Exotic and Invasive Species

Published On: 29-09-2023

Why is in news? The Gujarat government has banned the planting of ornamental Conocarpus trees “in forest or non-forest areas”, citing their “adverse impacts on environment and human health”.

Why the state government has banned Conocarpus trees plantation?

Conocarpus, a fast-growing exotic mangrove species, had been a popular choice for increasing the green cover in Gujarat in recent years.

Research reports have **highlighted adverse impacts/ disadvantages** of this species on environment and human health.

Trees of this species flower in winter and spread pollen in nearby areas. It is learnt that this is **causing diseases** like cold, cough, asthma, allergy etc.

Roots of this species go deep inside the soil and develop extensively, damaging telecommunication lines, drainage lines and freshwater systems.

Also, the leaves of Conocarpus are **unpalatable to plant-eating animals**.

Other states experiences:

Conocarpus is **not the only plant species that has fallen out** of favour after widespread use.

In the past few years, **Delhi and Kerala** have tried to control the growth of non-indigenous trees that were harming the local environment and flora and fauna due to their abundance.

In **2018, the Delhi government** agreed to clear the capital’s green lungs, the Central Ridge, of the **Vilayati Kikar** after years of appeals and court cases by activists.

The Vilayati Kikar (Prosopis juliflora) is **not native to Delhi**, and was brought to the city in the 1930s by the British.

In **2016, the Madras High Court** too passed an interim order for the removal of these exotic trees as they were depleting the water table in areas already struggling for water.

In **Kerala’s case too**, it was the British who introduced the **Eucalyptus tree to Munnar**, so its wood could be used as fuel in tea plantation boilers. The state forest department stopped the cultivation of acacia and eucalyptus in forest tracts in 2018.

Difference between Exotic and invasive species:

Exotic and invasive species are two **types of non-native species**.

Non-native species can be found in a second ecosystem apart from the ecosystem they evolved from.

Non-native species **spread by natural process or human activities**. Most non-native or indigenous species are harmless. They are **called exotic species**.

When an **exotic species becomes harmful to the ecosystem**, it is called an **invasive species**.

The main difference between exotic and invasive species is that **exotic species is harmless to the ecosystem** whereas **invasive species is harmful to the ecosystem**.

Invasive species can be harmful the native habitats, natural areas such as lakes, forests, and rivers, agriculture, economy, and humans.

Threats:

It has a direct impact on **human health.** They have **potential threats to livestock health**.

Biological invasions are a **major threat to global food security and livelihoods**, with developing countries being the most susceptible.

The **biological invasion** could lead to changes to fire regimes, disease transmission to native species, forest loss, reduction in water flows, and habitat transformation, among others.

On average, **32% of the farmers' budget goes into the control of weeds**, which includes the regular spraying of insecticide and labour costs.

The widespread prevalence of Invasive Alien Species like Lantana Camara has reduced the proportion of natural grasses for herbivorous animals.

This has resulted in the movement of animals like the Indian gaur and the chinkara (Indian gazelle) from their natural habitats to human settlements, thus endangering them.

Significance:

Some of the species are not weeds but are **highly economic species**.

Though they are a weed, they are of **high medicinal value**, being a potent source of Vitamin D-3.

Such weed could be turned into a potential crop for the people living in the vicinity of the park to uplift their livelihood.

Conservation and propagation of the members of the Poaceae family in a very holistic manner will **help in countering the shrinking grasslands**.

Way Ahead:

A **comprehensive plan of action** for dealing with the menace of expansion of the species as well as regeneration of the invasive species at an alarming rate is needed.

The **permission should be granted** under the Section 17B of the **Indian Wildlife (Protection) Act, 1972** for experimental cutting, slashing, uprooting, and girdling of the invasive plants.