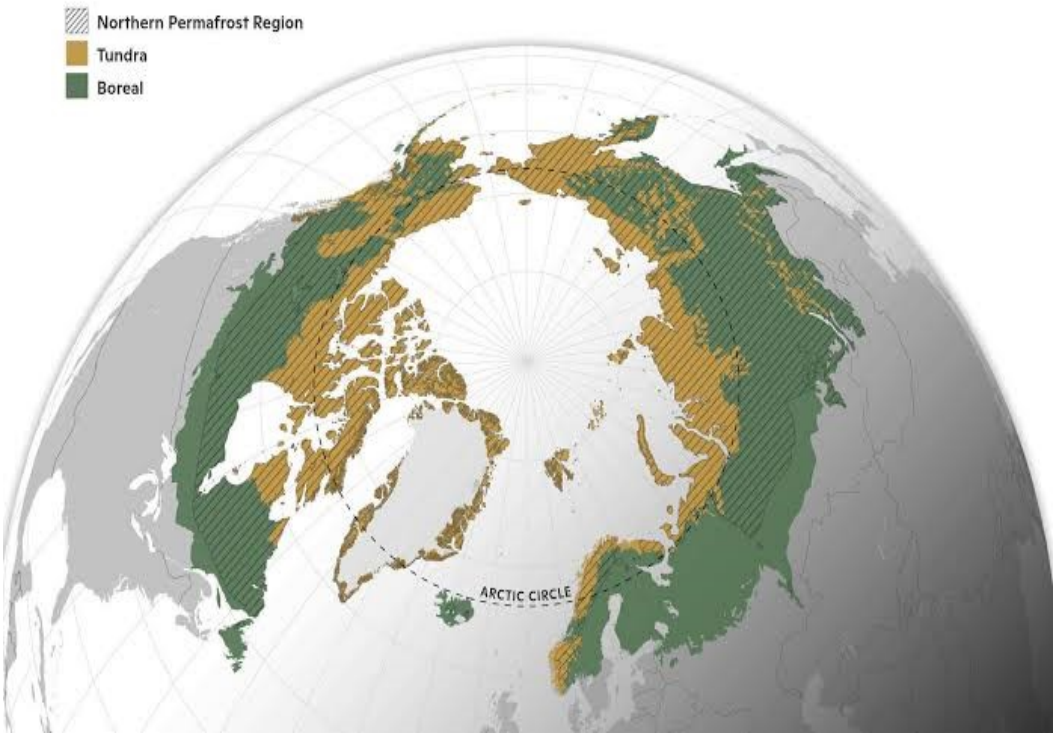
Sundarbans Wildfire

Why in news?

Recently fire erupted in Bangladesh's Sundarbans which took almost four days to extinguish.

What is forest fire?

- **Wildfire-** It is an uncontrolled fire in an area of combustible vegetation that occurs in the countryside or rural area.
- Wildfires can burn in vegetation located both in and above the soil.
- **Ground fires**- It ignite in soil, thick with organic matter that can feed the flames, like plant roots.
- **Surface fires**- It typically burn in dead or dry vegetation that is lying or growing just above the ground. Parched grass or fallen leaves often fuel surface fires.
- **Crown fires** -It burn in the leaves and canopies of trees and shrub.



Why Sundarbans is more prone to forest fire?

- **Dry seasons**- The Sundarbans experience pronounced dry seasons, particularly in the summer months. During this period, water bodies within the mangroves, such as ponds and canals, tend to dry up, especially in elevated areas which makes them more prone to forest fire.

- **Reduced water level**- Elevated regions in the Sundarbans, such as the area stretching from Katakhali to Daser Bharani, retain low water levels except during the monsoon, creating dry conditions conducive to fires.
- **Natural siltation**- It have turned some rivers and canals into mere channels that dry up during low tide, contributing to the overall dryness of the region. This reduction in water availability increases the susceptibility of the forest to fires.
- **Silt formation**- Rivers and canals, such as the Kharma river, have gradually filled up with silt, reducing water flow. During low tide, these water bodies often dry up, leaving the surrounding forest dry and more vulnerable to fires.
- **Drying water resources**- The drying up of these critical water sources, particularly outside the monsoon season, deprives the mangroves of essential moisture needed to prevent fires.
- **Climate change**- The region is experiencing severe heatwaves, insufficient rainfall, and drought conditions, all of which contribute to the drying out of vegetation and increase the risk of forest fires.
- **Unique tidal ecosystem**- The forest land sinks and floats with the tides, has been disrupted in areas affected by fires. This disruption hampers the natural fire resistance of the mangrove ecosystem.
- **Elevated areas-** They do not get inundated regularly by tides are particularly prone to drying out, thus becoming fire hazards.
- **Anthropogenic factors**- Honey collectors and fishermen frequently visit the Sundarbans, and sometimes their activities inadvertently start fires. Discarded cigarettes or small cooking fires can easily ignite dry vegetation.
- **Illegal activities**- Poaching or collecting forest resources, may also lead to intentional or accidental fires.
- **Inadequate forest management**- The forest department in Bangladesh struggles with limited manpower, budget constraints, and insufficient equipment, making it difficult to effectively monitor and control fire outbreaks.

What can be done to resist forest fires?

- **Clearing canals and ponds**- The primary suggestion is to clear 40 kilometers of canals and three ponds to restore water flow.
- **Increasing manpower**- Hiring more staff for the forest department to improve fire response capabilities.
- **Enhanced patrols**- Improving patrols by forest guards to monitor and prevent fire incidents.
- **Observation towers**- Building 3 observation towers and installing a nylon rope fence along a 35-kilometer stretch of the Chandpai area to prevent human-wildlife conflicts.
- **Fire stations**- Constructing a river fire station and dredging the Bhola river, which has silted up near the forest, to improve water availability.
- **Holistic approach**- There is a need for a holistic and cooperative approach to manage the Sundarbans.

What lies ahead?

- The Sundarbans' ecosystem, characterized by its tidal dynamics, is essential for both

environmental balance and local livelihoods.

- Effective management, involving updated legislation, better resource allocation, and community engagement, is crucial for the protection and sustainability of this vital mangrove forest.

Quick facts

Sundarbans ecosystem

• **About-** The Sundarbans contain the world's largest mangrove forests and one of the most biologically productive of all natural ecosystems.
• **Location-** At the mouth of the Ganges and Brahmaputra Rivers between India and Bangladesh.



• **Sundri**- The ecosystem is named after the dominant mangrove tree species, Heritiera fomes, known as “sundri” in Bengali, the term “Sundarbans” itself literally means “beautiful forest” in Bengali.
• **Sundarbans delta-** The ecosystem is formed by the confluence of South Asia’s largest rivers, the Ganges, Hooghly, Padma, Brahmaputra and Meghna.
• **UNESCO World Heritage Sites-** Sundarbans West (Bangladesh), Sundarbans South (Bangladesh), Sundarbans East (Bangladesh) and Sundarbans National Park (India).
• **Flora-** The most abundant tree species are sundri (Heritiera fomes) and gewa (Excoecaria agallocha).
• **Fauna**- Mugger crocodile, salt-water crocodile, shark, Gangetic dolphin, tiger, water monitor lizard, pangolin etc.,
• **Water monitor lizard**- It can grow up to 9 feet in length and is the second largest lizard in the world.
• **Mudskippers-** It is an air-breathing fish that climbs out of the water into mudflats and even climbs trees.

References

1. Down To Earth- Why Sundarbans catching fire?
2. UNESCO- Sunderbans National Park

