

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

Zimbabwe's Action on IAS

Description⁷

Zimbabwe, officially the Republic of Zimbabwe and formerly Southern Rhodesia, is a landlocked country located in the southern part of the continent of Africa, between the Zambezi and Limpopo rivers. It is bordered by South Africa to the south, Botswana to the southwest, Zambia to the northwest and Mozambique to the east. The climate is tropical; moderated by altitude; rainy season (November to March). The terrain is mostly high plateau with higher central plateau (high veld); mountains in east. It has a population of 11.3 million; about 44% are 14 years of age or under. Zimbabwe has three official languages: English, Shona (a Bantu language), and Ndebele.

In 1965 the government unilaterally declared its independence, but the UK did not recognize the act; UN sanctions and a guerrilla uprising finally led to free elections in 1979 and independence (as Zimbabwe) in 1980. Robert MUGABE, the nation's first prime minister, has been the country's only ruler (as president since 1987) and has dominated the country's political system since independence. His chaotic land redistribution campaign, which began in 2000, caused an exodus of white farmers, crippled the economy, and ushered in widespread shortages of basic commodities. Basically, the government of Zimbabwe faces a wide variety of difficult economic problems as it struggles with an unsustainable fiscal deficit, an overvalued official exchange rate, hyperinflation, and bare store shelves.

Overview of Biodiversity

Zimbabwe is characterised by three phytogeographic regions, the Zambesian, the Afromontane and the East African coastal. The Zambesian region covers over 95% of the country. The Eastern Highlands form part of the Afromontane region and have the highest level of endemism, notably in the Chimanimani Mountains. The Zambesian phytogeographic region comprises five woodland types – miombo, mopane, teak, acacia and Terminalia/Combretum. Many tree species in these woodlands are economically important and are used for timber, poles, firewood, fruit and medicines. The total flora of Zimbabwe comprises 5930 taxa.

- [Convention on Biological Diversity: Country Profile](#)
- [Earth Trends Country Profile on Biodiversity and Protected Areas](#)

Legislation relating to IAS²

- EMA (CAP 20:27)
- Forestry Act CAP 19:05
- Parks and Wildlife Act
- The Control of Goods Act ([Chapter 14:05](#))

Government Agencies/Programs dealing with IAS³

- [Ministry of Environment & Tourism](#)
 - Parks and Wildlife Authority
- [Ministry of Agriculture, Mechanization & Irrigation Development](#)
- [Ministry of Transport & Communication](#)
- [Ministry of Lands & Rural Resettlement](#)
- [Ministry of Water Resources and Development](#)
 - Zimbabwe's National Water Authority
- [Ministry of Science & Technology Development](#)

Major Invasive Alien Species^{1&8}

Acacia mearnsii (tree, shrub)	Psidium cattlensis (tree)
Acacia nilotica (tree)	Psidium guajava (tree, shrub)
Dichostrychus cinerea (tree)	Rubus niveus (shrub)
Eichhornia crassipes (aquatic plant)	Salvelinus fontinalis (fish)
Lantana camara (shrub)	Salvinia molesta (aquatic plant, herb)
Micropterus salmoides (fish)	Tinca tinca (fish)
Oreochromis spp. (fish)	Trogoderma granarium (insect)
Pinus patula (tree)	

Major Exported Species¹

Cardiospermum grandiflorum (vine, climber)	Oreochromis mossambicus (fish)
Commelina benghalensis (herb)	Pennisetum ciliare (grass)
Lagarosiphon major (aquatic plant)	Pennisetum polystachion (grass)
	Rottboellia cochinchinensis (grass)

Table 1 Action to prevent, detect and management invasive alien species based on three areas: biodiversity, human health, and economic

Note: Many actions including projects, publications and programs that fit into one area may also fit the dimensions of another; where available project links and funding (in brackets) is provided.

Area	Action
Biodiversity	<ul style="list-style-type: none"> • Zimbabwe's Third National Report to the Convention on Biological Diversity states some examples to eradicate / control / manage invasive Alien species that are in place: <ul style="list-style-type: none"> - Department of Natural Resources have a programme of controlling <i>Lantana camara</i>. - The Parks and Wildlife Authority and Zimbabwe National Water Authority (ZINWA) have plans to control the spread of Water hyacinth (<i>Eichhornia crassipes</i>) in Lake Chivero - The Parks and Wildlife Authority are removing Wattle and Pine trees in Nyanga National Park Kariba weed (<i>Salvinia molesta</i>) being removed with cooperation between Zambia fisheries and

	<p>The Parks and Wildlife Authority</p> <ul style="list-style-type: none"> - Environment Africa and Mukuvisi Woodlands are working on the Mukuvisi River in Harare.² • Zimbabwe’s Third National Report also states that although management plans are in place to remove / control IAS, the lack of resources and appropriate technology has led to failure in setting up national targets. The Parks and Wildlife Authority has under funded research projects in their Estates.² • Zimbabwe’s Biodiversity Strategy and Action Plan states that exotic species introduced for commercial or ornamental purposes have escaped from target areas and replaced the original tree biodiversity. Exotic plantations occupy about 156 000ha of which over 90% is in the eastern districts. Specific examples are <i>Acacia mearnsii</i> in the eastern highlands, <i>Pinus patula</i> in the Nyanga National Park and <i>Psidium cattlensis</i> in Chirinda Forest. Some indigenous species such as <i>Acacia nilotica</i> and <i>Dichostrychus cinerea</i> have been reported to invade degraded sites and pasture lands swamping the natural vegetation.⁸
Human health	<ul style="list-style-type: none"> •
Economic	<ul style="list-style-type: none"> • Zimbabwe’s Third National Report to the CBD report cites the Control of Goods Act (Chapter 14:05) that aims to control the import of IAS. The Act itself outlines the capacity of the President of Zimbabwe to regulate the import and export of goods (including species of flora and fauna), and financial penalties that may be delivered “for the effectual exercise” of these regulations. A permit is required for the import/export of animal and plant products, issued once “the applicant has satisfied the authorities that the plant/animal once imported will not find its way to the wild.” However, the report indicates that “(t)here is no capacity for strict monitoring” for this purpose.²

Table 2 Action on IAS in cooperation with other countries

Bilateral agreement/ Organization	Countries/ Member	Action
Intergovernmental Committee for the Control of the Water Hyacinth on Lake Kariba	Zimbabwe and Zambia	<p>Herbicide control measures using 2-4 D. The herbicide was used with various precautions to reduce its harmful effects “to negligible level” including:</p> <ol style="list-style-type: none"> a. maintaining its purity from the dioxin contaminant 2,4, 5T b. applying the herbicide away from sensitive waters c. Sampling and testing of water before, during, and after the spraying to asses the herbicidal effects on the environment

		<p>d. informing the public of the dates, and areas on which shall be sprayed in cooperation with two local councils.</p> <ul style="list-style-type: none"> - Public awareness campaigns. - Regular testing of water quality and aquatic species. - Introduction of the weevil <i>Neochetina eichhorniae</i> as an instrument of biological control.⁴
Committee for Inland Fisheries of African	Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Côte d'Ivoire, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritius, Niger, Nigeria, Rwanda Senegal, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe	<p>Fisheries Co-management on Lake Kariba: The riparian countries of Lake Kariba (Zambia and Zimbabwe) reported to the Committee about the results of a technical consultation on the Development and Management of Fisheries on Lake Kariba. The Committee noted that around Lake Kariba, Management was constrained by: inadequate funding for research and management, inadequate human resources, poor monitoring, control and surveillance, inadequate institutional capacity, absence of credit assistance to fishers, inadequate extension and fishery information delivery services, and weak linkages between fishery researchers, managers and stakeholders.⁹</p>

Case Studies

[Analysis of the Efficacy, Practicality and Cost of Various Tsetse and Trypanosomiasis Control Techniques in Zimbabwe](#)⁵

V. Chadenga

Introduction

The Branch of Tsetse and Trypanosomiasis Control (TTCB) in Zimbabwe's Department of Veterinary Services is tasked with organizing and implementing the permanent control of

trypanosomiasis, a disease transmitted by tsetse flies. Zimbabwe has an area of 390, 757 square kilometres of which almost half the country, some 180,000 square kilometres, can be occupied by tsetse flies if control measures are not undertaken and tsetse flies spread to their ecological limits (Fig I). Such a situation can put at risk a third of the national cattle herd, denying draught power and other benefits to a significant proportion of the country's population.

According to the agroecological survey of Zimbabwe by Vincent and Thomas (1962) about 240,000 square kilometres is not suited for growing crops due to erratic rainfall and poor retentive properties of the soils. The recommended land use in such areas is extensive livestock production, sometimes with production of drought-tolerant small grains. This being the case, the presence of tsetse becomes a major constraint to optimal exploitation of these areas.

The Government of Zimbabwe spends large sums of money on resettlement programmes to address the imbalance in land distribution, which was in existence for a long time. However, the presence of tsetse flies and the disease trypanosomiasis seriously affect Government efforts to make resettled farmers engage in productive and profitable farming. In view of this fact, the Branch's major objective of progressive tsetse eradication will have the effect of eliminating a major constraint on land use and enable farmers to optimise the use of a natural resource base within a policy framework in which the disease trypanosomiasis is not a major determinant.

Tsetse and trypanosomiasis control in Zimbabwe is characterised by remarkable achievements interrupted in the 70's by war which rendered control operations impossible.

Biodiversity and Planning Support Programme Zimbabwe Case Study⁶

Enos M. Shumba

Introduction

Zimbabwe is a developing country with a per capita income of US\$718 (in 1996) based on a total Gross Domestic Product (GDP) of Z\$85.5 billion (in nominal terms) and a total population of approximately 12.5 million. However, the GDP per capita has declined from US\$271 in 1980 to US\$201 in 1996 in real terms largely due to high inflation and the depreciation of the Zimbabwe dollar. The country's economy depends heavily on natural resources for generating employment, income and foreign exchange. The dominant sectors and their contribution to Zimbabwe's GDP in 1996 were as follows: manufacturing, 17%; agriculture, forestry and fishing, 18%; mining, 5%, and distribution, hotels and restaurants (which includes tourism), 18%.

The forestry sector contributes about 3% to the GDP largely from exotic plantations and commercial indigenous timber. However, this figure grossly misrepresents the contribution of forests and woodlands to the country's economy as most of their products and services are not captured in the national level statistics. Such a scenario partly explains why the forestry sector tends to get lower priority in terms of national resource allocation.

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