OUR PACIFIC OCEAN, OUR STORIES

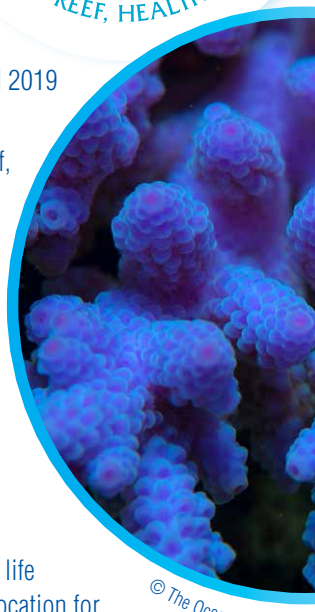
Learning more about our Coral Reef

Our Coral Reef is one of our greatest environment assets and in our Pacific region we are home to the world's largest coral reef, the Great Barrier Reef, which is also the largest structure on Earth made by living organisms. Spanning over 2,500 kilometers, it is about 500,000 years old.[1]

We are also home to the second longest double barrier reef in the world, the New Caledonia Barrier Reef which reaches a length of 1,500 kilometers. Fish diversity is high with at least 1,000 species documented, over 600 speices of sponges, 5,500 species of mollusks, 5,000 species of crustaceans, and over 350 species of algae.[2]

The International Year of the Coral Reef is 2018, however for the Pacific islands it is being commemorated over 2018 and 2019 to raise awareness and action for conservation!

We won't go any further, just wanted to share this with you to whet your appetite for more information about our coral reef, which we hope the next two factsheets will fulfil! The more we tell our Pacific stories about our coral reefs, the more we can all learn about the best way to protect and care for them.



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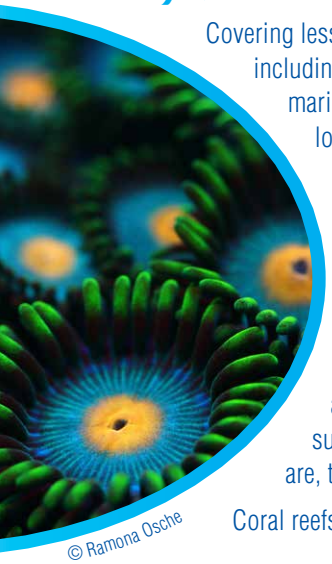
What are Coral Reefs?

Coral reefs are created by millions of tiny polyps, which are soft bodied animals without a backbone. They form large carbonate structures by extracting calcium from surrounding seawater. This is used to create a hardened framework, a coral reef, for protection and growth as well as the foundations for homes of hundreds of thousands, if not millions, of other species.[3]

Why are Coral Reefs important?



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Covering less than one percent of the ocean floor, reefs support an estimated twenty-five percent of all marine life including over 4,000 species of fish.[4] The reefs provide food, shelter, fish nurseries and are the perfect location for marine mammals to reproduce and raise their young.[5] Organisms such as sponges, worms, crustaceans (shrimp, spiny lobsters and crabs), molluscs, echinoderms (starfish, sea urchins and sea cucumbers), sea squirts, sea turtles and sea snakes are nurtured by the coral reef.[6]

Healthy reefs sustain the lives of many Pacific Islanders. More than 80% of Pacific Islanders live in or near coastal areas and depend on coral reefs for their livelihoods. A projected estimate of fish needs for all of SPREP Member states for 2030 is 328,000 tonnes.[7]

Fisheries and tourism industries rely heavily on coral reefs, which in turn boost the economy of the Pacific islands.[8] According to World Resource Institute, destroying one kilometre of coral reef translates to the economic loss of around USD 137,000 to USD 1,200,000 over 25 years.[9] Reef structures also play vital roles as they prevent storm surge and coastal erosion by breaking the impact of strong waves before they reach shorelines. The stronger our reefs are, the greater the protection of our island homes.[10]

Coral reefs are important sources of medicines developed to treat many diseases such as heart disease, cancer and arthritis.[11]

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4 International Coral Reef Initiative. What Are Corals? www.icriforum.org/about-coral-reefs/what-are-corals. Accessed 2018 July 10.

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7 Bell JD, Kronen M, Warwick JN, Keeble G, Demmke A, Pontifex S, Andréfouëtc S. Planning the use of fish for food security in the Pacific. Marine Policy. 2009 January; 33 (4): 64-76.

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Getting up close and personal with polyps

Polyps have a saclike body and a mouth lined with stinging tentacles to capture small prey that swim or drift by.

Coral polyps secrete calcium carbonate from underneath their skin through the food that they consume and absorb.

Zooxanthellae are single-celled photosynthesizing algae that live within the tissues of the polyps. They convert the sun's energy into food and are the reason why shallow reefs can grow fast enough to create large reef structures and gives the corals their vibrant colours.[12]

Did you know?

The fastest growing coral takes about 15 cm per year, but most grow less than 2.5 cm per year. Most reefs take decades to centuries of polyps secreting calcium carbonate to form the enormous hard structures we know today.[13]

Talking the Talk

Calcium carbonate – a chemical compound (CaCO3) that is the main component of pearls, shells of marine organisms, eggs, snails and corals.[14]

Echinoderms – a major group of marine animals, there are around 7,000 species normally found on the sea floor of every marine habitat; sea cucumbers, sea stars, brittle stars, sea urchins, sand dollars, etc.[15]

Organism – a living thing that can respond to stimuli, grow, and reproduce.

Telling our Pacific Stories

What activities are being done in your country to help raise awareness of our Coral Reefs?

Are there actions undertaken by the tourism industry or the government?

Do you feel coral reefs are being taken for granted and, if so, how can we change that mindset through the media?

The more that you learn about our coral reefs and know of the environmental work being done to conserve and protect them, the fuller your news stories can be.

12 The Ocean Portal Team. Ocean, Find Your Blue. Smithsonian; 2018 April. https://ocean.si.edu/ocean-life/invertebrates/corals-and-coral-reefs. Accessed 2018 July 10.

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