

Biodiversity Planning with 50/50 vision

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New Zealand is of world importance for its native biological diversity. Because of the uniqueness of native plants and animals that have evolved here, and the extent of threats to their future survival, New Zealand, is one of 26 sites world-wide that have been identified as a global “hotspot” for biodiversity conservation (Myers et al. 2000; Given & Mittermeier 1999). New Zealand has ratified the United Nations Convention on Biodiversity (in 1993), and completed a national strategy on the conservation of biological diversity (*New Zealand Biodiversity Strategy*). The Ministry for the Environment is currently in the process of preparing a National Policy Statement for biodiversity conservation (MfE, 2003)

For the visitor to Hamilton, two mountains stick up from the sea of green: Pirongia, to the southwest of Hamilton, and Maungatautari, to the southeast.





Kokako



Kaka

Fifty years ago, in 1953, the two mountains still supported kiwi, kokako, kaka and kereru, but numbers had plummeted drastically, and there few or no breeding individuals left.



Kereru (the native pigeon)

Today, the call of the kiwi and the kokako are no longer heard anywhere in the Waikato.

The story of the mountains, and their surrounding farmland, in many respects represents the story of biodiversity in New Zealand over the past hundred years.

50 years ago

By mid-20th century, most of the native forest and wetland in the Waikato and Hauraki Plains had already been cleared for farming. Nation-wide, New Zealand had already lost most of its native forest (down from 60% of its pre-human extent at the beginning of European settlement to about 25%), and introduced mammals such as pigs, goats, rats, mice, stoats, weasels, feral cats, dogs and domestic stock had already wreaked havoc over most of the country. The Huia had become extinct, and so, it seemed, had the stitchbird, the little spotted kiwi, the New Zealand quail, the laughing owl, the saddleback, kakapo, the takahe, and the bush wren. Species such as the tuatara, native skinks and geckos, three native frogs, the 3 native bats, the giant snail had been reduced to desperate remnants or eliminated from all but the off-shore islands.

And then in 1948, the takahe was rediscovered in the Murchison Mountains in Fiordland, and efforts were started to save the species from extinction. In 1952, the National Parks Act came into being and the Waipoua State Forest in Northland was established as a sanctuary to save the last sizeable stand of kauri left in the country. In 1953 Fiordland National Park and Mt Cook (now Aoraki/Mt Cook) National Park

were formally declared. In 1954 the catchment areas of Lake Waikaremoana, Lake Waikareiti were gazetted as national park and a few years later, the Nelson Lakes National Park joined the list. Also in 1953, the Wildlife Act 1953 and the Reserves and Domains Act 1953 came into law. Thus fifty years ago, there was a strong surge of public support for conservation of native fauna and flora, and a major boost to the measures for their protection.

But the support for conservation of native species was not enough to counter the effects of continued agricultural development, loss of habitat, and invasion by an ever-increasing horde of introduced plants and animals. Within the Waikato, the two mountains remained forested and the great wetlands of Whangamarino and Kopuatai remained, but their richness of native plants and animals had declined and over the rest of the region only fragments remained. Throughout the region as a whole species formerly common, such as kereru and manuka scrub are becoming rare.

This is not to say that New Zealand's biodiversity overall has declined. To the contrary, by 2000, the number of terrestrial higher native plant species in New Zealand was 2,350, while the number of naturalised introduced plants was 2,020, and the number of introduced, but not yet naturalised plants was 22,600 (DoC, 2000). And just as the introduced mammals have predated or competed with native animals, insects and other invertebrates, the introduced plants have competed and, in many areas, displaced the native plants. The survival of at least 61 native plants is threatened by invasive weeds such as Old Man's Beard, (*Clematis vitalba*), heather (*Calluna vulgaris*), pampas grass (*Cortaderia selloana*), and willow (*Salix fragilis* and *S. cinerea*). Hence the species that are unique to New Zealand have kept on slipping. If we are to achieve the goal of New Zealand's National Biodiversity Strategy to "halt the decline in New Zealand's indigenous biodiversity", we need to do more than hope that the Department of Conservation will do the job for us, and we need to do more than provide legal protection. Conservation of New Zealand's plants and animals needs protection of lowland habitat in private ownership **and** it needs special management to reduce the damaging effects of introduced pests and weeds.

Sustainable development

Globally as well as regionally and locally, current rates of biological extinction are higher than they have been for the past 65 million years, and have led to widespread concern about the long term environmental consequences of such loss (IUCN et al.

1991; Ministry for the Environment, 1997:9-6; World Commission on Environment and Development, 1987). Biological diversity is widely considered to be an important component of ecosystem health and a prerequisite for global environmental resilience, as well as a source of critical goods and services for the human community (Mooney, Lubchenko, Dirzo and Sala, 1995).

Sustainable Management

The Resource Management Act 1991 recognises the importance of New Zealand's native fauna and flora even if it is hard to implement the recognition in practice. Section 5.2 (b) calls for "safeguarding the life-supporting capacity of air, water, soil, and ecosystems". Because it is difficult to accurately identify the life-supporting capacity for ecosystems of native biodiversity, biodiversity safeguards are difficult to establish. Section 6 (c) calls for "the protection of areas of significant indigenous vegetation and significant habitat of indigenous fauna". But because ecological relationships and processes stretch across landscapes and property boundaries, piece by piece assessment of remnant habitats and patches all too often means that they are deemed not significant in themselves, and over time, the landscape as a whole (and the plants, birds, insects, fish and other animals that use them) are slowly lost.

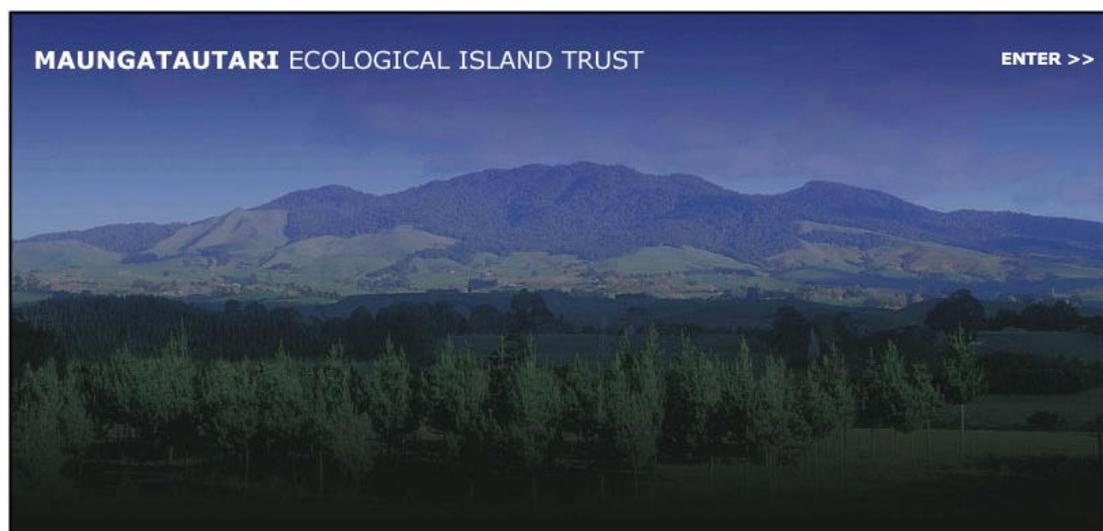
So where to for the next 50 years?

The publication of the National Biodiversity Strategy, the development of a National Policy Statement for biodiversity, and the actions of local people all over New Zealand indicate that New Zealanders are becoming much more aware of how important our native plants and animals to our future well-being. Just as there was 50 years ago, with the enactment of the Wildlife Act 1953, the Reserves and Domains Act 1953, the National Parks Act 1952, there has been a surge of public concern for conservation of native plants, animals and landscapes. But this time the concern expresses itself through the action of private individuals, local communities, and non-governmental organisations.

Maungatautari Mountain is an example of that awareness. In recent years a group of residents in the region have formed a Trust, the Maungatautari Ecological Island Trust, with the express intention of surrounding the entire mountain with a predator proof fence. Their actions are mirrored by many groups all over new Zealand: the supporters and proponents of Karori Wildlife Sanctuary in Wellington, the Brooks Sanctuary in Nelson, Travis Wetland Trust and Riccarton Bush in Christchurch,

Horseshoe Lake in Hamilton, Whangaroa Harbour Care at Raglan, and the Waikato Biodiversity Forum. These groups no longer look to a government department to do the job on behalf of the community. And they no longer think to “preserve” as if native ecosystems were open-air museums. They seek to restore, and also to create new landscapes of native and exotic together. They work with and through local and regional government, seek grants from public funds and sponsorship from the private sector, and harness a new energy, commitment and imagination.

Fifty years from now, as local communities strive to restore and recreate the habitats of the past, we can hope that kokako, kaka and kiwi will again nest on the mountains.



But where do planners fit into this equation? Will they be part of the problem, or part of the solution? Public sector planning has shrunk in the past 50 years. Equally, the efforts of some district councils to protect significant indigenous vegetation and habitat of indigenous species have been ham-fisted. The profession as a whole has become increasingly linked with the private sector as part of the machinery of development. Can planners join the new wave of biodiversity restoration? Or are they too afraid to work with developers towards a vision of future landscapes that will retain what still remains, restore what has been lost, and create hybrid new landscapes where native and exotic operate sustainably together?

My hope is that planners, as a profession, will be part of the solution.

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