

Bioinvasion and Global Environmental Governance: The Transnational Policy Network on Invasive Alien Species

New Zealand's Actions on IAS

Description²

New Zealand is a parliamentary democracy and former British Colony of over 4 million people situated in the South Pacific. Besides the two major islands, New Zealand also encompasses Antipodes Islands, Auckland Islands, Bounty Islands, Campbell Island, Kermadec Islands, the Chatham Islands, and many more. Its total land surface area covers 268,000 sq km and its coastline stretches over 15,000 km. It shares no land borders with any country.

New Zealand is party to several free trade agreements, particularly with South-East Asian countries, the most recent being one signed with Australia and ASEAN on 28 August, 2008. New Zealand's main trading partners are Australian, the U.S., Japan, China, and Singapore. Its main imports are machinery, vehicles and aircraft, petroleum, electronics, textiles, and plastics. Many of its exports are derived from its agricultural industry, including dairy and meat, as well as other exports such as wood, fish, and machinery.

Overview of Biodiversity

New Zealand is a Pacific island country composed of two main islands and many small islands. Its relative isolation from continental landmasses has led to a high level of endemic biodiversity. New Zealand's animal biodiversity is unique in that it comprises predominantly bird species that evolved with no terrestrial mammals filling the predator niche.

- [CBD Country Profile](#)
- [Earth Trends Country Profile on Biodiversity and Protected Areas](#)
- [Biodiversity Information Online](#) (government website)

Legislation relating to IAS

- [Biosecurity Act 1993](#) and the [Biosecurity Strategy](#) (2003)
- [Hazardous Substances and New Organisms Act 1996](#)
- [Resource Management Act 1991](#)

Government Agencies/Departments/Ministries dealing with IAS

- [Department of Conservation](#)
- [Ministry of Health](#)
- [Ministry of Fisheries](#)
- [Ministry for the Environment](#)
- [Ministry of Agriculture and Forestry](#)
 - [BioSecurity New Zealand](#)

Major Invasive Alien Species¹

<u><i>Agrostis capillaris</i></u> (grass)	<u><i>Hypericum perforatum</i></u> (herb)
<u><i>Asciidiella aspersa</i></u> (tunicate)	<u><i>Ligustrum lucidum</i></u> (tree)
<u><i>Buddleja davidii</i></u> (shrub)	<u><i>Morella faya</i></u> (tree, shrub)
<u><i>Canna indica</i></u> (herb)	<u><i>Musculista senhousia</i></u> (mollusc)
<u><i>Carassius auratus</i></u> (fish)	<u><i>Mustela erminea</i></u> (mammal)
<u><i>Carduus nutans</i></u> (herb)	<u><i>Mustela nivalis</i></u> (mammal)
<u><i>Cervus elaphus</i></u> (mammal)	<u><i>Passiflora tarminiana</i></u> (vine, climber)
<u><i>Chrysanthemoides monilifera</i></u> (herb)	<u><i>Pennisetum macrourum</i></u> (grass)
<u><i>Cyperus rotundus</i></u> (sedge)	<u><i>Polistes chinensis antennalis</i></u> (insect)
<u><i>Didymosphenia geminata</i></u> (algae)	<u><i>Polysiphonia brodiei</i></u> (algae)
<u><i>Elaeagnus pungens</i></u> (shrub)	<u><i>Radumeris tasmaniensis</i></u> (insect)
<u><i>Erinaceus europaeus</i></u> (mammal)	<u><i>Tradescantia fluminensis</i></u> (herb)
<u><i>Glyceria maxima</i></u> (aquatic plant, grass)	<u><i>Trichosurus vulpecula</i></u> (mammal)
<u><i>Gymnorhina tibicen</i></u> (bird)	
<u>A list of New Zealand's major animal pests</u>	
<u>A list of New Zealand's major weeds</u>	

Native Species Exported/Introduced to Non-Native Environments¹

<u><i>Alternanthera sessilis</i></u> (herb)	<u><i>Phormium tenax</i></u> (shrub)
<u><i>Kunzea ericoides</i></u> (shrub)	<u><i>Potamopyrgus antipodarum</i></u> (mollusc)
<u><i>Landoltia punctata</i></u> (aquatic plant)	<u><i>Pterois volitans</i></u> (fish)
<u><i>Lutjanus kasmira</i></u> (fish)	<u><i>Sphaeroma quoyanum</i></u> (crustacean)

Table 1 Actions to prevent, detect and manage IAS categorized into three themes: biodiversity, human health, and economic

Note: Actions (such as projects, publications and programs) are classified according to the most obvious theme but may also fit into the dimensions of another.

Theme	Action
Biodiversity	<ul style="list-style-type: none"> • Dept. of Conservation uses 1080 pesticide against possums, which is biodegradable by microorganisms and water.³ • Complete eradication of rats from Campbell Island by the Dept. of Conservation.⁴ • Project Island Song: effort to eradicate all rats, mice, and stoats by aerial release of pesticides on the eastern Bay of Islands. Efforts are currently under way to protect native species and water supplies, protect the public, “implement preoperational monitoring measures to the effects of the operations assess water quality, shellfish”, and engaging the community through public awareness and educational campaigns, and a post-operational pest-reintroduction prevention effort targeted at the public. The project shall be underway beginning in the summer of 2009 by the Dept. of Conservation.⁵ • Rangitot and Motutapu pest eradication project aimed at Norway rats, ship rats, mice, rabbits, stoats, feral cats, and hedgehogs in the

	<p>two islands. This would be “the most complex island pest eradication... attempted” by the Dept. of Conservation. Feasibility studies to use rodent baits containing brodifacoum are currently underway, alongside consultations with “(s)takeholders and users of the islands”.⁶</p> <ul style="list-style-type: none"> • Mud samples collected from dirty trucks in a Dept. of Conservation experiment provided evidence that trucks transport invasive weeds from one location to another with their wheels.⁷ • Dept. of Conservation and the Christchurch City Council launched public awareness and outreach campaign against the purple loosestrife over labour weekend, talking to over a thousand people on the streets.⁸ • Weedbusters: “a weeds awareness and education programme that aims to protect New Zealand’s environment from the increasing weed problem” created by the New Zealand government.⁹ • 890 kg of weeds cleared from Huramua Reserve to protect a population of endangered <i>Pittosporum obcordatum</i>.⁹ • The State of New Zealand’s Environment. (1997) Chapter 9 The State of Our Biodiversity: <ul style="list-style-type: none"> - Although they allow nature-loving humans into natural areas, roads and tracks are also a danger to natural ecosystems. They provide extensive edge zones where possums, other mammals and invasive weeds can gain entry to new habitats. Even well-intentioned human visitors can disturb sensitive micro-habitats through trampling and waste disposal. - A study of 234 small to medium lowland forest reserves (500 hectares or less) found that invasive plants are more common in reserves that are close to towns, rubbish dumps, roads and farms. The alien plants are also more common in reserves which have a high number of human visitors or a large perimeter-to-area ratio (Timmins and Williams, 1991).
<p>Environment, human health and economy (see case study)</p>	<ul style="list-style-type: none"> • The New Zealand Government has mandated the Ministry of Agriculture and Forestry (BioSecurity New Zealand) to carry out the Biosecurity Strategy (2003). 'Biosecurity' is the protection of New Zealand's economy, environment and people's health from pests and diseases. It includes trying to prevent new pests and diseases arriving, and eradicating or controlling those already present. The Biosecurity Strategy (pdf) has a range of goals for the economy, environment and human health, including: <ul style="list-style-type: none"> - Protecting marine and terrestrial primary industries and facilitating exports and tourism; - Protecting New Zealand’s indigenous biodiversity – our native species, natural habitats, ecosystems and landscapes; - Enabling sustainable use of natural resources and protection of the natural environment; - Maintaining the relationship between Maori and their culture

	<p>and traditions with ancestral lands, waters, sites, waahi tapu and taonga;</p> <ul style="list-style-type: none"> - Protecting the health of New Zealanders from zoonotic and pest-borne diseases and from venomous species; <i>and</i> - Reducing the damage caused by pests and diseases introduced in the past. <ul style="list-style-type: none"> • Around \$500 million is spent annually on biosecurity in New Zealand, of which \$180 million is allocated directly by MAF Biosecurity New Zealand.¹¹ • BioSecurity New Zealand website contains comprehensive information related to the country's import and export regulations, including an Import Health Standards search that yields documents stating the requirements that must be met before risk goods can be imported into New Zealand.¹⁰ • Biosecurity outcomes are jointly agreed by MAF, the Ministry of Health, Ministry of Fisheries, Department of Conservation and Te Puni Kōkiri, which are the leading government agencies responsible for biosecurity (our BioSecurity New Zealand's partner agencies). • The Biosecurity Strategy in part stems from the Biosecurity Act 1993 which specifically covers: <ul style="list-style-type: none"> - Management of risks associated with the importation of risk goods (Part 3); - Monitoring of New Zealand's pest and disease status (Part 4); - Management or eradication of pests through national and regional pest management strategies (Part 5); - Direct exercise of powers by a Government agency outside of formal pest management strategies (Part 6); and - • Exigency (emergency) action to prevent, manage or eradicate unwanted organisms (Part 7).
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Table 2 Action on IAS in cooperation with other countries

Agreement/ Organization	Countries/ Member	Action
Environmental Cooperation Agreement (2008)	People's Republic of China and New Zealand	<p>Article 2</p> <p>1. Taking account of their national priorities and available resources, the Parties agree to cooperate on environmental matters of mutual interest and benefit. The Parties shall jointly decide specific environment cooperative activities.</p> <p>2. Cooperative activities may be in areas including but not limited to: environmental management, environmental remediation, nature conservation, and technologies (including systems and processes) for environmental benefit. Examples could include:</p> <p>(a) Management of water environment;</p>

		<ul style="list-style-type: none"> (b) Coastal ecological conservation and pollution control; (c) Air pollution control and monitoring; (d) Improvement of environmental awareness, including environmental education and public participation; (e) Management and disposal of waste including hazardous waste; (f) Environmental management of chemicals; (g) Environment and trade; (h) Biodiversity conservation; and (i) Other areas as mutually agreed upon. <p>[does not specifically mention IAS]</p>
ENVIRONMENT COOPERATION AGREEMENT AMONG THE PARTIES TO THE TRANS-PACIFIC STRATEGIC ECONOMIC PARTNERSHIP AGREEMENT	<p>The Governments of Brunei Darussalam, the Republic of Chile, New Zealand, and the Republic of Singapore</p>	<p>Article 1: Objectives</p> <p>The objectives of the Agreement shall be to:</p> <ul style="list-style-type: none"> (a) encourage sound environment policies and practices and improve the capacities and capabilities of the Parties, including non-government sectors, to address environmental matters; (b) promote, through environmental cooperation, the commitments made by the Parties; and (c) facilitate co-operation and dialogue in order to strengthen the broader relationship among the Parties. <p>[does not specifically mention IAS]</p>

Case Study

[New Zealand Country Report](#)

[The Asia-Pacific Forest Invasive Species Network](#) (no date)

Section 4. *Strategies adopted/measures taken to control*

A "Biosecurity Strategy" (www.maf.govt.nz/biosecurity/bio-strategy/biostrategy) was published in August 2003 and has been fully endorsed by the Government. It sets an overall direction for biosecurity and identifies priority areas. The Strategy applies to land, freshwater and marine environments.

The strategy includes 57 expectations for the future of the biosecurity system. It recognises the breadth and complexity of the biosecurity system and the contribution it makes to protecting New Zealand's economic base, environment and human health. The Strategy noted the considerable challenges in managing the system due to the widening of the scope of biosecurity and the increasing flow of goods and services across the borders. It identified that the biosecurity system and particularly the identification and management of risks had become increasingly reactive.

[...]

The Biosecurity Strategy recommended ten steps to be implemented immediately:

Step	Action	Current Status
1	Make MAF clearly accountable for overall management of the whole biosecurity systems, on behalf of all New Zealanders	Complete
2	Put in place the necessary systems, structures and capabilities within MAF to support its role- starting with strong strategic capability	Underway
3	Establish governance mechanisms (including a reconstituted Biosecurity Council and chief executives' forum) to support this strategy's implementation and monitor performance	Complete
4	Encourage all New Zealanders to support and participate in biosecurity through a social marketing programme	Initial steps
5	Identify, ways to involve Maori in biosecurity issues and decisions, nationally and locally	Initial steps
6	Identify, priorities and review current and emerging risks- from pre-border to pest management and across aquatic and terrestrial environments	Initial steps
7	Establish national leadership and co-ordination of pest management	Underway
8	Recognise the contribution of science to biosecurity (strategically and operationally) and fund it properly	Initial steps
9	Ensure decision-making processes take account of risks to the economy, biodiversity, taonga, human health and lifestyle in setting priorities	Underway
10	Increase funding over the next five years for priority areas and build organizational capability across the system	Underway

References

1. Global Invasive Species Database. (2008) "New Zealand." Retrieved 16 December 2008, from <http://www.invasivespecies.net/database/species/search.asp?st=sss&sn=&rn=New%20Zealand&ri=18893&hci=-1&ei=-1&fr=1&sts=&lang=EN> and <http://www.issg.org/database/species/search.asp?sts=sss&st=sss&fr=1&Image1.x=0&Image1.y=0&sn=&rn=New+Zealand&hci=-1&ei=-1&lang=EN>
2. Country descriptions are compiled from the Central Intelligence Agency's World FactBook, available at <https://www.cia.gov/library/publications/the-world-factbook/>, and Wikipedia: The Free Encyclopaedia, available at http://en.wikipedia.org/wiki/Main_Page.
3. Department of Conservation. (2008) "Campbell Island rat eradication." Retrieved 7 December 2008, from

- <http://www.doc.govt.nz/conservation/threats-and-impacts/animal-pests/pest-control/campbell-island-rat-eradication/>
4. Department of Conservation. (2008) "Project Island Song." Retrieved 7 December 2008, from <http://www.doc.govt.nz/conservation/threats-and-impacts/animal-pests/pest-control/project-island-song/>
 5. Department of Conservation. (2008) "Rangitoto & Motutapu pest eradication project." Retrieved 7 December 2008, from <http://www.doc.govt.nz/conservation/threats-and-impacts/animal-pests/pest-control/rangitoto-and-motutapu-pest-project/>
 6. Department of Conservation. (2008) "Wheel Weedy." Retrieved 7 December 2008, from <http://www.doc.govt.nz/conservation/threats-and-impacts/weeds/docs-weed-work/wheel-weedy/>
 7. Department of Conservation. (2008) "Purple loosestrife." Retrieved 7 December 2008, from <http://www.doc.govt.nz/conservation/threats-and-impacts/weeds/docs-weed-work/purple-loosestrife/>
 8. Department of Conservation. (2008) "Seeing the woods amongst the weeds." Retrieved 7 December 2008, from <http://www.doc.govt.nz/conservation/threats-and-impacts/weeds/docs-weed-work/seeing-the-woods-amongst-the-weeds/>
 9. Weedbusters. (2008). Retrieved 7 December 2008, from http://www.weedbusters.co.nz/about_weedbusters/index.asp
 10. Biosecurity New Zealand. (2008) Retrieved 7 December 2008, from <http://www.biosecurity.govt.nz/ihs/search>
 11. Biosecurity New Zealand. (2008) "About us." Retrieved 20 January 2009, from <http://www.biosecurity.govt.nz/biosec/org>