

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

The Netherlands' Actions on IAS

Description¹

Independent from Spain since January 23, 1579, this former colonial power is a constitutional monarchy with a reputation for its “live and let live,” liberal political culture. The Netherlands is home to over 16 million people, over 41,000 square km. Its coastline stretches 451 km, though a sizeable network of channels penetrates its landmass as well. The Netherlands borders Belgium to the south and Germany to the east.

The Netherlands' economy is notable for its agricultural output, one of the highest in the world, as well as its food processing, petroleum refining, and electrical machinery. Its main trading partners are Germany, Belgium, China, the UK, France, and the U.S. Its exports include machinery and equipment, chemicals, fuels, and foodstuffs. Its imports include machinery and transport equipment, chemicals, and clothing.

Overview of Biodiversity

In the Netherlands, the steady dwindling of natural areas that had been ongoing since 1900 has recently halted. Among all vertebrates, plants and some major groups of invertebrates, 29% of the species are, to some extent, threatened with extinction at a national level. Threats to wildlife include the pressure of the European fisheries on the stocks, which has resulted in a marked decline in the catch of large fish.

- [CBD Country Profile](#)
- [Earth Trends Country Profile in Biodiversity and Protected Areas](#)
- [Netherlands Biodiversity Data Portal](#)

Legislation relating to IAS

- [International Policy Programme on Biodiversity \(BBI; 2002 - 2005\)](#)
- The Endangered Exotic Animal and Plant Species Act⁴
- Flora and Fauna Act 1998: prohibits releasing alien species in nature; the possession and import of specific species; and enables control of specific alien mammal and bird species.
- the National Policy for Shipping and Environment.⁶
- A Hunting Act 1954 regulation of 1995 which provides extra possibilities for control of the following alien mammals and birds, including species which may threaten ecosystems, habitats or species: *Mustela vison*, *Procyon lotor*, *Myocastor coypus*, *Nyctereutes procyonoides*, *Ondatra zibethicus*, *Alopochen aegyptiacus*, *Oxyura jamaicensis*, *Tamias sibericus*.⁶
- Because their introduction in natural environments is considered a threat to indigenous wild species, in accordance with the CITES-related EU council regulation 338/97 (L 61) and commission regulation 1988/2000 (L 237), it is not allowed to import the amphibian species *Rana catesbeiana* and the reptile species *Trachemys scripta elegans* in the Netherlands.⁶

- With regard to pests of plants, the Plant Diseases Act 1951 and the EU Phytosanitary Regulations (2000/29/EC) provide a sound set of phytosanitary regulations which, if required, are also applicable to pests of wild plants.⁶

Government Agencies/Departments/Ministries dealing with IAS

- Ministry of Agriculture, Nature Management and Fisheries (Department of Nature Management and Department of Agriculture)
- Ministry of Transport, Public Works and Water Management (North Sea Directorate)
- The Association of Water Boards
- [Ministry of Housing, Spatial Planning and Environment](#)
- [Dutch Ministry of Agriculture, Nature and Food Quality](#)
- National Institute of Public Health and the Environment (RIVM)
- Netherlands Institute for Fisheries Research (RIVO)
- Plant Protection Service (PD)
- CITES management authority for the Netherlands

Major Invasive Alien Species^{2&6}

Aedes albopictus (insect)	<i>Muntiacus reevesi</i> (mammal)
<i>Alopochen aegyptiacus</i> (bird)	Mustela vison (mammal)
Anoplophora chinensis (insect)	Myocastor coypus (mammal)
Cinara cupressi (insect)	<i>Nyctereutes procyonoides</i> (mammal)
Crepidula fornicata (mollusc)	<i>Ondatra zibethicus</i> (mammal)
Dreissena polymorpha (mollusc)	Oxyura jamaicensis (bird)
<i>Elodea nuttallii</i> (aquatic plant)	Rana catesbeiana (amphibian)
Eriocheir sinensis (crustacean)	Phytophthora ramorum (fungus)
Ficopomatus enigmaticus (annelid)	<i>Procyon lotor</i> (mammal)
Heracleum mantegazzianum (herb)	Styela clava (tunicate)
<i>Hydrocotyle ranunculoides</i> (aquatic plant)	<i>Tamias sibericus</i> (mammal)
Impatiens glandulifera (herb)	<i>Trachemys scripta elegans</i> (reptile)
<i>Lemna minuta</i> (aquatic plant)	Trogoderma granarium (insect)
<i>Ludwigia grandiflora</i> (plant)	Urosalpinx cinerea (mollusc)

Native Species Exported/Introduced to Non-Native Environments²

Bythotrephes longimanus (crustacean)	Lotus corniculatus (herb)
Columba livia (bird)	Ostrea edulis (mollusc)
Cytisus scoparius (shrub)	Perca fluviatilis (fish)
Euphorbia esula (herb)	Polysiphonia brodiei (algae)
Frangula alnus (shrub)	Salmo trutta (fish)
Hydrocharis morsus-ranae (aquatic plant)	Tomicus piniperda (insect)
Leuciscus idus (fish)	

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"> • The Division Diagnostics is working in close collaboration with the National Herbarium of the Netherlands at Leiden and Plant Research International at Wageningen to establish an information system on potentially invasive plants for the Netherlands. The major activities pertaining to invasive plants include:⁵ <ul style="list-style-type: none"> - diagnosis of plant material originating from interceptions of consignments at import - diagnosis of non-indigenous plants encountered in the Netherlands - selection of plant species to be incorporated in the information system on invasive plants • ANEMOON – A volunteer-based community organization that has collected samples from the coast of the Netherlands for thirty years. They have a number of projects pertaining to invasive species, including SETL, which seeks to detect IAS. • Exotic species policy The Ministry will make an extra 1 million euros available for the invasive exotic species network. Invasive exotic species can displace native species and so form a threat to biodiversity. The network identifies new exotic plant and animal species and carries out risk analyses.³ • International Policy Programme on Biodiversity (BBI; 2002 - 2005) focuses on three priority programme components for the coming five years, including the reduction of negative impacts of Dutch actions on biodiversity in other countries.⁴ • Halting Biodiversity Loss in the Netherlands: Evaluation of Progress New species enter the Netherlands because of new water connections and international transport routes. A well documented example is the Danube-Rhine canal that connects the Danube and Rhine fauna and flora. Nowadays, alien species outnumber the original species in the large Dutch rivers. The native species still occur, and it is not clear yet to what extent alien species are invasive and replace native ones. On land, at least 145 plant species settled in the Netherlands, most in urban regions. • In 1981, the Netherlands Plant Protection Service carried out a study to determine the number of non-native plant species in the Netherlands and to estimate their invasiveness. A total of 1171 non-native plant species was identified. Only one species was considered 'invasive' (Rotteveel 1981—see reference 6). • Based on a survey amongst experts conducted by the National

	<p>Museum of Natural History, a comprehensive assessment has been published of the numbers of wild animal species, including aliens, occurring in the Netherlands in the 1900-1995 period. Of the 25,215 animal species, approximately 772 were alien animal species, including 178 bird species considered 'alien' as their presence had been rare or irregular (Koomen <i>et al.</i> 1995—see reference 6).</p> <ul style="list-style-type: none"> • Based on a survey amongst experts conducted by the Department of Marine Biology of the University of Groningen, an assessment has been made of the number of alien marine species occurring in the Dutch territorial waters in the period from 1750 to present. Approximately 100 species were labelled 'alien' (W.J. Wolff, personal communication 2001—see reference 6). • The Dutch Foundation for Applied Water Research (STOWA) reports that several alien fresh water plant species have caused problems in the Netherlands, including <i>Elodea nuttallii</i> (from 1948) and <i>Lemna minuta</i> (from 1988). STOWA also systematically follows the reported distribution of the alien fresh water plant <i>Hydrocotyle ranunculoides</i>.⁶ • The Netherlands Institute for Fisheries Research (RIVO) systematically surveys fish species, if found present, including aliens, in fresh and marine Dutch national waters. RIVO also surveys benthic species, if found present, including aliens, in marine Dutch national waters.⁶ • 13 NGOs united in the VOFF, the umbrella organization of Dutch species survey NGOs, have scheduled extensive field surveys in the Netherlands with regard to the following species groups, generally, if found present, including aliens: <ul style="list-style-type: none"> - mosses, lichens, macrofungi, higher plants, - mammals, birds, reptiles, amphibians, fresh water fishes, - butterflies, moths, micro moths, dragonflies, crickets and grasshoppers, hover flies, carabid beetles, bees, - soil fauna (woodlice, centipedes and millipedes), - fresh water molluscs (gastropods and bivalves), - marine organisms (> 0.5 cm), i.e.: sponges, cnidarians (scyphozoans hydrozoans), ctenophores, sea anemones, various groups of worms, molluscs (gastropods, bivalves, cephalopods), crustaceans (crabs, lobsters, hermit crabs, shrimps, ghost crabs, cirripedes), echinoderms (asteroids, ophiuroids, echinoids), bryozoans, sea squirts, fishes.⁶
Human health	<ul style="list-style-type: none"> • In a monitoring program from 1999, the National Institute of Public Health and the Environment (RIVM) systematically surveys the following groups of soil species, if found present, including aliens, in various soil habitats: bacteria, nematodes, earthworms, enchytraeids, mites, and springtails.⁶
Economic	<ul style="list-style-type: none"> •

Table 2 Actions on IAS in cooperation with other countries

Agreement/ Organization	Countries/ Member	Action
the Marine Environment of the North-East Atlantic (OSPAR Commission)		<p>With regard to marine alien species, discussion on potential projects is under way, i.e., within the Convention for the Protection of the Marine Environment of the North-East Atlantic (“OSPAR Convention”), the prevention of the introduction of aliens through ballast water will be discussed (regional approach).⁶</p> <p>OSPAR is implementing a suite of five thematic strategies to address the main threats that it has identified: the Biodiversity and Ecosystem Strategy, the Eutrophication Strategy, the Hazardous Substances Strategy, the Offshore Industry Strategy and the Radioactive Substances Strategy. The Strategy for the Joint Assessment and Monitoring Programme assesses the status of the marine environment and follows up implementation of the strategies and the resulting benefits to the marine environment.⁷</p>
the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention)		<p>The Netherlands participate in the Expert Group on Legal Aspects of the Introduction and Reintroduction of Wildlife Species. This expert group has been set up by the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats (Council of Europe/ Bern Convention). The Standing Committee of the Bern Convention has adopted Recommendation no. 57 (adopted on 5 December 1997) on the introduction of organisms belonging to non-native species into the environment, Recommendation no. 58 (adopted on 5 December 1997) on the reintroduction of organisms in the environment, and Recommendation no. 77 (adopted on 3 December 1999) on the eradication of non-native terrestrial vertebrates.⁶</p>
Ontario and Netherlands Partner on Environment	Province of Ontario in Canada and the Netherlands	<p>Ontario and the Netherlands have signed a Memorandum of Understanding on environmental cooperation. The two jurisdictions will tackle issues of polluted air, land and water, look for ways to reduce human impact on the natural environment and share environmental information, experience</p>

		and technologies. This year, they will focus on climate change, waste management, soil remediation and source water protection. For 2010, they have agreed to address sustainable water use through water conservation and efficiency, urban and regional planning, clean energy and transboundary and regional air pollution. [Does not directly mention IAS]
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References

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