

Introduction

Biological diversity – or biodiversity – is the complete variety of life on earth, and people are an integral part of this. Biodiversity is easiest to understand when you think of the different kinds of plants and animals around us and all the species that support and link them. 'High biodiversity' can mean that there are a lot of different species, while 'biodiversity loss' means that these species become extinct. However, biodiversity is more than plants and animals. Biodiversity includes:

- genetic diversity, which is the variability in the genetic make-up amongst individuals of the same species
- species diversity, which is the variety of species within a particular area
- ecosystem diversity, which is the variety of ecosystem types and associated biological communities or habitats (e.g. scrubland, forest, sand dunes, wetlands, streams).

All Wellingtonians (including Wellington City Council) have a positive or negative effect on biodiversity, both global and local. This comes through political choices, jobs, economic activities and daily actions. There is a huge opportunity for all to become more aware and more responsible; to enhance biodiversity generally through the cumulative effect of positive actions, small and large.

Perhaps the greatest challenge is to make everyone realise that they have an impact on biodiversity and can play a part in its conservation.



Biodiversity incorporates all biological life, including fungi and micro organisms, the genes they contain and the ecosystems of which they form a part. These life forms contribute to essential ecological processes.

Global Biodiversity

The protection of biodiversity is a global issue and is an essential ingredient of sustainable development. International awareness of biodiversity has been steadily growing since the 1992 United Nations Conference 'Earth Summit' in Rio de Janeiro. The Convention on Biological Diversity, one of the outcomes of this summit, recognises that biodiversity is about plants and animals as well as people and our need for food, medicines, fresh air and water, shelter, and a clean and healthy environment. New Zealand is a signatory to this convention on biodiversity, and the *New Zealand Biodiversity Strategy* (2000) was prepared as part of New Zealand's commitment to biodiversity protection. The New Zealand Biodiversity Strategy establishes national goals to "turn the tide" on biodiversity decline and includes action points for Local Authorities. Retaining a high level of indigenous biodiversity will result in a high level of global biodiversity.



Globally, biodiversity is in decline and the rate of biodiversity loss is accelerating.

Indigenous Biodiversity

New Zealand is an internationally recognised world 'hotspot' for biodiversity. This is because we have exceptionally high numbers of endemic species (species found nowhere else in the world). This high endemism is largely the result of our long isolation from other land masses and diverse habitat and climate, allowing unique flora and fauna to develop. Around 90 percent of New Zealand's insects and marine molluscs are found nowhere else on earth. This is also true for 80 percent of our vascular plants (which includes trees, ferns and flowering plants); 25 percent of bird species; all of our 60 reptiles; our four remaining frogs and all our species of bat. Compare this to Britain, which is a similar size but has only two endemic species.





Leadership in Biodiversity

The Local Government Act 2002 sets local authorities (regional, city and district councils) a mandate to promote sustainable development. Biodiversity is a critical measure of sustainability, with clear environmental, social, economic and cultural benefits and these are summarised below ¹.

- **Environmental:** Biodiversity describes the variety of life on earth. Indigenous biodiversity refers to the biological life unique to New Zealand. Locally, Wellington's indigenous biodiversity is also unique, boasting community associations and genetic diversity that aren't found anywhere else in the world. Resilient and stable ecosystems are essential to sustain all of our activities in a functioning environment.
- **Economic:** Without healthy biological resources and ecosystem processes we would be without basic services such as the production of raw materials, clean water, waste decomposition, soil conservation and climate regulation. A 1997 Massey University study estimated that the total annual value of New Zealand's indigenous biodiversity could be more than twice that of its Gross Domestic Product – which would put it over \$200 billion.²
- **Social:** Much of Wellington's distinctive identity, its sense of place, is bound in its natural areas. Eco-tourism is important in attracting national and international visitors who visit areas such as the Makara Peak Mountain Bike Park, Otari-Wilton's Bush, Wellington Botanic Garden and Karori Wildlife Sanctuary.
- **Cultural:** There is intrinsic value in biodiversity and for many, particularly Maori, it is an essential part of their world-view.

Under the Resource Management Act (RMA), local authorities have a role in protecting biodiversity, particularly with respect to the use and development of land. For example, under Section 6 of the RMA (1991) councils must recognise and provide for the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna³.

Wellington's Biodiversity Challenge

If you wanted to write a book about Wellington's vegetation, your friends would probably say, 'A book about gorse? Why?' This would harden your resolve. Obviously your friends have not looked twice at the groves of karaka tucked into gullies or bounced on the springy cushions of pohuehue on the coast... Perhaps they are so used to the sight of wind-buffed flax and taupata on rocky cliffs that they no longer notice it... There is no one particular feature that characterises the Wellington region... it seems to contain a little bit of all New Zealand.

Wellington's Living Cloak, Isobel Gabites 1993:7

In her opening page of *Wellington's Living Cloak*, Gabites captures the exceptional thing about Wellington; the diversity in landscape. From the rugged South Coast, to the bays, the harbour, rural hinterland, green belts, ridgelines and hilltops – all of these define Wellington. And with these landscapes and associated vegetation types, comes ecosystem diversity, species diversity and genetic diversity.

Wellington City Council manages around 3600 hectares of publicly owned open space land. Wellington City must look after the biodiversity values of this land, as well as providing leadership in the conservation of biodiversity values throughout the city.

Biodiversity conservation is about ensuring the:

- *viability of naturally occurring local populations of species*
- *resilience of the range of habitats and ecosystems that makes Wellington unique*

¹ Willis, G 2004. Guidelines on Strategic Planning for Biodiversity. A report for Action Bio-Community on using LTCCPs to promote better biodiversity management. Auckland: Enfocus Ltd.

² Patterson M and Cole A 1999. Assessing the Value of New Zealand's Biodiversity. Occasional Paper Number 1, School of Resource and Environmental Planning, Massey University, February 1999.

³ See also Sections 5(2)(a-c) and 7 (b), (d), (f), (g); and the RMA Amendment Act (2003) s.31(1)(b)