

Climate Change & Locust Infestations

Why in News

Infestation of <u>desert locusts</u>, which has plagued a vast swathe **from eastern Africa to India** in recent years, has been **closely linked to climate change.**

- In this context, the **Global Landscapes Forum Climate Hybrid Conference** has proposed that plans to mitigate climate change must include action against pests and diseases.
- The conference was recently held alongside the <u>26th Conference of Parties (CoP26)</u> to the <u>United Nations Framework Convention on Climate Change.</u>

Global Landscapes Forum

- The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the <u>Sustainable Development Goals</u> and <u>Paris Climate</u> <u>Agreement</u>.
- It is led by the Center for International Forestry Research (CIFOR), in collaboration with its co-founders <u>UNEP</u> and the <u>World Bank</u> and Charter Members.

Key Points

- Locust Attack and its Impact:
 - **About:** The **desert locust** (*Schistocerca gregaria*) is a short-horned grasshopper.
 - Harmless when solitary, locusts undergo a behavioural change when their population builds up rapidly.
 - They enter the 'gregarious phase' by forming huge swarms that can travel up to 150 km per day, eating up every bit of greenery on their way.
 - Impact: Locust infestations can harm livelihoods and be a threat to regional investments in ensuring food security.
 - According to the World Bank: In East Africa and Yemen alone, damages and losses in 2020 due to locusts could amount to as much as \$8.5 billion.
 - According to the <u>World Food Program</u>: The long-term response and recovery costs could top \$1billion if swarm growth is not controlled.
- Locust Breeding and Linkage With Climate Change:
 - **Affected Area:** Locusts have been a bane especially to farmers in several countries, including **India**, **Pakistan and Iran**.
 - **Effect of Climate Change**: Change in cyclonic patterns over the Arabian Sea is behind the locust invasions in east Africa, west and south Asia, in 2020.
 - Unusual rainfall in Iran helped in their breeding.
 - Locusts are known to be passive flyers and generally follow the wind.
 - Their movement has been aided by westerly winds, which were further strengthened by the low-pressure area created by **Cyclone Amphan** (2019) in the Bay of Bengal.

Areas Affected By Desert Locust



- Pesticide is Not the Appropriate Solution:
 - It said that heavy use of a **broad-spectrum pesticide may slow down the desert**locust invasion but they also exert significant external costs on the environment and human health.
 - They are a threat to pollinators and wildlife.
 - A broad-spectrum pesticide is a powerful pesticide that targets entire groups or species of organisms that are commonly harmful to plants.
 - According to the <u>Food and Agriculture Organization (FAO)</u>, by March 2021, 1.8 million litres of <u>pesticides</u> were used to control locusts in East Africa. This may increase to over two million litres by the end of 2021.
 - Organophosphate pesticides such as Malathion and Chlorpyrifos, for instance, are highly toxic to humans and animals.

Way Forward

- Early Warning System: Satellite and weather data, along with field observations, can be used for building powerful predictive models on breeding sites.
- True Cost Accounting: Counting the environmental and human costs through True Cost Accounting.
 - True Cost Accounting is a new type of bookkeeping that does not just look at the usual financial values within a company, but also calculates the impacts on natural and social

capital.

- **Developing an Efficient Governance Model:** Governing the locusts crisis may also provide useful lessons for the agri-food system.
 - There is a need to raise awareness amongst farmers and local communities as well as involve them in decision making.
- **Mobilising Funds for Research:** It is important to fund research on the biopesticide sector which remains extremely underfunded.
 - The organisations responsible for preventing locust attacks face tremendous financial hurdles.
 - In February 2020, \$138 million was required by FAO to combat locusts outbreaks in East Africa. The organisation received only \$33 million from donors.

Source: DTE

