Convention on Biological Diversity

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Background

On 5 June 1992 at the Earth Summit in Rio de Janeiro the world's leaders (with the notable exception of the United States of America) signed the Convention on Biological Diversity. This was a very significant step for global conservation, both because most countries are parties to the Convention, thus ensuring a common approach to biodiversity conservation, but particularly because of the ecosystem approach taken. This is the first major international treaty that has affirmed the importance of conserving ecosystems rather than single species, the so-called *in-situ* approach to conservation. New Zealand representatives played a key role in ensuring that this emphasis was incorporated in the Convention.

It is now widely recognised that if we are to be successful in conserving the worlds biological diversity, then we need to conserve the habitats and ecosystems in which the myriad of living organisms occur. Simply saving species is not enough. Having this approach built into a global convention will provide added strength to local arguments for a greater emphasis on ecosystem conservation. The reasons for the USA not signed apparently relate to a perception that the Convention threatens the rights of USA businesses to patents on genetic material from the 'developing world'. It has been suggested that once Bill Clinton is inaugurated as president, it is likely that the USA will sign.

Because of the significance of the Biological Diversity Convention, I have reproduced some extracts from it here.

Objectives (Article 1)

"The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding."

Definitions (Article 2)

I have included a selection of definitions from Article 2 only.

"Biological conservation means 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."

"Ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit."

"*Ex-situ* conservation means the conservation of components of biological diversity outside their natural habitats."

"Habitat means the place or type of site where an organism or population naturally occurs."

"*In-situ* conservation means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties."

"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."

In-situ Conservation (Article 8)
"Each Contracting Party shall, as far as possible and as appropriate:

(a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;

(b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;

(c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;

(d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;

(e) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;

(f) Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, *inter alia*, through the development and implementation of plans or other management strategies;

(g) Establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that

could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health;

(h) Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species;

(i) Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components;

(j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;

(k) Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations;

(l) Where a significant adverse effect on biological diversity has been determined pursuant to Article 7, regulate or manage the relevant processes and categories of activities; and

(m) Cooperate in providing financial and other support for *in-situ* conservation outlined in subparagraphs (a) to (l) above, particularly to developing countries."

Ex-situ Conservation (Article 9)
"Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing *in-situ* measures:

(a) Adopt measures for the *ex-situ* conservation of components of biological diversity, preferably in the country of origin of such components;

(b) Establish and maintain facilities for *ex-situ* conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources;

(c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;

(d) Regulate and manage collection of biological resources from natural habitats for *ex-situ* conservation purposes so as not to threaten ecosystems and *in-situ* populations of species, except where special temporary *ex-situ* measures are required under subparagraph (c) above; and

(e) Cooperate in providing financial and other support for *ex-situ* conservation outlined in subparagraphs (a) to (d) above and in the establishment and maintenance of *ex-situ* conservation facilities in developing countries."

Comment
A key feature of the Convention is the very strong emphasis on conserving biological diversity *in-situ*. This includes identification and establishment of protected natural areas, restoration of degraded ecosystems and threatened species, and control of introduced predators and herbivores, as well as management of natural ecosystems. While this may seem an obvious conservation objective, there has been a strong global tradition of resorting to *ex-situ* conservation (e.g., in zoo's or on islands) without really exploring the potential of maintaining species in natural habitats.

In New Zealand our use of islands for preserving threatened birds and reptiles has been a necessary last resort in the face of predators, but the Convention is clear that we must look long-term at returning these species to their mainland habitats. Conservation can not rely on islands to protect all species. As Colin Meurk has pointed out in an article in 'Ecological Restoration of New Zealand Islands', our off-shore islands do not provide the full range of habitats present on the mainland and so cannot be expected to preserve all our biological diversity. The challenge for New Zealand conservation as we move into the 21st century is to develop conservation programmes, and the necessary technology, to conserve our unique biological diversity on the mainland, in essence to create mainland habitat islands in which species such as saddlebacks, kokako and kaka are abundant, and in which the mistletoes and rata can again flower in profusion. This is a major challenge for conservation, but one I believe is achievable and one that the Biological Diversity Convention provides a very clear rationale for.

Other important issues covered by the Biological Diversity Convention include sustainable use of components of biological diversity (Article 10) and recognition of traditional indigenous uses of natural species and ecosystems. This latter point in particular is one that we need to work further with in New Zealand as Maori regain use of traditional Mahinga Kai. The Convention also emphasises the importance of supporting conservation in developing countries and particularly the need to transfer technology and scientific knowledge, and management skills from developed to developing countries. The Convention also discusses the use of genetic resources for biotechnology, and again emphasises the importance of developing countries in this, as much of the genetical material comes from them.

In summary, this is a key document and one that is likely to have an important influence on future developments in conservation both within New Zealand and globally. If you are interested in reading the full document, copies can be obtained from the Department of Conservation or Ministry of External Relations and Trade.