## **SPREP PACIFIC CONVERSATION SERIES**



CO2

CO2

## WHAT IS OCEAN ACIDIFICATION2

Changes in seawater chemistry are the 'other' greenhouse gas crisis. Our global ocean absorbs approximately 30% of the carbon dioxide  $(CO_2)$  we release into the atmosphere. This  $CO_2$  combines with seawater to produce carbonic acid, acidifying and depleting the seawater of carbonate that many forms of sea life need to build their shells.

The addition of  $CO_2$  to the ocean from burning fossil fuels is making seawater more acidic; we call this process "ocean acidification."

## **DID YOU KNOW?**

Globally, ocean pH has declined by 30% since the start of the Industrial Revolution when we started burning fossil fuels intensively. The current rate of acidity change is about 50 times faster than any known historical change, making it difficult for marine life to adapt.

If we keep emitting carbon dioxide like we do today, by the end of the century, we may have created an ocean more acidic than any seen in the past 100 million years. As the ocean's pH drops by 150% by 2100, coral reefs may become a memory. Some corals already show signs of dissolving in the acidified ocean waters, and we are just starting to learn about the effects of ocean acidification on other marine life.

The effects on coral reefs, shellfish, and more add up. Globally, USD 1 trillion every year could be lost due to ocean acidification, according to a report from the Convention on Biological Diversity.

## WHAT MAKES THE PACIFIC ISLANDS SPECIAL REGARDING OCEAN ACIDIFICATION?

Coral reefs provide 30 to 172 billion dollars of value each year—and 25% of the world's coral reefs are in the Pacific island's region.

Ocean resources account for a third of many islands' annual economies, not to mention our reliance on fish for up to 90% of our protein. For instance, Micronesia's ocean economy is worth USD 5.4 billion each year.

We all have a role to play, let's work together on action against ocean acidification.

We have a lot to lose. Have that Pacific conversation today!

















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"A RESILIENT PACIFIC ENVIRONMENT SUSTAINING OUR LIVELIHOODS AND NATURAL HERITAGE IN HARMONY WITH OUR CULTURES"