

## OCEAN ACIDIFICATION

# Our Pacific is Special

### OUR OCEAN IS CHANGING

Globally, the ocean pH has become 30% more acidic since we started burning fossil fuels intensively. The CO<sub>2</sub> we release combines with seawater to produce carbonic acid, acidifying the seawater and depleting it of carbonate that many forms of sea life need to build their shells. We call this process 'ocean acidification'.

By the end of this century, we may have created an ocean more acidified than any seen in the past 100 million years.

### SPECIAL PACIFIC PLACES HELP US UNDERSTAND THE FUTURE OCEAN

The acidity levels of seawater are different from place to place, especially in coastal areas.

Some Pacific places are like portals into the future ocean. At Illi Illi Bua Bua or 'Blowing Bubbles' in Papua New Guinea, CO<sub>2</sub> naturally bubbles out from cracks in the seafloor and creates a seawater pH between 7.6 and 7.7. That's 40% lower than today's average for the global ocean!

The water in Palau's Nikko Bay is naturally acidified, at pH levels predicted for 2100 in the global ocean. The corals that live there are different, but the bay has high coral cover and diversity even in those extreme conditions.

These rare places give a unique insight, making them natural laboratories of global value. Understanding how life survives in acidified seawater could help us face the extreme challenges affecting our ocean today.

### WE CAN MAKE A DIFFERENCE

We have a lot to lose from ocean acidification—but we also have a lot to share.

We can reduce ocean acidification by reducing our carbon emissions. We can also share our Pacific stories and support Pacific representation in ocean science.

Let's all work together on action against ocean acidification. Have that Pacific conversation today!



PO Box 240  
Apia, Samoa  
+685 21929  
sprep@sprep.org or pccc@sprep.org  
www.sprep.org

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