# Global Coral Bleaching Event

***Prelims:*** *Current events of national and international importance | Environment*

## Why in News?

*Recently, Researchers from the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Watch stated the 4$^{th}$ global coral bleaching event as the fastest and widest on record.*

- ***Corals –*** *They are* ***tiny marine invertebrates (polyps) that build reefs.***
- *It covers 1% of the ocean floor yet supporting 1/4$^{th}$ of marine life by providing food, shelter, and breeding grounds.*
- **Coral Bleaching –** It occurs when corals are stressed by changes in conditions such as *temperature, light, or nutrients,* they expel the symbiotic algae (zooxanthellae) living in their tissues, causing them to turn completely white.
- Coral bleaching is not only caused by warm water; *cold stress can also trigger it,* making corals more vulnerable to disease just like higher temperatures do.




## Key Highlights

- **Scale of the Event –** The 4$^{th}$ global coral bleaching ended by mid-2025, affecting 84% of reefs across 83 countries.
- **Concluding Phase –** Severe bleaching in Western Australia (early 2025) marked the end.
- **Defining Global Events –** Scientists noted difficulty in fixing start/end points as reefs bleach nearly annually.
- **Heat Stress –** Despite decline, sea surface temperatures remain far above past levels.
- **Thermal Tipping Point –** Warm water coral reefs in tropical and sub-tropical regions undergoing unprecedented die off.
- **Global Tipping Points Report 2025 –** Warned rising greenhouse emissions push world toward dangerous new reality near 1.5°C threshold.
- **El Niño Risks Ahead –** NOAA warned expected El Niño could raise ocean temperatures and trigger renewed bleaching.
- **Regional Outlook –** NOAA predicts bleaching risk in North Pacific (Hawai'i), Florida, and Caribbean during upcoming summer.
- **Human Livelihoods at Risk –** Nearly one billion people dependent on reefs for food, income, and coastal protection are threatened.
- **Conservation Framework –** NOAA's Coral Reef Conservation Program (CRCP), under the Coral Reef Conservation Act, coordinates protection, conservation, and restoration of reefs.

**Reference**

[Down to Earth | Coral Bleaching]