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Deteriorating Great Barrier Reef

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Why in News

Recently, the **International Union for Conservation of Nature (IUCN)** has highlighted that **Australia's Great Barrier Reef** is in a critical state and deteriorating as **climate change** warms up the waters in which it lies.



Key Points

- **Great Barrier Reef:**

- It is the **world's most extensive and spectacular coral reef ecosystem** composed of over 2,900 individual reefs and 900 islands.
- The reef is located in the **Coral Sea** (North-East Coast), **off the coast of Queensland, Australia.**
- It can be **seen from outer space** and is the **world's biggest single structure made by living organisms.**
- This reef structure is composed of and built by billions of tiny organisms, known as **coral polyps.**
 - They are made up of genetically identical organisms called **polyps**, which are tiny, soft-bodied organisms. At their base is a hard, protective limestone skeleton called **a calicle**, which forms the structure of coral reefs.
 - These polyps have **microscopic algae called zooxanthellae** living within their tissues. The corals and algae have a **mutualistic (symbiotic)** relationship.
- It was selected as a **World Heritage Site** in **1981.**

- **Concern:**

Coral along large swathes of the 2,300-kilometre reef have been killed by **rising sea temperatures** linked to climate change, leaving behind skeletal remains in a process known as **coral bleaching.**

- When corals face **stress 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.** This phenomenon is called coral bleaching.
 - Corals **can recover if the stress-caused bleaching is not severe.**
 - Coral bleaching has occurred in the Caribbean, Indian, and Pacific oceans on a regular basis.
- **In August 2019, Australia downgraded its long-term outlook to "Very Poor"** for the first time and there are high chances that it will be considered for the **List of World Heritage in Danger.**
 - The List is designed to inform the international community of conditions which threaten the very characteristics for which a property was inscribed on the World Heritage List.
 - It also encourages corrective action.

International Union for Conservation of Nature

- It is a **membership union** uniquely composed of **both government and civil society organisations.**

- Created in **1948**, it is the global authority on the status of the natural world and the measures needed to safeguard it.
- It is headquartered in **Switzerland**.
- The **IUCN Red List of Threatened Species**, is the **world's most comprehensive inventory of the global conservation status** of plant and animal species.