The Budget Push to Mangroves

Why in news?

The Union Budget for 2023-24 announced an initiative for mangrove plantation along the coastline and on salt pan lands, under MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes).

What are mangroves?

- **Mangroves** – They are a group of trees and shrubs that live in the coastal intertidal zone.
- They only grow at tropical and subtropical latitudes near the equator because they cannot withstand freezing temperatures.
- **True mangroves** - The tree species that form a mangrove forest or ecosystem are broadly classified as true mangroves and mangroves associates.
- **Distribution** - Mangroves in India are distributed across 9 States with 4975 sq km and three Union Territories with **West Bengal** having the highest mangrove cover.

What are the benefits of mangroves?

- **Salt tolerant** - Mangroves are salt-tolerant plant communities found in tropical and subtropical intertidal regions.
- **Indicators of changes** - True mangroves are the ones which display morphological adaptations for a high saline mangrove ecosystem such as pneumatophores and salt-secreting cells**.**
- **Bulwark of climate change -** With the threat of climate change and frequent tropical storms looming large, planting more mangroves is welcoming for India which has a coastline of about 7,500 km**.**
- **Potent carbon sites** - Mangroves are potent carbon sites with 4-5 times greater efficiency than terrestrial forests.
- **State of World Mangroves 2022** points out that mangroves are estimated to hold up to four times the amount of carbon so the loss of even 1% of remaining mangroves could lead to the loss of 0.23 gigatons of CO_2 equivalent.
- **Disaster risk reduction** - Not only do mangroves stabilise coastlines by holding sediments together but they also act as safety nets against storms and surges.

IFSR report points out that there has been an increase in the mangrove cover from 4,046 sq km in 1987 to 4,992 sq km in 2021.

What are the threats to mangroves?

- **Population** - In India the mangrove ecosystem faces constant pressure due to increasing population in coastal areas.
- **Logging** of mangroves for timber and charcoal production and the extension of usable areas for settlements, agriculture is an issue.
- **Aquaculture or fisheries** along the coast obstructing tidal flow is one of the biggest threats to the mangrove ecosystem.
- **Tourism** is a booming industry and an important source of income in many developing nations that affects mangroves massively.
- **Overreliance on mangroves** for fuel because of a lack of affordable alternatives pose serious threats to mangroves.
- **Deforestation for fuel** is the biggest threat to mangroves in Madagascar.
- **Discharge of untreated domestic and industrial effluents** into the rivers impede the natural inter-tidal flow along the coast and the mixing of freshwater and saline water.

What is the need for a Budget push?

- The survival rate of mangrove seed plantation is 50% and of saplings is about 60%.
- It takes 3 years for a new plant to stabilize so we need various schemes to increase mangrove plantation with local community support.
- **Schemes** - MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme), CAMPA (Compensatory Afforestation Fund Management and Planning Authority) Fund and other sources.
- A contract-based one-time plantation under MGNREGS and CAMPA may not work unless the local communities take ownership of the forests.

What can be done for mangrove conservation?

- Participate in a mangrove cleanup
- Help plant mangroves
- Reduce single-use plastic consumption
- Protect existing mangroves
- Patronize businesses with mangrove conservation in mind
- Support mangrove nonprofits and research organizations
- Spread the word and engage your local community
- Trial and testing with field experience and monitoring

Quick Facts

Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)

- MISHTI is a new programme that will facilitate mangrove plantation along India’s coastline and on salt pan lands.
- The programme will operate through convergence between MGNREGS, Campa Fund and other sources.

- This new programme will aim at **intensive afforestation** of coastal mangrove forests.
- India has such forests on both its Eastern and Western coasts with the **Sundarbans in Bengal** being one of the largest mangrove forests on the planet.

References

1. The Hindu|Why have mangroves got a budget push?
2. The Hindu|The strange effect of the Moon on mangrove forests.

