

# Status and Trends of Coral Reefs of the Pacific Islands

## A Global Coral Reef Monitoring Network (GCRMN) Regional Report

### focusing on the island Pacific

Joint coordinators: CRIOBE and SPREP

#### Background

Coral reefs and coral communities occur throughout the island Pacific, extending from Palau to Pitcairn (from 134°37'E to 130°06'W) and from the North Western Hawaiian Islands to French Polynesia (from 28°25'N to 27°36'S). The coral reefs are ecologically and socially important: they nourish and stabilize shorelines, provide income through tourism and fishing, and are a vital source of dietary protein for many people. Some countries have a long history of coral reef research and monitoring, which has generated excellent data on coral reefs and associated biota including corals, algae, sea urchins, and fishes, the oldest dating back a century, but most from the past three decades. However, coral reef datasets are disparate and much data remains inaccessible for reporting on environmental status, environmental planning, as well as large scale ecological research. The region has previously been the subject of a GCRMN status and outlook report (Chin et al. 2011), but there has not been an analysis of long-term trends in coral reef health based on primary data.

#### Objectives

A regional<sup>1</sup> analysis of coral reef trends and current status will be prepared, with the objectives to

- Create a comprehensive inventory of reef data in the region, improving access to coral reef data;
- Identify key drivers of reef change and provide actionable management and policy recommendations, as well as recommendations for future monitoring and reporting; and
- Revitalize the regional GCRMN network and strengthen regular regional reporting.

This will enable better tracking of environmental change; enhance use of coral reef data policy formulation, management planning as well as research; and increase the utility of reef data for tracking progress against internationally adopted targets such as SDG 14 and Aichi Target 10. It will also support the preparation of a more synthetic global GCRMN report.

#### Approach

GCRMN supports the International Coral Reef Initiative (ICRI) by working through a global network to strengthen the provision of best available scientific information on and communication of the status and trends of coral reef ecosystems, for their conservation and management. Preparation of regional periodic coral reef assessments is the main substantive activity of GCRMN, with the approach piloted in the Caribbean in 2012-2014<sup>2</sup> providing a blueprint. That process has had an impact at many levels. Better ways of monitoring have been proposed and are being adopted by countries, and the archiving and use of monitoring data is being strengthened. Importantly, both public and private sector decision-makers in the region are taking action (e.g. through enhanced reef protection and management, and halting sales of parrotfish in supermarkets). Drawing on these experiences, the Pacific Islands analysis will focus on coral reef biota broken down by major functional groups, coupled with data on local oceanographic conditions and El Niño events, levels of human protection, exploitation, and development. SPREP provides a formal regional mechanism to facilitate national uptake of findings in policy and management. The study will be conducted building on the network of researchers in the region, coordinated by Serge Planes, Director of CRIOBE, Jerker Tamelander, Head of the UNEP Coral Reef Unit, and Warren Lee Long and Paul Anderson, Coastal and Marine Adviser and Environmental Monitoring Analyst, respectively, at SPREP. Guidelines for the development of regional GCRMN reports are being prepared and will support preparation of the Pacific Island report.

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<sup>1</sup> Proposed area: American Samoa; Commonwealth of the Northern Mariana Islands; Cook Islands; Federated States of Micronesia; French Polynesia; Guam; Hawaii; Samoa; Tonga; Nauru; New Caledonia; Niue; North Western Hawaiian Islands; Pacific Remote Islands Marine National Monument; Papua-New Guinea; Pitcairn Islands; Fiji; Kiribati; Palau; Marshall Islands; Vanuatu; Solomon Islands; Tokelau; Tuvalu; and Wallis & Futuna.

<sup>2</sup> Jackson et al. (eds) 2014. *Status and Trends of Caribbean Coral Reefs: 1970-2012*. ICRI, GCRMN, IUCN and UNEP. 306p. The report and Executive Summary in English, French and Spanish can be downloaded at [www.icriforum.org/caribbeanreport](http://www.icriforum.org/caribbeanreport)

## Key activities and timeline

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1. Compiling a complete bibliography of data from the region;	<b>October 2016*</b>
2. Conducting a scientific workshop to review data, discuss and agree on regional and national analyses and data management;	<b>Mid-October 2016</b>
3. Collating data in a regional database hosted by a regional institution;	<b>January 2017</b>
4. Data analysis and compilation of a draft executive summary and recommendations, reviewed by partners;	<b>May 2017</b>
5. International launch of executive summary at the UN SDG 14 Conference (New York, 5-9 June 2017)	<b>Beginning June 2017</b>
6. Full draft report reviewed by partners;	<b>September 2017</b>
7. Publication of the report;	<b>October 2017</b>
8. Conducting a workshop to strengthen the regional network for monitoring and reporting and to foster greater harmonization of future monitoring efforts.	<b>TBD</b>

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\* Data received later than November 2016 will not be included in the report analysis but can be included in the regional database.

## Outputs

- A regional GCRMN report co-authored by all contributors, containing a regional synthesis, concise summaries for countries/territories, and actionable recommendations for management and policy, as well as recommendations on monitoring indicators and methods in the region;
- A comprehensive database of coral reef data in the region;
- Communication products including press release, materials for press conferences as well as briefing sessions for policy makers;
- Scientific publication(s) including an overview/synthesis paper;

## Policy and management relevance

The report is expected to generate a number of recommendations for coastal and marine policy and management, that can be pursued at the regional level through SPREP and other regional networks, as well as nationally and sub-nationally by governments and other entities. Specifically, policy and management application of report findings is envisaged in the following areas:

- Biodiversity conservation: recommendations regarding marine protected area (MPA) network policies as well as to support siting and sizing of MPAs will be provided;
- Fisheries: fish species or areas that warrant particular management efforts can be identified;
- Coastal planning and development: recommendations on coastal development, including tourism development, as well as other land-use may also be possible, to be pursued through sectoral interventions or cross-sectoral processes at any level (e.g. marine spatial planning);
- Climate change: Recommendations for coastal adaptation planning including ecosystem-based adaptation will be provided, based on historical trends and projected climate change impacts;
- Assessment and research: The work also has direct implications for research, monitoring and assessment for management, including by generating recommendations on indicators and methods for coral reef monitoring for use e.g. in national and regional state of the environment reporting, Drivers-Pressures-State-Impacts-Responses (DPSIR) analyses, Environmental Impact Assessments (EIA), Strategic Environmental Assessments (SEA) etc.

## Partners

Collaboration is requested from individuals and institutions, including provision of raw data on coral reefs in the region and other in-kind support towards the process. In addition to coordinating partners (SPREP, CRILOBE, UNEP and ICRI (co-chaired by France and Madagascar)), a broad range of national agencies, academic institutions and NGOs from around the Pacific are participating in the initiative.

**Further information**

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