Mangrove Alliance for Climate [UPSC Notes]

India has signed the Mangrove Alliance for Climate in COP 27 held in November 2022. This development is important from the UPSC exam perspective, especially for the environment and ecology segment.

What is the Mangrove Alliance for Climate (MAC)?

The Mangrove Alliance for Climate (MAC) is an initiative pioneered by the United States of Emirates (UAE) and Indonesia. It was later joined by India, Sri Lanka, Australia, Japan, and Spain. The alliance was launched during COP27 in Egypt.

- This is an **intergovernmental alliance with no binding targets**. It means they will work on a voluntary basis. Here, the parties are given flexibility to decide their own targets and commitments to plant trees.
- The members will also share expertise and support each other in researching, managing and protecting coastal areas.
- MAC was established with an objective of spreading awareness among the people regarding the benefits of mangrove plants and their contribution to making the environment liveable.
- UAE as a part of its commitment intends to plant 3 million mangroves in the next two months, with the intention of adhering to the UAE's COP26 pledge of planting 100 million mangroves by 2030.

Mangrove Forest: Vital Statistics

South Asia has one of the richest mangroves in the world, and Indonesia alone constitutes nearly **1/5th of the total mangroves found in this region.**

- **India holds around 3 percent of South Asia's mangrove population.** Besides the Sundarbans in West Bengal, the Andaman region, the Kachchh and Jamnagar areas in Gujarat too have substantial mangrove cover.
- The Global Mangrove Alliance in its 2022 report, pointed out that, between 2010 and 2020, around 600 sq km of mangroves were lost of which more than 62% was due to direct human impacts.
- As a part of its Intended Nationally Determined Contribution (INDC), India has promised to create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030. Mangrove would play an instrumental role in achieving this target.

Significance of Mangroves

Mangroves play a very important role in supporting the food web, with molluscs and algae-filled substrate acting as a breeding ground for small fish, mud crabs and shrimps, thus providing a livelihood to local artisanal fishers.

- Mangroves in coastal areas stand as a natural barrier against cyclones and thus prevent loss of life and property.
- Additionally, mangroove are very important with respect to carbon sequestration and storage. Mangrove plants store carbon from the atmosphere and reduce the impact of global warming.
- Studies have shown that mangrove forests can absorb four to five times more carbon emissions than landed tropical forests.
- Mangroves also play a very important role in sustaining and supporting the economic benefits that may accrue as a result of the 'Blue Economy'.
- Mangroves protect the coastlines from erosion and storm surges and provide a 'nursery' for marine creatures.

Reason for Loss of Mangrove Forests:

- Anthropogenic activities are one of the most important factors for loss of mangrove forests across the world.
- Infrastructural projects, industrial expansion, unsustainable fishing and deforestation are some of the most common reasons for the loss of mangrove forests.
- Additionally, the wave of aquaculture in the coastal area has forced people to remove the mangrove forests.