



Climate Change & Locust Infestations

Why in News

Infestation of [desert locusts](#), 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 **26th Conference of Parties (CoP26)** to the **[United Nations Framework Convention on Climate Change](#)**.

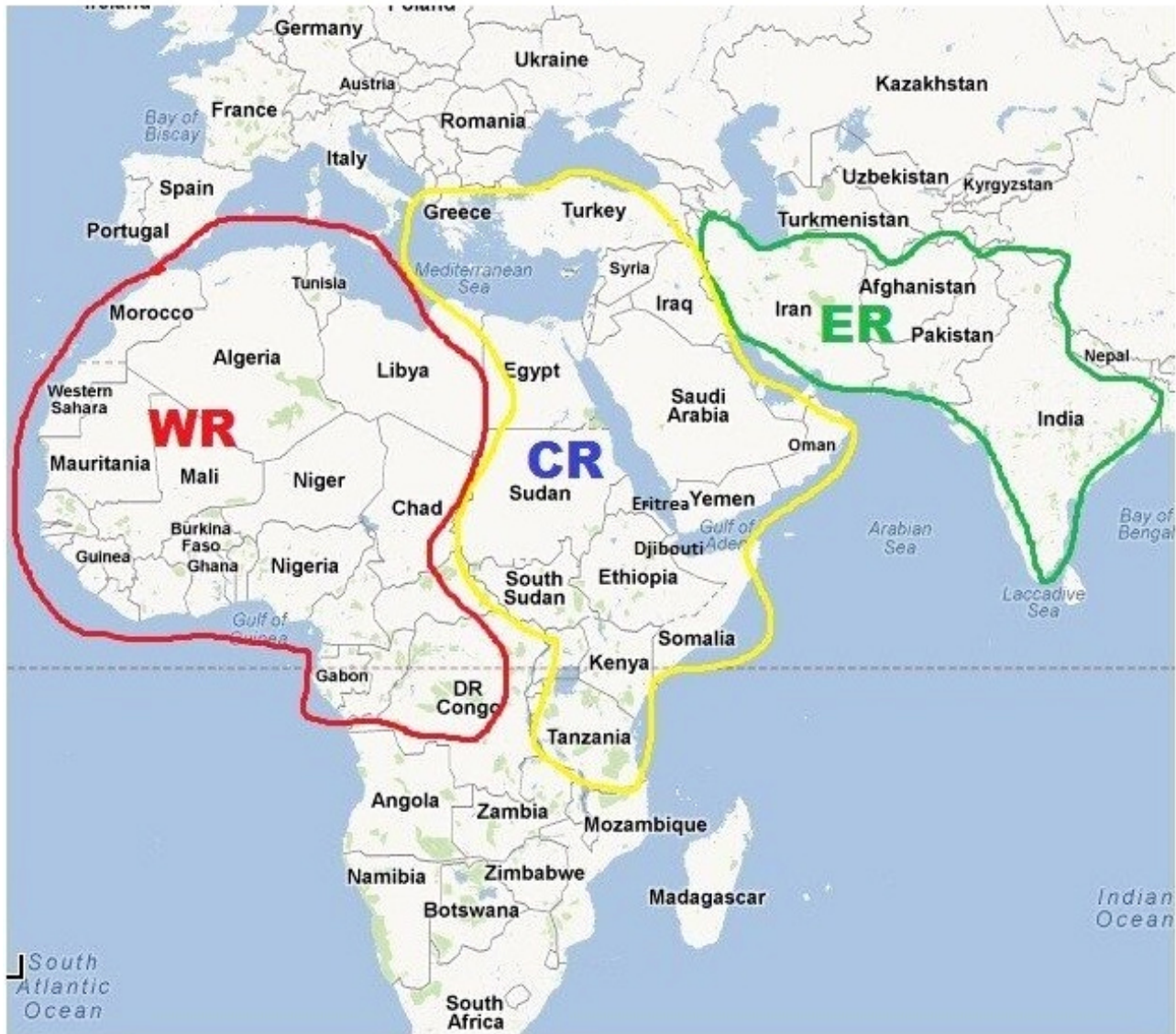
Global Landscapes Forum

- The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the **[Sustainable Development Goals](#)** and **[Paris Climate Agreement](#)**.
- It is led by the **Center for International Forestry Research (CIFOR)**, in collaboration with its co-founders **[UNEP](#)** and the **[World Bank](#)** 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 [World Food Program](#):** 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 is 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 **Food and Agriculture Organization (FAO)**, by March 2021, 1.8 million litres of pesticides 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

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