



Kelp Forests on Decline

Why in News?

A recent study has revealed that **Kelp forests are declining because of climate change.**



What are the Highlights of the Study?

- *Ecklonia radiata*, a **dominant kelp species in the southern hemisphere**, is vulnerable to climate change, especially in regions near the equator.
- Rising temperatures are causing declines in the **species along the eastern Australian coastline and it is expected to decline further in the future globally.**
- In situ protection **may not be possible but its unique genetic diversity** can be preserved through ex situ preservation in culture banks for use in future restoration, hybridization, or adaptation strategies.

What are the Kelp Forests?

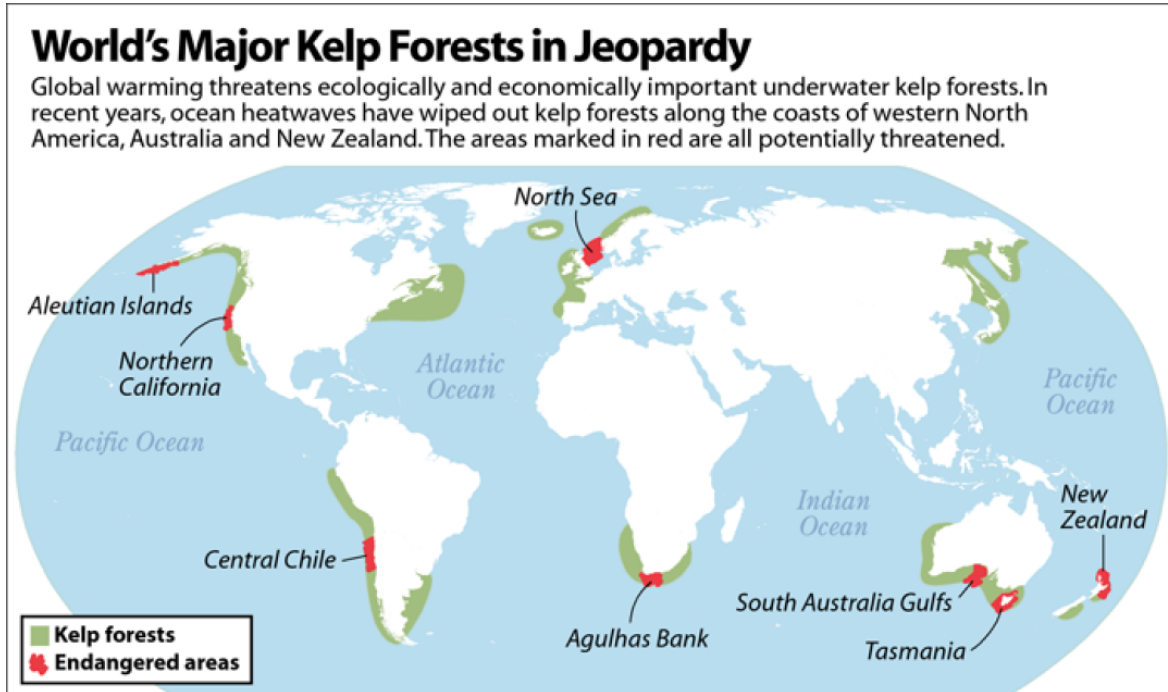
- **About:**
 - Kelp forests are underwater ecosystems **formed in shallow water by the dense growth of several different species.**
 - Kelp are **large brown algae that live in cool**, relatively shallow waters close to the shore.
 - They attach to the **seafloor and eventually grow to the water's surface and rely on sunlight to generate food and energy**, kelp forests are always coastal and require shallow, relatively clear water.
 - They provide underwater **habitats to hundreds of species of invertebrates**, fishes,

and other algae and have great ecological and economic value.

▪ **Significance:**

- It serves as a pertinent food source **for a variety of marine creatures**. Kelps are responsible for **producing up to 60% of the carbon** found in coastal invertebrates.
- As a diverse invertebrate and fish ecosystem, **they serve as a habitat for birds to forage**.
- It releases carbon into the **coastal ecology, increasing its productivity**. New biomass, detritus, and other materials are produced through primary production by kelp.

▪ **World Distribution of Major Kelp Forests:**



[Source: DTE](#)

PDF Reference URL: <https://www.drishtias.com/printpdf/kelp-forests-on-decline>