



Defining Biodiversity

For additional discussion on biodiversity see:

'Biodiversity and its value - Biodiversity Paper Series, Paper No. 1' at
<http://chm.environment.gov.au/publications/op1.html> and

New Zealand's Biodiversity Strategy - Our Chance to Turn the Tide -
http://www.doc.govt.nz/cons/biodiversity/biodiversity_template.html

Convention on Biological Diversity, United Nations Environment Programme - www.biodiv.org



Biological Diversity:

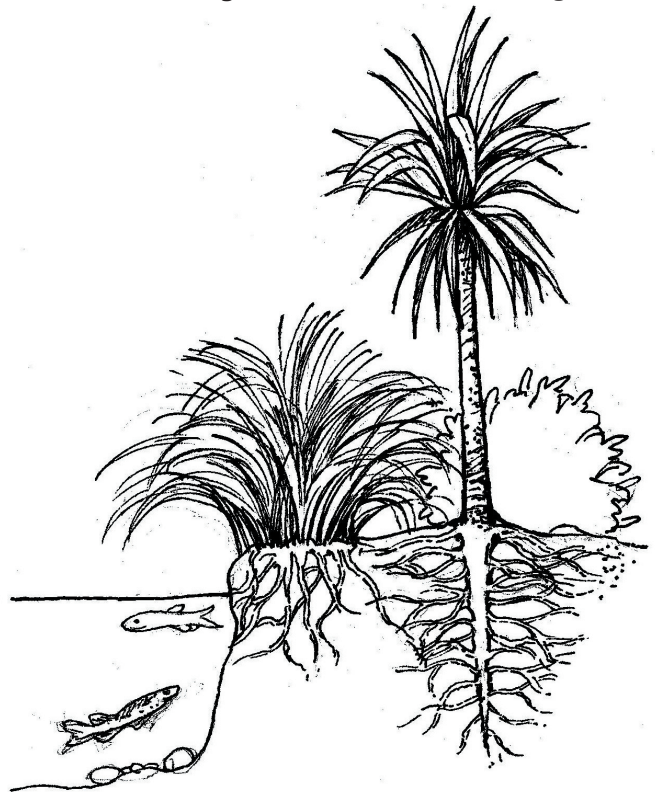
The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems (Convention on Biological Diversity). Components include:

Genetic Diversity:

Genetic diversity refers to the variability in the genetic makeup among individuals within a population.

Species Diversity:

Species diversity refers to the range of species native to a particular geographical area. A species is a group of organisms that have evolved distinct inheritable features and occupy a unique geographic area. Species are usually unable to interbreed with other species due to such factors as genetic divergence, different behaviour and biological needs, and separate geographic location. However several plant species readily cross-pollinate and produce hybrids. Natural barriers help to isolate populations. These barriers include historical (remnant patches of vegetation); climatic or micro-climatic (valley bottoms and swamps versus ridge-tops); substrate (volcanic soils bordering alluvial areas) and topographical barriers (islands isolated by surrounding water and ridge-lines that cause seed transporting water to flow in one direction or another). Such barriers are a significant factor in the development and maintenance of diversity in the New Zealand landscape.



Ecological (Ecosystem) Diversity:

Ecological diversity refers to the variety of ecosystem types (for example, forests, deserts, grasslands, streams, lakes, wetlands and oceans) and their biological communities that interact with one another and their non-living environments. An ecosystem is an interacting system of living and non-living environments. An ecosystem is an interacting system of living and non-living parts such as sunlight, air, water, minerals and nutrients. Ecosystems can be small and short-lived, for example, water-filled tree holes or rotting logs on a forest floor, or large and long-lived such as forests or lakes.

Biosecurity:

The protection of people and natural resources, including biodiversity, from unwanted organisms capable of causing harm. This harm often includes loss of local biodiversity.

Ecological District:

A local part of New Zealand where the features of geology, topography, climate and biology, plus the broad cultural pattern, interrelate to produce a characteristic landscape and range of biological communities unique to that area. Two hundred and sixty-eight Ecological Districts in New Zealand have been identified and mapped (at 1:500,000 scale).

Ecosourcing:

Practices using native plants in gardening, horticulture, landscape design and revegetation, that preserve and continue natural, genetic diversity (biodiversity) in local native plant populations.

Ecosourcing Has Two Key Aspects:

1. Using local native seeds for local planting;
2. Collecting representative diversity from the local population (by collecting seed from many individual plants from within the wild population, by collecting from different habitats within the population area, etc).

Deciding what area the 'local population' occupies is important. The Code of Practice & Ethics gives guidelines and discussion on this.

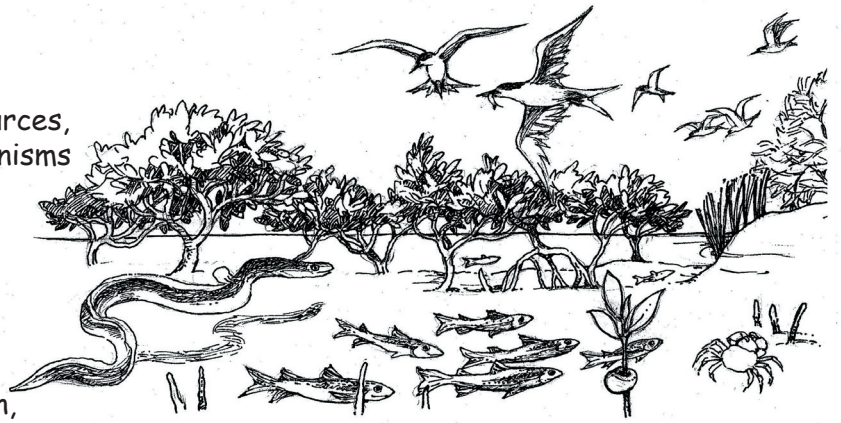
Integrity Is Maintained Through:

3. Careful management of batching and other production practices in the nursery or retail operation, so that information recorded during collection remains accurate and easy to find and use;
4. Passing information to the customer through accurate labeling that enables customers to make informed and appropriate decisions.

For comprehensive guidelines see the publication 'Ecosourcing Code of Practice & Ethics, Waitakere City Council 2002.

Endemic Species:

See 'Native Species'



Genetic Erosion:

Loss of genetic diversity between and within populations of the same species over time; or reduction of the genetic basis of a species due to human intervention or environmental changes.

Introduced Species:

A plant or animal species that has been brought to New Zealand by humans, either by accident or design. Another term is "exotic species".

Invasive Species:

An animal pest or weed that can adversely affect indigenous species and ecosystems by altering genetic variation within species, affecting the survival of species, or the quality or sustainability of natural communities. In New Zealand, invasive animal pests or weeds are almost always species that have been introduced into the country.

Native Species To New Zealand:

Those species that lived here at the time New Zealand became an independent landmass, or they evolved or migrated here - without help from people. They are well adapted to localised conditions. An average of 80% of our native species live nowhere else in the world. These are called Endemic. Some native species are present naturally through many regions or areas of the country. These species can be described as native to each such region or locality. Some native species exist only in one region or localised area of the country. Such a species is therefore endemic to that area.

