



Plastic Crisis: Sundarbans

Why in News

Unregulated inflow of relief to the [Sundarbans](#) has resulted in a new crisis in the cyclone-battered region as plastic has been accumulated in the area.

- The threat posed by **plastic** is so great for the **Sundarbans** because the region is witnessing **frequent tropical storms**, which lead to **devastation**.

Key Points

▪ Plastic Pollution:

- **Plastic pollution** is caused by the **accumulation of plastic waste in the environment**.
- It can be categorized in **primary plastics**, such as cigarette butts and bottle caps, or **secondary plastics**, resulting from the degradation of the primary ones.

▪ Reasons for Accumulation of Plastic in Sundarban:

◦ Cyclones:

- The region is witnessing **frequent cyclones**, which lead to devastation, followed by the necessity for **relief** and rehabilitation of inhabitants.
 - In geography, a location's relief is the **difference between its highest and lowest elevations**.
- **Plastic waste associated with relief material**, used in the aftermath of **Cyclone Amphan** (May 2020) in the Sundarbans, could cause damage to the eco-sensitive region.
 - Prior to this, the region had witnessed cyclones **Fani** (May 2019) and **Bulbul** (November 2019).

◦ Tourism:

- Besides **recent cases of cyclones** in the region, **tourists have also contributed** to the accumulation as they leave behind heaps of plastic waste that is strewn all over the forest.

▪ Concerns:

◦ Increase Toxicity:

- The presence of plastic in saline water increases the **toxicity of water** and could also **contribute to the eutrophication of water**.
 - Eutrophication is the **process** by which an **entire body of water, or parts of it**, becomes **progressively enriched with minerals and nutrients**.
 - It also results in oxygen depletion.

- Given that **Sunderbans is connected to the sea**, the **increase of plastic in the region could lead to plastic waste entering the ocean.**
- **Threat to food System:**
 - The **breakdown of plastics** in the water will lead to an **increase in microplastics**, which would subsequently **enter the food system.**
- **Affects Livelihoods:**
 - Sunderbans is **largely dependent on fisheries and aquaculture** and any change in the delicate ecosystem can spell doom **not only for the ecology but also for livelihoods.**
- **Some related Initiatives:**
 - In 2019, the Union government in a bid to free India of single-use plastics by 2022, had **laid out a multi-ministerial plan** to discourage the use of **single-use plastics across the country.**
 - **Plastic Waste Management Rules, 2016** which extended the responsibility to collect waste generated from the products to their producers and brand owners.

Importance of Sundarbans

- The Sundarbans ecoregion is located in the **tidally active lower deltaic plain** of the **Ganges-Brahmaputra-Meghna (GBM) basin.**
- It hosts the **largest contiguous mangrove forest** and the **only mangrove tiger habitat in the world.**
 - Mangrove forests perform **multiple ecological functions** such as production of woody trees, provision of habitat, food and spawning grounds for fin-fish and shellfish, provision of habitat for birds and other valuable fauna; protection of coastlines and accretion of sediment to form new land.
- Spread over parts of **Bangladesh and India**, the **Protected Areas (PA)** within the forested parts are designated by the **United Nations Educational, Scientific and Cultural Organisation (UNESCO)** as **World Heritage Sites** in both countries.
- The natural areas spanning **10,000 square kilometres** across the two countries are also **Ramsar Sites or Wetlands** of International Importance.
- The **cleared forest tracts** in the two countries are now collectively home to over 7.5 million people.
- The area is known for its **wide range of fauna**, including **260 bird species** and is home to many **rare and globally threatened wildlife species** such as the **Estuarine Crocodile**, Royal Bengal Tiger, Water Monitor Lizard, **Gangetic Dolphin** and **Olive Ridley Turtles.**

Way Forward

- Government should ensure that the **entrances to the Sundarbans Biosphere Reserve** and the Sundarbans Tiger Reserve are **tightly maintained.**
- **Non-governmental Organizations (NGOs)** and **locals** should be **encouraged to collect plastic waste**, which should also be recycled.
- Also, the government should **organize cleanliness drives** to remove plastic from the Sunderbans.

Source: TH

