



Living in harmony with nature

Invasive Alien Species

Invasive alien species have devastating impacts on native biota, causing decline or even extinctions of native species, and negatively affecting ecosystems. Invasive alien species are animals, plants, fungi and microorganisms entered and established in the environment from outside of their natural habitat. They reproduce rapidly, out-compete native species for food, water and space, and are one of the main causes of global biodiversity loss. Species are often introduced deliberately, through for example, fish farming, pet trade, horticulture, biocontrol; or unintentionally, through such means as land and water transportation, travel, and scientific research.

The global economy, with increased transport of goods and travels, has facilitated the movement of live species over long distances and beyond natural boundaries. While only a small percentage of transported organisms become invasive, they have a tremendous impact on the health of plants, animals and even humans—threatening lives and affecting food security and ecosystem health. Their negative impact on the economy costs countries billions of dollars in losses to agricultural production and some trillion dollars of environmental cost worldwide annually. Once established, eradication is the most desirable solution, but it can be very expensive to do. Prevention is still the best answer.

The negative effects of invasive alien species on biodiversity can be intensified by climate change, habitat destruction and pollution. Isolated ecosystems such as islands are particularly affected. Loss of biodiversity will have major consequences on human well-being. This includes the decline of food diversity, leading to malnutrition, famine and disease, especially in developing countries. It will also have an important impact on our economy and culture.

The issue of invasive alien species is caused by human activities associated with international movement, but measures have to be taken at national and local levels. International cooperation can assist it. Prevention is the first step, but where the damage has been done, it can still be reversed if we all work together.



Convention on
Biological Diversity

www.cbd.int/invasive



Fast Facts

- ▶ Invasive alien species have since the 17th century contributed to nearly 40% of all animal extinctions for which the cause is known
- ▶ Annual environmental losses caused by introduced pests in the United States, United Kingdom, Australia, South Africa, India and Brazil have been calculated at over US\$ 100 billion
- ▶ Chytridiomycosis caused by the fungus *Batrachochytrium dendrobatidis*, pushed populations of amphibian species to decline and even go extinct in western North America, Central America, South America, eastern Australia, and Dominica and Montserrat in the Caribbean. The fungus caused sporadic deaths in some amphibian populations, with 100% mortality in others
- ▶ 80% of the threatened species in the Fynbos biome of South Africa are endangered due to invasions by alien species
- ▶ Invasive alien species can transform the structure and species composition of ecosystems by dominating the ecosystems and repressing or excluding native species
- ▶ Because invasive species are often one of a whole suite of factors affecting particular sites or ecosystems, it is not always easy to determine the proportion of their impact
- ▶ Major pathways of invasive alien species in aquatic environment are hull fouling and the release of ballast water from ships. Live bait for recreation fishing, escapes and releases from aquaculture or aquariums, are also serious problems

Learn More

International Plant Protection Convention ▶ www.ippc.int

Global Invasive Species Programme ▶ www.gisp.org

IUCN's Invasive Species Specialist Group ▶ www.issg.org

The Nature Conservancy ▶ www.nature.org/initiatives/invasivespecies

CAB International ▶ www.cabi.org

Global Invasive Species Database (GISD) of ISSG ▶ www.issg.org/database/welcome

World Organisation for Animal Health ▶ www.oie.org

Global Ballast Partnership ▶ <http://globallast.imo.org>

CITES ▶ www.cites.org

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