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Award for clever cloud tool bringing reef communities together

An Australian Institute of Marine Science (AIMS) innovation that allows the world's coral reef monitoring community to work together in real time to improve reef monitoring and management was today announced a Pacific regional winner at the Asia-Pacific Spatial Excellence Awards (APSEA) in Port Vila.

[ReefCloud](#) is an open-access, cloud-based platform, co-designed by reef scientists from Pacific island nations, that uses machine learning and artificial intelligence to analyse photographs of coral reefs to rapidly extract and share data.

It is set to consolidate international coral reef monitoring efforts, inform more timely conservation decision-making and, ultimately, improve the long-term resilience of global coral reefs.

AIMS research team leader Dr Manuel Gonzalez Rivero said Pacific island coral reef managers faced the urgent challenge of managing reefs that were declining due to the pressures of climate change and local threats, faster than they could be tracked.

"This challenge is compounded by limited resources and differences in capacities and survey methodologies between nations," he said. "ReefCloud addresses the urgent need for an innovative, integrated approach to coral reef monitoring."

Science Coordinator at the Wildlife Conservation Society in Fiji, Yashika Nand has been helping test and develop the tool.

"ReefCloud is all about the democratisation of knowledge," she said. "It promotes effective communication within and between our different monitoring teams and creates a path to support collective conservation efforts in the long-term."

Users submit photos of the reef taken during their surveys, along with associated data. Cloud-based automated image analysis produces accurate estimates of coral reef composition 700 times faster than manual assessment.

With significant in-kind support from Accenture and funding from Department of Foreign Affairs and Trade, ReefCloud was developed by AIMS in partnership with the Queensland University of Technology (QUT). It was co-designed by reef scientists from Pacific island nations including: Palau International Coral Reef Center, University of South Pacific, Marine Ecology Consulting and Wildlife Conservation Society Fiji.

The Global Coral Reef Monitoring Network (GCRMN) recently released the [world's first quantitative assessment on global coral reef condition](#), integrating monitoring efforts across 100 countries and territories.

Dr Gonzalez Rivero said ReefCloud was partnering with the GCRMN to automate and fast-track future coral reef assessments.



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The transformational digital tool is being trialled in the Pacific and is expected to be widely available to reef monitors around the world from early 2022.

ReefCloud was announced winner of the Environment and Sustainability Category of APSEA for the Pacific region. APSEA celebrates the achievements of top spatial information enterprises and individuals.

ReefCloud is now a finalist for the overall APSEA Oceania Environment and Sustainability Award which will be announced in Canberra next May.

For more information visit: reefcloud.ai

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Download images: <https://cloudstor.aarnet.edu.au/plus/s/YnPHnHPGMfLesBU>

More about the Australian Institute of Marine Science:

The Australian Institute of Marine Science (AIMS) is Australia's tropical marine research agency. In existence for almost half a century, it plays a pivotal role in providing large-scale, long-term and world-class research that helps governments, industry and the wider community to make informed decisions about the management of Australia's marine estate. AIMS science leads to healthier marine ecosystems; economic, social and environmental benefits for all Australians; and protection of coral reefs from climate change. More here: <https://www.aims.gov.au/>