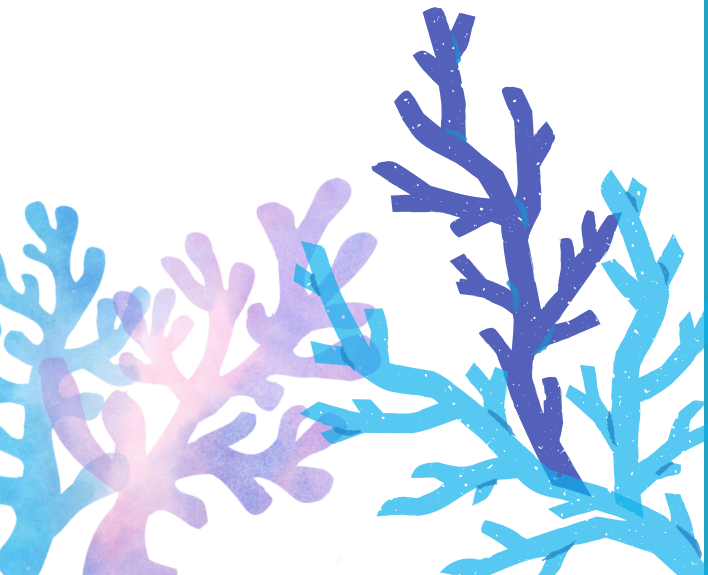


FUN FACTS ON CORALS

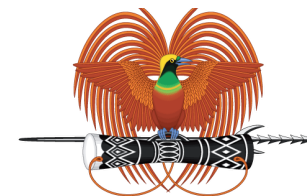
- Corals are animals that feed on plankton and small fish.
- There are about six thousand species of coral around the world, with some species growing in warm shallow waters near coastlines and others thriving on the dark, cold seafloor of the open ocean.
- Several recent studies have confirmed the significant diversity of corals on PNG's reefs. In all, PNG waters are probably home to more than 500 species of stony corals.
- Coral reefs protect coastlines from storms and erosion, provide jobs for local communities, and offer opportunities for recreation. They are also a source of food and new medicines. Over half a billion people depend on reefs for food, income, and protection.
- They are among the most threatened ecosystems on Earth, largely due to unprecedented global warming and climate changes, combined with growing local pressures.
- The Great Barrier Reef, situated off the northeastern coast of Australia, is the largest coral reef system in the world. Stretching for 1,429 miles over an area of approximately 133,000 square miles.



CORAL PLANTING



Coral Planting Activities carried out by the Tubusereia Community in the Central Province through Lakwaharu Coral, Kokoda Track Development and Livelihoods Association Inc., CEPA's Marine Branch and CCDA's Adaptation and Projects Division. This project is funded by Kyeem Foundation.



CLIMATE CHANGE AND CORAL REEFS

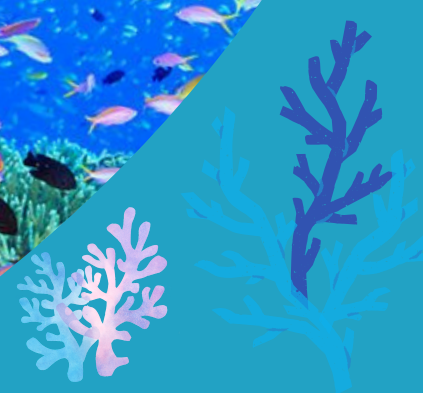
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CORAL REEFS AND CLIMATE CHANGE

The climate change impacts on coral reefs are diverse and cumulative. Rising sea temperatures stress coral and lead to more frequent and sustained coral bleaching. The higher frequency of extreme weather means more wave damage to reefs, and increased run-off from high precipitation, bringing more sedimentation and pollution from land. Ocean acidification weakens corals' structure, slows their growth, and makes them more prone to damage. Corals cannot survive the frequency of current bleaching events from global temperature rise. If temperatures continue to rise, bleaching events will increase in intensity and frequency. Coral reefs are also key indicators of global ecosystem health. They serve as an early warning sign of what may happen to other less sensitive systems, such as river deltas, if climate change is not urgently addressed. Once the tipping point for the survival of coral reefs is passed, the deterioration of other systems may cascade more quickly and irreversibly. Limiting global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C, in line with the Paris Agreement on climate change, provides the only chance for the survival of coral reefs globally. If the agreement is fully implemented, we will likely see a decrease in atmospheric carbon concentrations. This will improve conditions for the survival of reefs, and enable other measures to rescue reefs to be successful. Other measures can include addressing local pollution, destructive fishing practices and coral planting.



WHERE DO CORALS GROW?

Worldwide, coral reefs cover an estimated 284,300 km². This area represents less than 0.1% of the world's oceans and less than 1.2% of the continental shelf area. Coral reefs are found all around the world within the tropics (between 30°N and 30°S of the equator). Coral reefs can be found in 3 broad regions: the Caribbean and Atlantic, the Indian Ocean and Red Sea and the Pacific and Southeast Asia. Most coral reefs are found in the Indo-Pacific, an area that stretches from the Red Sea to the Central Pacific. This is also the area with the highest species diversity among reefs overall. Less than 8% of the world's coral reefs are found in the Caribbean and Atlantic, and species diversity is much lower in these regions.

WHAT ARE CORALS?

Although they are often mistaken for plants or rock, corals are simple animals, belonging to a group of invertebrates (spineless animals) called cnidarians. All cnidarians are characterized by a large stomach cavity and specialized stinging cells called cnidocytes, which they use to capture prey. Polyps are the actual coral animals. Thousands of these animals cover one coral branch. Corals often grow into huge coral colonies or coral heads. Each coral head can be made up of hundreds or thousands of individual polyps, which are all linked to their neighbors by connective tissue – including their stomach. So when one eats, they all eat!

CORAL REEFS AND BIODIVERSITY

Biodiversity refers to the variety of living species that can be found in a particular place. Coral reefs are believed by many to have the highest biodiversity of any ecosystem on the planet—even more than a tropical rainforest. Occupying less than 1% of the ocean floor, coral reefs are home to more than 25% of all marine life. A highly biodiverse ecosystem, one with many different species, is often more resilient to changing conditions such as the effects of climate change and can better withstand significant disturbances. Each species plays its own function in a coral reef ecosystem. Some are herbivores and specialize in eating different kinds of algae, keeping corals from being smothered by their potentially deadly competitors. Others, like sharks, groupers, and other predatory fish, keep populations of smaller fish and other organisms in balance.

