

This section describes New Zealand's international obligations that need to be considered for any risks, cost and benefit assessment of 1080 use in New Zealand. The relevance of the continued use of 1080 in New Zealand is discussed briefly in this section. However, the primary discussion of risks, costs and benefits of 1080, and the alternatives if 1080 were not available is contained in sections 4.1 and 4.2 of the application.

1. Obligations for Bovine Tb Control

1.1 The Terrestrial Animal Health Code and the Office International des Epizooties (OIE)

New Zealand is a member country of the Office Internationale Epizooties (OIE, the World Organisation for Animal Health) and a signatory to the OIE Terrestrial Animal Health Code. Each Member Country undertakes to report the animal diseases that it detects on its territory to the OIE, which disseminates the information to other member countries. The Terrestrial Animal Health Code deals with bovine Tb.

As a signatory to the Code, New Zealand has a legal requirement to comply with the requirements of the Code in order to be involved in the trade of live animals, meat and meat products and milk and milk products. The Code requires the following:

- For fresh meat and meat products an international veterinary certificate must attest that the entire consignment of meat comes from animals that have been proven free of Tb by ante-mortem and post-mortem inspections.
- For milk and milk products an international veterinary certificate attesting milk products were derived from a Tb free herd or was subjected to pasteurisation or equivalent.
- For live export of animals to a country free from bovine Tb, cattle must come from a country that is also free of bovine Tb.

The lead agency for ensuring compliance with these conditions for meat and dairy products is the New Zealand Food Safety Authority and for the live export of animals Biosecurity New Zealand.

Every country has a different set of regulations (known as overseas market restrictions or OMARS) that New Zealand also needs to comply with when trading live animals, meat and milk products. Some of these regulations also relate specifically to bovine Tb levels.

Most importantly, the OIE Code sets the internationally accepted definition of bovine Tb freedom, which is reached when 99.8% of domestic cattle and deer herds have been free of bovine Tb for three years, that is, only 0.2% of herds have bovine Tb. Many of New Zealand's major international trading partners have attained this standard of Tb freedom, but New Zealand continues to have a relatively high level of Tb infection of 0.5 % (as at April 2006). The key restriction for New Zealand as a Tb affected country is that it cannot trade live animals with Tb free countries.

The primary objective of New Zealand's **National Pest Management Strategy** (NPMS) (see Appendix A) is to reduce the number of Tb-infected cattle and deer herds to 0.2% by 2012/13, in order to be officially recognised as free of bovine Tb.

1.2 How Important is the Use of 1080 for Bovine Tb Control Obligations?

The use of 1080 is undertaken to control bovine Tb levels in cattle and deer herds in New Zealand. It is the most effective tool available to undertake this task and one of the most acceptable toxins to use from an international trade perspective (due to its short half life). The control of bovine Tb is an important goal to reduce risks and costs associated with bovine Tb and international market access for live animal trading but eradication in itself is not an international obligation.

2. Obligations for Conservation Outcomes

2.1 Convention of Biological Diversity 1992

The key international multi-lateral agreement relevant for conservation related uses of 1080 is the Convention on Biological Diversity 1992, which was ratified by New Zealand in September 1993.

The Convention was one of the key agreements arising from the 1992 Earth Summit in Rio de Janeiro, where world leaders agreed on a comprehensive strategy for "sustainable development - meeting our needs while ensuring that we leave a healthy and viable world for future generations". The Convention has three main goals:

- 1. The conservation of biological diversity
- 2. The sustainable use of its components
- 3. The fair and equitable sharing of the benefits from the use of genetic resources.

More specifically relevant to conservation, Article 8(h) of the Convention requires countries to "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species'.

A further specific aspect of the Convention on Biological Diversity of relevance to 1080 use is the Global Strategy for Plant Conservation (GSPC). The key focus of the GSPC is to improve long-term conservation, management and restoration of plant diversity, plant communities, and associated habitats and ecosystems. Effective pest control is vital to success of the key focus.

In New Zealand, responsibility for implementing the Convention rests with the Ministry for the Environment (MfE) and the Department of Conservation (DOC). These agencies launched the New Zealand Biodiversity Strategy (NZBS) in 2000, to address New Zealand's obligations under this Convention. The NZBS funds programmes on conservation (public) land aimed at restoring habitat and aiding the recovery of threatened species.

2.2 World Heritage Status – Tongariro National Park, Te Wahi Pounamu, sub-Antartic Islands

New Zealand has successfully nominated three locations for inclusion in the World Heritage list

- 1. Tongariro National Park
- 2. Te Wahi Pounamu (in South Westland)

3. The New Zealand Sub-Antarctic Islands.

New Zealand's obligations in respect of these areas are embodied in:

- The Convention concerning the protection of the World Cultural and Natural Heritage 1972 (UNESCO), ratified by New Zealand on the 22nd November 1984; and
- The Ramsar Convention 1975 (signed by New Zealand on 13 August 1976).

DOC is the lead agency responsible for these conventions. Both of these conventions require monitoring of the state of conservation of listed sites and how threats to their state of conservation are being managed. For example, a complaint was recently lodged with the International Union on the Conservation of Nature (IUCN) and the World Heritage Committee (WHC) concerning damage caused by thar (*Hemitragus jemlahicus*) in Te Wahi Pounamu. When a complaint is lodged with the IUCN and the WHC, New Zealand is required to report it to the Convention's Secretariat and explain what it is doing to address the problem.

This complaint and response mechanism is an example of the way in which international conventions put pressure on contributing parties to conform, even though sovereignty remains with the countries concerned.

Pest control programmes using 1080 are the prime tool in restricting and managing the invasion of possums into Fiordland (part of Te Wahi Pounamu) i.e. managing a conservation threat to a World Heritage Area.

2.3 Convention on Conservation of Nature in the South Pacific 1990

DOC is the lead agency for the Convention on Conservation of Nature in the South Pacific. The terms of the Convention require contracting parties to use their best endeavours to protect fauna and flora (special attention being given to migratory species) and safeguard them from unwise exploitation and other threats that may lead to their extinction.

One of the mechanisms through which this convention is realised is the South Pacific Regional Environmental Programme 1986 (SPREP) which New Zealand ratified on 3 May 1990. SPREP is the intergovernmental organisation charged with promoting cooperation and supporting protection and improvement of the Pacific Islands' environment and ensuring their sustainable development for present and future generations. Its members are the governments and administrations of 22 Pacific Island countries and four developed countries with direct interests in the Pacific Islands region (USA, France, Australia, New Zealand).

SPREP has a Regional Invasive Species Programme (RISP) that has been in place since 1998. The goal of the RISP is the: "Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species".

2.4 Other Biodiversity Obiligations

Protecting our indigenous biodiversity through effective pest control is also an obligation for New Zealand as a member nation of the following agreements:

 World Conservation Union (IUCN). New Zealand has obligations under various resolutions adopted by IUCN members from time to time. Some of these relate directly to control of invasive species.

- International Plant Protection Convention 1951
- Plant Protection Agreement for the South East Asia and Pacific Region

2.5 How Important is the Use of 1080 for Conservation Obligations?

Effective pest control is a vital part of the programmes which aim to achieve the conservation outcomes required by the various international obligations, namely:

- 1. Achieving habitat and ecosystem protection
- 2. Securing the future of threatened species
- 3. Reducing the range expansion of biosecurity pests.

Any loss of 1080 as a tool for controlling pests would severely impact on New Zealand's capacity to achieve these three conservation outcomes at both national and local levels.

3. Obligations for Climate Change Outcomes

3.1 The Kyoto Protocol

Within the United Nations framework, the Kyoto Protocol is an international agreement to address current and potential adverse global environmental changes related to rising concentrations of greenhouse gases in the atmosphere caused as a result of human activities. Only countries that ratify the Protocol are bound by it. New Zealand ratified the Protocol on 19 December 2002, and it came into force on 16 February 2005 after Russia ratified it in late 2004. Negotiations have already started about a new international agreement to succeed the Kyoto Protocol after 2012.

The Protocol sets targets for the greenhouse gas emissions of individual developed countries for the period 2008 to 2012 (the first commitment period). New Zealand's target is to reduce its greenhouse gas emissions back to 1990 levels, on average, over the first commitment period (a total of 308 million tonnes of CO2 equivalent (Mt CO2e)). New Zealand is obliged to take responsibility for excess emissions above its 1990 target by purchasing emission units on the international market or by growing forest carbon sinks. The latest national greenhouse gas inventory shows that New Zealand's emissions are increasing, and that New Zealand will have an estimated excess of emission units of 64 Mt CO2e. That is, our total emissions will be 20% percent over our target for the first commitment period (http://www.climatechange.govt.nz/about/kyoto.html, August 2006).

The rising greenhouse gas concentrations are expected to sustain the ongoing rise in surface air temperature, which in turn is predicted to result in fewer frosts, broad changes to rainfall patterns, and more extreme weather (both in terms of magnitude and frequency). These climate changes are expected to cause increases in flooding, droughts, heatwaves, fires and coastal erosion, affect land use capability, and increase biosecurity risks. New Zealand has a biologically-based economy, and therefore is particularly vulnerable to the effects of these changes.

3.2 How Important is the Use of 1080 for Climate Change Obligations?

Consideration of climate change in conservation management decisions is likely to increase in the future. Effective pest control will help to improve the resilience of forest ecosystems to extreme weather events, particularly to high intensity rainfalls (and associated erosion events) and droughts (and their effects on vulnerability to disease)

Climate change obligations, and opportunities, are likely to increase in the future. Effective pest control will help to meet Kyoto Protocol obligations by maintaining and enhancing the biomass of forest ecosystems by removing or reducing the grazing pressure of pests such as possums, goats and deer, which will help to sequester carbon-dioxide and thereby generate Kyoto-compliant carbon credits. Credits may be used to offset excess emissions or be traded. Government recently announced that landowners will be able to claim carbon credits generated by permanent exotic forest carbon sinks established after October 2002, and by permanent indigenous forests established after January 1990.

The nature of post-Kyoto international obligations is still unclear. It is possible that new international climate change agreements will require the Government to account for the carbon sequestered in all forests (exotic and indigenous), independent of when they were established. If so, then the maintenance or enhancement of these carbon stores is likely to be crucial to the achievement of a net reduction in greenhouse gas emissions. This is because indigenous biomass is approximately 80% of the total estimated plant biomass stored above and below ground in New Zealand (around 2,420 Mt CO2e, (Tate et al. 1997)), and the total indigenous biomass is much, much larger than the potential excess of emissions above greenhouse gas obligations (e.g. the predicted excess over the first commitment period is 0.5% of the indigenous carbon pool).

Any loss of 1080 as a tool for controlling pests would impact on New Zealand's capacity to meet its Kyoto Protocol and subsequent international obligations to reduce the emissions of greenhouse gases to achieve these outcomes.

Reference

Tate,K.R. Giltrap, D.J. Clayton,J.J. Newsome, P.F. Atkinson,I.A.E. Taylor, M.D. Lee, R. 1997. Journal of The Royal Society of New Zealand 27(3): 315 - 335