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

South Africa's Actions on IAS

Description[3]

The Republic South Africa celebrates Freedom Day, April 27, to mark the date of their first multi-racial inclusive democratic elections in 1994. A country of over 1.2 million square km, and nearly 50 million people, South Africa is situated on the southern-most tip of the continent, and shares borders with Namibia, Botswana, Zimbabwe, and Tanzania to the north, as well as Lesotho and Swaziland, the latter two being located within South Africa's national boundaries. It also possesses a coastline 2,800 km long. Despite making long strides since the end of Apartheid and becoming a major political player in the continent, South Africa has suffered from high rates of HIV infection.

South Africa's main trading partners include the U.S., Germany, and China. Its main exports consist of gold, diamonds, platinum, other minerals, and machinery. It imports primarily chemicals, petroleum products, scientific instruments, and foodstuffs. South Africa plays a leading role in a number of regional organizations, including the Southern African Customs Union and the Southern African Development Community Free Trade Agreement.

Overview of Biodiversity

South Africa occupies only 2% of the world's surface area but is home to nearly 10% of the world's plants (approximately 24 000 species), around 7% of the world's vertebrate species, and 5.5% of the world's known insect species (only about half of the latter have been described). In terms of the number of endemic species of mammals, birds, reptiles and amphibians, South Africa ranks as the fifth richest country in Africa and the 24th richest in the world.

- CBD Country Profile
- Earth Trends Country Profile on Biodiversity and Protected Areas
- University of Western Cape Biodiversity in South Africa Web Page
- South Africa National Biodiversity Institute (SANBI)

Legislation relating to IAS

- Biodiversity Act of 2004
- Agricultural Pests Act (36/1983) "provides measures to prevent infectious diseases and to regulate the use of pathogens. An Executive Officer may enter upon any land, building or vehicle if he suspects that controlled goods are in use. The Officer may also inspect any document, book and demand explanations. The Officer may also seize anything that may serve as evidence and quarantine an area to determine a user's compliance with Act No. 36."[2]
- Animal Diseases Act (35/1984)
- The Conservation of Agricultural Resources Act (43/1983)
- National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)—see case study

Government Agencies/Departments/Ministries dealing with IAS

- Department of Water Affairs and Forestry
- Department of Environmental Affairs and Tourism
- Department of Agriculture
- National Plant Protection Organization (issues import and export permits, offers quarantine services, and delivers awareness programmes, among other plant-health related measures)
- The South African National Biodiversity Institute (SANBI)
- National Environmental Management Act (1998) (Act No 107 of 1998)

Major Invasive Alien Species [1]

Caesalpinia decapetala (tree, shrub)
Canna indica (herb)
Carcinus maenas (crustacean)
Cedrela odorata (tree, shrub)
Chromolaena odorata (herb)
Hypericum perforatum (herb)
Ligustrum lucidum (tree)
Opuntia stricta (shrub)
Oreochromis aureus (fish)
Pittosporum undulatum (tree, shrub)
Salvinia molesta (aquatic plant, herb)
Sciurus carolinensis (mammal)
Solanum mauritianum (tree, shrub)
Technomyrmex albipes (insect)

Native Species Exported/Introduced[1]

Chrysanthemoides monilifera (herb)
Commelina benghalensis (herb)
Delairea odorata (vine, climber)
Lagarosiphon major (aquatic plant)
Perna perna (mollusc)
Ricinus communis (tree, shrub)
Senecio inaequidens (shrub)
Trapa natans (aquatic plant)

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	• The South African National Biodiversity Institute was established on 1 September 2004 through the signing into force of the National Environmental Management: Biodiversity Act 10 of 2004 by President Thabo Mbeki. The Act expanded the mandate of SANBI's forerunner, the National Botanical Institute to include responsibilities relating to the full diversity of South Africa's fauna and flora, and built on the internationally respected programmes in conservation, research, education and visitor services developed over the past century by the National Botanical Institute. This is SANBI. • The relatively new Threatened Biodviersity Research Programme of SANBI examines, *inter alia*, alien invasions as a recognized threat

	to the biodiversity of South Africa. Alien invasion is extensive and locally severe, but varies considerably between biomes and ecosystems. Research is divided along two lines; threaten species and threatened ecosystems. • SANBI has drafted an Alien Invasive Species Lists • Global Change Research Group: The SANBI has been commissioned by the IUCN funded Southern African Development Community Biodiversity Support Program (SABSP) to: 1. Compile a roster of experts implicated directly, circuitously and historically in the management and control of and research on floral and faunal species of alien invasive organisms in South Africa 2. Assemble a comprehensive bibliography of contemporary and former published and unpublished scientific and popular literature pertaining to floral and faunal species of alien invasive organisms in South Africa • Charles Griffiths and Jenny Day of the University of Cape Town, South Africa, presented "Aquatic invasive species in South Africa—impacts and management" which centered on environmental impacts and management of half a dozen non-native species and proposes research for 2005. • National Department of Agriculture's Environmental Implementation Plan (June 2001) includes a section on "Plant Health and Quality": That all regulated actions be technically justified and that the release of exotic organisms and potentially invasive plant species into the environment only be done after wide consultation of all the relevant stake holders. • "[I]ncreased funding made available to the Working for Water Programme over the past several years. The budget for the Working for Water Programme increased steadily from R25 million in 1995/6 to R442 million in 2003/4. Of this, more than R250 million has been invested in national parks and more than 1 million hectares of land has been cleared of invasive alien plants…. [The] Programme focuses on a priority list of 27 woody species. In addition to mechanical removal and chemical control, South Africa is conducting research into biocontrol methods."[2]
Economic	• Environmental Implementation Plans and Environmental Management Plans Under Section 15(1) of the National Environmental Management Act, 1998, by the Department of Defense (March 2008): aims to eradicate IAS on military sites and reduce or eliminate the introduction of non-native species into South Africa by military vessels or vectors.

Table 2 Actions on IAS in cooperation with other countries

Agreement/	Countries/	Action

Organization	Member	
New Partnership for Africa's Development (NEPAD)	African states	The Action Plan for the Environment Initiative, which includes management of invasives, held a thematic workshop on IAS in Pretoria, South Africa in January, 2003.

Case Study

The Inception and Role of International Environmental Law in Domestic Biodiversity

Louis J. Kotze and Anel Du Plessis

QUT Law & Justice Journal (2006) (Queensland University of Technology)[4]

Introduction

South Africa is internationally renowned for its rich biodiversity heritage that comprises, amongst others, many endemic animals and birds, an abundance of marine biodiversity and a large diversity of flora populations.[1] These biodiversity resources are however under continual threat of exploitation and extinction. Moreover, South Africa is in the process of social, developmental and economical reconstruction and upliftment. These considerations may place an additional burden on biodiversity resources if the developmental needs of society are not balanced harmoniously with the conservation needs of the environment in general, and biodiversity resources in particular.

Having noted this, the South African government recently enacted the *National Environmental Management: Biodiversity* Act 10 of 2004 (the '*NEMBA*'). The Act is currently the main legal platform on which biodiversity conservation is based in South Africa. The NEMBA specifically provides for management and conservation of South Africa's biodiversity within the framework of the *National Environmental Management Act* 107 of 1998 (the '*NEMA*').[2] It also provides for the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; and the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources.[3]

[...]

Section F *The South African National Biodiversity Institute*

Section 10 of the NEMBA establishes the SANBI. Various tasks are assigned to the Institute. These include, amongst others: regular monitoring and reporting on the status of South Africa's biodiversity; the conservation status of all listed threatened or protected species and listed ecosystems; and the status of all listed **invasive species**.[82] [...]The Institute must further: establish, maintain, protect and preserve collections of plants in national botanical gardens and in herbaria; establish, maintain, protect and preserve collections of animals and micro-organisms in

appropriate enclosures; and collect, generate, process, coordinate and disseminate information about biodiversity and the sustainable use of indigenous biological resources, and establish and maintain databases in this regard.[85]

[...]

Section L *Species and Organisms Posing Potential Threats to Biodiversity*

Chapter 5 of the NEMBA aims to regulate: the prevention of unauthorised introduction and spread of alien and **invasive species** to ecosystems and habitats where they do not naturally occur; management and control of alien and **invasive species** to prevent and minimise harm to the environment and to biodiversity in particular; and the eradication of alien and **invasive species** from ecosystems and habitats where they may harm such ecosystems or habitats.[116] This chapter also aims to ensure that environmental assessments, for purposes of permits in terms of national environmental legislation, are conducted. It is required by chapter 5 that environmental impact assessments be conducted prior to any authorisation relating to species and organisms posing potential threats to biodiversity are issued. Section 64 states, for example, that a permit in terms of the GMOA will only be issued insofar as an environmental assessment, provided for in chapter 5 of the NEMBA, has been conducted. Chapter 5 requires that environmental impact assessments be conducted prior to any authorisation, relating to species and organisms posing potential threats to biodiversity, being issued. Section 64 states, for example, that a permit in terms of the GMOA will only be issued insofar as an environmental assessment, provided for in ch 5 of the NEMBA, has been conducted. Subsequent provisions in the chapter regulate: restricted activities involving alien species;[117] a general duty of care relating to alien species;[118] restricted activities involving listed **invasive species**;[119] and other threats such as GMOs.[120]

Chapter 5 of the NEMBA specifically addresses South Africa's international obligations on: special protection of animal and plant species that are threatened with extinction; protection of listed species in terms of CITES; and *in situ* and *ex situ* conservation measures. These are distilled from, *inter alia*, arts 3, 8, 9, 10 of the CBD;[121] and art VIII of CITES.[122]

[…]

Section N *The Permit System in Terms of the NEMBA*

The provisions on bioprospecting, access, and benefit-sharing must be read with the provisions of ch 7. Chapter 7 of the NEMBA aims to provide for "command-and-control" type regulation relating to biodiversity resources in the form of a permit system. The permit system further aims to regulate permits authorising restricted activities involving: specimens of listed threatened, or protected, species;[130] alien species;[131] and listed **invasive species**.[132] It also deals with: authorisation of activities regulated in terms of a notice published under s 57(2);[133] bioprospecting involving indigenous biological resources;[134] and the export of indigenous biological resources for bioprospecting or any other type of research.[135] The remainder of ch 7 deals with procedural and substantive aspects of permits. These include: the permit application procedure; risk assessments and expert evidence; the content of permits; additional requirements

relating to alien and **invasive species;** the issuance of integrated permits; the cancellation of permits; and appeals.[136]

[…]

Relevant footnote with no link in the above text

[87] Article XI(1) requires parties to designate one or more management authorities competent to grant permits or certificates on behalf of the party, as well as one or more scientific authorities. Although s 60 of the NEMBA provides for the establishment of a scientific authority, no explicit provision is made for the establishment of a management authority. The Act does refer to a 'competent authority' and 'issuing authority' which means the Minister, any organ of state in the national, provincial or local sphere of government designated by regulation as a competent authority for the control of an alien species or a listed **invasive species** in terms of the Act, or any other organ of state that may arguably include the SANBI. See in this regard ss 1 and 97.

References

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