Coral Biomes

Geography Year 6

Coral Biomes: Why are oceans important?

Very Important Vocabulary:

Coral reef: A large underwater structure made from the skeletons of tiny animals called corals. Coral reefs provide homes for lots of sea creatures and protect coastlines from big waves.

Coral bleaching: When corals lose their colour because of stress, usually from warmer ocean temperatures. This happens when corals get rid of the tiny algae that live inside them, which can make the coral weak or die.

Marine: Anything relating to the sea or ocean. For example, marine animals live in the ocean.

Species: A group of living things that are similar and can reproduce to have babies. For example, all dogs belong to one species, and all goldfish belong to another.

Marine Protected Area (MPA): A special part of the ocean where human activities like fishing or building are controlled to protect sea life and habitats.

Ecosystem: A community of living things like plants, animals, and microorganisms, interacting with each other and their environment in a specific place.

Environment: The natural world around us — including land, water, air, plants, and animals — where living things exist and interact.

How are humans harming coral reefs?

Coral reefs around the world are under serious threat, mostly because of human activity. One of the biggest problems is climate change. As the ocean gets warmer, corals suffer from something called coral bleaching — this is when they lose the tiny algae that help them grow and survive. If bleaching continues, the corals can die.

Other problems include:

- Ocean acidification (from carbon dioxide), which weakens coral skeletons
- Pollution, like plastic waste and chemicals, which damages coral habitats
- Overfishing and harmful fishing methods that destroy reef ecosystems
- Tourism and coastal building, which can physically damage reefs and cause erosion

When reefs are damaged, it affects marine life, coastal protection, and the people who rely on reefs for food and jobs.

Why coral reefs matter to everyone

Coral reefs are sometimes called the "rainforests of the sea" because they support about 25% of all marine life. They provide food, protect coastlines from strong waves, and support jobs and tourism. They even help with medical research, offering ingredients for new medicines.

Reefs and oceans are important not just for nature, but for people too — especially those who live near the sea. To keep them safe, we need to take action as individuals, in communities, and as a global society.

The Ocean and life on Earth

The ocean is essential for life. It covers more than 70% of Earth's surface and plays a major role in controlling the planet's climate. It does this by absorbing heat and carbon dioxide, which helps keep global temperatures stable. Ocean currents, like the Gulf Stream, move warm water around the Earth and help balance temperatures between different regions.

The ocean is also the main part of the water cycle. When the sun heats the ocean, water evaporates (turns into gas), rises into the air, and later falls as rain or snow. This provides freshwater for rivers, plants, animals, and people.

The ocean is full of life. It provides habitats for millions of species and gives us resources like fish, minerals, and renewable energy from waves and tides.

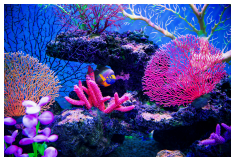
The Great Barrier Reef

The Great Barrier Reef, off the northeast coast of Australia, is the world's largest coral reef system. It stretches over 2,300 km and includes nearly 3,000 reefs and 900 islands. It's so big, you can see it from space!

This reef is home to thousands of species — from colourful corals and tropical fish to sea turtles and dugongs. It is a UNESCO World Heritage Site and one of the Seven Natural Wonders of the World.

The reef is not only important for nature — it also supports the tourism and fishing industries, bringing billions of dollars to the Australian economy. For Indigenous Australian groups, the reef holds deep spiritual and cultural meaning.

Protecting the ocean and coral reefs

Even though our oceans are in danger, there are ways to protect them. One method is creating Marine Protected Areas (MPAs) — special parts of the ocean where human activities like fishing are controlled. These help marine ecosystems recover and stay healthy.

While there are no MPAs directly on the Great Barrier Reef, nearby protected areas, such as the Natural Park of the Coral Sea, help reduce harm to the reef.