



ICRI Member's Report

PALAU

Reporting period December 2017 – November 2018

1. **Reporting on the ICRI Plan of Action 2016-2018.** *Your responses will help inform the Secretariat about members' contributions toward the previous Plan of Action.*

a. **Please list any relevant examples from your organisation/country of investment/projects to protect and restore the natural infrastructure of reefs and mangroves.** (See Goal (1) 2 [ICRI Recommendation for supporting investments in the natural infrastructure of reefs and mangroves to increase climate resilience](#)).

- *Protect and restore reefs/mangroves:*

1) *National Initiative - Protected Areas Network (14 sites)*

2) *Organization Projects: Conduct coral reef monitoring at long term monitoring sites and PAN marine sites; coral reef recovery research following large-scale disturbance,*

b. **Has your organisation/country made any progress in the following areas to target anthropogenic pressures?** Please give detail below. Note: If no change since your last ICRI member report, please write 'no change'.

Encourage ban of plastic microbeads in cosmetic products. (See Goal (3) 2 & [See ICRI Recommendation to reduce plastic microbeads pollution in marine environment](#)):

- *National Initiative: Recently signed into Law RPPL # 10-14 to ban single use plastics [after 1 year, no individual or businesses may import plastic bags for distribution to customers and after 2 years, retail establishments may not provide plastic bags that are not biodegradable or compostable to their customers; prohibits the provision of disposable plastic and polystyrene beverage containers to employees and guests, such as water bottles, eating utensils, and Styrofoam plates and cup]*

- *Organization Project: collaborate with Scientific Center of Monaco to study the "Abundance of plastics in Palau: their effects on coral physiology".*

Improve regulation and enforcement to reduce direct anthropogenic damage due to dredging and physical alteration of reef structures. (See Goal (3) 3 & [ICRI Recommendation to reduce damage due to dredging and](#)

[dumping on coral reefs](#)):

-Organization: Review Environmental Assessments to enforce regulations

Deployment of mooring devices limiting the mechanical destruction of coral reefs and seagrasses. (See Goal (3) 4).

- c. **Did your organisation/country celebrate International Year of the Reef?** Please give details below. (See Goal (5) 1 & [ICRI Recommendation designating 2018 as the third International Year of the Reef](#)):

*- 20x20 Coral Reef Talk International Year of the Reef Sept 12, 2018
[7 presenters from different local and international organizations that discussed how their agencies/project are studying the reef]*

2. **Contribution to the ICRI Plan of Action 2018-2020 and upcoming ICRI general meetings.** Your responses to the following questions will assist the Secretariat in assessing contributions towards the major themes of the draft ICRI Plan of Action 2018-2020.

Theme 1 – Promote effective and adaptable solutions to improve the protection of coral reefs

- a. **Which of the below topics do you consider to be the three top challenges that your organisation faces in managing coral reefs?** Please select from the options below:

- Climate change impacts
- Inadequate planning, zoning and management
- Unsustainable resource extraction
- Tourism and recreation
- Shipping
- Coastal development
- Dredging
- Illegal and destructive fishing
- Fish and coral trade
- Marine debris
- Other. Please specify:

- b. **Please list any examples of innovative management practices that your organisation/country is involved in, such as use of VMS, drones & ecological**

mooring devices. Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

- use of Stereo-DOVs system to conduct fish surveys instead of underwater visual census survey to get more accurate fish size measurement
- use of acoustic and satellite tags in pelagic fish with receivers attached to FADs to study pelagic fish movements within the Palau National Marine Sanctuary
- use of tablets to conduct socioeconomic surveys
- use of underwater temperature loggers, water quality meter (AAQ), long term ocean acidification buoy (KIOST) to monitor water chemistry and quality
- use of stress tank to measure tolerance of heat stress on corals

- c. **Please list any examples of innovative funding for management that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

- Protected Areas Network (PAN) Fund
- State funded projects
- Grants

- d. **Please list any examples of leading practices, techniques and strategies for building reef resilience that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

- Breeding of heat tolerant corals
- Identification of areas with heat tolerant corals

- e. **Please list any examples of leading practice reef restoration mechanisms that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

- "Coral reef rehabilitation Program" among Koror State Government, Palau Visitors Authority and Palau International Coral Reef Center. The three organizations will work together to rehabilitate degraded areas in Koror State waters. Funding provided by Koror State Government and Palau Visitors Authority as well as private donations.

Theme 3 – Support communities reliant on coral reefs

- f. **Is sustainable tourism development a significant challenge for your organisation?** If so please include detail below of the kinds of challenges faced and your strategies to deal with them.

- g. **Is your organisation involved in activities to raise awareness and encourage action to support communities reliant on coral reefs?** Please include details below.

- Communication and Outreach conduct school and community outreach;
- Collaboration with Koror State in educating tour guides of all tour operators in Palau. Giving lecture on coral reefs and their importance once a month during the course.

Socioeconomic and ecological presentations to the communities on their respective protected areas and recommendations on how to improve management, protection, and benefits.

Theme 4 – Help to reduce anthropogenic threats to coral reefs, particularly those that occur at a global or regional scale

h. What activities is your organisation involved in to elevate awareness of the global nature of the threat of climate change to coral reefs? Please include details below

- Research on climate change: OA project ; KIOST OA-monitor water conditions (heat, pH, salinity) in Malakal Bay
- Research on the capacity of coral reefs to recover after large-scale disturbance (mass bleaching event, typhoon disturbance)
- Awareness activities: presentations to schools and community on Climate change

i. Has your organisation made any progress in dealing with destructive fishing and trade? Please include details below.

j. Has your organisation made any progress in dealing with marine debris? Please include details below.

3. Would you like to report on your activities during the ICRI GM? Please give details below.

4. International events. Please list any upcoming international events relevant to ICRI which someone from your organisation plans to attend in 2018-2019.

ICRI GM, Monaco, 5-7 Dec 2018

Conference of the Parties to the United Nations Framework Convention on Climate Change, 3-14 Dec 2018

Reef Futures 2018: A Coral Restoration and Intervention-Science Symposium, Florida, 10-14 Dec 2018

Global World Heritage Marine Managers meeting, Alaska, US, 26-31 May 2019

Other:

5. Publications. Please list relevant publications and reports you have released during this reporting period.

Rengiil G, Kitalong A, Tsuchiya M. 2017. Paradise of Nature: Understanding the Wonders of Palau. Palau International Coral Reef Center, Palau.

Hongo C, Kurihara H, Golbuu Y. 2018. Projecting of wave height and water level on reef-lined coasts due to intensified tropical cyclones and sea level rise in Palau to 2100. *Natural Hazards and Earth System Sciences* 18: 699-686.

Marino L, Gouezo M, Dochez M, Nestor V, Otto E, Jonathan R, Mereb G, Olsudong D, Parker A. Ecological assessment of Iuau Conservation Area in Angaur State. PICRC Technical Report 18-18 Palau International Coral Reef Center. Koror, Palau

Miyakuni K, Fujita Y, Marino L, Rengiil G. 2018 Developing Carrying Capacity for Marine Tourism: The Case of the Republic of Palau. PICRC Technical report 18-15 Palau International Coral Reef Center. Koror, Palau

Mumby P, Bozec Y, Roff G, Gouezo M, Doropoulos C, Golbuu Y. 2018 Status Report on Ngederrak and Lighthouse Reef. PICRC Technical report 18-14 Palau International Coral Reef Center. Koror, Palau

Gouezo M, Nestor V, Dochez M, Jonathan R, Marino L, Olsudong D, Mereb G. 2018 Status of seagrasses fishes and macro-invertebrates at Teluleu Conservation Area from 2011 to 2018. PICRC Technical report 18-13 Palau International Coral Reef Center. Koror, Palau
Fujita Y, Miyakuni K, Marino L. 2018 Economic Value of Coral Reefs in Palau. PICRC Technical Report 18-12 Palau International Coral Reef Center. Koror, Palau

Rengiil G, Kimura T. 2018 Capacity Building on Conservation of Marine Biodiversity in Palau's PAN MPAs. PICRC Technical report 18-11 Palau International Coral Reef Center. Koror, Palau

Miyakuni K, Fujita Y, Koshiba S, Rengiil G. 2018 Residents' Attitudes toward Tourism in an Island Destination, Focusing on Ecocentric Attitudes: The Case of the Republic of Palau. PICRC Technical report 18-10 Palau International Coral Reef Center. Koror, Palau

Marino L, Gouezo M, Dochez M, Nestor V, Jonathan R, Mereb G, Olsudong D. 2018 Ecological Assessment of Ngermedellim Marine Sanctuary. PICRC Technical report 18-09 Palau International Coral Reef Center. Koror, Palau

Gouezo M, Olsudong D. 2018. Impacts of Tropical Storm Lan (October 2017) on the western outer reefs of Palau. PICRC Technical Report 18-08 Palau International Coral Reef Center. Koror, Palau

Hongo C, Kurihara H, Golbuu Y. 2018 Projecting the effectiveness of coral reefs in mitigating the impact from sea-level rise and tropical cyclones on the coastline of Melekeok, Palau to the end of the 21st Century. PICRC Technical report 18-07 Palau International Coral Reef Center. Koror, Palau

Marino L, Jonathan R. 2018 Socio-economic Baseline Study of Melekeok State. PICRC Technical report 18-06 Palau International Coral Reef Center. Koror, Palau

Sowa K, Hongo C, Watanabe A, Yamaguchi K, Golbuu Y, Kurihara H. Massive Porites coral cores reveal two major skeletal growth cessation and subsequent recovery at Airai Bay, Palau in the last 30 years. PICRC Technical report 18-05 Palau International Coral Reef Center. Koror, Palau

Reimer J, Uyeno D, Kise H, Biondi P, Masucci G, Kintaro Z, Adelba Z, Isalias K, Masang N, Kitalong W, Marie L, Olkeriil M, Albinsky D, Montenegro J, Yang S, Lau Y, Wee B, Kunihiro S, Kawamura I, Soong G, Kushida Y, Kawai E, Kubomura T, Timmons C, Gordon J, Nestor V. 2018 Investigating biodiversity of coral reefs and related marine ecosystems in Palau. PICRC Technical report 18-03 Palau International Coral Reef Center. Koror, Palau

Yuen Y, Gouezo M, Nakamura T. 2018 Coral Reef Communities in Palau's Inner Reefs. PICRC Technical report 18-02 Palau International Coral Reef Center. Koror, Palau

Gouezo M, Dochez M, Jonathan R, Marino L, Nestor V, Olsudong D, Mereb G. 2018 Medal Ngediull Conservation Area 2017 Monitoring Assessment. PICRC Technical report 18-01 Palau International Coral Reef Center. Koror, Palau

6. General Information. (Note that this information will be posted on the ICRI website on your member page: <http://www.icriforum.org/about-icri/members-networks>.)

Member type (Country / Organisation):	Country
Focal Point 1:	
<i>Name:</i>	Dr. Yimnang Golbuu
<i>Title/Organisation:</i>	CEO/Palau International Coral Reef Center
<i>Email:</i>	ygolbuu@picrc.org / ygolbuu@gmail.com
Focal Point 2:	
<i>Name:</i>	
<i>Title/Organisation:</i>	
<i>Email:</i>	