

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

Argentina's Actions on IAS

Description²⁶

Argentina, officially the Argentine Republic, is a country in South America, constituted as a federation of 23 provinces and an autonomous city with a total population of about 40.482 million. It is the second largest country in South America by land area, and eighth in the world. Its continental area is 2,766,890 km², between the Andes mountain range in the west and the southern Atlantic Ocean in the east and south. Argentina borders Paraguay and Bolivia to the north, Brazil and Uruguay to the northeast, and Chile to the west and south.

In 1816, the United Provinces of the Rio Plata declared their independence from Spain. The country's population and culture were heavily shaped by immigrants from throughout Europe, but most particularly Italy and Spain, which provided the largest percentage of newcomers from 1860 to 1930. After World War II, an era of authoritarian rule was followed by a military junta that took power in 1976. Democracy returned in 1983, and has persisted despite numerous challenges, the most formidable of which was a severe economic crisis in 2001-02 that led to violent public protests and the resignation of several interim presidents. The economy has since recovered strongly.

Overview of Biodiversity

The Republic of Argentina is classified as one of the world's "megadiverse" countries. Argentina boasts some of the best varieties of ecosystems in the world: 15 continental zones, 3 oceanic zones and the Antarctic region are all represented in its territory. This diversity of ecosystems has led to large species diversity: 9,000 vascular plant species (30% endemics) and 2,380 vertebrate species of which there are 38 endemic species of mammals and 19 endemic species of birds.

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

Legislation relating to IAS

- Resolution no. 376/1997 (May 14, 1997): all introductions of alien species to the country shall first be subjected to an environmental impact assessment to be delivered to the Department Of Fish and Wildlife.⁵
- Resolution SAGPy A no. 987/97: declares that "(i)mported [aquatic] organisms cannot be transferred to another hatchery without authorization" and where import certificates are concerned: "Definitive Certificate is granted after the Enforcement Authority controlled the development of the activity. If the Definitive Certificate is not granted, the specimens of those species must be eradicated."⁶
- Resolution no. 974/1998 (Nov. 12, 1998): declares *Sturnus vulgaris* (mackerel pinto) and *Acridotheres cristatellus* (mackerel crested) as harmful and authorizes the Department of

Fish and Wildlife Services to Coordinate with the Health and Agricultural Quality as well as provincial authorities responsible for wildlife actions aimed at the eradication of said species.⁷

- Resolution no. 1314/2004 (Dec. 27, 2004): establishes a National Register of all aquaculture establishments (both commercial and recreational) that all cultivators of fish and other aquaculture have to register for and provide structural and technical information related to the site's quarantining capacity, water intake and outflow, as well as production figures.⁹
- Law 22.351, Resolutions APN 16/94, 17/94, and 106/95 enable the Authority to "permit hunting and fishing whenever there are biological, scientific, or technical reasons. Both activities can be used for control and eradication."⁶
- Law 22421 (March 5, 1981) Article 22 states that the national executive authority of this Act shall cooperate with international organizations in the protection of wildlife and will work to implement international agreements pertaining to wildlife protection.²
- Law 22, 344 (December 1, 1980) outlines Argentina's subscription to the CITES treaty.³
- Decree 666/97 (July 18, 1997) defines the authority of the Secretary of Natural Resources and Sustainable Development to protect wildlife and enforce pertinent laws, including the adoption of measures to prevent the accidental release of IAS.⁴
- Senasa Resolution 117/02 and its amendment 1052-02 provides a methodology for approving the importations of live animals and animal parts.²³
- Law 2.268, Law 4.084, Regulatory decree 4.238/68 outline Quarantine measures for sanitary control.⁶
- Resolution no. 1269/04 proclaims the National Program to eliminate *Carpocapsa*.⁷
- Resolution no. 157/03 (October 31, 2003) outlines the requirements for nursery plant palm trees destined export, including that each copy should be subjected to phytosanitary treatments for a period of 6 months prior to export at a rate of one per month.⁸
- Resolution no 47/2007 (Aug. 3, 2007) creates the National Advisory Committee on Pest Resistance whose functions include advising, monitoring, and detection of pests; proposing standards and management measures; coordinating effective and integrated pest resistance; and suggesting lines of inquiry.¹⁴
- Resolution no. 312/2007 (Nov. 1, 2007) establishes the National Register of Phytosanitary Operators of Propagation Material and Micropropagation to prevent the spread of pests in Argentina. Registry is mandatory for all operators who propagate, domesticate, cultivate, import or export plants or their parts.¹⁵

Government Agencies/Programs/Ministries dealing with IAS

- Department of Fish and Wildlife
- Health and Agricultural Quality
- [Secretariat of Environment and Sustainable Development](#)
 - [Protected Areas working Group](#)

Major Invasive Alien Species¹

[Acacia melanoxylon](#) (tree)

[Aedes albopictus](#) (insect)

[Ambrosia artemisiifolia](#) (herb)

[Anthonomus grandis](#) (insect)

[Axis axis](#) (mammal)

[Bubulcus ibis](#) (bird)

[Bugula neritina](#) (bryozoan)
[Carassius auratus](#) (fish)
[Castor canadensis](#) (mammal)
[Centaurea biebersteinii](#) (herb)
[Ceratitix capitata](#) (insect)
[Cervus elaphus](#) (mammal)
[Columba livia](#) (bird)
[Corbicula fluminea](#) (mollusc)
[Gambusia affinis](#) (fish)
[Harmonia axyridis](#) (insect)

[Ligustrum sinense](#) (tree, shrub)
[Lonicera japonica](#) (vine, climber)
[Melia azedarach](#) (tree, shrub)
[Mustela vison](#) (mammal)
[Oncorhynchus mykiss](#) (fish)
[Pinus spp.](#) (tree)
[Ricinus communis](#) (tree, shrub)
[Sagittaria sagittifolia](#) (aquatic plant)
[Salvelinus fontinalis](#) (fish)
[Tradescantia fluminensis](#) (herb)

Native Species Exported/Introduced to Non-Native Environments¹

[Alternanthera philoxeroides](#) (aquatic plant, herb)
[Bidens pilosa](#) (herb)
[Boa constrictor imperator](#) (reptile)
[Caiman crocodilus](#) (reptile)
[Cedrela odorata](#) (tree, shrub)
[Chromolaena odorata](#) (herb)
[Cortaderia jubata](#) (grass)
[Linepithema humile](#) (insect)
[Ludwigia peruviana](#) (aquatic plant)
[Macfadyena unguis-cati](#) (vine, climber)

[Miconia calvescens](#) (tree)
[Molothrus bonariensis](#) (bird)
[Myiopsitta monachus](#) (bird)
[Myocastor coypus](#) (mammal)
[Piper aduncum](#) (tree, shrub)
[Pomacea canaliculata](#) (mollusc)
[Prosopis spp.](#) (tree, shrub)
[Solanum sisymbriifolium](#) (herb)
[Solanum viarum](#) (shrub)
[Solenopsis richteri](#) (insect)
[Verbena brasiliensis](#) (herb)

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 National Biodiversity Strategy (Jan. 27, 2003) devotes one section (VIII) to the various goals towards countering IAS, including: <ol style="list-style-type: none"> 1. Prevention (develop strategies to quarantine, monitor accidental introductions of IAS) 2. Regulation (amend existing legislation towards the more restrictive; create legislation towards restitution of all legal persons responsible for introductions) 3. Establish a political consensus around the issue (coordinate with regional bodies on legislation and other mechanisms towards countering invasions; create awareness; promote the use of native species in sectors of the economy where IAS is prominent.) 4. Establish mechanisms for early detection.⁸ • Argentina currently has 17 Ramsar sites, totaling 4,087,201

	<p>hectares.¹⁷</p> <ul style="list-style-type: none"> • One of the most biodiverse Ramsar sites within Argentina, The Reserva Natural Otamendi, is threatened by the invasion of exotic flora and fauna, however there is currently a five-year management plan in place to mitigate the threats posed by invasive species as well as other problems.¹⁷ • National program of Eradication and Control of Exotic Species under the Secretariat of Environment and Sustainable Development • Workshop on “The Problem of Alien Species and Marine Biodiversity” consisted of an overview of introductions of IAS, with an emphasis on those originating from ballast water. Ballast water regulations were examined, as well as the patterns of dispersal of various IAS. The participants were divided into groups that then made recommendations, including the ratification of the Ballast Water Convention and a permanent fund to manage and research IAS.¹⁰ • Capacity-building project (July 1992 – June 1993) to “provide a comprehensive training on commodity treatments (heat, cold, biological, chemical irradiation) to satisfy quarantine regulations in major importing countries and to facilitate wider trade in fresh fruits and vegetables from developing countries.”¹¹ • The government of Argentina took part in a project for the ‘Harmonization and Coordinating of the Requirement and Procedures for the Control of Pesticides’ which aimed to provide support to Southern Cone governments to harmonize their requirements and procedures for registering pesticides.¹⁸ • The government of Argentina took part in a technical project for commodity treatment to satisfy quarantine regulations; the objective was to provide training on commodity treatments (heat, cold, biological, chemical irradiation) to satisfy quarantine regulations in major importing countries and to facilitate wider trade in fresh fruits and vegetables from developing countries.¹⁸ • A program has been implemented to protect Pome fruits from <i>Cydia pomonella</i> and to prevent its spread through Argentina and into Chile.¹⁹ • There is a National Program for the Control and Eradication of Fruit Flies which focuses on two species of fruit flies: The Mediterranean fruit fly, <i>Ceratitidis capitata</i>, which is originally from Africa and the South American fruit fly, <i>Anastrepha fraterculus</i>, which is native to the Neotropical region; the program consists of monitoring and detection of the pest as well as cultural and chemical control.²⁰ • National Program for the Prevention and Eradication of Cotton Weevils: the program consists of monitoring, eradication, quarantine control and training and involves partnerships with Brazil, Bolivia and Paraguay.²¹ • National Program for Silvicultural Health which aims to improve
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	<p>forest health; the program involves various aspects targeting forest pests, working towards their eradication and the control of their spread.²²</p> <ul style="list-style-type: none"> • Inter-American Biodiversity Information Network: Invasives Information Network (I3N) integrates information from Western Hemisphere countries to support the detection and management of invasive alien species. I3N provides capacity building, electronic tools, and support for database development and increased access to information. The technology for this Web site was developed by the National University of the South (Argentina) with the collaboration of the Horus Institute (Brazil) and the support of United States Geological Survey (USGS) and the National Biological Information Infrastructure (NBII) and The Nature Conservancy (TNC).²⁶ • The Database on Biological Invasions in Argentina is sponsored by I3N.
Human health	<ul style="list-style-type: none"> • There have been controls on the import of live animals, their reproductive material and products of animal origin, as well as goods that contain them since 1990.²³ • Program of Fish Diseases which includes a plan of action for the control and eradication of diseases that affect aquatic animals.^{XXIV} • Each province has specific entry requirements for Apiary imports under the Disease Program of Bees which can be found at http://www.senasa.gov.ar/contenido.php?to=n&in=864&io=8426

Table 2 Actions on IAS in cooperation with other countries

Agreement/ Organization	Countries/ Member	Action
Proceedings of the Argentinean—Chilean cooperation in relation to the invasive species the Canadian Beaver and its handling in South America	Chile	<ul style="list-style-type: none"> • Three goals: <ul style="list-style-type: none"> - Elimination of the sources of invasion across the continent - Contingency plan against the reinvasion of the sources of invasion - Eradication of the species in archipelago Fuegoino • Plan of Action includes the establishment of an Control Program (including eradication) • Publication of the document “Estrategia binacional para la erradicación del castor de la Patagonia Austral”

Case Study

[LA AMENAZA DE LAS ESPECIES EXÓTICAS PARA LA CONSERVACIÓN DE LA BIODIVERSIDAD SURAMERICANA](#)

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Summary

The challenge posed by exotic species to the conservation of South American biodiversity is described. First, examples are given of the effect of exotic species on human health, economic well-being, ecosystem function, and the survival of native species. Next, some general characteristics of biological invasions and their main global geographical patterns are presented. The final section is an analysis of the impact of exotic species on South American animals. Prior research suggests that aliens are a relatively minor threat, especially when compared to the impact of overexploitation and habitat conversion. Given that the connection of North and South America, 3 million years ago, led to a massive biotic exchange between these two landmasses, those taxa whose participation in the exchange was minor, such as continental fishes and amphibians, lack prior exposure to exotic species and should be more sensitive to the current wave of invasions. The results discussed agree with this hypothesis and identify the aquatic communities of the Andes as priority ecosystems for future research.

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