

WHAT ARE INVASIVE SPECIES

Invasive alien species are plants, animals, pathogens (agents that cause disease) and other organisms that are non-native to an ecosystem, which may cause economic or environmental harm or adversely affect human health. They impact adversely on biodiversity, resulting in the decline or elimination of native species - through competition, destruction, or transmission of pathogens - and the disruption of local ecosystems and ecosystem functions.

Invasive alien species, introduced and/or spread outside their natural habitats, have affected native biodiversity in almost every ecosystem type on earth and are one of the greatest threats to biodiversity. Since the 17th century, invasive alien species have contributed to nearly 40% of all animal extinctions.

The problem continues to grow at great socio-economic, health and ecological cost around the world. Invasive alien species worsen poverty and threaten development through their impact on agriculture, forestry, fisheries and natural systems, which are an important basis of peoples' livelihoods in developing countries. This damage is aggravated by climate change, pollution, habitat loss and human-induced disturbance.

ALIEN INVASIVE SPECIES IN ZIMBABWE

The following plant species are specified as invasive alien species in Zimbabwe and it's everyone's responsibility to clear any growing plant and report to EMA inspectors the occurrence of such plants in their properties.

Aquatic Species (Those found in water bodies)

Common Name	Botanic Name
Water hyacinth	<i>Eichhornia crassipes</i>
Kariba weed	<i>Salvinia molesta</i>
Azolla	<i>Pistiastratiotes</i>
Water lettuce	<i>Azollafiliculoides</i>
Water fern	<i>Salvinia auriculata</i>

Terrestrial Species (Those found on land)

Common Name	Botanic Name
Jointed cactus	<i>Opuntia Aurantiaca</i>
Moonflower cactus	<i>Harrisia martini</i>
Cactus rosea	<i>Opuntia fulgida</i>
Wild oats	<i>Avenafatua</i>
Dodder	<i>Cuscutaspp</i>
Cherry pie	<i>Lantana camara</i>

Invasive species are introduced through many means. Intentional introductions have often been for agricultural or ornamental purposes. Once introduced, some of these species escape their enclosures or cultivation and can become established as viable populations. Accidental introductions are usually the result of contaminated freight or movement of contaminated wood.

Are all exotic species invasive?

No, actually only a small percent of introduced species ever become invasive. However, it is nearly impossible to predict which species will become invasive and new species are introduced every day.

Some species are present for many years before they exhibit invasive characteristics. Many invasive species go through a "lag phase" in which their populations grow slowly until they reach a size large enough for the population to explode and/or become adapted to the local environment and become invasive.

What type of harm does an invasive cause?

- Since invasive species are in a new environment, free from natural predators, parasites, or competitors, they often develop large population size rapidly;
- These high populations can out-compete, displace or kill native species or can reduce wildlife food and habitat;
- Some also have the potential to disrupt vital ecosystem functions, such as water flow, nutrient cycling, or soil decomposition;
- Other invasive species cause massive amounts of economic damage to the agricultural business by destroying crops and contaminating produce;
- Some invasive species can cause direct harm to humans or domestic animals e.g. lantana camara and opuntia fulgida (commonly known as isiname in Gwanda where it is widespread);
- They propagate diseases;
- Competition between introduced and native species can lead to extinctions;
- Replaces indigenous vegetation and reduces the rich vegetation species or biodiversity; Some of the worst invaders that affect water bodies are: Kariba weed, water hyacinth, dodder and water fern. Many rivers and dams are clogged by these resulting in reduced flow of water in water bodies making irrigation difficult. They also affect aquatic life and disturb recreation activities in water bodies.
- Invasion of aquatic weeds are associated with a range of impacts on water quality. Dense mats of these weeds can impede water flow, which increases the rate of siltation in water bodies and inhibit diffusion of air into the water, resulting in lower concentrations of dissolved oxygen. Lower oxygen concentrations combined with the increased amounts of organic waste that collect beneath the floating plants limit light penetration thereby preventing the development of planktonic algal blooms a typical result of eutrophication e.g. invasion of *salvinia molesta* in lake Kariba.

What can be done to fight invasive species?

- The simplest and most important way to fight invasive species is to prevent its' introduction and establishment. Invasive organisms can easily be transported on living plants or fresh products such as fruit. Many pests can be found in recently killed plant material including firewood, lumber, and wooden packing material. Avoiding the long range movement of these materials is a simple way to slow the spread of pests.
- Spread the word; tell your neighbors if you see invasive species on their land.
- Volunteer with local authorities to control invasive species. Control of small infestations is more effective and economical than trying to control a well-established, rapidly spreading infestation.
- Curbing the disposal of raw sewage into water bodies.

What can you do?

- Cutting and burying the weeds in –situ. For example *the opuntia fulgida* is cut and buried in situ to prevent its spreading;

- Preventing streambank cultivation which results in fertilizers being washed into water bodies resulting in hyacinth bloom due to nutrient load;
- Clear any invasive alien species growing or occurring on their land;
- List and map all invasive alien species in their area;
- Find out how to control each invasive alien species;
- Draw up a report outlining an overall control plan (get specialist advice)and present it to your local authorities, **EMA or AGRITEX**;
- Report the occurrence of any invasive alien species in your area;
- Abide by the regulations regarding the importation of plant and animal material when returning from abroad and encourage friends to do so;
- Farmers should control weeds like *Lantana Camara* by mechanical means through clearing and destroying each plant. Simple and safe herbicides may be used.

DO NOT

- Move any aquatic plants or animals (including fish) from one water body to another- without written authorization from Parks and Wildlife Management Authority;
- Do not sell; offer any plant, seed or grain to spread the growth of invasive alien species.

Bin it, don't drop it -Keep Zimbabwe clean.

Please talk to us we are always ready to listen. Email: eep@ema.co.zw or 04 305543 / Toll free 08080028, sms/whatsapp 0779 777 094, Like our Facebook Page- Environmental Management Agency or follow us on Twitter @EMAeep.

Photos

Opuntia Fulgida, Lantana Camara and water hyacinth



