



## Reviving Coral Reefs with 'Good Sounds'

[Source: TH](#)

A study was presented that examined the **use of "healthy reef sounds" to potentially aid in the resettlement of coral polyps** and the **restoration of degraded reefs**.

- **Coral polyps use sound to communicate**, and the study found that **playing healthy reef sounds increased the settlement rate of coral polyps** on degraded reefs.
- The settlement rate was higher closer to the underwater speakers playing the sounds, indicating the impact of the sounds.
- **Coral Reef:**
  - [Coral reefs](#) are marine ecosystems primarily composed of **coral polyps** that form symbiotic relationships with **zooxanthellae**, photosynthetic algae.
  - The **zooxanthellae provide corals with nutrients and oxygen, while corals offer shelter**. This mutualism is vital for the health and survival of coral reef ecosystems.
- **Climate change** due to the burning of fossil fuels and deforestation is **causing global warming** and rising sea levels, **leading to the destruction of coral reefs** through bleaching events.



# Coral Reefs

(Rainforests of the seas)



## About

- ✦ **Large underwater structures** – made of skeletons of **colonial marine invertebrates** ‘coral’ – individually called **polyp**
- ✦ **Symbiotic** Relationship with **algae** ‘**zooxanthellae**’ (responsible for beautiful colours of corals)
- ✦ Support over 25% of marine biodiversity

## Hard Corals vs Soft Corals

- ✦ **Hard Corals** - Rigid skeleton **made of  $\text{CaCO}_3$**  - **reef-building** corals
- ✦ **Soft Corals** - Non reef-building

## Great Barrier Reef (Australia)

- ✦ Largest Coral Reef in the World
- ✦ World Heritage Site (1981)
- ✦ Endures Mass Coral Bleaching



## Corals in India

- ✦ Present in the areas of Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Islands and Malvan



## Significance

- ✦ Coral reefs **protect coastlines from storms/erosion**, provide jobs, offer opportunities for recreation
- ✦ Source of **food/medicines**

## Threats

- ✦ **Natural:** Temperature, Sediment Deposition, Salinity, pH, etc.
- ✦ **Anthropogenic:** Mining, Bottom Fishing, Tourism, pollution, etc.

## Coral Bleaching

- ✦ Corals under stress - expel algae – thus turning white (bleached)
- ✦ Bleached corals - not dead – but, more risk of starvation/disease



## Initiatives to Protect Corals

### Technology

- ✦ **Cyromesh:** Storage of the coral larvae at (-196°C) - Can be later reintroduced to the wild
- ✦ **Biorock:** Creating artificial reefs on which coral can grow rapidly

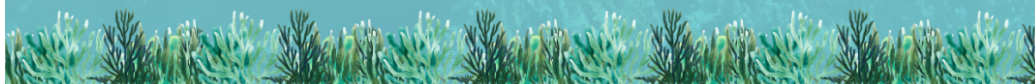


### Global

- ✦ International Coral Reef Initiative
- ✦ The Global Coral Reef R&D Accelerator Platform

### Indian

National Coastal Mission Programme



**Read More-** [Coral Bleaching in Great Barrier Reef](#), [Coral reefs](#)

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