NZASE resource

Wildlife sanctuaries

Aotearoa/New Zealand has more than 80 eco-sanctuaries where native species are conserved, and pests are actively managed or eliminated. There is often substantial community involvement in these projects. Ecosanctuaries aim to allow an ecosystem to recover from the ravages of humans and pests, increasing biodiversity. This helps preserve endangered species and allows the public to appreciate them. Some, such as Orokonui, Zealandia and Maungatautari, offer education programmes but others, like Kaipupu, do not.

History

Many of our native species are vulnerable, with numbers declining rapidly. While the devastating role of past forest clearance was obvious, it was only in the 1980s that many became aware that predatory pests were a major cause of this decline. Until then, conservation efforts had focussed on protecting individual species, like the kiwi and the black robin.

In the 90s, large-scale, sustained predator control in forests helped some species – such as kōkako, kākā and kiwi – but more was needed. Island reserves were created for endangered or rare wildlife species – Little Barrier, Tiritiri Matangi, Kapiti and Stephens Island – and DoC sometimes limited public access.

Pest-resistant fences began to be developed and trialled, leading to our first ecosanctuaries in the Waikato and in Wellington. In 1999, the Karori Wildlife Sanctuary (later Zealandia) was established, with a 9 km fence around the 225 ha park – the first fully-fenced urban wildlife sanctuary in the world. In 2006 Sanctuary Mountain was established at Maungatautari – our largest fenced ecosanctuary, with a 47 km fence around 3,400 ha. In both cases, pests were eradicated within the fence and endangered natives re-introduced.

Sanctuary Mountain at Maungatautari, Waikato. Photo: Liz Carlson.

Types of sanctuaries

There are four main types of ecosanctuaries. About a quarter are marine islands. Those nearer the mainland are prone to re-invasion from mammals that swim, drift on debris or arrive on boats. Some are led by DoC, and others by community trusts, such as Tiritiri Matangi, Ulva, Little Barrier and Stephens Islands.

New Zealand has seven fenced peninsulas. These use the ocean to protect much of the perimeter, but are prone to re-invasion from the mainland, around the ends of the fence. Some are privately owned (Cape Sanctuary), others are community projects (Kaipupu and Shakespear Open Sanctuary) with council support.

There are seven fenced mainland islands, ranging in size from 40 to 3,400 ha. These are protected areas surrounded by farmland or pockets within a larger forest. They tend to be led by community trusts, such as Orokonui, Maungatautari, Zealandia and Rotokare.

About 60 percent of sanctuaries are unfenced mainland islands, where predators need constant trapping and poisoning. These areas target fewer pests, but manage to lower pest numbers in the area (e.g., Arthur's Pass, Te Henga, Pirongia, Ark in the Park, and Rotoiti).

Pest-proof fences

Fences need to keep out pests, herbivores and carnivores. Cats can scale 1.8 m fences (and can dig too), possums can leap as high as 1.2 m, rats can climb up 70 cm and stoats 1 m, mice squeeze through tiny gaps and rabbits dig deep. Pest-proof fences are typically 2 m high,

Predator-proof fence section at Kaipupu peninsula eco-sanctuary. Photo: Mike Stone

made of very small stainless steel wire mesh topped with a rolled hood to prevent climbing, and a mesh skirt under the surface to prevent burrowing.

It is important to keep branches from touching the fence, as they allow a bridge for pests to re-enter. Some sanctuaries have electronic surveillance systems that sound an alarm if the fence is breached. Fences are expensive to build and maintain but are effective, keeping out most predators most of the time. While rats, possums and mustelids can be excluded relatively easily, mice will often continue their incursions, so detection and trapping devices need to be monitored, as does the integrity of the fence.

Funding

Many of these sanctuaries are established by community groups, which can lack expertise and resources, and may not be aware of or consider regional or national priorities. While some places provide advice, no agency ensures the adoption of best practices in controlling and monitoring pests and monitoring biodiversity outcomes (Innes et al, 2019).

Funding is available from government, local authorities, statutory, philanthropic and gaming trusts and some service organisations.

Research

Many of the fenced sanctuaries are a focus of scientific research. A selection of studies indicate that scientists investigate particular species in and near the sanctuary (their numbers, food intake, and ways of reducing the stress of their translocation), as well as surveying local attitudes, among other topics.

Success

Sanctuaries tend to be successful if they have a long-term vision, strong leadership, sustained relationships with the local community including iwi, and with agencies like DoC, sound business planning and the ability to fundraise. There is widespread and growing iwi involvement.

There have been many biodiversity benefits since the introduction of wildlife sanctuaries:

- More of our islands are pest-free. This can be helped by planting appropriate vegetation.
- Particularly vulnerable species have been returned to the mainland.
- Populations of native species are growing within sanctuaries.
- Native birds are dispersing from sanctuaries to nearby areas.

Kaitiakitanga

Te Tiriti o Waitangi guaranteed Māori rangatiratanga over the lands to which they whakapapa, which includes the responsibility of kaitiakitanga or guardianship of the land, water and its lifeforms. Before European arrival, Māori had, like all cultures, learnt from mistakes and established their own structure of resource guidelines and conservation. Over the generations this became an integral part of their social structure, for example imposing rāhui.

It is important to remember that kaitiakitanga is the role played by kaitiaki. In Te Ao Māori kaitiaki are imbued with mana, power and authority having come from the gods. Being descendants from these gods, Māori believe they are also instilled with this mana of kaitiaki and so are very careful to preserve it. This responsibility of kaitiakitanga has become interwoven with tapu, mauri and wairua. Māori themselves have become the minders for the physical elements of the world and so see themselves as part of the ecosystems around them, caring for such natural taonga for future generations. They must ensure that the mauri or life force of a taonga, such as an awa, is healthy and strong.

Whereas many Pākehā see whenua as a material asset needed to maintain sustainabil-

ity for human purposes, Māori see whenua and waterways as unique entities and systems with their own rights, mana, and mauri. To uphold this mana of kaitiaki, Māori (as the minders of this mana) must do all in their power to restore the mauri of that taonga to its original strength.

This perspective has been recognised in two pieces of legislation resulting from Treaty settlements. Te Awa Tupua, the Whanganui River system, was accorded the legal status of a person, and Te Urewera was recognised as its own legal entity. These Acts acknowledge the responsibility of the local iwi to maintain the health and well-being of their taonga according to tikanga, alongside government representatives. Other te Tiriti settlements have created smaller collaborations between mana whenua and tauiwi bodies, like the Tūpuna Maunga Authority managing 14 of Auckland's ancestral mountains.

Sanctuary Mountain Maungatautari has bicultural leadership on their trust, one for mana whenua and one for tangata Tiriti. Manager Bodie Taylor (Ngāti Korokī Kahukura) is part of the planning and carrying out translocations as a process, saying "these are real bicultural exchanges, a gift from one iwi to another, aroha atu, aroha mai. The first kiwi for our sanctuary came from Ngāti Tūwharetoa over 10 years ago. We transfer the birds and also the whakapapa of the birds. This is a process involving karakia, ritual and formal speeches."

Bodie also trains rangers. He says "we can collect data but sometimes not see the connection. Kaitiakitanga is a way to initiate people's holistic connection to the land. Maatauranga Maaori is a huge part of that invisible connection, but so is Science; both play a role, it's a partnership. And this partnership needs to involve tika, pono and aroha. These are the highest human virtues in our world view, to be truthful, righteous and compassionate."

This Māori belief that we are all instilled with the mana of kaitiaki focuses on people as much as the environment. By including mātauranga Māori concepts of kaitiakitanga in conservation practices such as sanctuaries, New Zealanders will hopefully gain a deeper understanding of their role as a kaitiaki and work more closely with their environment to keep it healthy.

Sources

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Tuatara at Ngā Manu Reserve near Waikanae. Photo: Sid Mosdell. Wikimedia Commons.

This article was improved by critique from Mere Manning, Ngāti Kahungunuki te Wairoa .

Ngā Kupu

Aroha mai, aroha atu – Love received, love returned
Mana – Authority, power, status
Mana whenua – Authority over land
Manaakitanga – Hospitality, generosity
Mauri – Life force, vital essence
Pono – Honest, genuaine, authentic heart
Rāhui – Temporary ban on taking food from an area
Rangatiratanga – Self-determination, chiefly authority
Taonga – Treasure, iconic cultural species, customary flora and fauna
Tapu – Sacred, restricted, set apart
Tika - Right process.

Te Aka Maori Dictionary