

Mangroves to be planted as barriers to cyclonic storms in Odisha

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In news

State government of Odisha has proposed to raise mangrove and casuarinas plantation in the coastal belt.

Key updates

- The mangrove forests (109 hectares) will be raised under the Integrated Coastal Zone Management Project (ICZMP) Phase-II.
- The casuarinas (in 4,000 hectares) will be planted by the state resources.
- The coastal belt plantation aims to erect a strong, natural barrier against the strong winds during cyclones.

Importance of Mangroves to Odisha

- Odisha is one of the most cyclone-prone states in the country, hence it is important to build the coastal shelter belt to protect the coastal areas.
- The Odisha coastal area is a wildlife hotspot as well as an economic zone.
- The mangroves have acted as a bio-shield against the strong winds in all the cyclones that struck the state.
- For example, the mangroves served as a natural barrier to cyclonic winds in Bhitarkanika National Park during Cyclone Yaas, which hit the state on May 26, 2021.
- The cyclone, with wind speed of around 145 km, devastated a few other areas, but its impact was not felt in Kalibhanjadiha island inside the national park.

due to the presence of mangroves.

Mangroves

- Mangroves are a group of trees and shrubs that live in the coastal intertidal zone.
- Mangroves are salt-tolerant trees, also called halophytes, and are adapted to live in harsh coastal conditions.
- They contain a complex salt filtration system and complex root system to cope with salt water immersion and wave action.
- There are about 80 different species of mangrove trees.
- All of these trees grow in areas with low-oxygen soil, where slow-moving waters allow fine sediments to accumulate.
- Mangroves occur worldwide in the tropics and subtropics, mainly between latitudes 30° N and 30° S, with the greatest mangrove area with 5° of the equator.
- Areas, where mangroves occur, include estuaries and marine shorelines.
- As per the India State of Forest Report 2017 report, the total area of mangrove cover of India is 4,921 Sq Km.
- Indian mangroves consist of 46 species (4 of which are natural hybrids) belonging to 22 genera and 14 families, representing about 57% of the world's mangrove species.

Casuarina

- Casuarina is a genus of 17 tree species in the family Casuarinaceae, native to Australia, the Indian subcontinent, southeast Asia, islands of the western Pacific Ocean, and eastern Africa.
- It was once treated as the sole genus in the family, but has been split into four genera
- *Casuarina* species are a food source of the larvae of hepialidae moths; members of the genus *Aenetus*, including *A. lewinii* and *A. splendens*, burrow

- horizontally into the trunk then vertically down.
- In India *Casuarina equisetifolia* was introduced during the 19th century and is now estimated to be under cultivation in around half a million hectares mainly in the Peninsular region

Integrated Coastal Zone Management Project

- It is a process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainability.
- This concept originated in 1992 during the Earth Summit of Rio de Janeiro.
- It is a dynamic, multidisciplinary and iterative process to promote sustainable management of coastal zones.
- The objective of the ICZM Project is to assist the Government of India in building national capacity for implementation of a comprehensive coastal management approach in the country, and piloting the integrated coastal zone management approach in states of Gujarat, Orissa and West Bengal.