

Growing our understanding of ocean acidification

Did you know that some Pacific islands are like portals into the future ocean?

In the natural volcanic seeps of Tutum Bay, Papua New Guinea, CO₂ bubbles out from cracks in the seafloor and expose the nearby coral reef to a seawater pH between 7.6 and 7.7. That's 40% lower than the global average ocean pH today!

The water in Palau's Nikko Bay is at pH levels predicted for 2100 in the global ocean. Even under those extreme conditions, the bay has high coral cover and diversity. Understanding how those corals live could help us face the extreme challenges affecting corals today.

These 'natural laboratories' help researchers around the world figure out what marine life does in response to different chemical conditions of seawater. As our carbon dioxide emissions keep changing the ocean's acidity, we need to find solutions and learn how to help nature adapt to change.

Despite the importance of these sites and the threat that ocean acidification brings to our communities, Pacific island researchers were authors of only 15 scientific publications on ocean acidification between 2011 and 2019, out of the 3,833 publications worldwide, according to the **UNESCO Science Report (2021)**.

We can call for more, especially as we are entering the United Nations Decade of Ocean Science for Sustainable Development (2021–2030). Pacific islands are represented in endorsed Decade actions like the development of OA Action Plans through the OA Alliance¹; ocean acidification research for sustainability supported by the Global Ocean Acidification Observing Network (GOA-ON).

Basic monitoring of ocean conditions is essential for understanding the ocean and supporting management actions. Through the New Zealand–Pacific Partnership on Ocean Acidification, SPREP worked with Fiji, Kiribati, and Tokelau to support and boost the monitoring of local responses.

When you support ocean research, you are saving the ocean—and saving us too. Ask for research and representation.

Help give voice to this Pacific Conversation – learn more about **ocean acidification in the Pacific islands**.

**Join in the Pacific Conversation: #SaveOurOcean
#ResilientPacific**



NEW ZEALAND
FOREIGN AFFAIRS & TRADE
Manatū Aorere



SPREP
Secretariat of the Pacific Regional
Environment Programme



Gouvernement Princier
PRINCIPAUTÉ DE MONACO

¹ Cook Islands, Fiji and Tokelau are current members of the International Alliance to Combat Ocean Acidification, with SPREP as an affiliate member. For more on creating an action plan, see: <https://www.oaalliance.org/toolkit>

For more information:
www.sprep.org
sprep@sprep.org