animals and smaller organisms inhabit the natural environments of Aotearoa New Zealand and are our mauri. Without biodiversity, we wouldn't have the food, clear air and clean water we need to live. Biodiversity loss puts the health of nature, people and living indigenous knowledge systems (such as mātauranga Māori) in danger.

There is growing recognition that access to nature is vital for our mental and social wellbeing. Spending time in nature can provide physical activity, create social bonds with others who share the same space and improve our mental health through relaxation and restoration. A high proportion of people in Aotearoa New Zealand live in urban areas, so it is important that people can access nature in or close to towns and cities.

4.1.2 Nature and cultural wellbeing

As well as its life-giving qualities, many people admire aspects of nature for its rarity, beauty, wonder, complexity, and scientific, historic or spiritual significance. Valuing something for what it is rather than what it can provide is often referred to as intrinsic value.

Our home is made up of a wide range of places, from the rohe of whānau, hapū and iwi and the wild coastlines, glaciers, high mountain peaks and ocean depths to the rivers that run through towns, cities and farmland and our own backyards. Nature in Aotearoa New Zealand is the inspiration for our national icons and helps to define the 'kiwi' character. It also contributes to our increasingly multi-cultural society's sense of national identity. Each culture experiences different ways of viewing, appreciating and relating to nature.

People living in Aotearoa New Zealand take advantage of the huge range of recreational activities available in our great outdoors, from sightseeing, boating, tramping and fishing to mountain biking and skiing. We also experience nature through hearing birdsong in the cities we live in, being involved in community projects to restore streams or the bush, visiting the beach, catching fish and many other ways. For many of us, the time we spent in nature as children has shaped our memories.

In Māori culture, nature and people are entwined through whakapapa, te reo (the Māori language), tikanga (customs), the arts, food, rongoā (medicine) and spirituality. This relationship flows both ways – people are kaitiaki of the natural world and the

A thriving biodiversity means increased populations of indigenous species in urban areas. *Photo: Rob Suisted*

A snapshot in time

Tēnei te ruru te koukou mai nei

Moa were once present at Ōtākou. Munro (1844); "for some hours after sunrise, the woods resounded with the rich and infinitely varied notes of thousands of tūi and other songsters".† Trees lined the inner harbour, leaves drooping into the sea at high tide, kiwi roamed the hills and whales frequented the harbour. HK Taiaroa (1880); "... the rich fishery and many fixed customs and reasons for settlements by the sea river 'Ōtākou'.‡ M Karetai (1915); "... weka were a local food source"¶. In the 1950s; the ruru (morepork) call could be heard, īnanga and tuna were available in season, the harbour would froth with schooling maka (barracoota) and seasonally teem with krill, flounders speared night or day, finfish and kaimoana (seafood) were varied and plentiful. Today, the moa, kūkupa (New Zealand pigeon), kiwi, weka, ruru are absent, visits by whales are rare and there is a greatly reduced presence of tūī, īnanga, tuna, maka, pātiki (flounder) and kaimoana, while the toroa (albatross), hoiho (yellow-eyed penguin) and kororā (little blue penguin) persist.

Traditional lifeways at Ōtākou intersected with ngā hua of Tane and Tangaroa and customary harvest, and at times rāhui prevailed – a kinship connection based on reciprocity and recognition of the primal function of mauri. A localised knowledge originating from Māori ancestors, framed in the Māori world view and perspectives, creativity and cultural practices developed. Expressed in everyday practices, descriptions for weather, seasons, tides and in place names, waiata (songs), whakaara, pepeha (proverbs) and pakiwaitara (narratives) – for example, 'kai te haere' was coined for the months between potato digging and storing.

A scenario repeated across Te Waipounamu (the South Island), an erosion of taonga species that may seem imperceptible during a lifetime, but calamitous when measured over several generations, and alienating for whānau, hapū and the associated mātauranga.

An account narrated by Edward Ellison, Ōtākou, Ngāi Tahu.

† Munro, D., *Notes of a Journey Through a Part of the Middle Island of New Zealand* in the Nelson Examiner in several parts from July to October 1844

‡ Section 88, Kaawa Moana (Seafood areas), Ngāi Tahu 1880, Hori Keri Taiaroa

¶ Personal diary of Maaki Karetai

natural world is kaitiaki of people. The loss of biodiversity and the growing distance between whānau, hapū, iwi, Māori communities and Treaty partners and what remains are making it harder to sustain relationships, responsibilities and practices. For example, mātauranga-ā-iwi, mātauranga-ā-hapū, mātauranga-ā-whānau (local place-based knowledge that is held within tribal groupings) relating to particular taonga (treasured) species can only survive if kaitiakitanga can be carried out for those taonga – which in turn requires exercising rangatiratanga.

4.1.3 Nature and economic wellbeing

Although biodiversity underpins our economy, the value of nature is often not fully incorporated in our decision making. In addition to the benefits nature provides through ecosystem services to support primary industries, its cultural, social and human health benefits also need to be recognised and considered as part of its value.

Our primary industries – agriculture, forestry, fisheries and horticulture – are all closely linked with the natural environment. They provide incomes and opportunities for many regional communities, with

primary sector exports having reached a record $46.4 billion in the year ended June 2019.[11]

Our activities on coasts and in oceans, such as fishing, aquaculture, shipping and coastal development, also provide economic value and support growth. In 2017, New Zealand's marine environment was estimated to add at least $7 billion to our economy.

There are also many opportunities for nature-based employment through primary industries, tourism, recreation and conservation. Nature supports our recreational activities and visitor-based economy. Much of our domestic tourism is based on people who live in Aotearoa New Zealand wanting to experience nature, and the rest of the world also sees our country as one of natural beauty and wonder, with breathtaking places to visit and explore. Tourism is traditionally one of our top export earners and is likely to continue to be a significant sector of our economy.[12]

Many landowners, farmers and rural communities have recognised the value of biodiversity and are working to enhance biodiversity on their land. Improving biodiversity on productive land and in catchment areas can have benefits for both indigenous species and farming. For example, planting indigenous trees as a shelterbelt provides habitat and food for indigenous birds and insects, while also providing shade or warmth for livestock and preventing soil erosion.

National Plan of Action – Seabirds 2020

The third iteration of New Zealand's National Plan of Action – Seabirds 2020 (NPOA) was published in 2020. It represents the culmination of three years' work by government agencies (Department of Conservation and Fisheries New Zealand) and the Seabird Advisory Group. The Seabird Advisory Group was established in 2013 and includes members from environmental organisations, the fishing industry, Te Ohu Kaimoana and the recreational fishing sector. The multi-sector Group worked constructively to provide valuable advice to Government during the review and development of the NPOA-Seabirds 2020. It will continue to play an important role in monitoring and implementation of the new NPOA.

The NPOA-Seabirds 2020 sets out the Government's commitment to reducing fishing-related captures. It acknowledges that while significant progress has been made since the first NPOA was published in 2004, we can do better. The focus of the new NPOA is on supporting all fishers, commercial, recreational and customary, to ensure they are equipped with the knowledge they need to avoid catching seabirds. The plan recognises that New Zealanders are naturally innovative and encourages development of new solutions to seabird mitigation.

The NPOA-Seabirds 2020 takes a risk-based approach to the management of interactions between commercial fishing and seabirds. It is underpinned by the seabird risk assessment, which is a model that assesses risk from fisheries to seabird populations. The outputs of the risk assessment are used to prioritise management actions. For example, efforts can be focused on specific seabird species, fishing methods or areas that have been identified as having elevated risk levels. The plan also recognises that New Zealand's seabirds forage globally, and sets out objectives to promote the management of seabird captures beyond New Zealand waters.

The Department of Conservation and Fisheries New Zealand will report on a range of performance measures to ensure that the NPOA-Seabirds 2020 will have positive outcomes for marine biodiversity and achieve its goals.

[11] Ministry for Primary Industries 2020: Situation and outlook for primary industries. **www.mpi.govt.nz/news-and-resources/economic-intelligence-unit/situation-and-outlook-for-primary-industries/**

[12] Ministry for the Environment & Stats NZ (2019). New Zealand's Environmental Reporting Series: *Our marine environment 2019*, p5.

Karen and Bob Schumacher's forest covenant in eastern Taranaki. *Photo: Nick Graham*

The Schumachers' Inglewood Kiwi Haven

In the rugged hills of eastern Taranaki, Karen and Bob Schumacher registered their first forest covenant with QEII National Trust to protect kiwi on their farm in 2004.

"We always wanted to have bush that we could put a QEII National Trust covenant on and give a bit back. It's all very well talking but you have to give."

In 2009, the Schumachers worked with QEII to protect another two covenants of remnant tawa-podocarp forest on their home farm south of Inglewood. These forest remnants together with other small lowland forest fragments provide a larger habitat for a range of native bush birds. They are a corridor between the forest on Mount Taranaki and the hills to the east. Their fourth covenant expands on the Otunahe forest and was added in November 2017.

The Otunahe forest is home to native bird species such as fernbird, whitehead, North Island robin, North Island brown kiwi, New Zealand falcon and the threatened long-tailed bat. It is also home to bellbird, tūī, and kererū. Of particular botanical interest in these blocks is swamp maire (Threatened – Nationally Critical) which although not uncommon in Taranaki is now threatened by myrtle rust.

The Schumachers' private land protection and stewardship work in Inglewood, Taranaki, has expanded to many neighbouring farms. It is now included as part of the Pūrangi Kiwi Project. This predator-controlled area is cared for by the East Taranaki Environment Trust (ETET). The ETET is a group of landowners dedicated to creating a safe habitat for kiwi, long-tailed bats, North Island robin and New Zealand falcon by managing pests across 13,000 hectares.

Predator control includes stoat, rat, possum and feral goats. Because of these efforts, kōkako were recently released into a core area with suitable habitat. Kiwi numbers have grown to over 500 pairs thanks to the Trust's work controlling predators. Members of the public can visit the reserve or book a guided walk.

In the marine environment, efforts have been made to support the recovery of protected species and to reduce the impacts of fishing on the wider ecosystem.

4.1.4 Nature and community conservation

Many of the people who live in Aotearoa New Zealand are dedicated to improving nature, and this brings benefits both for nature and to the people who take part. Community conservation has been increasing in recent years, with many volunteers playing their part in restoring and protecting nature in their neighbourhoods and local areas. Involvement in community conservation groups can help to strengthen social bonds as well as improving the environment.

Individuals make a significant contribution to protecting Aotearoa New Zealand's biodiversity through activities such as trapping pests and predators in their own backyards, contributing to citizen science projects, and planting more indigenous species.

Local organisations provide free advice and guidance on which species will best support local environments. Councils also provide environmental advice, as well as funding for local environmental education and protection programmes through grants.

Guardians of Pāuatahanui Inlet – 19 years of counting cockles to monitor water health

The Guardians of Pāuatahanui Inlet was founded in 1991 by a group of local residents who were concerned about the environmental health of the inlet, which forms one of the two arms of Te Awarua-o-Porirua Harbour. Since 1992, the Guardians have been counting hundreds and thousands of tuangi (cockles) every 3 years.

Why are cockles key to the health of the inlet?

Cockles are essential to the water quality of the inlet, helping to keep the water clear by removing plankton and minute particles of organic debris. Indeed, cockles in the inlet filter up to one-third of the incoming tidal volume through their gills.

As a keystone species, any changes in the cockle population can be a useful indicator of the biological health of the inlet – the more cockles, the healthier the inlet.

Monitoring the health of the inlet

Cockle surveys are carried out every 3 years by the Guardians, with help from other agencies and community volunteers. Scientists at the National Institute of Water and Atmospheric Research (NIWA) helped to establish this research programme and the associated survey transects and methodologies and also analyse the results of each survey.

In 2019, about 90 people of all ages gathered at Pāuatahanui Inlet, donning gumboots, to take part in the tenth cockle count. The event seemed to take longer this time than previously, prompting optimism that this was due to increasing numbers of cockles in the inlet.

The survey results have just been announced and there is good news – the cockle population has increased by 41% since the last survey in 2016, representing the highest population size since 1976, and the cockle density is also above that recorded in the previous two surveys.

Lindsay Gow, Chairperson of the Guardians, says "the cockle count is probably the longest running citizen science programme in New Zealand, and it's heartening that it continues to make a valued contribution to understanding the health of the Pāuatahanui Inlet ecosystem".

Excellent progress in removing bamboo and reusing it for terrace wall by the Street Guardian's group. *Photo: Tomorrow Inc*

Kaipātiki Project involvement in Te Ara Awataha & restoration of the Jessie Tonar Scout Reserve

Kaipātiki Project had the privilege of working with mana whenua and members of the community alongside Panuku Development Auckland to regenerate the Awataha Stream as part of Te Ara Awataha greenway project. Following a mauri indicator framework developed by mana whenua, Kaipātiki Project is piloting the use of a whole systems approach to community restoration. This framework will boost the mauri of the stream, improve its water quality, and allow it to become a habitat for birds, insects and tuna (eels) once more. It will also reconnect the community with this lost environmental taonga.

Kaipātiki Project has also co-created a regeneration plan for the Jessie Tonar Scout Reserve following the same mauri indicators framework. To encourage engagement with the immediate neighbours and locals, monthly working bees have been established at the site, the initial focus of which is on the removal of a large stand of running bamboo. In addition, corporate groups, local schools and community groups have been brought in. One of the highlights for Kaipātiki Project members has been working regularly with Street Guardians in conjunction with City Mission and Tomorrow Inc. Charity. Another significant highlight was the recent finding of tuna for the first time after a year of monitoring, confirming that they are returning to the stream to continue their life-cycles.

A hunter in Fiordland National Park. *Photo: Rob Suisted*

4.1.5 Non-indigenous species are also a part of nature

As well as the unique biodiversity found in Aotearoa New Zealand, there are also more recent arrivals. Many species have been introduced to Aotearoa New Zealand over the last 800 years. These include livestock and crops, trees that make up the forestry industry, garden plants, animals and fish that are hunted for sport or food, and many more.

Many of these species are critical to our everyday lives and to the primary sector, while others provide recreational and commercial opportunities and avenues for conservation efforts – and some are considered mahinga kai by Māori. These species are considered valued introduced species. However, a number of introduced species can threaten indigenous species, valued introduced species and ecosystems through predation, browsing, disease, competition and habitat degradation.

Reaching a balance to ensure that valued introduced species continue to provide the benefits they are valued for, while also ensuring that indigenous biodiversity thrives, is a key challenge for Aotearoa New Zealand.

To maintain such a balance, it is important that our biosecurity system works to reduce the number of new species arriving and becoming established in Aotearoa New Zealand, while also eradicating or managing the impact of priority introduced invasive species.

An angler fishing for trout in the Okuru River, South Westland. *Photo: Fish & Game New Zealand*

Trout and the complexity of modern biodiversity

Trout were first introduced to New Zealand in 1867, when three brown trout ova (eggs) brought from Britain via Tasmania hatched in Christchurch's botanical gardens. Having been brought to New Zealand by British settlers as a source of food and recreation, trout in many ways embody the complexity of our modern biodiversity.

To many thousands of New Zealanders and international tourists, trout represent a hugely valued introduced species that provides food and recreation alongside many associated mental, physical and nutritional health benefits. To others, trout are a threat to indigenous fish and should be controlled to support indigenous biodiversity.

The value placed on trout provides an avenue for strong habitat conservation advocacy. Many keen trout anglers, as well as those who hunt other game species, also spend time taking part in protection and restoration projects to keep freshwater resources and wetlands healthy through involvement in community conservation groups or initiatives led by organisations such as Fish & Game New Zealand.

To date, Fish & Game has secured 12 out of 15 Water Conservation Orders, including one in the Nevis River to explicitly protect the indigenous Gollum galaxias, and has also undertaken countless cases under the Resource Management Act to protect Aotearoa New Zealand's freshwater environments.

4.2 Mātauranga Māori and its important relationship with biodiversity

Māori culture and language evolved in the ecosystems and landscapes of Aotearoa New Zealand. Generations of Māori people lived as an integral part of the natural world, forming an interwoven relationship with nature.

The collective understanding and ways of knowing of these generations is preserved through mātauranga Māori, which is unique to Aotearoa New Zealand. Mātauranga is a complete indigenous scientific knowledge system that is drawn from the relationship Māori have with all natural environments.

Just as this relationship was essential to the creation of Māori culture before colonisation, it is still essential today as it enables Māori culture to flourish.

> "Growing up, I would often hear kaumātua talk about the connection between the Manu and our reo. In preparation for whaikōrero, young men were told to copy the Tūī. The Tūī learns songs from other birds in the forest and uses it to make a unique song of its own. So young men were told to go out and listen to as many whaikōrero as possible to make a style that was unique to ourselves."
>
> (Tame Malcolm)

Te Mana o te Taiao recognises the importance of mātauranga-ā-iwi, mātauranga-ā-hapū and mātauranga-ā-whānau as culturally specific place-based knowledge that is held within tribal groupings, as well as the interwoven relationship these knowledge bases have with biodiversity.

All waves of human settlement and colonisation in Aotearoa New Zealand have had an impact on our unique biodiversity. Colonisation in the 19th century and the resulting environmental impacts and biodiversity losses caused by these new settlers had wide-ranging effects on the relationship that whānau, hapū and iwi had with biodiversity.

One of these impacts has been the loss of mātauranga in relation to those species that have vanished. It only takes one generation to lose such mātauranga. Hence, Te Mana o te Taiao – ANZBS actively seeks to support the regeneration and continuation of mātauranga Māori through the enhancement and regeneration of biodiversity.

The loss of some indigenous species over time has led to some whānau, hapū, iwi and Māori communities developing relationships with non-indigenous species, which act as a proxy for maintaining their active relationship with the environment. In some cases, these non-indigenous species play a significant role for whānau, hapū, iwi, Māori communities and Treaty partners in maintaining both connection and mātauranga Māori.

5.1
Te whakawhanaketanga o Te Mana o te Taiao – ANZBS
Development of Te Mana o te Taiao – ANZBS

Te Mana o te Taiao – ANZBS was developed with input from a wide range of parties and based on learnings from the previous strategy. He Awa Whiria, the concept of braided river systems, has been adopted as an approach to implementing and understanding it.

5.1.1 Approach to developing Te Mana o te Taiao – ANZBS

The development of Te Mana o te Taiao – ANZBS was led by the Department of Conservation on behalf of Aotearoa New Zealand. It was built on the advice and ideas of Treaty partners, whānau, hapū, iwi, Māori organisations, communities, individuals, stakeholders, NGOs, industry organisations, and central and local government – i.e. all those who will be vital to its success.

5.1.2 Input from the public

Public consultation and Treaty partner hui (meetings) on *Te Koiroa o te Koiora*,[13] a discussion document on the Biodiversity Strategy, was held between August 2019 and February 2020. The Discussion Document Summary of Submissions[14] provides more details of the process and the input received.

5.1.3 Input from experts

Three reference groups appointed by the Minister of Conservation also provided valuable input and support throughout the development of this strategy. These groups contributed te ao Māori expertise, science expertise and stakeholder perspectives.

Local government plays an important role in carrying out vital biodiversity work across Aotearoa New Zealand. Therefore, regional and local councils also contributed expertise to ensure that biodiversity management will be effective on the ground.

5.1.4 *Biodiversity in Aotearoa* – companion report

To enable the country's unique biodiversity and taonga to be protected and restored, it is important that we understand the state they are in, the trends at play and the many pressures they face, all of which can be informed by the complementary perspectives, histories and world views of mātauranga Māori and science. The companion report to Te Mana o te Taiao – ANZBS, *Biodiversity in Aotearoa*,[15] provides the evidence base for this strategy by summarising the present state, as well as trends and pressures on Aotearoa New Zealand's plants, animals and ecosystems on land, in fresh water and at sea.

[13] Department of Conservation 2019: te Koiroa o te Koiora: our shared vision for living with nature. Department of Conservation, Wellington. 70 p. **www.doc.govt.nz/globalassets/documents/conservation/protecting-and-restoring/biodiversity-discussion-document.pdf**

[14] **https://www.doc.govt.nz/anzbs-summary-submissions**

[15] **https://www.doc.govt.nz/anzbs-biodiversity-report**

5.1.5 International links

Aotearoa New Zealand is a party to the international Convention on Biological Diversity (CBD).[16] The CBD's current strategic plan has a vision that people are living in harmony with nature by 2050 and includes three objectives:

- The conservation of biological diversity
- The sustainable use of its components
- The fair and equitable sharing of the benefits arising from the utilisation of genetic resources

Each country that is party to the CBD is required to have a national biodiversity strategy and action plan. New Zealand's previous national strategy (New Zealand Biodiversity Strategy 2000[17]) and action plan (New Zealand Biodiversity Action Plan 2016–2020[18]) expired in 2020.

5.1.6 What we've learned from the last New Zealand Biodiversity Strategy

The last New Zealand Biodiversity Strategy set a direction of 'halting the decline' of indigenous biodiversity loss by 2020. It was reviewed after being in place for 5 years and an updated action plan was released in 2016. This previous strategy made some progress, but biodiversity is still declining today.

To make sure that we are learning from the past, the review of the last strategy has informed the development of Te Mana o te Taiao – ANZBS. Some missing aspects that could have strengthened that strategy included carrying out regular reviews and reporting on progress, setting time-bound and measurable actions, prioritising actions more effectively, setting out clearer roles and responsibilities for all those involved, and obtaining ongoing targeted funding.

More details on the lessons learned from the previous strategy can be found in the lessons learned paper.[19]

[16] **www.cbd.int/convention/**

[17] Department of Conservation; Ministry for the Environment 2000: New Zealand Biodiversity Strategy. Department of Conservation and Ministry for the Environment, Wellington. 146 p. **www.doc.govt.nz/nature/biodiversity/nz-biodiversity-strategy-and-action-plan/new-zealand-biodiversity-strategy-2000-2020/**

[18] Department of Conservation 2016: New Zealand Biodiversity Action Plan 2016–2020. Department of Conservation, Wellington. 58 p. **www.doc.govt.nz/Documents/conservation/new-zealand-biodiversity-action-plan-2016-2020.pdf**

[19] **https://www.doc.govt.nz/anzbs-lessons-learnt**

Many species, like the Fiordland Crested Penguin, have continued to be under pressure since the last Biodiversity Strategy. *Photo: Andrew Walmsley (andrewwalmsleyphotography.com)*

Braided rivers are found in only a few places in the world. In Aotearoa New Zealand they provide habitats for many indigenous species. Photo: Dave Murray

5.1.7 Our approach to implementing and understanding Te Mana o te Taiao – ANZBS

Te Mana o te Taiao – ANZBS adopts the He Awa Whiria approach to implementing and understanding the strategy. He Awa Whiria refers to braided rivers, which are made up of multiple and interconnecting channels of water. The size and shape of a braided river is continually changing as channels shift and the water finds new paths.

In Te Mana o te Taiao – ANZBS, He Awa Whiria is used as a cross-cultural conceptual framing tool. He Awa Whiria brings together all peoples, across all cultures, sectors and knowledge paradigms in Aotearoa New Zealand to contribute to realising the strategy.

Developed by Māori scholars through Māori research methods, the He Awa Whiria approach has been used across a range of disciplines as a way to recognise the Treaty partnership between the Crown and Māori, as well as to draw from multiple scientific disciplines and ways of seeing and understanding the world, including mātauranga Māori.[20] This approach:

- Recognises these as stand-alone and equally valid knowledge systems, much like how two different sources can feed the waters of a braided river.
- Identifies where these knowledge systems mingle and mix, like the ever-changing streams of a braided river, to generate new approaches and ways of understanding.

5.1.8 He Awa Whiria and Te Mana o te Taiao

He Awa Whiria, in the context of Te Mana o te Taiao, acknowledges both mātauranga Māori and other scientific disciplines and ways of seeing and understanding the world as equally valid, distinct and separate knowledge systems in biodiversity management.

Te Mana o te Taiao – ANZBS sets a direction for active protection of the unique role that Treaty partners, whānau, hapū, iwi and Māori organisations play in biodiversity and mātauranga regeneration both as rangatira and kaitiaki, and in partnership with the Crown.

He Awa Whiria also acknowledges the roles different people, groups and sectors have in biodiversity protection and restoration and their respective worldviews and values. We use this metaphor as a way to be inclusive of all forms of knowledge and peoples in Aotearoa New Zealand while ensuring that the Treaty partnership is honoured and mātauranga Māori is elevated to equal standing with other forms of knowledge.

He Awa Whiria shines a light on the areas where the river braids – joining mātauranga Māori with other knowledge systems to support actions and innovations that result in thriving biodiversity.

[20] Macfarlane, A., Macfarlane, S. and Gillon, G. (2015). Sharing the food baskets of knowledge: Creating space for a blending of stream. In: A. Macfarlane, S. Macfarlane and M. Webber, ed., Sociocultural Realities: Exploring New Horizons. Christchurch: Canterbury University Press.

6.1
Ngā āheinga ki te whakarerekē i te āhua o tā tātou mahi
Opportunities to shift the way we work

Despite our best efforts to turn the tide, biodiversity loss is still happening in Aotearoa New Zealand. We now have the opportunity to be bold and make some big changes to how we interact with nature and biodiversity.

> "[It] is not too late to make a difference, but only if we start now at every level from local to global. Through transformative change, nature can still be conserved, restored and used sustainably."
>
> (IPBES global assessment 2019)[21]

Te Mana o te Taiao – ANZBS provides direction on how to respond to the pressures and issues facing biodiversity in Aotearoa New Zealand. We will start by strengthening the biodiversity system, empowering action for all those involved, and putting steps in place to improve the protection and restoration of nature (see the strategic framework on page 43).

With a new strategy comes the opportunity to make improvements or changes to the ways we work. The problems and challenges we face with the current biodiversity system can be addressed by putting nature at the heart of our economy and strengthening our ability to work in partnerships, commit to action, create connections and be flexible. This will provide a strong foundation that enables everyone to help achieve the vision of *Te Mauri Hikahika o te Taiao*.

6.1.1 Recognising nature as at the heart of our economy

Aotearoa New Zealand, along with the rest of the world, will be on a pathway to economic and social recovery for many years to come following the Covid-19 crisis. Recognising that nature is at the heart of our economy and the way we do business will be key to our successful recovery.

Achieving this will include looking at economic tools that promote the protection and restoration of biodiversity, and how the impacts of economic activities on biodiversity can be reduced. Protecting and restoring nature will have direct benefits for our economic wellbeing and prosperity. Our international brand and domestic tourism, our resilience to climate change, the health of our fisheries, forests and productive soils – these are all dependent on the ecosystem services provided by healthy nature. There are also cultural, social and human health benefits that need to be recognised and considered as part of the value of nature.

Nature-based jobs present an opportunity to stimulate regional economies by providing labour-intensive, practical and meaningful work that will upskill people and deliver long-term economic benefits – including jobs, skills, mental and physical health, and training for future employment.

[21] **https://ipbes.net/global-assessment**

Restoring indigenous biodiversity and habitat, including wetlands, planting on private and public conservation land and along waterways, stabilising riverbanks and providing for fish passage, and undertaking pest control and eradication are examples of what these new nature-based jobs will achieve. Ecosystem restoration can also simultaneously bring both mitigation and adaptation benefits, making it a powerful tool for mitigating or avoiding catastrophic climate change impacts.

6.1.2 Partnerships across Aotearoa New Zealand

Te Mana o te Taiao – ANZBS has been designed for all of us who live in Aotearoa New Zealand to own and implement. There is a place for everyone to be involved, no matter how big or small their contribution. By working together towards common goals, we can achieve much more than we would alone.

Upholding the principles of the Treaty of Waitangi is an essential part of Te Mana o te Taiao – ANZBS. Working together in partnership towards a shared vision for biodiversity will ensure that rangatira and kaitiaki obligations, as well as mātauranga Māori, are actively protected.

Regulatory and non-regulatory tools can help to achieve the outcomes and goals of Te Mana o te Taiao – ANZBS, but they alone will not solve the biodiversity crisis. Actions to address biodiversity loss need to involve everyone in the biodiversity system – whānau, hapū, iwi, Māori communities, organisations, environmental NGOs, central and local government, businesses, industry, and every individual. This means people will need to work alongside each other to actively manage threats to biodiversity and take proactive and positive measures to protect and restore biodiversity.

By using the He Awa Whiria approach, in which the braided river metaphor represents diverse perspectives and knowledge systems, including te ao Māori and multiple scientific disciplines, we can make sure that diverse players with differing interests and values in biodiversity can work together to implement the strategy.

6.1.3 Committing to action

There is growing awareness and concern in both society and the Government about the state of nature and our duty of care to ensure it is thriving. We're on the right path – we have recognised the impacts of plastics, pollution and climate change on the environment and the importance of sustainability in our everyday lives. We now have an opportunity to give the protection, restoration and sustainable use of biodiversity the same recognition and commitment to action.

6.1.4 Creating connections

Biodiversity is just one part of Te Mana o te Taiao – ANZBS, and the causes of biodiversity loss are multiple and complex. Biodiversity loss is a cross-cutting issue that impacts our environment, society, cultures and economy.

There are many related pieces of work in biosecurity, urban planning, primary production, climate change planning, energy and resources, education and many other sectors. Te Mana o te Taiao – ANZBS will enable connections and collaboration to occur across these. Some of the work that is already underway includes:

- Carrying out major reforms of the resource management system, including freshwater and biodiversity management
- Establishing a whole-of-government framework on climate change to support our transition to a low-emissions economy and help us to build resilience and adapt to the impacts of a changing climate
- Increasing our focus on the marine environment and the health of fresh water – for example, work to reform our approach to marine protection and to strengthen freshwater regulations
- Putting considerable effort into landscape-scale ecological restoration, community-driven projects and pest management initiatives such as Predator Free 2050

- Promoting wider recognition of the need to shift to more sustainable farming, forestry, aquaculture and fisheries practices
- Developing Te Pae Tawhiti, an all-of-government approach to address the issues raised by the WAI 262 claim and the Waitangi Tribunal report Ko Aotearoa Tēnei[22]
- Facilitating the transition to a low-emissions economy via renewable energy generation and providing access to the necessary resources to support this transition, as set out in the Minerals and Petroleum Resource Strategy.[23]

See Appendix 3 for related international, national, regional and local plans, strategies or agreements.

6.1.5 Heading for the same destination, but experiencing different journeys along the way

The causes of biodiversity loss vary from place to place, depending on the natural environment and how natural resources are managed and used. Therefore, different solutions are needed depending on the situation, location and context. Even though our collective actions as Aotearoa New Zealand are contributing to the same vision and goals, how this is achieved can look different across places and regions – and this will be one of the keys to our success.

[22] Waitangi Tribunal 2011: Ko Aotearoa Tēnei: a report into claims concerning New Zealand law and policy affecting Māori culture and identity. Te Taumata Tuatahi (Waitangi Tribunal report). Waitangi Tribunal, Wellington. 268 p. **https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_68356054/KoAotearoaTeneiTT1W.pdf**

[23] Ministry of Business, Innovation and Employment 2019: Responsibly delivering value. A Minerals and Petroleum Resource Strategy for Aotearoa New Zealand: 2019–2029. Ministry of Business, Innovation and Employment, Wellington. 47 p. **www.mbie.govt.nz/assets/nzpm-resource-strategy-multi-agency.pdf**

Kahikatea forest in Arahaki Lagoon. This forest type once covered large areas of New Zealand's lowlands.
Photo: Craig Potton / Photo New Zealand

7.1
He pou tarāwaho mō te mahi
Framework for action

The strategic framework for Te Mana o te Taiao – ANZBS shows the steps we need to take to achieve the vision.

Three pillars or pou will weave together to make the transformational change needed to reach the strategy outcomes – Tūāpapa (getting the system right), Whakahau (empowering action) and Tiaki me te Whakahaumanu (protecting and restoring).

The strategic framework for Te Mana o te Taiao – ANZBS sets out how the different components of the strategy work together to achieve the long-term vision of *Te Mauri Hikahika o te Taiao*. See Fig. 4 for the strategy flowchart and Fig. 5 for the strategy framework on pg. 43.

There are five outcomes, which together describe what we are aiming to achieve by 2050.

Central to our work between now and 2050 are the pou (pillars) Tūāpapa, Whakahau and Tiaki me te whakahaumanu, each of which represents a step towards the 2050 outcomes. Pou were originally placed in the environment to guide people to key locations, and these pou will guide us towards transformational change.

What we need to do in order to succeed is set out in 13 objectives, and time-bound goals sit beneath these to provide milestones along the way. Implementation actions will focus on making progress towards these goals.

Developing and implementing an agreed set of national indicators is one of the goals within Tūāpapa (getting the system right). These national indicators will be used to measure and report on strategy outcomes, objectives and goals. Potential indicators are detailed in Appendix 4.

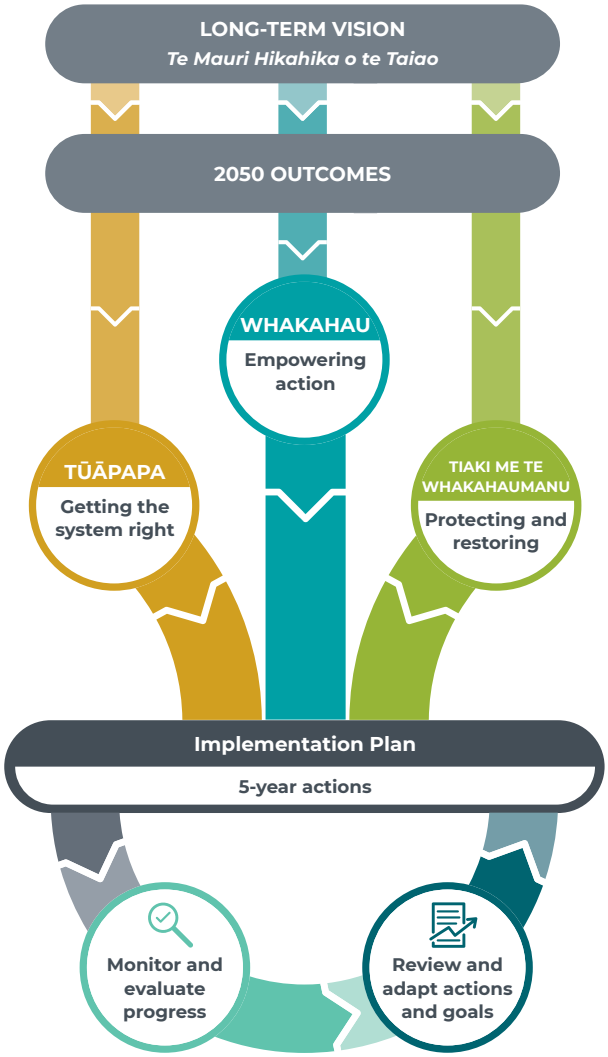

Figure 4.
Flowchart showing the pathway from the vision to the implementation plan.

Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020

The vision

Te Mauri Hikahika o te Taiao

The mauri of nature is vibrant and vigorous

Why this is important

People are part of nature and nature supports life and human activity. All aspects of our wellbeing, physical, cultural, social and economic, are dependent on nature and the services that it provides. Natural wellbeing underpins our lives, lifestyles and livelihoods. Nature is valuable for its own sake (intrinsic value) and is linked to our identity as New Zealanders. Our vision for a future with nature that has thriving, vibrant, vigorous mauri will result in thriving wellbeing for the people of Aotearoa New Zealand.

The problem

We are in a biodiversity crisis - Papatūānuku, Ranginui and their offspring are in serious trouble, and we urgently need to do a better job at looking after them. Nature in Aotearoa New Zealand, and across the rest of the world, is declining, and directly under threat from pressures, including changes in land, freshwater and sea use, introduced species, exploitation for food and resources, pollution, and the increasing threat of climate change. Indirect pressures, such as not having the right 'systems' in place, people not having enough knowledge or resources to act, and a disconnect between people and nature, are causing and contributing to these direct pressures. Here in Aotearoa New Zealand, we are already successfully taking action to protect and restore nature, and this strategy sets out how we can expand and build on the strong foundation we have already built to allow our natural world, and the people in it, to thrive.

What we are aiming to achieve by 2050

Outcome 1

Ecosystems, from mountain tops to ocean depths, are thriving

- The mauri of ecosystems is thriving
- A full range of indigenous ecosystems are protected and secured for future generations
- The health, integrity and connectivity of ecosystems have been maintained and/or restored, including in human-dominated areas

Outcome 2

Indigenous species and their habitats across Aotearoa New Zealand and beyond are thriving

- The mana of taonga species is restored
- All indigenous species are protected and s ecure, and none are at risk of extinction due to human activities
- Species' populations are healthy, genetically diverse and have increased resilience to future threats including climate change
- Migratory species and their habitats are secured across international boundaries

Outcome 3

People's lives are enriched through their connection with nature

- Everyone in Aotearoa New Zealand is connected with nature, and supports and actively contributes to its protection and restoration
- Connection with nature is improving people's physical, spiritual and mental health and quality of life
- Future generations inherit restored, thriving nature

Outcome 4

Treaty partners, whānau, hapū and iwi are exercising their full role as rangatira and kaitiaki

- Resilient biodiversity enables cultural practices and mahinga kai, contributing to the regeneration of mātauranga Māori
- Restored nature uplifts mana
- Treaty partners, whānau, hapū, iwi and Māori organisations are central to the biodiversity system and recognised as leaders

Outcome 5

Prosperity is intrinsically linked with a thriving biodiversity

- Thriving biodiversity provides the services that underpin our prosperity
- Biodiversity resources are managed sustainably to provide ongoing economic benefits
- Economic activity has neutral or beneficial impacts on biodiversity
- Thriving biodiversity plays a central role in our approach to mitigating climate change

Central to our work between now and 2050 are three pou (pillars) *which provide direction and focus to guide us towards the transformational change needed to achieve the strategy outcomes. Objectives are identified within each pou.*

TŪĀPAPA
Getting the system right

We need the right systems in place to tackle the biodiversity crisis. These cross-cutting objectives set out how we will ensure this.

What our 2050 objectives are:

1. Governance, legislation and funding systems are in place and enable delivery of the strategy outcomes
2. Treaty partners, whānau, hapū, iwi and Māori organisations are rangatira and kaitiaki
3. Biodiversity protection is at the heart of economic activity
4. Improved systems for knowledge, science, data and innovation inform our work
5. Mātauranga Māori is an integral part of biodiversity research and management
6. Aotearoa New Zealand is making a meaningful contribution to biodiversity globally

WHAKAHAU
Empowering action

We need all New Zealanders to help to protect and restore our biodiversity. These cross-cutting objectives set out how we will ensure that everyone is empowered to act.

What our 2050 objectives are:

7. All New Zealanders have the skills, knowledge and capability to be effective
8. Resourcing and support are enabling connected, active guardians of nature
9. Collaboration, co-design and partnership are delivering better outcomes

TIAKI ME TE WHAKAHAUMANU
Protecting and restoring

We need to address the direct pressures causing a decline in biodiversity, ensure the sustainable use of biodiversity, and restore biodiversity in areas where it has been lost. These objectives set out what we will do to ensure biodiversity is resilient and secure.

What our 2050 objectives are:

10. Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths
11. Management ensures that Biological threats and pressures are reduced through management
12. Natural resources are managed sustainably
13. Biodiversity provides nature-based solutions to climate change and is resilient to its effects

Implementation

Each of the objectives has measurable and time-bound goals. The goals are set at 2025 for Tūāpapa and Whakahau and at 2025, 2030 and 2050 for Tiaki me te whakahaumanu. The cross-cutting goals in these first two priority areas will enable us to achieve the longer-term goals detailed in Tiaki me te whakahaumanu. Implementation planning will set actions for achieving the goals for the shorter term. Progress on actions and goals will be evaluated, and the actions and goals will be reviewed and revised to ensure we are on track to achieving the outcomes.

Measuring success:

Progress towards the strategy outcomes will be regularly assessed. Progress reporting will focus on both the delivery of implementation actions (output monitoring) and progress towards the outcomes (outcome monitoring). A progress review will take place every 5 years, and this will be followed by a review and update of the strategy and the development of the next 5-yearly implementation plan. A full set of indicators to measure progress will be developed as part of the initial phase of implementation. A table of potential indicators for the five outcomes is provided in Appendix 4.

How we work together:

We all have roles to play in protecting and restoring the mauri of nature. The strategy has a set of underlying values and principles to guide how we work together to make decisions and deliver action. These will form the basis of implementation planning.

Figure 5.
The strategic framework for Te Mana o te Taiao – ANZBS sets out how the different components of the strategy work together to achieve the long-term vision of Te Mauri Hikahika o te Taiao.

7.2 Values to guide Te Mana o te Taiao

We all have roles to play in protecting and restoring the mauri of nature. If we think about and use the following values, we will be able to achieve Te Mana o te Taiao – ANZBS:

- *Kaitiakitanga* – We enable kaitiakitanga of our natural environment by Treaty partners, whānau, hapū, iwi and Māori organisations.
- *Mahi whaipainga* – We care about making a difference for nature in Aotearoa New Zealand.
- *Ngākaunui* – We are passionate and enthusiastic about the work ahead.
- *Mahi tahi* – We work together towards a common purpose, particularly at a regional level.
- *Whakapapa* – We recognise inter-connections and have an intergenerational view.
- *Tohungatanga* – We recognise expertise and pursue new knowledge and ideas.
- *Manaakitanga* – We build trust and inclusiveness through our actions with others.

7.3 Guiding principles

The following guiding principles have been established for those involved in implementing Te Mana o te Taiao – ANZBS.

7.3.1 Stewardship principles

- **Treaty partnership** – The relationship between the Crown and Māori as reflected in the Treaty of Waitangi and its principles are given effect to in the conservation and sustainable use of biodiversity, including kawanatanga, tino rangatiratanga, kaitiakitanga, customary use and mātauranga Māori.
- **WAI 262** – Te Mana o te Taiao – ANZBS recognises the important role that biodiversity management plays in meeting the aspirations of Treaty partners, whānau, hapū, iwi and Māori organisations in regard to WAI 262, as well as in protecting taonga species, regulating bio-prospecting and ensuring the protection of Māori cultural and intellectual property.
- **Intergenerational equity** – Future generations of people living in Aotearoa New Zealand are part of a natural environment that has a healthy and thriving biodiversity in the same or an improved condition to the present status.
- **Creating change** – Everyone can be a change-maker, with the power to influence the future state of biodiversity in Aotearoa New Zealand and encourage the transformative shifts needed for success.
- **Intrinsic value** – Species and ecosystems are valuable in their own right and have their own right to exist and be healthy and thriving now and in the future, regardless of human use and appreciation.

7.3.2 Integrated implementation approaches

- **Ki uta ki tai** – A whole of land and seascape approach is taken, focusing on understanding and managing interconnected resources and ecosystems from the mountains to the sea. Everyone is connecting, sharing and aligning projects across systems.
- **Ecologically sustainable use** – The protection and restoration of indigenous biodiversity is a priority but does not preclude use or activities that would affect them where this is ecologically sustainable.

7.3.3 Decision making in biodiversity management

- **Indigenous biodiversity** – We recognise and prioritise the special responsibility we have towards indigenous species, while still recognising the recreational, economic and cultural benefits of valued non-indigenous species.
- **Involvement in decision making** – Roles and responsibilities are clear, transparent and effectively undertaken, and everyone has the support, knowledge and networks they need to help make informed decisions that protect and restore biodiversity.

Restoration projects are one way to increase biodiversity in an area. *Photo: DOC*

- **Knowledge** – Decisions are evidence-based, transparent and informed by the best available information, including mātauranga Māori and science.
- **Precautionary approach** – Action and innovation to improve indigenous biodiversity outcomes are encouraged and are not delayed due to a lack of complete information. A precautionary approach is taken where actions could cause significant or irreversible damage or where species are at risk of extinction.
- **Internalising environmental costs** – Where an activity imposes adverse effects on species, habitats or ecosystems, the costs of mitigating or remedying those impacts should be borne by those benefitting from the activity.

7.4 Thriving nature and thriving people: end-state outcomes

Te Mana o te Taiao – ANZBS sets out five outcomes for 2050. The first two are about restoring a healthy nature and embedded within these are three outcomes focused on thriving people. This reflects the fact that in order for people to thrive, nature needs to be thriving (see Fig. 6). A healthy biodiversity will ensure that our social, cultural and economic needs are met.

We will know we have been successful in achieving the vision when we have achieved these outcomes.

Each outcome has a number of parts that describe what achieving it will look like, with the understanding that fully achieving these outcomes may take 30 years or longer. Each outcome will have a set of indicators so that we can measure progress along the way.

Three pillars or pou have been identified to help achieve the outcomes, within each of which objectives for 2050 and goals for 2025 have been identified.

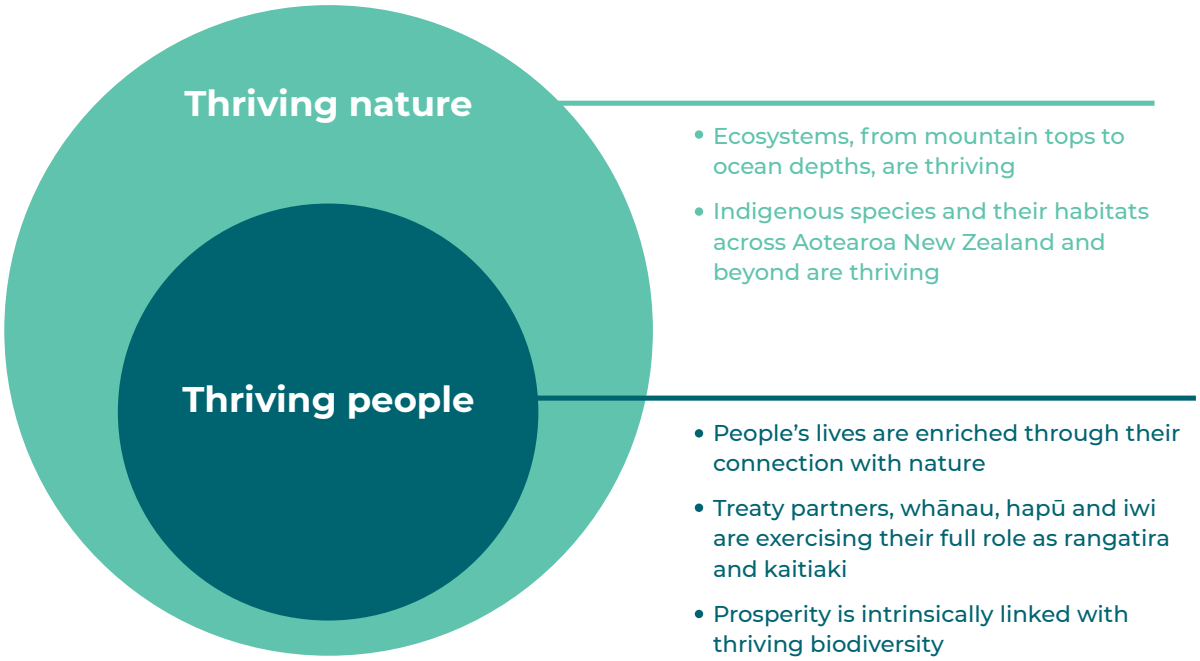

Figure 6.
2050 outcomes: thriving nature and thriving people.

Close up of kauri bark. *Photo: Rob Suisted*

7.5 Tūāpapa / getting the system right

This strategic priority is about having the right systems, processes and enabling conditions in place to tackle the biodiversity crisis.

We will know we've made progress towards this strategic priority when:

- The foundation for action has been built.
- Systems that support the running of Aotearoa New Zealand, from the Treaty partnership to the Government to the economy, have been set up to protect and restore biodiversity.
- Everyone has the knowledge, science and data they need to manage biodiversity effectively, and innovation is continually delivering new tools.
- Equity in Treaty-based collaboration is recognised as the key to success, and biodiversity is at the heart of decision making at all levels of society.
- Through the growth and weaving of mātauranga Māori, science, data and other forms of knowledge, we have the information and tools we need to manage biodiversity well.

The goals for this strategic priority have been set to be achieved by 2025 to ensure that we have the systems in place to enable us to address pressures on biodiversity. The next set of goals for 2030 will be set at the first strategy review after 5 years.

TŪĀPAPA / Getting the system right

OBJECTIVES

1.

Governance, legislation and funding systems are in place and enable delivery of the strategy outcomes

2.

Treaty partners, whānau, hapū, iwi and Māori organisations are rangatira and kaitiaki

3.

Biodiversity protection is at the heart of economic activity

2025 GOALS

1.1 Cross-stakeholder biodiversity system implementation group(s) are in place to develop, monitor and report on implementation plans

1.2 Biodiversity system governance, in partnership with Treaty partners, whānau, hapū, iwi and Māori organisations and informed by multi-stakeholder involvement, is in place and providing leadership, accountability, and inclusive and transparent decision making

1.3 Current natural resource legislation has been reviewed to ensure it is effective and comprehensive, recognises cumulative effects, and ensures ongoing biodiversity protection, including climate resilience

1.4 The costs and value of restoring indigenous biodiversity have been quantified and are being actively used to inform decision making

1.5 Sufficient ongoing resource and funding have been secured from multiple sources to implement the strategy

2.1 Te ao Māori perspective is being embedded throughout the biodiversity system, including through the use of cultural practices and tools

2.2 Innovative Treaty partnership approaches have been developed and are leading the delivery of many biodiversity restoration projects

2.3 Treaty partners, whānau, hapū, iwi and Māori organisations are better able to practice their responsibilities as rangatira and kaitiaki, including leading and partnering with the Government in decision making about taonga species and the whenua, awa and moana with which they associate

2.4 Māori cultural and intellectual property rights and data sovereignty regarding indigenous biodiversity are being upheld

3.1 A nature-based brand is central to the economy of Aotearoa New Zealand and is increasing support for nature

3.2 Economic tools are promoting the protection and restoration of biodiversity for its intrinsic value, as well as for the economic benefits it provides

3.3 Economic activities that have the most significant adverse impacts on biodiversity have been identified, their impacts have been quantified and active measures are in place to reduce these impacts

3.4 Nature-based jobs are providing significant employment and delivering benefits for biodiversity in all regions and on both public and private land

OBJECTIVES

4.

Improved systems for knowledge, science, data and innovation inform our work

5.

Mātauranga Māori is an integral part of biodiversity research and management

6.

Aotearoa New Zealand is making a meaningful contribution to biodiversity globally

2025 GOALS

4.1 A national, agreed set of indicators and an effective environmental monitoring and reporting system are informing biodiversity management and decision making

4.2 National, agreed common data standards and open data agreements are ensuring that everyone has access to a federated repository of biodiversity information

4.3 A framework for identifying and prioritising high biodiversity value areas has been developed and agreed on

4.4 The research, science and innovation system is investing in and collaboratively delivering research and rangahau (research) in alignment with an agreed integrated set of biodiversity science priorities that cover ecological, biophysical, social, cultural, economic and other areas

4.5 Innovative solutions to biodiversity issues, including the development of new tools and technologies, are being collaboratively developed and actively sought from a range of sources and deployed on the ground

5.1 The use, development and restoration of mātauranga Māori is being invested in and supported and has equal mana to knowledge gained through other scientific disciplines and ways of seeing/understanding the world

5.2 Traditional and customary practices, including mahinga kai, are increasing, and the intergenerational transfer of mātauranga is underpinning the work of rangatira and kaitiaki

5.3 Treaty partners, whānau, hapū, iwi and Māori organisations are making decisions based on the best knowledge from multiple scientific disciplines and ways of seeing/ understanding the world, including mātauranga Māori

6.1 Aotearoa New Zealand is influencing international policy and meeting commitments to international biodiversity-related agreements and conventions, including the Convention on Biological Diversity

6.2 Treaty partners, whānau, hapū, iwi and Māori organisations are making informed contributions to developing Aotearoa New Zealand positions for international conversations, and the Treaty partnership and collaboration is recognised globally

6.3 Aotearoa New Zealand is recognised for providing leadership in international conservation knowledge and delivery through international collaboration and capacity building, especially in the Pacific region

7.6 Whakahau / empowering action

This strategic priority recognises that we need all of Aotearoa New Zealand to help to protect and restore our biodiversity. We will know we have made progress towards this strategic priority when:

- Restoring biodiversity is second nature and easy to do.
- People feel connected with nature and are inspired to protect its awe and wonder.
- Treaty partners, whānau, hapū, iwi and Māori organisations are leading the way as rangatira and kaitiaki and are ensuring the restoration of mātauranga Māori.
- Everyone has the support, knowledge and networks they need to take effective action and make informed decisions that protect and restore biodiversity.

All of the goals in this strategic priority are to be achieved by 2025 to ensure that collective action is taking place so we can address the pressures on biodiversity. The next set of goals for 2030 will be set at the first strategy review after 5 years.

Tree planting in Hokitika. *Photo: Richard Rossiter*

WHAKAHAU / Empowering action

OBJECTIVES

7.

All New Zealanders have the skills, knowledge and capability to be effective

8.

Resourcing and support are enabling connected, active guardians of nature

9.

Collaboration, co-design and partnership are delivering better outcomes

2025 GOALS

7.1 Education and campaigns are ensuring that all New Zealanders are aware of the current biodiversity crisis and the importance of nature and are encouraging people to take action to protect and restore nature and ensure sustainable use

7.2 An analysis of gaps and future needs, training, capacity-building and job creation are ensuring that enough people have the right skills to protect and manage biodiversity into the future

7.3 Research is improving our understanding of societal values, norms and beliefs, as well as the motivators, barriers and enablers of action to support biodiversity management and decision making

8.1 Treaty partners, whānau, hapū, iwi and Māori organisations as rangatira and kaitiaki are sufficiently supported and resourced to protect and manage biodiversity, particularly taonga species, in their place

8.2 Nature is part of the everyday life and identity of New Zealanders, and individuals are motivated, supported and, where appropriate, incentivised to make decisions that ensure sustainable use, reduce negative impacts, and restore and protect indigenous biodiversity

8.3 Community action groups are resourced, growing, connected and coordinated and also have access to knowledge, expertise and information to actively manage biodiversity and other natural resources and act as environmental stewards

8.4 Landowners, businesses, resource users/owners and industry are supported and, where appropriate, incentivised to contribute to protecting and restoring indigenous biodiversity as standard practice

9.1 The values of Treaty partners, whānau, hapū, iwi and Māori organisations are being actively used in collaboration and co-design approaches

9.2 Collaboration and co-design processes that foster collective ownership and delivery through the consideration of multiple values in decision making are recognised as the key to success

9.3 Well-connected networks of relevant people, including urban and rural communities, stakeholders, industry and central and local government, are effectively working together in partnership and enabling collective action and successful implementation of the strategy at national, regional and local scales

7.7 Tiaki me te Whakahaumanu / protecting and restoring

This strategic priority area is focused on addressing the direct pressures that are causing a decline in biodiversity, ensuring the sustainable use of biodiversity and restoring biodiversity in areas where it has been lost.

We will know we have made progress towards this strategic priority when:

- Biodiversity is increasingly protected, restored and resilient.
- Backyard trappers, kaitiaki rōpū and community groups are finding new ways to help because there are no predators or pests left to trap.
- We see a return of petrels to the mainland mountains and bats to town parks.
- We are taking no more than we need from the land, fresh water and seas, ensuring that resources are kept for future generations.
- Taonga species have recovered enough that mahinga kai can be practiced, enabling the endurance of cultural practices.

The goals for this strategic priority are set for 2025, 2030 and 2050, reflecting and recognising the larger amount of time that will be required to make significant progress ecologically and the fact that achievement/progress of many of the 2025 goals in the other strategic priority areas is needed to enable delivery of the Tiaki me te whakahaumanu goals. Many actions will need to be completed by 2025 and these will be set as part of implementation planning. Progress towards the Tiaki me te whakahaumanu goals will be measured at the first strategy review after 5 years, at which time the goals will be reviewed to ensure they are still aspirational and achievable.

Checking a stoat trap. *Photo: Sabine Bernert*

TIAKI ME TE WHAKAHAUMANU / Protecting and restoring

OBJECTIVES	2025 GOALS	2030 GOALS	2050 GOALS
10. **Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths**	**10.1.1** Prioritised research is improving baseline information and knowledge of species and ecosystems	**10.1.2** Improved baseline information, comprehensive mapping, and improved knowledge of species and ecosystems and causes of their decline are informing management	**10.1.3** Comprehensive baseline information integrated with spatial information and knowledge about effective management is informing the adaptive management of species and ecosystems
	10.2.1 The cumulative effects of pressures on biodiversity are better understood	**10.2.2** Management at different scales and across domains is reducing the cumulative effects of pressures on biodiversityı	**10.2.3** The cumulative effects of pressures on biodiversity have been reduced to a level that does not have significant detrimental effects on biodiversity
		10.3.2 There has been no loss of the extent or condition of indigenous land, wetland or freshwater ecosystems which have been identified as having high biodiversity value	**10.3.3** An interconnected series of indigenous land, wetland and freshwater ecosystems have been restored to a 'healthy functioning' state and are connected to marine and coastal ecosystems
	10.4.1 Significant progress has been made in identifying, mapping and protecting coastal ecosystems and identifying and mapping marine ecosystems of high biodiversity value	**10.4.2** No loss of the extent or condition marine and coastal habitats which have been identified, mapped and designated as having high biodiversity value	**10.4.3** An interconnected series of marine and coastal ecosystems have been protected and restored to a 'healthy functioning' state and are connected to indigenous land, wetland and freshwater ecosystems
	10.5.1 A framework has been established to promote ecosystem-based management, protect and enhance the health of marine and coastal ecosystems, and manage them within clear environmental limits	**10.5.2** Significant progress has been made in protecting marine habitats and ecosystems of high biodiversity value	**10.5.3** (2035) Marine and coastal biodiversity is managed within environmental limits so that there is no net loss in the extent or condition of marine and coastal ecosystems
	10.6.1 A protection standard for coastal and marine ecosystems established and implementation underway	**10.6.2** Significant progress made in establishing an effective network of marine protected areas and other protection tools	**10.6.3** (2035) An effective network of marine protected areas and other tools, including marine and coastal ecosystems of high biodiversity value is established and is meeting the agreed protection standard
	10.7.1 There have been no known human-driven extinctions of indigenous species	**10.7.2** Populations of all indigenous species known to be at risk of extinction are being managed to ensure their future stability or an improving state	**10.7.3** Indigenous species have expanded in range, abundance and genetic diversity and are more resilient to pressures, including climate change
	10.8.1 The viability of current and future mahinga kai and cultural harvest of indigenous species has been assessed to guide future use	**10.8.2** Mahinga kai and cultural harvest of a wider range of indigenous species is being practiced, with no adverse impacts on ecosystems and species	**10.8.3** Resilient biodiversity ensures that Treaty partners, whānau, hapū, iwi and Māori organisations can practice mahinga kai and cultural harvest
11. **Biological threats and pressures are reduced through management**	**11.1.1** The impacts of introduced browsers, including valued introduced species (pigs, deer, tahr and chamois), on indigenous biodiversity have been quantified, and plans for their active management have been developed with Treaty partners, whānau, hapū, iwi, Māori organisations and stakeholders	**11.1.2** Introduced browsers, including valued introduced species, are actively managed to reduce pressures on indigenous biodiversity and maintain cultural and recreational values	**11.1.3** Introduced browsers, including valued introduced species, have been removed from high priority biodiversity areas and threatened ecosystems and are under ongoing management elsewhere to maintain functioning ecosystems and cultural and recreational values
	11.2.1 Introduced predators (ferrets, weasels, stoats, possums and rats) have been suppressed across 1 million hectares of mainland and eradicated from all uninhabited offshore islands	**11.2.2** Introduced predators (ferrets, weasels, stoats, possums and rats) have been eradicated from one inhabited island, one city or town, and 10 000 hectares of rural production land, and their eradication in 10 large mainland sites is underway	**11.2.3** Aotearoa New Zealand is free from ferrets, weasels, stoats, possums and rats
	11.3.1 New and emerging biosecurity threats, including weeds, animal pests and diseases (e.g. introduced invasive plants, algae, mammals, fish, invertebrates and micro-organisms), in all domains are actively identified and managed early through improvements in decision making, Treaty partnership approaches, skills and technology	**11.3.2** The highest priority biosecurity threats, including weeds, animal pests and diseases (e.g. introduced invasive plants, algae, mammals, fish, invertebrates and micro-organisms), in all domains have been identified and are being managed based on current and potential future impacts on indigenous biodiversity	**11.3.3** Introduced biosecurity threats, including weeds, animal pests and diseases (e.g. introduced invasive plants, algae, mammals, fish, invertebrates and micro-organisms), in all domains have been eradicated or are being managed to reduce negative impacts in areas of high biodiversity value

TIAKI ME TE WHAKAHAUMANU / protecting and restoring

OBJECTIVES	2025 GOALS	2030 GOALS	2050 GOALS
12. **Natural resources are managed sustainably**	**12.1.1** Environmental limits for the sustainable use of resources from marine ecosystems have been agreed on and are being implemented	**12.1.2** Marine fisheries are being managed within sustainable limits using an ecosystem-based approach	**12.1.3** Marine fisheries resources are abundant, resilient and managed sustainably to preserve ecosystem integrity
	12.2.1 The number of fishing-related deaths of protected marine species is decreasing towards zero for all species	**12.2.2** The direct effects of fishing do not threaten protected marine species populations or their recovery	**12.2.3** The mortality of non-target species from marine fisheries has been reduced to zero
	12.3.1 Environmental limits for the sustainable use of resources from freshwater ecosystems have been agreed on, and plans for the active management of fisheries have been developed with Treaty partners, whānau, hapū, iwi, Māori organisations and stakeholders	**12.3.2** Freshwater fisheries are being managed sustainably to ensure the health and integrity of freshwater species and ecosystems while retaining cultural and recreational values, including for valued introduced species	**12.3.3** Freshwater fisheries are not negatively affecting high-priority biodiversity areas and threatened ecosystems and are under ongoing management in other places to maintain functioning ecosystems and cultural and recreational values, including for valued introduced species
	12.4.1 The potential for different sectors to contribute to improved indigenous biodiversity is understood, and sustainable use practices that include benefits for indigenous biodiversity are becoming more widespread	**12.4.2** Sustainable use practices that include benefits for indigenous biodiversity are standard practice for biodiversity resource users (including tourism and recreation) and primary industry (including agriculture, forestry, fisheries, aquaculture and horticulture)	**12.4.3** Sustainable use practices are providing benefits for indigenous biodiversity and maintaining ongoing economic and wellbeing benefits for people
	12.5.1 The most appropriate places for the protection and restoration of indigenous biodiversity and areas that are suitable for other uses have been identified	**12.5.2** Implementation of an integrated spatial plan for land, freshwater and marine use has ensured no net loss of areas of high biodiversity value	**12.5.3** The connectivity of indigenous ecosystems has been improved through targeted restoration from mountain tops to ocean depths (ki uta ki tai)
	12.6.1 Indigenous vegetation planting is standard practice in urban areas, riparian zones, agricultural buffers, transport corridors and other areas	**12.6.2** Infrastructure and urban planning include indigenous biodiversity as standard practice, including through green infrastructure, green spaces, ecological corridors and environmentally friendly design elements, and nature-based solutions for issues, such as improving water quality and natural hazard protection (e.g. flooding, landslips)	**12.6.3** Infrastructure and urban design are delivering increasing benefits for indigenous biodiversity
	12.7.1 The most ecologically damaging pollutants (e.g. excess nutrients, sediment, biocides, plastics, light and sound) and pollutant sources have been identified, and an integrated plan for their management is in place	**12.7.2** The amount of pollution entering the environment has significantly decreased	**12.7.3** Pollution has been reduced to a level that does not have significant detrimental impacts on biodiversity
13. **Biodiversity provides nature-based solutions to climate change and is resilient to its effects**	**13.1.1** The potential for carbon storage from the restoration of indigenous ecosystems, including wetlands, forests, and coastal and marine ecosystems (blue carbon), to contribute to our net emissions targets is understood	**13.1.2** Carbon storage from the restoration of indigenous ecosystems, including wetlands, forests, and coastal and marine ecosystems (blue carbon), contributes to our net emissions targets	**13.1.3** Carbon storage from the restoration of indigenous ecosystems, including wetlands, forests, and coastal and marine ecosystems (blue carbon), is a key contributor to achieving net-zero emissions for Aotearoa New Zealand
	13.2.1 The potential for indigenous nature-based solutions is understood and being incorporated into planning	**13.2.2** The restoration of indigenous ecosystems is increasingly being used to improve our resilience to the effects of climate change, including coastal protection against rising sea levels	**13.2.3** The restoration of indigenous ecosystems is mitigating the effects of climate change and natural hazards (e.g. flooding)
	13.3.1 Potential impacts from climate change have been integrated into ecosystem and species management plans and strategies, and a research and rangahau strategy has been developed to increase knowledge and understanding of climate change effects	**13.3.2** Risks to biodiversity from climate change, including cascading effects (e.g. increases in introduced invasive species, water abstraction, fire risk, sedimentation) have been identified and assessed, and indigenous ecosystems, habitats and species are being managed to build resilience where possible	**13.3.3** Adaptive management is addressing the impact of climate change on biodiversity, including cascading effects, and is building resilience to future risks

7.8 How Te Mana o te Taiao – ANZBS will be implemented

A strategy is only as good as the action it delivers. Te Mana o te Taiao – ANZBS provides the vision and strategic direction of where we want to get to, but we also need a plan for how we will get there.

The goals are ambitious and can only be met by working collectively. Many people and organisations will need to be involved in implementing Te Mana o te Taiao for it to be successful, and we will also need to learn and adapt as we go. Our thinking needs to be innovative, inclusive and responsive to new knowledge.

Because of this, the process for implementation has been designed to be collaborative, adaptive and responsive.

7.8.1 Collaboration and partnership will be at the heart of implementation

Partnerships at all levels will be a core approach for delivering this strategy.

We all need to work together to make the strategy's vision a reality. A broad range of perspectives and expertise is needed to plan and implement the next steps, including from iwi, hapū and whānau, central and local government, industry, science, NGOs, and communities.

A core implementation group will be convened that includes Treaty partners, regional councils and the Crown to co-develop the national implementation plans for delivering this strategy.

7.8.2 Treaty partners, whānau, hapū and iwi will be partners in implementation

During consultation on this strategy, Treaty partners, whānau, hapū, iwi and Māori organisations have stated that partnering to deliver the strategy should include the ability to manage, co-manage or co-govern the whenua in their rohe, which will require adequate resourcing to allow for local-level Māori and iwi leadership on what is important.

WAI 262 and settlement deeds present a range of direction or obligations for government agencies and regulators with regard to biodiversity management. These will need to be considered at all levels of implementation of the strategy and will also need to be adequately resourced.

The He Awa Whiria model will inform the approach to implementation. The weaving together of mātauranga Māori and scientific disciplines in the delivery of the strategy will be crucial in achieving the goals.

7.8.3 Implementation will occur at multiple scales

The strategy will need to be implemented at national, regional and local levels. Those actions that need to be implemented nationally will often be led by agencies or national organisations. Regional biodiversity strategies, which have already been produced for some regions, will be a key part of regional and local implementation., as these have been collaboratively designed and implemented by those who know their region best – the councils, iwi/hapū, landowners and users, communities, and local people on the ground. Thus, they will be an important tool for creating linkages between ecosystems and the people involved.

The national strategy is also intended to provide strategic direction for sectors and groups to implement independently. For example, an industry body could align its environmental or biodiversity strategy to Te Mana o te Taiao – ANZBS, and community organisations could use both Te Mana o te Taiao and their regional strategies to guide their activities. This will ensure that we are all pulling in the same direction and optimising outcomes for biodiversity.

7.8.4 An adaptive approach to implementation will be needed

The strategy's implementation is intended to be dynamic, adapting to new information, tools and methods as they arise. The long-term outcomes and objectives of the strategy are not likely to change, but our understanding of the most appropriate goals and the best methods and approaches to get there will change over time as new knowledge and tools become available.

For this reason, implementation planning will focus on 5-year time frames, with a review of progress over the previous 5 years informing the development of a new implementation plan every 5 years.

The initial implementation planning process will differ slightly, in that a 2-year initial implementation plan will be developed that focuses on setting in place the systems needed to deliver the strategy, followed by a plan for a further 3 years. The 5-year cycle of planning will then commence after the first 5-yearly review in 2025.

This approach allows us to keep the strategy live and to respond to changes and new knowledge and approaches.

7.8.5 Transparent monitoring of progress will keep us accountable and moving forward

We heard during strategy development that it will be important for monitoring and progress reporting to be independent and transparent.

Progress against the strategy and implementation plan will be regularly assessed and publicly reported on. Regular reviews will ensure that the strategy remains fresh, relevant and influential and that we are measuring and accounting for our progress.

Monitoring Reporting will occur at the end of each 5-year implementation cycle to allow that monitoring to inform the development of the next 5-year implementation plan. At the same time, the strategy will be reviewed to ensure that it is still fit for purpose and will be updated if required. Other reviews may be needed when appropriate – for example, to ensure alignment with the Convention on Biological Diversity Post-2020 Global Biodiversity Framework.[24]

7.8.6 Implementation plans will include goals, actions, accountabilities and indicators

Each implementation plan will include:

- **Goals** – Additional goals that build on the 2025 and 2030 goals included in Te Mana o te Taiao – ANZBS will be developed as needed, including goals for 2035, 2040 and 2045. This will ensure that there are always milestones to track progress and that goals can be iteratively developed, building on new knowledge, approaches and progress to date.
- **Actions to progress towards the goals** – Actions to deliver on each of the goals will be identified, with multiple actions potentially being required in some cases.
- **Responsibility for the delivery of the goals** – Responsibility will also be assigned, a key part of which will be an assessment of the resourcing required for delivery.
- **Indicators to measure progress** – A full suite of indicators and measures will be developed to enable progress towards the strategy's outcomes and goals to be tracked. Measuring these indicators will be a key part of the 5-yearly progress reviews. As new goals are developed over the course of the strategy's life, new indicators may also need to be developed.

As part of implementation, a process will be undertaken to identify an integrated set of biodiversity science priorities that cover biophysical, social, cultural, economic and other needs.

[24] **www.cbd.int/conferences/post2020**

7.8.7 The first implementation plan

Following release of this strategy, a collaborative implementation planning process will begin. The initial implementation plan that is developed through this process will cover a period of 2 years (2021–2022). This initial plan will focus on establishing the systems and processes needed to support the effective delivery of this strategy, as well as making progress on those actions that can begin immediately. This will include aligning work that has already begun or is ready to begin with the strategy direction. This initial plan will be developed in late 2020 and is intended to be completed by early 2021 so that work can start immediately.

A small review of progress will take place prior to development of the next plan, which will cover the subsequent 3 years (2023–2025). The regular cycle of 5-yearly reviews and implementation planning will then begin with the 2025 implementation plan (see Fig. 7).

A wealth of knowledge and ideas for implementation have been captured during the development of this strategy that will be drawn from to help inform this process.

Figure 7.
Implementation cycles.

Kuputaka
Glossary

Glossary of te reo terms

atua	God, supernatural being, deity.
awa	River, stream, creek.
hākari	Meal, feast, celebration.
hapū	Kinship group, clan, tribe, subtribe.
he awa whiria	Braided rivers.
hui	Gathering, meeting.
ihi	Essential force, thrill, personal magnetism.
iwi	Extended kinship group, tribe, nation.
kaimoana	Seafood, shellfish.
kaitiaki	Guardian, trustee, minder.
kaitiaki rōpū	Conservation guardianship groups.
kaitiakitanga	The obligation to nurture and care for the mauri of a taonga; ethic of guardianship, protection.
kaumātua	Elderly person, a person of status within the whānau.
kaupapa	Topic, policy, initiative.
ki uta ki tai	From mountain tops to ocean depths.
mahi tahi	To work together, collaborate, cooperate.
mahi whaipainga	Beneficial work.
mahinga kai	Garden, cultivation, food-gathering place.
mana	Prestige, authority, control, personal charisma.
mana whenua	Territorial rights, authority over land or territory.
manaakitanga	Hospitality, kindness, generosity, support.
manu	Bird, winged creature.
mātauranga Māori	Māori knowledge; the body of knowledge originating from Māori ancestors, including the Māori world view and perspectives, Māori creativity, and cultural practices.
mauri	Life principle, life force, vital essence.
moana	Sea, ocean.
ngā hua	The benefits.
ngākaunui	Eager, enthusiastic, kindly disposed towards.
pakiwaitara	Legend, story, fiction, narrative.

Papatūānuku	Earth, Earth mother.
pepeha	Tribal saying, tribal motto, proverb.
pou	Post, upright, support, sustenance.
rāhui	To put in place a temporary ritual prohibition, closed season, ban, reserve.
rangahau	Research, survey.
rangatira	Chief, supervisor, employer.
rangatiratanga	Chieftainship, right to exercise authority, sovereignty, self-determination.
Ranginui	Atua of the sky, sky father.
rohe	Boundary, district, region, territory, area.
rongoā	Remedy, medicine, treatment, solution (to a problem).
taiohi	Youth, adolescent, young person.
taonga	Treasure, anything prized; applied to anything considered to be of value, including socially or culturally valuable objects, resources, phenomena, ideas and techniques.
taonga kai	Prized food.
te ao Māori	The Māori world; a Māori perspective / world view.
te pae tawhiti	The distant horizon.
te reo [Māori]	The [Māori] language.
te taiao	Natural world, environment, nature.
te Tiritiri o Waitangi	The Treaty of Waitangi.
Te Waipounamu	The South Island of New Zealand.
tiaki	Protect, conserve, look after.
tikanga	Custom, practice, correct protocol; the customary system of values and practices that have developed over time and are deeply embedded in the social context.
tino rangatiratanga	Self-determination, sovereignty, autonomy, self-government.
tohungatanga	Expertise, proficiency, competency.
waiata	Song, chant.
wānanga	To meet and discuss, deliberate, consider.
wero	Challenge.
whaikōrero	To make a formal speech, formal speech making.
whakaara	To raise, initiate, instigate.
whakahau	To encourage, urge, direct.
whakapapa	Genealogy, genealogical table, lineage, descent.
whānau	Extended family, family group.
whenua	Land.

Glossary of technical terms

Note: The definitions provided here are intended to guide interpretation of the goals and narrative of this strategy. They do not replace the definitions of terms as set out in legislation.

At Risk species	Species assessed according to the New Zealand Threat Classification System as being likely to become 'Threatened' should pressures on their populations worsen. Includes four subcategories: 'Declining', 'Recovering', 'Relict' and 'Naturally Uncommon'.
biodiversity	Biological diversity or the variability among living organisms from all sources, including land, marine and freshwater ecosystems and the ecological complexes of which they are a part; this includes diversity within species (including genetic diversity), between species and of ecosystems (based on the definition of the Convention on Biological Diversity).
bio-prospecting	Searching for plant and animal species from which medicinal drugs and other commercially valuable compounds can be obtained.
biosecurity	The exclusion, eradication or management of pests and diseases that pose a risk to the economy, environment, or cultural or social values, including human health.
blue carbon	Carbon dioxide removed from the atmosphere by the world's coastal ocean ecosystems.
browsers	Herbivorous animals that generally feed on high-growing plants rather than grasses.
bycatch	Species not targeted by a fishery but caught incidentally during fishing operations. Once caught, they can be landed, discarded or released.
catchment	Area of land in which rainfall drains towards a common watercourse, stream, river, lake or estuary.
climate change	Changes in global or regional climate patterns that are evident over an extended period (typically decades or longer). May be due to natural factors or human activities.
conservation	'The preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future generations' (Conservation Act 1987).
cumulative effects	Changes to the environment caused by the combined impacts of past, present and future human activities and natural processes.
customary or cultural harvest/use	The traditional practice of taking natural resources. These are mostly indigenous birds, fishes and plants, but also include other traditional materials, such as bone and stone.
Data Deficient species	Species for which there is so little information available that an assessment through the New Zealand Threat Classification System is not possible.

domain (ecological)	The freshwater domain comprises fresh water in all its physical forms. This includes fresh water in rivers, lakes, streams, wetlands and aquifers. The land domain comprises the soil, the underlying rock and what is on the land surface, such as vegetation and human-made structures. The marine domain extends from the seashore to the outer limits of Aotearoa New Zealand's exclusive economic zone and includes the continental shelf.
ecological corridor	An area of habitat connecting wildlife populations that have been separated by human activities or structures.
ecological integrity	The full potential of indigenous biotic and abiotic features and natural processes, functioning in sustainable communities, habitats, and landscapes.
ecosystem health	Ecosystem health describes the fundamental physical and biological state of an ecosystem in relation to its ability to support services. A healthy ecosystem is stable and sustainable, maintaining its organisation and autonomy over time and its resilience to stress. Ecosystem health can be assessed using measures of resilience, vigour and organisation.
ecosystem	A community of plants, animals and microorganisms in a particular place or area interacting with the non-living components of their environment (e.g. air, water and mineral soil).
ecosystem services	The benefits obtained from ecosystems. Examples include: **a)** Supporting services (e.g. nutrient cycling, soil formation, habitat creation) **b)** Provisioning services (e.g. food, fresh water, wood, fibre, fuel) **c)** Regulating services (e.g. water purification, climate regulation, flood regulation, disease regulation) **d)** Cultural services (e.g. aesthetic, spiritual, educational, recreational)
endemic species	Indigenous species that breed only within a specified region or locality and are unique to that area. Aotearoa New Zealand's endemic species include birds that breed only in this country but may disperse to other countries in the non-breeding season or as sub-adults.
erosion	The wearing away of land by the actions of water, wind or ice.
eutrophication	The excessive build-up of nutrients in a body of water, frequently due to run-off from land, which causes the dense growth of periphyton.
extinction (species)	The loss of a species. The moment of extinction is generally considered to be marked by the death of the last individual of that species.
full range (ecosystems)	A comprehensive and representative range of natural habitats and ecosystems that reflects the known diversity of habitats and ecological communities remaining in Aotearoa New Zealand.
green prescription	A health professional's written advice for a patient to be physically active as part of that patient's health management.
habitat	A combination of environmental factors that provide the food, water, cover and space that a living thing needs to survive and reproduce.
indigenous biodiversity	The diversity (or range) of indigenous species. This includes diversity within and between species.

indigenous species	Species that occur naturally in Aotearoa New Zealand.
intensification (agriculture)	An increase in the stocking rate of animals, or an increase in the level of production from a given area of land.
intrinsic value	The value placed on something for what it is rather than what it can provide.
introduced species	Plant or animal species that have been brought to Aotearoa New Zealand by humans, either by accident or design. A synonym is 'exotic species'.
invasive introduced species	Non-indigenous species whose introduction or spread threatens biodiversity, food security, and/or human health and wellbeing.
maintain (species/ habitat/ecosystem)	Prevent a reduction in the: **a)** Size of populations of indigenous species **b)** Occupancy of indigenous species across their natural range **c)** Properties and functions of ecosystems and habitats **d)** Full range and extent of ecosystems and habitats **e)** Connectivity between and buffering around ecosystems **f)** Resilience and adaptability of ecosystems The maintenance of indigenous biodiversity may also require the restoration or enhancement of ecosystems and habitats.
migratory species	A species that moves from one habitat to another to complete its life cycle.
nature	A holistic term that encompasses the living environment (te taiao) – i.e. all living organisms and the ecological processes that sustain them. By this definition, people are a key part of nature. This strategy uses the term 'biodiversity' to refer to biological diversity and 'nature' when considering the wider processes, functions and connections of the natural environment, of which biodiversity is a part.
nature-based solutions	Solutions that are inspired and supported by nature, cost-effective, and simultaneously provide environmental, social and economic benefits and help build resilience.
New Zealand Threat Classification System	The system used to assess the conservation status of Aotearoa New Zealand's native species. Categories include At Risk, Data Deficient, Not Threatened and Threatened (also defined in this glossary).
non-indigenous biodiversity/species	Species that have been brought to Aotearoa New Zealand by humans, whether intentionally or unintentionally. A synonym is 'introduced species'.
Not Threatened species	Species that have been assessed under the New Zealand Threat Classification System and do not fit any of the other categories.
pathogen	A bacterium, virus or other microorganism that can cause disease.
predator	An organism that feeds on another living organism (its prey).
primary production	The production of goods and services from the primary sector, such as agriculture, horticulture and forestry.
private land	Land in private ownership – that is, land not managed by the Department of Conservation or any other public body.

protected area	A geographically defined area that is protected primarily for nature conservation purposes or to maintain biodiversity values, using any of a range of legal mechanisms that provide long-term security of either tenure or land use purpose. It may be publicly or privately owned.
protection	Looking after biodiversity in the long term. This involves managing all threats to secure species from extinction and ensuring that their populations are buffered from the impacts of the loss of genetic diversity and longer term environmental events such as climate change. This includes, but is not restricted to, legal protection.
resilience	Species definition: The ability of a species, or variety or breed of species, to respond and adapt to external environmental stresses. Ecosystem definition: The ability of an ecosystem to recover from and absorb disturbances, and its capacity to reorganise into similar ecosystems.
restore (ecology)	The active intervention and management of modified or degraded habitats, ecosystems, landforms and landscapes in order to reinstate indigenous natural character, ecological and physical processes, and cultural and visual qualities.
sediment	Particles or clumps of particles of sand, clay, silt, or plant or animal matter carried in water.
sedimentation	The process of settling or being deposited as a sediment.
species	A group of living organisms consisting of similar individuals that are capable of freely exchanging genes or breeding. In this strategy, we use the term to include subspecies and varieties.
sustainability / sustainable use	'The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations' (Convention on Biological Diversity).
Threatened species	Species assessed according to the New Zealand Threat Classification System as facing imminent extinction (or a reduction to just a few small, safe refuges, which makes them highly susceptible to stochastic events) because of their small total population size and/or rapid rate of population decline. This includes three sub-categories: 'Nationally Critical', 'Nationally Endangered' and 'Nationally Vulnerable'.
valued introduced species	Introduced species, including sports fish, game birds and animals and species introduced for biocontrol, which provide recreational, economic, environmental or cultural benefits to society.
WAI 262	A Waitangi Tribunal claim that considered who is entitled to make or participate in decisions affecting indigenous flora and fauna, the environment, Māori culture, and the products of Māori culture. The accompanying Ko Aotearoa Tēnei report discusses many of these kaupapa (topics) and lays down a wero (challenge) for the Crown and Māori to advance their relationship as Treaty partners in a positive and future-focused way.
weed	A plant that is considered to be unwanted or a nuisance. The term is often used to describe native or non-native plants that grow and reproduce aggressively.
wellbeing	The health, happiness and prosperity of an individual or group. In this strategy, wellbeing is discussed in terms of material wellbeing (income and wealth, jobs and earnings, and housing), health (health status and work–life balance), security (personal security and environmental quality), social relations (social connection, subjective wellbeing, cultural identity and education), and freedom of choice and action (civic engagement and governance).

Āpitihanga 1
Appendix 1

People, organisations and agencies involved in the biodiversity system

The table below outlines some of the key people, organisations and agencies that are involved in the biodiversity system. It should be noted that many others also have roles in biodiversity management or responsibilities for managing activities that have the potential to impact on biodiversity.

SOCIETY	
Individuals	Many people are interested in conservation and contribute towards it in a variety of ways – e.g. backyard trapping or weeding, educating others, donating money or time.
Community conservation groups	Hundreds of conservation groups around the country are working independently or with others on a range of projects – from restoring forests, coasts and wildlife to managing huts, tracks and historic places. Many of these groups have large-scale restoration and biodiversity recovery as their aims, while others are focusing on a particular endangered species.
Rōpū kaitiaki	Several conservation guardianship groups have been formed by Māori communities.
Landowners	Many landowners have indigenous habitats on their land and wish to maintain or restore biodiversity.
Environmental organisations	There are several independent organisations that advocate for conservation – e.g. Forest and Bird, the Environmental Defence Society, the New Zealand Conservation Authority.
INDUSTRY	
Productive land/sea users	These include members of the agriculture, horticulture, forestry, commercial fishing and aquaculture industries, many of which are supported by advocacy organisations.
Tourism	In Aotearoa New Zealand, tourism relies heavily on the draw of our natural environments.
Electricity generators and mining	Some power schemes and mines are located in conservation areas and other locations with high biodiversity value.

GOVERNMENT AND STATUTORY BODIES	
Department of Conservation	Responsible for conserving the natural and historic heritage of Aotearoa New Zealand on behalf of and for the benefit of present and future New Zealanders.
Ministry for the Environment	Responsible for advising the Government on policies and issues affecting the environment and for developing and providing a national environmental management system, including laws, regulations, national policy statements and national environmental standards.
Ministry of Foreign Affairs and Trade	Responsibilities include representing Aotearoa New Zealand in global talks on the conservation and sustainable use of biodiversity, including the preservation of threatened species and habitats. Plays an active role in negotiations to improve the conservation and sustainable use of the world's oceans and fisheries.
Ministry for Primary Industries	Responsible for growing and protecting Aotearoa New Zealand by maximising export opportunities for the primary industries, improving sector productivity, increasing sustainable resource use and protecting the country from biological risk. Te Uru Rākau (Forestry New Zealand) supports the planting of exotic and indigenous forests, sustainable forest management, programmes such as the Emissions Trading Scheme, and forestry grants. Fisheries New Zealand works to ensure that fisheries resources are managed to provide the greatest overall benefits to New Zealanders. Biosecurity New Zealand leads the biosecurity system, which includes our efforts to prevent pests and diseases from arriving and eradicating or managing those that do arrive or have been here for some time.
Land Information New Zealand	Responsible for land titles, topographical information, managing Crown property and a variety of other functions.
Regional councils	Have a general function to maintain biodiversity under the Resource Management Act (RMA) and accompanying powers to regulate land use, the discharge of contaminants to land and water, the damming, diversion and abstraction of water, and discharges to and occupation of the coastal marine area. They also have powers under the Biosecurity Act (BSA) to regulate and/or carry out operations (pest management) to achieve biodiversity outcomes through plans prepared under that Act. They can secure a mandate through the Local Government Act (LGA) to expend financial resources to carry out pest management operations or other non-regulatory methods (regardless of whether a pest or project is provided for in a plan prepared under the BSA).
Territorial authorities	Under the RMA, territorial authorities have the role of controlling the effects of the use, development and protection of land, including for the purpose of the maintenance of indigenous biological diversity.
New Zealand Fish and Game Council	Manages, maintains and enhances sports fishes and game birds in the recreational interests of anglers and hunters. Manages the sports fishery to ensure that Aotearoa New Zealand's freshwater resource is healthy and that all species that live within it are flourishing.
Game Animal Council	Represents the interests of the hunting sector, and aims to improve the management of hunting resources while contributing to positive conservation outcomes.

Āpitihanga 2
Appendix 2

Key legislation relating to biodiversity

Biosecurity Act 1993

The Biosecurity Act provides regulation relating to the exclusion, eradication and effective management of pests and unwanted organisms. It includes provisions relating to the import of risk goods, surveillance for and response to pest incursions (including establishing government/industry agreement for readiness or response), enforcement and penalties, and pest management – including pest management plans and pathway management plans.

Conservation Act 1987

The Conservation Act underpins the governance, administration and management of Aotearoa New Zealand's public conservation land and sports fish and game resources. It establishes the Department of Conservation, the New Zealand Conservation Authority and conservation boards, the New Zealand Fish and Game Council, and regional fish and game councils. It governs the administration of other conservation legislation and provides for the management of the majority of public conservation land, including stewardship land.

Fisheries Act 1996

The Fisheries Act provides for the utilisation of marine and freshwater fisheries resources, while ensuring sustainability (including maintaining the potential of fisheries resources) and avoiding, remedying or mitigating any adverse effects of fishing on the aquatic environment.

Forests Act 1949

The Forests Act includes provisions that promote the sustainable forest management of indigenous forest land.

Marine Mammals Protection Act 1978

The Marine Mammals Protection Act regulates the protection and management of marine mammals in Aotearoa New Zealand and its fisheries waters, including the exclusive economic zone.

Marine Reserves Act 1971

The Marine Reserves Act preserves areas containing underwater scenery, natural features or marine life of such distinctive quality, or so typical, beautiful or unique, that their preservation for scientific study is in the national interest.

National Parks Act 1980

The National Parks Act preserves in perpetuity areas that are so beautiful, unique or special that their preservation is in the national interest. These areas are preserved for their intrinsic worth and for the benefit, use and enjoyment of the public.

Native Plants Protection Act 1934

Under the Native Plants Protection Act, native plant species can be declared protected, which prohibits them from being taken from Crown or public land.

Queen Elizabeth II National Trust Act 1977

The Queen Elizabeth II National Trust Act establishes a national trust to encourage and promote the provision, protection and enhancement of open space. A key role of the Trust is to partner with private landowners to protect natural and cultural heritage sites on their land with covenants.

Reserves Act 1977

The Reserves Act governs the administration and management of local authority and other reserves, as well as those managed by the Department of Conservation. Its overall purpose is to protect areas of special value, including for recreation and for access to and along waterways and the coast.

Resource Management Act 1991

The Resource Management Act (RMA) is New Zealand's primary legislation outlining how to manage the environment. The purpose of this Act is 'to promote the sustainable management of natural and physical resources'. Under the Act, local authorities have responsibility for managing activities on land, on water, in the air and in the coastal marine area, many of which have an effect on biodiversity.

The RMA provides several mechanisms, including policy statements, environmental standards and planning standards, that are developed at a national level to provide direction to local authorities on how to achieve the purpose of the Act (including the protection of biodiversity). Other mechanisms also include regional policy statements, regional plans and district plans.

Some of the key instruments currently in place that specifically provide for the protection of biodiversity include the:

- New Zealand Coastal Policy Statement 2010 (NZCPS), which includes direction on national priorities for biodiversity in the coastal environment
- National Policy Statement for Freshwater Management 2014 (NPSFM), which directs regional councils to safeguard the life-supporting capacity of freshwater and associated aquatic ecosystems
- National Environmental Standard for Plantation Forestry 2017 (NESPF), which includes requirements around the protection of specific indigenous biodiversity and habitats within or close to plantation forestry activity

Work is currently underway on a proposed National Policy Statement on Indigenous Biodiversity. This will include objectives and policies to help guide the way in which local authorities work with landowners and communities to protect indigenous biodiversity.

Trade in Endangered Species Act 1989

The Trade in Endangered Species Act implements the International Convention on the Trade in Endangered Species of Wild Flora and Fauna (CITES). It controls New Zealand's import and export of species listed in schedules 1–3 of the Convention.

Wild Animal Control Act 1977

The Wild Animal Control Act provides for the control of animals listed in the Sixth Schedule of the Wildlife Act to manage their effects on vegetation, soils, waters and wildlife. This Act covers wild animal control plans, concessions for wild animal recovery operations and the granting of permits for hunting on public conservation land.

Wildlife Act 1953

The Wildlife Act regulates the keeping and killing of wild birds and other animals, including some fishes and invertebrates but excluding marine mammals. All species are protected unless scheduled as game, unprotected or subject to the Wild Animal Control Act. The Act's jurisdiction covers all of Aotearoa New Zealand's fisheries waters, including the exclusive economic zone.

Other Acts

Other relevant Acts include the:

- Crown Minerals Act 1991
- Crown Pastoral Land Act 1998
- Environmental Reporting Act 2015
- Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012
- Game Animal Council Act 2013
- Hazardous Substances and New Organisms Act 1996
- Hauraki Gulf Marine Park Act 2000
- Kaikoura (Te Tai o Marokura) Marine Management Act 2014
- Local Government Act 2002
- Marine and Coastal Area (Takutai Moana) Act 2011
- Māori Fisheries Act 2004
- Treaty Settlement Legislation (various)

Āpitihanga 3
Appendix 3

Related strategies and policies

Local policy

- Iwi environmental management plans
- Farm plans
- District plans
- Fisheries plans

Regional policy

- Regional biodiversity strategies
- Regional policy statements and plans
- Conservation management strategies
- Pest management strategies
- Sports fish and game management plans

National policy

- New Zealand Biodiversity Strategy
- Deeds of settlement
- National policy statements, such as the proposed National Policy Statement on Indigenous Biodiversity and the National Policy Statement on Freshwater Management
- Predator Free 2050 Strategy
- Biosecurity 2025

International policy

- Aotearoa New Zealand is a party to the international Convention on Biological Diversity and several other international agreements relating to the protection of biodiversity (see below for a list of some key international agreements).

Some of the key international agreements and intergovernmental bodies relating to biodiversity include:

- Agreement on the Conservation of Albatrosses and Petrels (ACAP)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Convention on the Conservation of Migratory Species (CMS)
- International Union for Conservation of Nature (IUCN)
- International Whaling Commission (IWC)
- Secretariat of the Pacific Regional Environment Programme (SPREP)
- Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat
- Regional fisheries management organisations (RFMOs)
- United Nations Convention on Biological Diversity (CBD)
- United Nations Convention to Combat Desertification (UNCCD)
- United Nations Convention on the Law of the Sea (UNCLOS)
- United Nations Framework Convention on Climate Change (UNFCCC)
- World Heritage Convention

Āpitihanga 4
Appendix 4

Potential indicators for measuring progress towards the strategy outcomes

Monitoring the state and trends of biodiversity and measuring progress against the outcomes and goals of this strategy will be a crucial part of the implementation process. The first step will be developing and implementing an agreed set of national indicators to measure and report on the strategy outcomes. This work will be a priority as part of the initial implementation planning.

The table below shows some potential indicators that could be used, including relevant indicators that are currently used for environmental reporting by Statistics New Zealand and the Ministry for the Environment. This is not a comprehensive list, so further work will be needed to develop and agree on a full set of indicators.

OUTCOMES	POTENTIAL INDICATORS
Outcome 1 **Ecosystems, from mountain tops to ocean depths, are thriving**	
The mauri of ecosystems is thriving	• 'Mauri meter' and Kaupapa Māori Environmental Assessment tools
A full range of indigenous ecosystems are protected and secured for future generations	• Wetland extent • Protection in the marine environment • Indigenous cover and protection in land environments

The health, integrity and connectivity of ecosystems has been maintained and/or restored, including in human-dominated areas	• Ecosystem health and function measures, including:
	  • Representation of plant functional types
	  • Demography of widespread animal species
	  • Pressure index
	• Land pests
	• Freshwater pests
	• Extent of potential range occupied by focal taxa
	• Land cover
	• Proportion of vegetation (indigenous and all types) in urban areas
	• Freshwater health indicators, e.g. cultural health index, macroinvertebrate community index (MCI)
	• Marine primary productivity
	• State of fish stocks
	• Commercial catch, seabed and coastal seabed dredging and trawling
	• Marine trophic index
	• Marine non-indigenous species

OUTCOMES	POTENTIAL INDICATORS
Outcome 2 **Indigenous species and their habitats across Aotearoa New Zealand and beyond are thriving**	
The mana of taonga species is restored	• Reports on progress in taonga species management by Treaty partners
All indigenous species are protected and secure, and none are at risk of extinction due to human activity	• Changes in the conservation status of indigenous species • Bird species on public conservation land • Pest impacts on indigenous trees • Bycatch of protected species
Species' populations are healthy, genetically diverse and have increased resilience to future threats, including climate change	• Changes in the conservation status of indigenous species • Human-caused threats to marine environments • Freshwater fish communities
Migratory species and their habitats are secured across international boundaries	• Changes in the conservation status of indigenous species • Percentage of migratory species' habitats under legal protection

OUTCOMES	POTENTIAL INDICATORS
Outcome 3 **People's lives are enriched through their connection with nature**	
Everyone in Aotearoa New Zealand is connected with nature and supports and actively contributes to its protection and restoration	• Indigenous species in urban and developed spaces • Number of people involved in conservation and kaitiaki activities that deliver conservation outcomes • Participation of Treaty partners, whānau, hapū, iwi and Māori organisations in revitalising mātauranga, te reo and tikanga • Number, activities and impacts of community groups • Number of volunteers participating, including in citizen science
Connection with nature is improving people's physical, spiritual and mental health and quality of life	• Connection with nature in children and adults • Access to indigenous green spaces and blue (freshwater, coastal and marine) spaces • Frequency/time spent in nature • Green prescriptions • Number of people spending time in nature
Future generations inherit a restored and thriving nature	• Baseline status of ecosystems and species • Education system delivering environmental education

OUTCOMES	POTENTIAL INDICATORS
Outcome 4 **Māori are exercising their full role as rangatira and kaitiaki**	
Resilient biodiversity enables cultural practices and mahinga kai, contributing to the regeneration of mātauranga Māori	• Customary use of biodiversity • Increase in taonga kai (prized food) at hui (meetings) and hākari (celebrations) • Māori cultural and intellectual property agreements in relation to biodiversity
Restored biodiversity uplifts mana	• Intergenerational transmission of te reo (the Māori language) in households / Māori communities • Rangatira (leadership) and kaitiaki (guardianship) participation in biodiversity activities
Treaty partners, whānau, hapū, iwi and Māori organisations are central to, and recognised as leaders in, the biodiversity system	• Role of mātuaranga Māori (Māori knowledge) in management decisions

OUTCOMES	POTENTIAL INDICATORS
Outcome 5 **Prosperity is intrinsically linked with a thriving biodiversity**	
A thriving biodiversity provides the services that underpin our prosperity	• Measures of key services, e.g. soil carbon, pollination, natural pest control, carbon sequestration • Performance of sectors most linked to indigenous biodiversity
Biodiversity resources are managed sustainably to provide ongoing economic benefits	• Environmental economic accounts, including the health of fish stocks
Economic activity has neutral or beneficial impacts on biodiversity	• International brand identity and perception • Primary industry value per product • Investment in environmental services
A thriving biodiversity plays a central role in our approach to mitigating climate change	• Carbon sequestration from native forests

2022

TE MANA O TE TAIAO – AOTEAROA NEW ZEALAND BIODIVERSITY STRATEGY

IMPLEMENTATION PLAN

Te Kāwanatanga o Aotearoa
New Zealand Government

Te Mana o Te Taiao – Aotearoa New Zealand Biodiversity Strategy Implementation Plan

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COVER: Whio / blue duck in the Tongariro River near Turangi.
*Photo: Leon Berard (**www.leonberardphotography.co.nz**)*

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Minister's foreword

Nature is an important part of our lives here in Aotearoa New Zealand. We have been entrusted with unique and special biodiversity – many of the species living here are found nowhere else in the world.

But science doesn't lie and despite the many good intentions, we now have a biodiversity crisis, with 4000 of our species threatened or at risk of extinction.

We all have an obligation to protect our natural environment for the benefit of future generations, and by acting now and working together to tackle the challenges that threaten biodiversity, change can happen.

That means building on past efforts and clearly laying out the actions we will take to ensure biodiversity is not only protected but flourishes. It means recognising that every part of our environment, whether it's in a national park or our backyards, sustains biodiversity. It means bringing biodiversity into decision making and mainstream policy.

We already have a way forward for protecting and restoring biodiversity. Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy, which was released last year, set the direction for improving biodiversity over the next 30 years.

This implementation plan will drive ongoing collective action across Aotearoa New Zealand, adding new knowledge to existing activities and programmes. Every 5 years, we will review and assess what has been achieved and what we have learned to inform the next set of actions.

The initial actions in this plan align with the strategy's goals for 2025. The immediate focus is on establishing well-functioning systems and processes to support a partnership approach to conserving and enhancing biodiversity.

In addition, this plan signals the priority initiatives that focus on directly addressing the most pressing drivers of biodiversity loss and will lead to step changes in the biodiversity system that will accelerate future efforts.

Because of central and local government's responsibility in this area, this first iteration of the plan is focussed on government actions. The implementation plan is a living document so, as it evolves, additional actions will be added from others in the system. Recognising our international obligation under the United Nations Convention on Biological Diversity – to protect and conserve our unique natural and cultural heritage – the plan will be updated following the adoption of new global biodiversity goals in 2022.

We also need to continue to support and grow the good work being done on the ground. I want to acknowledge the many individuals, communities and tangata whenua-led groups that are already making a difference for biodiversity. Actions to protect and restore nature are being achieved through Predator Free 2050, Jobs for Nature and other initiatives supported by the Government.

This implementation plan signifies a step closer towards the vision of the strategy, Te Mauri Hikahika o te Taiao – nature is vibrant and vigorous. I look forward to what we can achieve together for nature.

Hon Kiritapu Allan

Minister of Conservation

Introduction

Biodiversity in Aotearoa New Zealand and across the rest of the world is declining due to a range of threats. Direct pressures include changes in the use of land, freshwater and marine environments, introduced species, the unsustainable use of species and resources, pollution, and climate change.[1] And these direct pressures are caused or compounded by indirect pressures, such as not having the right systems in place, not having sufficient knowledge or resources to act, and a disconnect between people and nature.

Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy 2020 (ANZBS) seeks to address these pressures and provides direction for the protection, restoration and sustainable use of biodiversity over the next 30 years.

The vision of the strategy is Te Mauri Hikahika o te Taiao – nature is vibrant and vigorous. This means a future where:

- ecosystems and species from mountain tops to ocean depths are thriving
- people's lives are enriched through their connection with nature
- Treaty partners, whānau, hapū and iwi are exercising their full role as rangatira and kaitiaki
- prosperity is intrinsically linked with a thriving biodiversity.

Te Mana o te Taiao – ANZBS Implementation Plan will be used over the next 30 years to set out a pathway for achieving the strategy.

International biodiversity commitments

The development and implementation of a national biodiversity strategy and action plan is a requirement for Aotearoa New Zealand to meet its obligations under the United Nations Convention on Biological Diversity (CBD). We are also required to report back to the CBD on progress towards achieving our objectives. Currently, new global biodiversity goals are expected to be adopted in mid-2022. This implementation plan will be updated following confirmation of the new global goals.

An adaptive approach to implementation

This implementation plan is intended to be a living document so that others who are involved in the biodiversity system can include their actions alongside those from central and local government.

Being a living document also allows the plan to be adaptive to changes in knowledge and context. While many pressures on biodiversity are already known, emerging threats or events may require a change in approach. Therefore, the implementation plan will be updated regularly to include new actions.

Monitoring and reporting on progress

In addition to regularly updating the actions, there will be 5-yearly reviews of the implementation plan to evaluate progress towards goals and outcomes, re-assess priorities, and develop new actions.

[1] **Biodiversity in Aotearoa – an overview of state, trends and pressures** (2020).

Progress towards achieving the goals and outcomes will be tracked using a monitoring and reporting system, which is currently being scoped. This will be combined with assessment of how delivery on the goals is progressing to inform future actions and priorities.

Since the development and implementation of a national biodiversity action plan is a requirement for Aotearoa New Zealand to meet its obligations under the United Nations Convention on Biological Diversity (CBD), our country also needs to report back to the CBD every 4 years on progress towards achieving the plan.

Providing guidance on where to focus efforts

Three pou (pillars) provide a framework for action by setting out the areas where transformational change is needed to achieve Te Mana o te Taiao – ANZBS: Tūāpapa (getting the system right), Whakahau (empowering action) and Tiaki me te Whakahaumanu (protecting and restoring) (**Figure 1**).

The current actions being undertaken across central and local government provide a good baseline for working towards the 2025 goals under each pou, but much more still needs to be done.

As this implementation plan continues to be updated, priority areas that link back to the strategy framework will determine where new actions should be added. These will set the foundations needed for further work to achieve the 2025 goals and beyond.

Priorities to address the drivers of biodiversity loss

Actions that directly address the drivers of biodiversity loss are likely to make the biggest difference for biodiversity if current efforts are increased. These include focussing on joint efforts that tackle both biodiversity loss and climate change together, the ongoing threat of introduced pest species and weeds, improving biodiversity on privately owned land, and pressures on the marine environment.

Priorities to drive step changes in the biodiversity system

Everyone in the biodiversity system has a role to play in achieving Te Mana o te Taiao – ANZBS, including central government agencies, local government, tangata whenua (whānau, hapū, iwi and Māori organisations), communities, individuals, scientists and researchers, industry, landowners, tourism, and businesses. However, the way the biodiversity system is currently set up means there is a lack of coordination and connection between all those involved.

Current actions are focussed on central and local government agencies, recognising that these agencies have key responsibilities for setting up the processes and structures that will enable the wider biodiversity system and other activities, such as those being led by communities and tangata whenua, to be better connected and make more effective contributions.

As outlined in the strategy, there is also a need to increase the integration of te ao Māori (the Māori world view) and elevate mātauranga Māori (Māori knowledge) in biodiversity decision making, management and funding. The He Awa Whiria approach in Te Mana o te Taiao – ANZBS describes the weaving together of mātauranga Māori and other knowledge systems. Once tools have been developed to guide how this can be achieved in practice, this approach will be applied to implementation.

Focus needs to be placed on developing integrated approaches to biodiversity protection that consider environmental, social, cultural and economic values. Emerging new tools and technologies for biodiversity protection will also be key to achieving the strategy's outcomes.

Interaction with other frameworks and programmes across government

Work that will help address the drivers of biodiversity loss is taking place across a wide range of government agencies, reflecting the complex and cross-cutting nature of the challenges biodiversity faces.

Some agencies, such as Toitū te Whenua Land Information New Zealand (LINZ) and the Department of Conservation (DOC), have developed, or are developing, their own biodiversity strategies based on Te Mana o te Taiao – ANZBS to guide how they will contribute to the goals.

There are also many other programmes or frame–works in place across government that focus on cross-cutting themes and are connected to biodiversity. Actions happening in these themes are contributing to achieving the objectives and goals of Te Mana o te Taiao – ANZBS.

- Sustainable, productive and inclusive land and sea use (eg **Fit For a Better World**)
- Climate change (eg **One Billion Trees**, **He Waka Eke Noa**)
- Predator eradication (eg **Predator Free 2050**)
- Support for the communities and the economy through nature-based employment (eg **Jobs for Nature**)
- Responding to the issues raised in the Wai 262 inquiry and the recommendations of the Ko Aotearoa Tēnei report (Te Pae Tawhiti)

Figure 1. *Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy* framework.

Figure 1 continued

Central to our work between now and 2050 are three pou (pillars) *which provide direction and focus to guide us towards the transformational change needed to achieve the strategy outcomes. Objectives are identified within each pou.*

TŪĀPAPA
Getting the system right

We need the right systems in place to tackle the biodiversity crisis. These cross-cutting objectives set out how we will ensure this.

What our 2050 objectives are:

1. Governance, legislation and funding systems are in place and enable delivery of the strategy outcomes
2. Treaty partners, whānau, hapū, iwi and Māori organisations are rangatira and kaitiaki
3. Biodiversity protection is at the heart of economic activity
4. Improved systems for knowledge, science, data and innovation inform our work
5. Mātauranga Māori is an integral part of biodiversity research and management
6. Aotearoa New Zealand is making a meaningful contribution to biodiversity globally

WHAKAHAU
Empowering action

We need all New Zealanders to help to protect and restore our biodiversity. These cross-cutting objectives set out how we will ensure that everyone is empowered to act.

What our 2050 objectives are:

7. All New Zealanders have the skills, knowledge and capability to be effective
8. Resourcing and support are enabling connected, active guardians of nature
9. Collaboration, co-design and partnership are delivering better outcomes

TIAKI ME TE WHAKAHAUMANU
Protecting and restoring

We need to address the direct pressures causing a decline in biodiversity, ensure the sustainable use of biodiversity, and restore biodiversity in areas where it has been lost. These objectives set out what we will do to ensure biodiversity is resilient and secure.

What our 2050 objectives are:

10. Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths
11. Management ensures that Biological threats and pressures are reduced through management
12. Natural resources are managed sustainably
13. Biodiversity provides nature-based solutions to climate change and is resilient to its effects

Priority areas

Steps need to be taken in these priority areas to ensure that the strategy outcomes can be achieved. Current actions that align with these areas are indicated with a symbol in the implementation plan.

Addressing the drivers of biodiversity loss, including:

- Joined up efforts that **tackle biodiversity loss and climate change together**, which will be critical to our ability to restore and manage ecosystems and species.
- Addressing the **ongoing threat of introduced pest species and weeds**, which is being extended by the increasing range of new biosecurity threats driven by a changing climate.
- Achieving biodiversity outcomes on private land will help address **ecosystem impacts of land-use changes on terrestrial, freshwater and marine ecosystems** where they extend beyond public conservation lands and waters.
- Addressing the **increasing pressures on the marine environment**, particularly those related to climate change, freshwater, sediments, plastic pollution, and fishing.

Driving step changes in the biodiversity system, including:

- Increasing the **integration of te ao Māori and elevation of mātauranga Māori** in biodiversity decision-making, management, and funding.
- **Larger scale and more integrated approaches to biodiversity protection**, such as landscape-scale Predator Free 2050 projects developed alongside private and Māori landowners, integrated statutes for land use, development and environmental protection, and a regenerative approach to tourism.
- **Emerging new tools and technologies** that have the potential to offer breakthrough opportunities for biodiversity protection.
- **System-level design** of governance, including monitoring and reporting, decision making, institutions and polices, and integration across agencies

Moko kākāriki / jewelled gecko. *Photo: Sabine Bernert*

Implementation plan

The following tables outline actions contributing towards the Te Mana o te Taiao – ANZBS 2025 goals and objectives. For an explanation of the symbols, refer to **Figure 1**. Symbols are not shown for actions relating to more than three priority areas.

Tūāpapa – getting the system right

Objective 1: Governance, legislation and funding systems are in place and enable delivery of the strategy outcomes.

Action	Lead agency	Achieve by	2025 goal(s)
Develop a DOC Biodiversity Action Strategy to identify which Te Mana o te Taiao – ANZBS goals DOC is accountable for and to guide the work required to deliver on these goals. Implementation of the strategy will contribute to multiple pou, objectives and goals.	DOC	Completed	4.3, 6.1
Work with other system participants on continued system improvement and ensure close alignment between the biosecurity and biodiversity systems. An effective biosecurity system is critical to achieving the goals of Te Mana o te Taiao – ANZBS.	Ministry for Primary Industries (MPI)	Ongoing	1, 3, 4, 9, 11
Establish a system across central and regional government to support future implementation planning and facilitate connections across the wider biodiversity system.	DOC	Ongoing	1.1
Establish multi-agency national collaborative groups to plan and implement Predator Free 2050 (PF2050) activity, as well as local collaborative groups to progress landscape-scale regional projects.	DOC	Established and ongoing	1.1
Regional Councils operate according to a landscape-scale view of biodiversity management across all tenures, rohe and agencies.	Regional and unitary councils	Ongoing	1.1 
Regional Councils are providing tactical leadership at ground level across many programmes and projects – interface between people and management operations.	Regional and unitary councils	Ongoing	1.1 

Action	Lead agency	Achieve by	2025 goal(s)
Establish an Interim Oversight Group to provide advice on what governance structure(s) could be adopted to achieve Te Mana o te Taiao – ANZBS, as well as strategic advice on implementation.	DOC	Established and ongoing	1.2
Ensure a governance structure is in place that provides leadership, accountability, and inclusive and transparent decision making.	DOC	2024	1.2
Multi-stakeholder involvement and governance is an emerging practice through joint management agreements, alliances, resource management plans and council committees.	Regional, unitary and district councils	Ongoing	1.2
Ensure a governance structure is in place for the **Ngā Whenua Rāhui (NWR) Fund** to provide leadership, accountability, and inclusive and transparent decision making for the protection of indigenous biodiversity on private land owned by Māori.	DOC/NWR	Established and ongoing	1.2
A new Oceans Secretariat has been established by the Minister for Oceans and Fisheries, comprising DOC, MPI and the Ministry for the Environment (MfE) (with support from other agencies including the Ministry of Foreign Affairs and Trade (MFAT) as appropriate). Its purpose is to support collaboration and coordination by providing enhanced governance for significant marine initiatives and the sharing of resources and expertise. It supports the Government's commitment to a more holistic, integrated approach to managing our oceans.	DOC, MPI, MfE with support from MFAT	Ongoing	1.2
The Resource Management Act (RMA) is repealed, and new legislation is enacted based on the recommendations of the Resource Management Review Panel. The three proposed acts are the: • Natural and Built Environments Act (NBA), as the main replacement for the RMA, to protect and restore the environment while better enabling development • Strategic Planning Act (SPA), requiring the development of long-term regional spatial strategies to help coordinate and integrate decisions made under relevant legislation • Climate Adaptation Act (CAA), to address complex issues associated with managed retreat.	MfE	2022	1.3

Action	Lead agency	Achieve by	2025 goal(s)
Development of national direction that provides direction to councils on their responsibilities for protecting and maintaining indigenous biodiversity, supported by the work already undertaken to develop a National Policy Statement for Indigenous Biodiversity.	MfE	TBC	1.3
Review conservation management planning documents and planning systems to improve biodiversity outcomes.	DOC	Ongoing	1.3
Establish a foundation for future comprehensive conservation legislation reform and undertake preparatory policy analysis. Initiate a review of the Wildlife Act 1953 and provide an update to Cabinet (subject to Cabinet's decision).	DOC	Q2 2023 (update to Cabinet)	1.3
Review of the Crown Pastoral Land Act 1998 to end tenure review and improve the way 1.2 million hectares of Crown pastoral land is administered and regulated.	Toitū te Whenua LINZ	Ongoing	1.3
Create a more strategic, nationally coordinated framework for marine protection with modernised legislative tools and processes that improve integration with wider marine use.	DOC, MPI	Ongoing	1.3
Review the Forests Act 1949, including Part 3A.	MPI	Bill next parliamentary term	1.3
Review the Biosecurity Act 1993.	MPI	TBC	1.3
Make amendments to the Fisheries Act 1996 to move towards a more ecosystem-based approach to fisheries management and more responsive decision making and to drive more selective fishing.	MPI	October 2022, followed by a 4-year transition phase	1.3
Carbon calculator and resource consent offsetting are being trialled in some regional councils. Biodiversity offsetting exists in some regional policy statements and plans.	Regional, unitary and district councils	Ongoing	1.4, 3.2, 13.1.1

Action	Lead agency	Achieve by	2025 goal(s)
Undertake a gap analysis to identify the additional actions and resources needed to deliver on the 2025 goals.	DOC	2023	1.5
Resource and funding are secured through the long-term planning cycle for Regional Councils for business as usual (BAU). Additional funding would need to be prioritised and approved through the same mechanism. Funding to scale up activities is also leveraged off government funding and landowner and community direct and in-kind resources.	Regional and unitary councils	Ongoing	1.5
Toitū te Whenua LINZ is developing templates to support a funding system that will allow us to pool resources to more efficiently manage biosecurity and biodiversity across Crown land.	Toitū te Whenua LINZ	Ongoing	1.5

Objective 2: Treaty partners, whānau, hapū, iwi and Māori organisations are rangatira and kaitiaki.

Action	Lead agency	Achieve by	2025 goal(s)
Put a Kaitiakitanga Collaborative Group and Te Ao Māori Strategic Advisor in place to ensure that a te ao Māori perspective is embedded in the PF2050 programme.	DOC	2022	2.1
Toitū te Whenua LINZ is engaging with Māori as kaitiaki and as having mana whenua where they have an interest in Toitū te Whenua LINZ-managed Crown land, to ensure that Māori and iwi interests, te Ao Māori, and mātauranga Māori are incorporated into Toitū te Whenua LINZ programmes (where deemed appropriate by mana whenua).	Toitū te Whenua LINZ	Ongoing	2.1
Mātauranga Māori is being incorporated through some Regional Councils into biodiversity activities, projects and management plans. Community group funding includes iwi/hapū to undertake biodiversity work. Some district councils also undertake this work.	Regional, unitary and district councils	Ongoing	2.1, 2.2
Biodiversity restoration projects on Toitū te Whenua LINZ-managed Crown land are undertaken in partnership with iwi/rūnanga to support them as rangatira and kaitiaki and to achieve cultural outcomes. *Supported through Jobs for Nature funding*	Toitū te Whenua LINZ	Q1 2025	2.2
As part of **Revitalising the Gulf: Government Action on the Sea Change Plan**, two pilots for Ahu Moana projects (collaborative management between mana whenua and local communities of their local coastal area) are implemented and the learnings are used to inform development of an Ahu Moana Framework.	MPI	2023	2.2 (supports 10.5)
Ensure that relationships with Māori landowners and communities are supporting their aspirations for indigenous biodiversity protection at places under NWR kawenata.	NWR	Started and ongoing for the term of the NWR kawenata	2.2, 2.3
Ensure that the whenua (land) remains in Māori ownership under the NWR kawenata, including a 25-year review clause with the intent of allowing for the next generation to have a say.	NWR	In place and ongoing	2.3
Actively seek whānau and hapū to undertake management work at place and land trusts to co-design management plans.	NWR	Annually or when required	2.3

Action	Lead agency	Achieve by	2025 goal(s)
Ensure that whānau, hapū and iwi are leading or partnering on delivering Jobs for Nature projects to achieve their aspirations for their whenua.	DOC, MPI	Ongoing	2.3 
Treaty partners, whānau, hapū, iwi and Māori are involved in decision making through elected officials and specialised governance committees. The advent of alliances and management agreements in some regions is also promoting a partnership framework of working together.	Regional and unitary councils	Ongoing	2.3 
Support the protection and restoration of Māori land through projects funded by Jobs for Nature.	DOC	2025	2.3 
Work with mana whenua on regenerative tourism approaches for nature walks, including the co-design of walk experiences and links to te Taiao.	DOC	Ongoing	2.3  
South East Marine Protection (SEMP) network – Agencies and Kāi Tahu to establish an enduring rohe-based co-management structure for any marine protected areas implemented, including the funding of Kāi Tahu rangers.	DOC, MPI	End of 2024	2.3
Ensure that the Kauri Disease (*Phytophthora agathidicida*) National Pest Management Plan provides for and enables the exercise of rangatira and kaitiaki at operational, plan and governance levels, as well as through a specific funding stream pou for whānau, hapū and iwi.	MPI	Order in Council (OIC) mid-2022	2.3 
Put in place marine biodiversity and customary research plans that are agreed on by Fisheries New Zealand and Iwi Forums as part of a move to improve partnership between Māori and the Crown on all fisheries-related matters.	MPI	Established Nov 2022 and ongoing	2.3, 8.1 
Work across government agencies to implement the Te Pae Tawhiti work programme, in partnership with Te Taumata Whakapūmau, the original Wai 262 claimants' representative rōpū. Work streams related to objective 2 focus on the protection of taonga works, taonga taiao, taonga species and the biodiversity of Aotearoa New Zealand.	Te Puni Kōkiri	2026	All – but especially 2.3 and 2.4 
Joint management agreements and mātauranga Māori incorporated into monitoring and projects.	Regional, unitary and district councils	Ongoing	2.4 

Objective 3: Biodiversity protection is at the heart of economic activity.

Action	Lead agency	Achieve by	2025 goal(s)
Implement the **New Zealand-Aotearoa Government Tourism Strategy**, which sets out the Government's goals for tourism, including that tourism protects, restores and champions Aotearoa New Zealand's natural environment, culture and historic heritage.	DOC and Ministry of Business, Innovation and Employment (MBIE)	Ongoing	3.1, 3.3
Ensure that DOC's key experiences, such as Great Walks, Short Walks and Day Hikes, have a strong vision and connection to te Taiao that is internationally recognised.	DOC	Established and ongoing	3.1
The regional sector is working to develop a brand that highlights the work we do across the environment, community and economics.	Regional and unitary councils	Ongoing	3.1
Councils must operate across private land, within working landscapes. Every action or initiative affects economics for individuals and the region. Councils try to make biodiversity protection more economically attractive for landowners using a variety of tools (rates relief, funding, technical expertise sharing, etc).	Regional, unitary and district councils	Ongoing	3.2
Support for affected businesses through the creation of nature-based employment opportunities (via Jobs for Nature) gives businesses the confidence to invest further in conservation activities.	DOC	2024	3.3
Work with stakeholders and partners to use destination management planning to explore the implementation of innovative management tools that can reduce visitor impacts in popular tourism destinations such as Milford, South Westland and Mackenzie.	DOC / Regional Tourism Organisations	Established and ongoing	3.3
As part of the **Milford Opportunities Project**, develop a plan to ensure that Milford Sound/Piopiotahi maintains its status as a key visitor icon in Aotearoa New Zealand and provides a world-class visitor experience that is accessible, upholds its World Heritage status and national park and conservation values, and adds value to Southland and Aotearoa New Zealand.	DOC / MBIE / Waka Kotahi New Zealand Transport Agency (NZTA) / Southland District Council / Queenstown District Council	Established and ongoing	3.3

Action	Lead agency	Achieve by	2025 goal(s)
Research by Crown Research Institutes and monitoring by regional councils is contributing to knowledge on impacts to biodiversity from economic activities. Significant issue with indigenous vegetation clearance for forestry or farming.	Regional and unitary councils	Ongoing	3.3 
Ensure that spatial planning identifies areas where open ocean aquaculture can be developed while minimising impacts on other values, including biodiversity. *(DOC, regional councils, iwi and industry involved)*	MPI	Ongoing. Work in East Coast South Island to start 2022, time for completion TBC	3.3 
Identify steps to protect biodiversity from the adverse effects of fishing on the marine environment in all fisheries management plans, and embed actions in national plans of action and threat management plans.	MPI	Dec 2022 and ongoing	3.3 
Explore options to further reduce the effects of bottom trawling on benthic biodiversity through spatial gear restrictions and innovative gear design, whilst allowing for the sustainable utilisation of fisheries resources.	MPI (DOC, iwi and industry involved)	2022/23	3.3 
Create nature-based employment opportunities through the Jobs for Nature programme.	DOC, MfE, Toitū te Whenua LINZ, MBIE, MPI	2024	3.4
Contractor roles for animal and plant pest control, fencing, biodiversity management plans, trapping, etc support local employment.	Regional, unitary and district councils	Ongoing	3.4 
Scaling up biodiversity programmes in the terrestrial and freshwater space through collaborative delivery programmes with the assistance of Jobs for Nature.	Regional, unitary and district councils	Ongoing	3.4
Some regions continue to identify significant natural areas for wetlands, terrestrial areas and marine areas (estuarine and reef systems).	Regional, unitary and district councils	Ongoing	
Development of protection programmes for significant natural areas.	Regional, unitary and district councils	Ongoing	

Objective 4: Improved systems for knowledge, science, data and innovation inform our work.

Action	Lead agency	Achieve by	2025 goal(s)
Develop a DOC Biodiversity Monitoring and Reporting Strategic Plan to provide line of sight from the data that are currently collected through to the use of reporting to inform DOC's investment decisions and management actions.	DOC	Mid-2023	4.1, 4.2 
A comprehensive, nationally agreed monitoring system is established to enable decision-makers to measure whether the implementation of Te Mana o te Taiao - ANZBS is enabling better protection and enhancement of indigenous biodiversity, including: • national-level biodiversity databases • relevant indicators • standard methods for data collection (or a process for alternative methods provided) • field protocols used by agencies.	DOC	2025	4.1, 4.2  
Regional councils are undertaking monitoring, but it varies in scale and focus.	Regional and unitary councils	Ongoing	4.1
A data improvement work stream for environmental reporting ensures consistent and representative data are available for future environmental reporting. Key areas of focus for future data are improving underdeveloped, insufficient and poor-quality data. The work may include developing new indicators, models, data sources, methodologies, analyses and presentation techniques.	MfE and Stats NZ	Ongoing	4.1
Through PF2050, trial common data and reporting frameworks in regions such as Taranaki to inform the development of a national framework.	DOC	2022	4.1
Ensure that centralised data on marine biodiversity are accessible at different spatial scales through purpose-built platforms that enable full querying of the data by all end-users.	MPI	Ongoing	4.2 
Develop a new research plan to assess economic interactions by valuing nature, biodiversity and ecosystems, communities, and climate change impacts and undertaking a socio-economic systems analysis.	MPI	Nov 2022, ongoing	4.2

Action	Lead agency	Achieve by	2025 goal(s)
Most councils use zonation analysis tools to identify priority biodiversity.	Regional and unitary councils	Ongoing	4.3
Identification of significant natural areas is completed at various levels.	Regional and unitary councils	Ongoing	4.3
A prioritisation framework is being developed to justify investment into the priority rivers and lakes that Toitū te Whenua LINZ manages.	Toitū te Whenua LINZ	Ongoing	4.3
Use the 'Readiness tool' framework to inform the suitability of potential new predator eradication projects for PF2050.	DOC	2023	4.3 
Use the Tourism Science Roadmap to coordinate and foster the research required to achieve regenerative outcomes, including for biodiversity.	DOC	Ongoing	4.4 
New Zealand's **Biological Heritage National Science Challenge**, which aims to 'Protect and manage New Zealand's biodiversity, improve our biosecurity, and enhance our resilience to harmful organisms' by conducting research under the impact pillars 'Whakamana', 'Tiaki' and 'Whakahou'. Research funding is administered to a host organisation (Manaaki Whenua – Landcare Research) and managed through an independent Governance Group, Director and Management Team representing the Challenge.	MBIE funded – devolved	2024	4, 5, 6, 9, 10, 11 
The **Ngā Rākau Taketake Strategic Science Investment Fund** platform, which was set up to enable kauri dieback and myrtle rust related research that aligns with the priorities identified in the **Kauri Dieback Science Plan** and **Myrtle Rust Science Plan** (developed by MPI). This investment has a strong focus on te ao Māori and integrates mātauranga Māori into nearly all aspects of the research. The platform looks to empower communities to protect, manage and help restore taonga that are impacted by these biosecurity threats.	MBIE funded – devolved	2023	4, 5, 8, 11 

Action	Lead agency	Achieve by	2025 goal(s)
The **Sustainable Seas National Science Challenge**, which aims to 'Enhance the utilisation of our marine resources within environmental and biological constraints'. Sustainable Seas is tackling this by developing an ecosystem-based management approach to marine resource use, working with industry and research sectors to ensure sustainability. Research funding is administered to a host organisation (NIWA) and managed through an independent Governance Group, Director and Management Team representing the Challenge.	MBIE funded – devolved	2024	3, 4, 10, 12 
The **land-based ecosystems Strategic Science Investment Fund** platform, which is hosted by Manaaki Whenua – Landcare Research and supports research that enables Aotearoa New Zealand to sustainably manage its land-based species, habitats and ecosystems. Ultimately, this platform aims to reverse the decline of Aotearoa New Zealand's biodiversity and enables land resources to be managed and used in ways that protect biodiversity for future generations.	MBIE funded – devolved	2024	
Crown Research Institutes work with regional councils to support ecosystem-based management aligned to regional plans, strategies and policies.	Regional and unitary councils	Ongoing	4.4
Further develop data information sharing systems and capabilities with landowners and others to better inform decisions and plans collectively.	NWR/ landowners	2023	4.5 
Tools are being developed to gather data to support biosecurity and biodiversity work on the ground for Toitū te Whenua LINZ-managed land.	Toitū te Whenua LINZ	Ongoing	4.5
Continue work under the funding programmes **Tools to Market** and **Products to Projects**, which are helping to deliver research into tools, technologies and methodologies with the output of deliverable products for market.	DOC (with PF2050 Ltd)	Ongoing	4.5 
Support projects that stimulate innovation in on the ground techniques (eg pest control) and approaches to deliver conservation (eg the employment of tourism workers in the low season) through the Jobs for Nature programme.	DOC	2024	4.5 

Action	Lead agency	Achieve by	2025 goal(s)
Innovative solutions to biodiversity issues are being applied at various councils (eg Taranaki).	Regional, unitary and district councils	Ongoing	4.5
Development of a significant natural area framework for the marine environment in the Marlborough Sounds.	Regional, unitary and district councils	Ongoing	4.5
Rollout of cameras on up to 300 inshore commercial fishing vessels. This rollout is targeted at vessels where fishing poses the greatest risk to protected species and/or have significant amounts of fish bycatch.	MPI	2024	4.5, 12.2.1
Identify and implement methods for measuring the environmental performance for aquaculture.	MPI	Methods identified by Q1 2022, implementation ongoing	4.5
Continue to undertake and report on research to inform fisheries interactions and risks to protected species, including dolphins, seabirds and sharks, benthic impacts, and fish bycatch for the improved protection of biodiversity.	MPI	Ongoing	4.5

Objective 5: Mātauranga Māori is an integral part of biodiversity research and management.

Action	Lead agency	Achieve by	2025 goal(s)
Facilitate the application of ecosystem research within a mātauranga Māori framework.	DOC	Ongoing	5.1 
It is emerging practice to integrate mātauranga Māori into policies, plans and actions.	Regional, unitary and district councils	Ongoing	5.1 
SEMP network – Agencies to provide for mātauranga Māori through the practice of wānanga for any marine reserves progressed as directed by the Minister of Conservation.	DOC, MPI	End of 2024	5.1
Ensure that the Kauri Disease (*Phytophthora agathidicida*) National Pest Management Plan recognises and supports the use and application of mātauranga Māori in the fight against the spread of the pathogen and the disease.	MPI	OIC in 2022	5.1 
Ensure that **Sustainable Food and Fibre Futures** projects contribute towards biodiversity goals 4.5 and 5.1.	MPI	TBC	4.5, 5.1
Work is undertaken with certain iwi to incorporate mātauranga Māori into environmental monitoring tools and biosecurity solutions for Toitū te Whenua LINZ-managed land. *Supported through Jobs for Nature funding*	Toitū te Whenua LINZ	Ongoing	5.1, 5.2 
Support whānau, hapū and iwi to preserve their traditional Māori knowledge and practice so that their tikanga, stories and history associated with Papatūānuku (Earth mother) and te Taiao are not forgotten.	NWR	Ongoing	5.1, 5.2 
Ensure effective engagement with Māori landowners to better understand their aspirations and goals for natural and cultural heritage. This will ensure that the use of Māori knowledge is integral in biodiversity research and management mahi (work) at place.	NWR	Ongoing	5.1, 5.2 

Action	Lead agency	Achieve by	2025 goal(s)
The Māori/Crown partnership of Te Pae Tawhiti relates to the protection, promotion and preservation of taonga and mātauranga Māori. Current work streams that support objective 5 focus on establishing relationships and structures to enable engagement between Māori and the Crown; and developing and strengthening the necessary policy frameworks to protect and develop mātauranga Māori.	Te Puni Kōkiri	2026	5.1, 5.2, 5.3 
Mātauranga Māori is a core component of key National Direction. The National Policy Statement for Freshwater Management 2020 (NPS-FM) explicitly requires the consideration of Mātauranga Māori as part of giving effect to Te Mana o te Wai: (a) enable the application of a diversity of systems of values and knowledge, such as mātauranga Māori, to the management of freshwater; and (b) adopt an integrated approach, ki uta ki tai, to the management of freshwater (see clause 3.5).	MfE	Ongoing	5.1, 5.2, 5.3 
Ensure that mātauranga Māori and Treaty obligations are fully recognised across fisheries and marine biodiversity research planning frameworks through Iwi Forums giving effect to Te Mana o te Wai.	MPI	Nov 2022, ongoing	5.1, 5.3  

Objective 6: Aotearoa New Zealand is making a meaningful contribution to biodiversity globally.

Action	Lead agency	Achieve by	2025 goal(s)
Fund, through MFAT, global and Pacific agencies that deliver biodiversity-related projects (eg the **Global Environment Facility**, the **Secretariat of the Pacific Regional Environment Programme**, the **Pacific Community** and the **Pacific Islands Forum Fisheries Agency**) and support projects that ensure Pacific natural resources are managed for ecosystem protection and maintenance.	MFAT	Ongoing	6.3
Existing council biodiversity programmes contribute to national and international progress.	Regional, unitary and district councils	Ongoing	6.1
Contribute to the **post-2020 global biodiversity framework** to help advance domestic and international ambition and monitoring and reporting.	MFAT/DOC	May 2022	6.1
Regulate the international trade in plants and animals to contribute to ensuring their survival in the wild in accordance with the Convention on International Trade in Endangered Species of Wild Fauna and Flora and support its implementation in the Pacific region.	DOC	Ongoing	6.1
Develop and implement an International Seabird Strategy by engaging with whānau, hapū and iwi and participating in key international fora for the conservation of seabirds.	DOC	Ongoing	6.1, 6.2, 6.3
Contribute to global recognition and protection of natural and cultural heritage for future generations through DOC's work under the World Heritage and Ramsar conventions.	DOC	Ongoing	6.1, 6.2, 6.3
Fully engage in positive international biodiversity outcomes for the High Seas and South Pacific Regional Fisheries Management Organisation, Pacific Islands, and Antarctica.	MPI	Ongoing	6.1, 6.3
Routinely add data collected through MPI-funded marine biodiversity projects to international databases.	MPI	Ongoing	6.3
Our systems for prioritising threatened species work are being used by others (eg the New South Wales State Government **Saving our Species programme**).	DOC	Ongoing	6.3
Achieving biodiversity outcomes on private land to help address impacts of land-use changes on terrestrial, freshwater, and marine ecosystems where they extend beyond public conservation lands and waters, supported by the work already undertaken to develop a National Policy Statement for Indigenous Biodiversity	MfE	TBC	6.1

Mike Aviss (DOC) releasing an orange-fronted kākāriki on Blumine Island / Ōruawairua. *Photo: Sabine Bernert*

Whakahau – empowering action

Objective 7: All New Zealanders have the skills, knowledge and capability to be effective.

Action	Lead agency	Achieve by	2025 goal(s)
Existing biodiversity and biosecurity education projects/ campaigns include Weedbusters, the Kauri Dieback Programme, Check, Clean, Dry, and Enviroschools. Local regional biodiversity initiatives are provided through community groups/education providers. Education is carried out as required in regional pest management plans. Education is provided to private landowners and community groups through active project management.	Regional, unitary and district councils	Ongoing	7.1
Improve the communication of scientific results arising from projects commissioned by Fisheries New Zealand to non-technical audiences through web tools, synthesis reports, infographics and plain English report cards.	MPI	Ongoing	7.1
Incorporate learning that is important for respecting and caring for Te Mana o te Taiao as part of the **refresh of the national curriculum for schooling (the New Zealand Curriculum and Te Marautanga o Aotearoa) and changes to the National Certificate of Educational Achievement (NCEA)**. This includes mana ōrite mō te mātauranga Māori.	MoE	Q1 2024	7.1, 7.2
Provide curriculum resources that help early learning services, schools and kura work in partnership with communities and mana whenua to provide teaching and learning that connects to local environments and supports ākonga progress in learning that matters for Te Mana o te Taiao.	MoE	Q4 2025	7.1, 7.2 (also supports 8.2)
Engage with the Workforce Development Councils so that they can respond to skill needs relating to biodiversity. This will include leading planning and setting skill standards for incorporation into the education and training offered by providers.	DOC	Ongoing	7.1, 7.2
Create new skilled workforces for conservation career pathways through the Jobs for Nature programme.	DOC	2024	7.2 (also supports 9.3)
Incorporate training and skills development in every Jobs for Nature funded project.	DOC	2024	7.2

Action	Lead agency	Achieve by	2025 goal(s)
Provide training, skills development and business support with all tangata whenua employment opportunities at place.	NWR	Established and ongoing for the term of the NWR kawenata	7.2
Work on gaps and future needs, training, capacity building, job creation, etc has been completed in some regions for Jobs for Nature, based on post-COVID-19 job losses, but still requires further in-depth analysis.	Regional and unitary councils	TBC	7.2
Conduct research into who our visitors are and what they are wanting when visiting public conservation land and waters helps DOC to plan visitor investment priorities for operational and capital expenditure, to both maintain the current visitor network and expand in the right places.	DOC	Ongoing	7.3
Conservation community group research is underway on societal values around nature. DOC / regional council social science research is also underway.	Regional and unitary councils	Ongoing	7.3

Objective 8: Resourcing and support are enabling connected, active guardians of nature.

Action	Lead agency	Achieve by	2025 goal(s)
Resource employment and tools for whānau and/or hapū through 5-year management plans or annual work programmes and during protection agreement negotiations.	NWR Fund	Ongoing	8.1
Increased funding for NWR through Jobs for Nature enables more Māori land to be protected through kawenta.	DOC	Ongoing	8.1
Some funding is provided by regional councils to support iwi, hapū and whānau projects and work (eg nurseries, landscape-scale restoration).	Regional and unitary councils	Ongoing	8.1
Allocate Jobs for Nature funding to community and iwi-led projects tackling kauri dieback and myrtle rust issues.	DOC	2024	8.1, 8.3
Funding and support for landowners, iwi and hapū, and communities to carry out fencing, pest management and biodiversity restoration. Training and engagement, management plans, and workshops.	Regional, unitary and district councils	Ongoing	8.2 
Continue to support community-led conservation projects on public and private land through the **DOC Community Fund – Pūtea Tautiaki Hapori**.	DOC	Ongoing	8.2
Continue to implement the Environmental Protection Authority's (EPA's) local community environmental DNA (eDNA) initiative **Wai Tūwhera o te Taiao | Open waters Aotearoa** to promote the connection of communities with science, biodiversity and their local environment.	EPA	Ongoing	8.2, 8.3

Action	Lead agency	Achieve by	2025 goal(s)
MfE contributes to or delivers on a number of key initiatives to ensure sustainable outcomes across Aotearoa New Zealand's environment, including: • *Jobs for Nature* – the Jobs for Nature programme aims to support Aotearoa New Zealand's economic recovery from COVID-19 by delivering nature-based employment • **waste disposal levy** – progressively increasing and expanding. Revenue gathered will be used for initiatives to reduce waste and encourage resource efficiency • **He Waka Eke Noa – Primary Sector Climate Action Partnership** – this is a partnership between government and primary sector organisations to equip farmers and growers with the knowledge, tools and support they need to reduce emissions and adapt to a changing climate. The partners are working together to equip farmers to measure, manage and reduce on-farm agricultural greenhouse gas emissions and adapt to climate change to enable sustainable food and fibre production for future generations.	MfE MPI, MfE, DOC MfE, MPI	Ongoing	8.2, 8.3, 8.4
Continue to help private landowners, local government, community groups and others to protect high-value ecosystems through the **Nature Heritage Fund**.	DOC	Ongoing	8.3, 8.4
Many district and regional councils support community groups and landowners through funding assistance and contestable grants, facilitation, and the provision of advice. The scale of council support varies between councils due to resource and budget constraints.	Regional, unitary and district councils	Ongoing	8.3, 8.4
Continue **Matariki Tu Rākau funding for memorial tree planting** (part of the One Billion Trees Programme), which is helping people to plant living memorials that honour members of their communities who have made practical changes through their efforts, brought distinction to Aotearoa New Zealand through their work and/or enhanced Aotearoa New Zealand's reputation in their area or activity.	MPI	Ongoing	8.3

Action	Lead agency	Achieve by	2025 goal(s)
Continue to help community-led projects to deliver conservation benefits through the Jobs for Nature community conservation fund.	DOC	2024	8.3
Continue to enable ecosystem restoration and legal protection via QEII covenants through Jobs for Nature funding.	DOC	2024	8.3
Use the **integrated farm planning (IFP) framework** to integrate minimum regulatory requirements and good practice (including biodiversity) with regulated farm planning requirements such as **freshwater farm plans**. IFP work streams that support the strategy include: • the development of resources and tools to support farmers and growers to increase their uptake of IFP, including development of a biodiversity module • the **PreSeed Accelerator Fund**, which will provide funding to industry, Māori, regional and community groups, and catchment initiatives to accelerate, scale up or modify existing farm planning programmes or activities to better align with IFP • a career pathway scheme to increase the number and diversity of advisers capable of providing whole-of system advice (including biodiversity) to farmers and growers.	MPI	Fund open to applications in 2022 Career pathway scheme to launch in 2022	8.3, 8.4 
Councils support and, where appropriate, incentivise landowners, businesses, resource users/owners and industry to protect and restore indigenous biodiversity.	Regional, unitary and district councils	Ongoing	8.4 
Explore a range of tools, products, services and financial incentives for positive biodiversity outcomes with the goal of identifying incentive mechanism(s) to pilot across different sectors.	MfE	TBC	8.4 (also supports 3.2 and 8.2) 
Resource groups of landowners to protect and restore biodiversity on private land through the Jobs for Nature private land biodiversity fund.	DOC	2024	8.4 

Objective 9: Collaboration, co-design and partnership are delivering better outcomes.

Action	Lead agency	Achieve by	2025 goal(s)
Toitū te Whenua LINZ engages with iwi/rūnanga with an interest in Toitū te Whenua LINZ-managed Crown land to deliver better environmental and cultural outcomes.	Toitū te Whenua LINZ	Ongoing	9.1
Multiple biodiversity projects are undertaken with iwi, hapū and the Crown, and community as partners.	Regional, unitary and district councils	Ongoing	9.1
Ensure that implementation of the Kauri Disease (*Phytophthora agathidicida*) National Pest Management Plan reflects the co-design and partnership approach that has increasingly been seen in the kauri protection work. This will include having a Treaty partner co-chair on the governance group and Māori representation on all groups, in addition to direct engagement with mana whenua.	MPI	OIC in 2022	9.1
Drive the development of experience design projects and Great Walks, Short Walks and Day Hikes through collaboration and co-design processes that actively foster the values of Treaty partners, whānau, hapū, iwi and Māori organisations. In some projects, co-ownership or co-delivery will also be explored.	DOC	Ongoing	9.1, 9.2
Working with local government and landowners on their responsibilities for protecting and maintaining indigenous biodiversity on private land, supported by the work already undertaken to develop a National Policy Statement for Indigenous Biodiversity	MfE	TBC	9.3
Through NWR kawenata, whānau and hapū are able to establish collaborative relationships with the Crown, iwi, local and regional councils, DOC, PF2050, Kiwi for Kiwi and other active guardians of nature.	NWR	Ongoing	9.2
Establish PF2050 collaborative groups that bring together organisations and agencies to help drive the collective achievement of the PF2050 goals.	DOC	Ongoing	9.2

Action	Lead agency	Achieve by	2025 goal(s)
Support community-led collaborative farming groups in improving environmental outcomes and providing benefits for the economy and community cohesion (eg the **Thriving Southland Change Project** and Innovation Services project).	MPI	TBC	9.2
Continue to work with farming groups to measure, monitor and improve biodiversity and water quality in catchments through projects such as the **WAI Wānaka Jobs for Nature project**.	MPI	June 2023	9.2
Examples of emerging projects that collaborate with external partners and stakeholders include Reconnecting Northland, Raukumara, Kaimai Mamaku, Wild for Taranaki, Cape to City, Hawke's Bay Biodiversity, Pūkaha to Palliser, Kotahitanga mō te Taiao and Te Hoiere restoration project in Marlborough.	Regional, unitary and district councils	Ongoing	9.2
Councils engage with networks of stakeholders through regional biodiversity strategies, supporting community hubs or community-based organisations, direct funding of networks, and facilitation or participation in various forums, advisory groups and committees.	Regional, unitary and district councils	Ongoing	9.3
Work together on Jobs for Nature to align resources and expertise to deliver greater benefits to the environment, individuals and communities.	Multiple agencies	2024	9.3
In February 2021, the Government announced it would repeal the RMA and enact new legislation based on the recommendations of the Resource Management Review Panel. The three proposed acts are the: • Natural and Built Environments Act (NBA), as the main replacement for the RMA, to protect and restore the environment while better enabling development • Strategic Planning Act (SPA), requiring the development of long-term regional spatial strategies to help coordinate and integrate decisions made under relevant legislation • Climate Adaptation Act (CAA) to address complex issues associated with managed retreat. The resource management reforms provide a key vehicle through which collaboration, co-design and partnership will be delivered.	MfE	2022	9.1

Action	Lead agency	Achieve by	2025 goal(s)
Support mussel reef restoration in Marlborough and the Hauraki Gulf. *Supported by MPI, DOC, The Nature Conservancy, regional councils and iwi.*	MPI, Marine Farming association, Revive our Gulf	Hauraki ongoing; Marlborough due 2022	9.3
Continue the King Shag Research Project, which aims to protect the biodiversity of Nationally Endangered seabird species in the Marlborough Sounds.	King Shag Working Group (iwi, Marlborough District Council, MPI, DOC, MFA)	2022 for formal Seafood Innovations Limited (SIL)-funded reports; population monitoring support will be ongoing	9.3
Engage with regional and unitary councils on coastal planning processes, with a focus on integrated management and consideration of the effects of land-based activities on inshore fisheries and habitats.	MPI	Ongoing	9.3

Unfurling fern frond. Photo: Sabine Bernert

Tiaki me te Whakahaumanu – protecting and restoring

Objective 10: Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths.

Action	Lead agency	Achieve by	2025 goal(s)
Through the **Biodiversity Conservation Science Prospectus**, work with the research community to prioritise and align biodiversity research with the Te Mana o te Taiao – ANZBS 2025 goals.	DOC	Ongoing	10.1.1 (also supports 4.4)
Baseline information is being improved through landscape-scale projects, priority biodiversity site programmes and resource management plans.	Regional, unitary and district councils	Ongoing	10.1.1
Use the Fisheries System Reform to provide incentives that drive more selective fishing to improve the sustainable management of fisheries resources. Greater use of technology, including on-board cameras, will improve the quality and quantity of information to support more responsive decision making. These changes will enable a move towards a more ecosystem-based approach to fisheries management.	MPI	Oct 2022 for legislation, followed by a 4-year transition phase	10.1.1, 10.5.1
Ongoing research and regional-scale work on biodiversity pressures informs management plans and strategies. Council operate under various mandates, including: • RMA • Biosecurity Act • Coastal Policy • NPS-FM • national environmental standards.	Regional and unitary councils	Ongoing	10.2.1
Working with local government and landowners on their responsibilities for protecting and maintaining indigenous biodiversity on private land, supported by the work already undertaken to develop a National Policy Statement for Indigenous Biodiversity.	MfE	TBC	10.2.1
DOC's Jobs for Nature programme is investing in the protection and restoration of at-risk catchments through the **Ngā Awa** strategic waterways programme.	DOC	2024	10.3.2

Action	Lead agency	Achieve by	2025 goal(s)
Ongoing work is being carried out on significant natural areas, identified priority biodiversity sites or management units, priority rare and threatened ecosystems management plans and some collaborative restorative initiatives that extend from the mountains to the sea.	Regional and district councils	Ongoing	10.3.2
The NPS-FM explicitly requires consideration of connectivity: (1) Adopting an integrated approach, ki uta ki tai, as required by Te Mana o te Wai, requires that local authorities must: (a) recognise the interconnectedness of the whole environment, from the mountains and lakes, down the rivers to hāpua (lagoons), wahapū (estuaries) and to the sea; and (b) recognise interactions between freshwater, land, water bodies, ecosystems, and receiving environments …	MfE	Ongoing	10.3.2, 10.4.1
Progress implementation of the Government's Hauraki Gulf Sea Change Strategy (Revitalising the Gulf: Government Action on the Sea Change Plan) to provide integrated marine management for the Gulf, including marine protection, restoration and fisheries management measures.	DOC, MPI	2024	10.4.1
Implementation of a proposed network of marine protected areas is progressed in the southeastern South Island coastal marine area.	DOC, MPI	End of 2022	10.4.1
Undertake work in partnership with mana whenua to review existing marine reserves (where reviews are legally required) to strengthen and enhance protection of high-biodiversity coastal ecosystems.	DOC	Ongoing	10.4.1
The identification, mapping and protection of coastal and marine ecosystems is underway through significant natural area marine frameworks, Coastcare programmes for multiple regional councils, the Coastal Restoration Trust and regional coastal plans.	Regional councils	Ongoing	10.4.1
Regional councils use an ecosystem-based management approach to key priority sites. Policy statements and plans help to support and define this work.	Regional councils	Ongoing	10.5.1

Action	Lead agency	Achieve by	2025 goal(s)
Aligning with the vision of the Oceans and Fisheries work programme, take an ecosystem-based approach to research, monitoring and management that optimises the protection and use of the marine space.	MPI	Ongoing	10.5.1
Design and implement a best practice management framework for open ocean aquaculture. This includes the development of a fit-for-purpose legislative regime and management guidelines for open ocean aquaculture relating to seabirds, marine mammals, benthic impacts and water column impacts. Engagement on legislative framework to occur 2022. Management guidelines to be complete mid-2022. These will be updated as appropriate.	MPI	2022	10.5.1, 12.1.1
Ensure that fisheries interactions with marine biodiversity and adverse effects on the aquatic environment are measurably reducing, including through the development of guidance for decision-makers to take the Fisheries Act environmental principles into account.	MPI	By 2025	10.5.1
Continue research on fisheries interactions (eg with protected species such as dolphins, seabirds and sharks and the seabed) to improve outcomes for biodiversity through sealion and dolphin threat management plans, various national plans of action for seabirds and sharks, and the ongoing development of spatially explicit fisheries risk assessment methods.	MPI	Ongoing	10.5.1, 10.6.1
Protection standard for coastal and marine ecosystems – some regional policy statements and plans have this provision, and joint management agreements with iwi exist that address this.	Regional councils	Ongoing	10.6.1
Review DOC's strategic approach towards the management and recovery of threatened species to ensure alignment with Te Mana o te Taiao – ANZBS.	DOC	Mid-2023	10.7.1
Regional councils Special Interest Groups are undertaking limited research. Some species, habitats and ecosystems are not present on public conservation land, only on private land. Some unitary and regional councils are undertaking threatened species work.	Regional councils	Ongoing	10.7.1

Objective 11: Biological threats and pressures are reduced through management.

Action	Lead agency	Achieve by	2025 goal(s)
Reduce browsing pressure to support ecosystem resilience by: • Improving monitoring, delivery and evaluation of wild animal management • Coordinating efforts and enhancing capacity across the people, organisations and agencies involved in wild animal management	DOC	Ongoing	11.1.1
Actively manage introduced browsing animals at place across Aotearoa New Zealand, including the Chatham Islands (Wharekauri/Rekohu).	NWR	Ongoing	11.1.1
Animal and plant pest control programmes are carried out under regional pest management plans and biosecurity strategies (non-regulatory). Regional leadership is provided for key pest management programmes, such as Cape to City, national wallaby eradication programme, the Wilding Conifer programme.	Regional councils	Ongoing	11.1.1, 11.2.1, 11.3.1
Carry out animal and plant pest control through the delivery of Jobs for Nature projects.	DOC	2024	11.1.2
Demonstrate that the Prevention of North Island Forest Collapse projects funded through Jobs for Nature are controlling browsing animals in the Raukūmara and Kaimai–Mamaku ranges.	DOC	2024	11.1.2
Landscape-scale predator control programmes are protecting indigenous species and forests. Sustained, long-term, large-scale predator control programmes (usually coordinated with complementary work done by other people and agencies), such as Tiakina Ngā Manu (DOC's nationally coordinated landscape-scale predator control programme), protect representative populations of Aotearoa New Zealand's most highly threatened species that are vulnerable to rat, stoat and possum predation until predator-free status can be achieved.	DOC	Ongoing	11.1.1, 11.2.1

Action	Lead agency	Achieve by	2025 goal(s)
Ensure that regional coalitions involving PF2050 Ltd, central government, regional councils, OSPRI and community groups are carrying out large, regional predator control projects.	DOC	Ongoing	11.2.1 
Establish a National Eradication Team within DOC to establish the internal infrastructure required to achieve the eradication of introduced predators (ferrets, weasels, stoats, possums and rats) from all uninhabited offshore islands. Offshore Islands will be prioritised for eradication based on feasibility, benefits to threatened species, the suite of pests present and other criteria.	DOC	Ongoing	11.2.1 
Reduce threats to freshwater biodiversity through requirements under the NPS-FM, such as fencing stock out of waterways and capping nitrogen. Note that, in due course, the NPS-FM will also require councils to set limits and rules to protect ecosystem health. These are not directly MfE actions but do relate to MfE regulations.	MfE	Ongoing	11.2.1
Establish intensive management sites within wider focus areas with plans to improve the management and control of predators at the landscape scale.	NWR	2025	11.2.1
Management of pest plants is reducing their impact on priority ecosystems and species.	DOC	Ongoing	11.3.1
Work with regional councils, MPI and others to identify and control invasive aquatic plants and animals and reduce their impact on river, lake, wetland and marine ecosystems.	DOC	Ongoing	11.3.1
Maintain and improve the ability to detect, investigate and respond to new threats to biodiversity, building on the recently increased capacity for readiness and response to threats that are new to Aotearoa New Zealand.	MPI (Biosecurity New Zealand)	Ongoing	11.3.1
Eradicate the aquatic weed *Hydrilla verticillata*, as this has the potential to cause significant impacts to biodiversity and economic values if allowed to spread. This weed has been present in a small number of lakes in the Hawke's Bay and is being controlled under an MPI-led programme, which aims to achieve national eradication by 2026.	MPI	By 2026	11.3.1 

Action	Lead agency	Acheive by	2025 goal(s)
Reduce wilding conifer impacts on farm production, biodiversity, water availability and wildfire risk through the National Wilding Conifer Management Programme, which is a partnership between central and local government, farming and forestry sectors, iwi, and communities. By 2025, the National Wilding Conifer Control Programme will protect over a million hectares of conservation land from wilding conifer invasion. The **National Environmental Standards for Plantation Forestry (NES-PF)** is considering how controls from new afforestation can be improved.	MPI	Ongoing	11.3.1
Reduce the impacts of wallabies on farm production and biodiversity through the National Wallaby Eradication Programme, which is a partnership between central and local government, iwi, farmers, and environmental groups. This programme will fund research projects focussing on new wallaby detection and control tools to improve the effectiveness and efficiency of wallaby control.	MPI	Ongoing	11.3.1
Reduce the threat and pressure of the pathogen *Phytophthora agathidicida* on the taonga of kauri through the Kauri Disease (*Phytophthora agathidicida*) National Pest Management Plan. Primarily, this will target the behaviours of landowners, businesses and forest users to increase spread prevention measures, including cleaning measures, public track upgrades and earthworks risk management. Implementation will involve collaboration between MPI, regional councils, iwi/hapū, DOC, industry and community groups.	MPI	OIC in 2022	11.3.1
Wherever possible, apply the EPA's regulatory role in support of improved biodiversity outcomes.	EPA	Ongoing	11.3.1

Objective 12: Natural resources are managed sustainably.

Action	Lead agency	Achieve by	2025 goal(s)
Sustainably manage fisheries resources by setting fishery and stock targets and limits for fish stocks in the Quota Management System (QMS).	MPI	QMS is implemented	12.1.1
Progress work to improve the sustainable management of fisheries resources through the Fisheries System Reform. The new rules on landings and discards would incentivise more selective fishing practices, and the ability to develop pre-set decision rules would allow more agile adjustments to the sustainability measures in response to changes in the state of the fisheries, further ensuring sustainability. The proposed Industry Transformation Plan is intended to support fishers to innovate in less impactful, more selective fishing practices.	MPI	Oct 2022 for legislation, followed by a 4-year transition phase	12.1.1
The proposed Natural and Built Environments Act (NBA) is intended to be the primary piece of legislation to replace the RMA. Like the RMA, the NBA will be an integrated statute for land use and environmental protection. It will work in tandem with the proposed Strategic Planning Act (SPA). The Act sets out how the environment will be protected and enhanced in the future system, ensuring people and communities use the environment in a way that supports not only their wellbeing but that of future generations. This would be achieved by: • promoting positive outcomes for both the natural and built environments • ensuring that use, development and protection of resources only occur within prescribed environmental limits.	MfE	2022	12.1.1
The NPS-FM requires that fresh water is managed through a National Objectives Framework to ensure that the health and wellbeing of degraded water bodies and freshwater ecosystems is improved, and the health and wellbeing of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved. To do this, councils must set target states and achieve them through setting limits on resource use.	MfE	Ongoing	12.3.1

Action	Lead agency	Achieve by	2025 goal(s)
Through PF2050 investment, develop pest management tools for farmland and investigate the potential to use farms to prevent pest movement across Aotearoa New Zealand.	DOC	2026	12.4.1 
Create enduring benefits for freshwater ecosystems and water quality, biodiversity, climate change and cultural values.	DOC	2024	12.4.1
Councils partner and engage with multiple sectors to improve understanding of indigenous biodiversity and encourage sustainable use practices.	Regional and district councils	Ongoing	12.4.1
Almost every council has completed some type of mapping and/or prioritisation of key biodiversity sites for management.	Regional councils	Ongoing	12.5.1
Key areas of high biodiversity on Toitū te Whenua LINZ-managed Crown land are identified in alignment with regional councils to help inform decision making and investment.	Toitū te Whenua LINZ, regional councils, DOC	Ongoing	12.5.1
Indigenous planting is core work of councils and many projects are undertaken on this basis.	Regional and district councils	Ongoing	12.6.1
Maintain support for whānau, hapū, iwi, communities and other entities to significantly increase areas of restoration native planting at place to improve biodiversity and contribute to improving catchment water quality.	NWR	Ongoing	12.6.1
Using the NWR kawenata, engage with Māori to grow ecosystem protection and indigenous biodiversity preservation through a catchment approach, ensuring significant corridors connecting the mountains and sea are targeted.	NWR	Ongoing	12.6.1
Land, water and air pollutants are monitored, and adaptive management is applied. Regional policy statements, plans and strategies are developed to undertake this work.	Regional councils	Ongoing	12.7.1

Objective 13: Biodiversity provides nature-based solutions to climate change and is resilient to its effects.

Action	Lead agency	Achieve by	2025 goal(s)
Nature-based solutions are integrated through council plans, strategies and policies.	Regional and district councils	Ongoing	13.2.1 
MfE has a number of initiatives underway. • The *Emissions Reduction Plan* will put in place policies and strategies for Aotearoa New Zealand to meet its emissions reduction goals. • A *National Adaptation Plan* will put in place strategies, policies and proposals for Aotearoa New Zealand to manage the risks from climate change identified in the National Climate Change Risks Assessment (also to be published in August 2022). This includes the risks to ecosystems and species. The implementation and effectiveness of the National Adaptation Plan will be monitored by the Climate Change Commission. • The *Carbon Neutral Government Programme (CNGP)* has been set up to accelerate the reduction of emissions within the public sector. The Government will join businesses and communities already leading the way to reduce their emissions as we transition to a low-emissions economy. The CNGP aims to make the participating government agencies carbon neutral by 2025. • *Climate-related disclosures* – The Government has introduced legislation to make climate-related disclosures mandatory for publicly listed companies and large insurers, banks, non-bank deposit takers and investment managers. Mandatory reporting of climate-related risks and opportunities would help Aotearoa New Zealand meet its international obligations and achieve its target of net zero carbon by 2050. It would also help to address climate change risks outlined in the National Climate Change Risk Assessment by making our financial system more resilient.	MfE	Ongoing	13.1.1, 13.2.1, 13.3.1 

Action	Lead agency	Achieve by	2025 goal(s)
The Climate Change Response (Zero Carbon) Amendment Act 2019 will require Aotearoa New Zealand to prepare for, and adapt to, the effects of climate change through (among other things) national adaptation plans produced by the Government, the implementation of which will be monitored by the Climate Change Commission. Work to prepare the National Adaptation Plan is underway.	MfE	2022	
Implement DOC's **Climate Change Adaptation Action Plan** to guide DOC's strategic planning and management activities for increased resilience to climate change impacts.	DOC	2025	13.3.1 
Councils are developing climate change policies, plans and strategies that are integrated into day-to-day operations.	Regional and district councils	Ongoing	13.3.1 

Poor Knights Islands Marine Reserve. *Photo: Sabine Bernert*

Appendix 1

Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2025 goals

TŪĀPAPA / Getting the system right

OBJECTIVES

1.

Governance, legislation and funding systems are in place and enable delivery of the strategy outcomes

2.

Treaty partners, whānau, hapū, iwi and Māori organisations are rangatira and kaitiaki

3.

Biodiversity protection is at the heart of economic activity

2025 GOALS

1.1 Cross-stakeholder biodiversity system implementation group(s) are in place to develop, monitor and report on implementation plans

1.2 Biodiversity system governance, in partnership with Treaty partners, whānau, hapū, iwi and Māori organisations and informed by multi-stakeholder involvement, is in place and providing leadership, accountability, and inclusive and transparent decision making

1.3 Current natural resource legislation has been reviewed to ensure it is effective and comprehensive, recognises cumulative effects, and ensures ongoing biodiversity protection, including climate resilience

1.4 The costs and value of restoring indigenous biodiversity have been quantified and are being actively used to inform decision making

1.5 Sufficient ongoing resource and funding have been secured from multiple sources to implement the strategy

2.1 Te ao Māori perspective is being embedded throughout the biodiversity system, including through the use of cultural practices and tools

2.2 Innovative Treaty partnership approaches have been developed and are leading the delivery of many biodiversity restoration projects

2.3 Treaty partners, whānau, hapū, iwi and Māori organisations are better able to practice their responsibilities as rangatira and kaitiaki, including leading and partnering with the Government in decision making about taonga species and the whenua, awa and moana with which they associate

2.4 Māori cultural and intellectual property rights and data sovereignty regarding indigenous biodiversity are being upheld

3.1 A nature-based brand is central to the economy of Aotearoa New Zealand and is increasing support for nature

3.2 Economic tools are promoting the protection and restoration of biodiversity for its intrinsic value, as well as for the economic benefits it provides

3.3 Economic activities that have the most significant adverse impacts on biodiversity have been identified, their impacts have been quantified and active measures are in place to reduce these impacts

3.4 Nature-based jobs are providing significant employment and delivering benefits for biodiversity in all regions and on both public and private land

TŪĀPAPA / Getting the system right

OBJECTIVES

4.

Improved systems for knowledge, science, data and innovation inform our work

5.

Mātauranga Māori is an integral part of biodiversity research and management

6.

Aotearoa New Zealand is making a meaningful contribution to biodiversity globally

2025 GOALS

4.1 A national, agreed set of indicators and an effective environmental monitoring and reporting system are informing biodiversity management and decision making

4.2 National, agreed common data standards and open data agreements are ensuring that everyone has access to a federated repository of biodiversity information

4.3 A framework for identifying and prioritising high biodiversity value areas has been developed and agreed on

4.4 The research, science and innovation system is investing in and collaboratively delivering research and rangahau (research) in alignment with an agreed integrated set of biodiversity science priorities that cover ecological, biophysical, social, cultural, economic and other areas

4.5 Innovative solutions to biodiversity issues, including the development of new tools and technologies, are being collaboratively developed and actively sought from a range of sources and deployed on the ground

5.1 The use, development and restoration of mātauranga Māori is being invested in and supported and has equal mana to knowledge gained through other scientific disciplines and ways of seeing/understanding the world

5.2 Traditional and customary practices, including mahinga kai, are increasing, and the intergenerational transfer of mātauranga is underpinning the work of rangatira and kaitiaki

5.3 Treaty partners, whānau, hapū, iwi and Māori organisations are making decisions based on the best knowledge from multiple scientific disciplines and ways of seeing/ understanding the world, including mātauranga Māori

6.1 Aotearoa New Zealand is influencing international policy and meeting commitments to international biodiversity-related agreements and conventions, including the Convention on Biological Diversity

6.2 Treaty partners, whānau, hapū, iwi and Māori organisations are making informed contributions to developing Aotearoa New Zealand positions for international conversations, and the Treaty partnership and collaboration is recognised globally

6.3 Aotearoa New Zealand is recognised for providing leadership in international conservation knowledge and delivery through international collaboration and capacity building, especially in the Pacific region

Whakahau / Empowering action

OBJECTIVES

7.

All New Zealanders have the skills, knowledge and capability to be effective

8.

Resourcing and support are enabling connected, active guardians of nature

9.

Collaboration, co-design and partnership are delivering better outcomes

2025 GOALS

7.1 Education and campaigns are ensuring that all New Zealanders are aware of the current biodiversity crisis and the importance of nature and are encouraging people to take action to protect and restore nature and ensure sustainable use

7.2 An analysis of gaps and future needs, training, capacity-building and job creation are ensuring that enough people have the right skills to protect and manage biodiversity into the future

7.3 Research is improving our understanding of societal values, norms and beliefs, as well as the motivators, barriers and enablers of action to support biodiversity management and decision making

8.1 Treaty partners, whānau, hapū, iwi and Māori organisations as rangatira and kaitiaki are sufficiently supported and resourced to protect and manage biodiversity, particularly taonga species, in their place

8.2 Nature is part of the everyday life and identity of New Zealanders, and individuals are motivated, supported and, where appropriate, incentivised to make decisions that ensure sustainable use, reduce negative impacts, and restore and protect indigenous biodiversity

8.3 Community action groups are resourced, growing, connected and coordinated and also have access to knowledge, expertise and information to actively manage biodiversity and other natural resources and act as environmental stewards

8.4 Landowners, businesses, resource users/owners and industry are supported and, where appropriate, incentivised to contribute to protecting and restoring indigenous biodiversity as standard practice

9.1 The values of Treaty partners, whānau, hapū, iwi and Māori organisations are being actively used in collaboration and co-design approaches

9.2 Collaboration and co-design processes that foster collective ownership and delivery through the consideration of multiple values in decision making are recognised as the key to success

9.3 Well-connected networks of relevant people, including urban and rural communities, stakeholders, industry and central and local government, are effectively working together in partnership and enabling collective action and successful implementation of the strategy at national, regional and local scales

Tiaki me te whakahaumanu / protecting and restoring

OBJECTIVES

10.

Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths

11.

Biological threats and pressures are reduced through management

2025 GOALS

10.1.1 Prioritised research is improving baseline information and knowledge of species and ecosystems

10.2.1 The cumulative effects of pressures on biodiversity are better understood

10.4.1 Significant progress has been made in identifying, mapping and protecting coastal ecosystems and identifying and mapping marine ecosystems of high biodiversity value

10.5.1 A framework has been established to promote ecosystem-based management, protect and enhance the health of marine and coastal ecosystems, and manage them within clear environmental limits

10.6.1 A protection standard for coastal and marine ecosystems established and implementation underway

10.7.1 There have been no known human-driven extinctions of indigenous species

10.8.1 The viability of current and future mahinga kai and cultural harvest of indigenous species has been assessed to guide future use

11.1.1 The impacts of introduced browsers, including valued introduced species (pigs, deer, tahr and chamois), on indigenous biodiversity have been quantified, and plans for their active management have been developed with Treaty partners, whānau, hapū, iwi, Māori organisations and stakeholders

11.2.1 Introduced predators (ferrets, weasels, stoats, possums and rats) have been suppressed across 1 million hectares of mainland and eradicated from all uninhabited offshore islands

11.3.1 New and emerging biosecurity threats, including weeds, animal pests and diseases (e.g. introduced invasive plants, algae, mammals, fish, invertebrates and micro-organisms), in all domains are actively identified and managed early through improvements in decision making, Treaty partnership approaches, skills and technology

Tiaki me te whakahaumanu / protecting and restoring

OBJECTIVES

12.

Natural resources are managed sustainably

13.

Biodiversity provides nature-based solutions to climate change and is resilient to its effects

2025 GOALS

12.1.1 Environmental limits for the sustainable use of resources from marine ecosystems have been agreed on and are being implemented

12.2.1 The number of fishing-related deaths of protected marine species is decreasing towards zero for all species

12.3.1 Environmental limits for the sustainable use of resources from freshwater ecosystems have been agreed on, and plans for the active management of fisheries have been developed with Treaty partners, whānau, hapū, iwi, Māori organisations and stakeholders

12.4.1 The potential for different sectors to contribute to improved indigenous biodiversity is understood, and sustainable use practices that include benefits for indigenous biodiversity are becoming more widespread

12.5.1 The most appropriate places for the protection and restoration of indigenous biodiversity and areas that are suitable for other uses have been identified

12.6.1 Indigenous vegetation planting is standard practice in urban areas, riparian zones, agricultural buffers, transport corridors and other areas

12.7.1 The most ecologically damaging pollutants (e.g. excess nutrients, sediment, biocides, plastics, light and sound) and pollutant sources have been identified, and an integrated plan for their management is in place

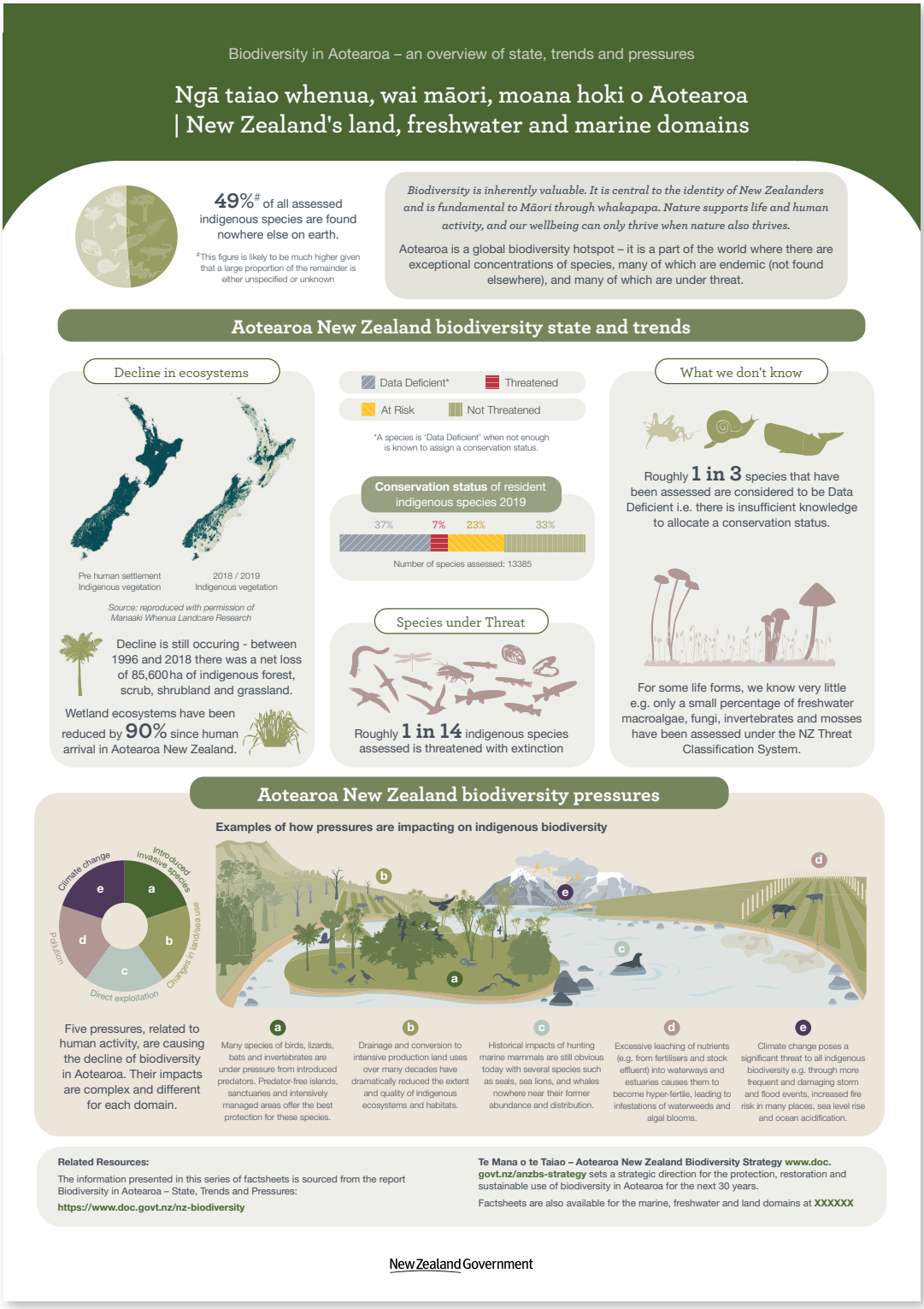
13.1.1 The potential for carbon storage from the restoration of indigenous ecosystems, including wetlands, forests, and coastal and marine ecosystems (blue carbon), to contribute to our net emissions targets is understood

13.2.1 The potential for indigenous nature-based solutions is understood and being incorporated into planning

13.3.1 Potential impacts from climate change have been integrated into ecosystem and species management plans and strategies, and a research and rangahau strategy has been developed to increase knowledge and understanding of climate change effects

Appendix 2

Summary of the state, trends and pressures of biodiversity in Aotearoa New Zealand, as developed for the **Biodiversity in Aotearoa – an overview of state, trends and pressures** report.



Appendix 3

Description of the strategy framework, showing the pathway from the vision to the implementation plan, as presented in **Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy 2020**.