



International Coral Reef Initiative (ICRI)

Member's Report | 37th General Meeting

19th – 23rd September 2023 Hawai'i, – United States of America

Reporting Period: 2021 – 2023

A. Member Information:

- Name of ICRI member: **Panama**
- Name of person(s) completing member's report: Lissette Trejos-Lasso
- Email: ltrejos@miambiente.gob.pa
- Are you a Focal Point: Yes No
 - If no, who are you completing the form on behalf of:

Roberto Santamaría, by Environmental Ministry and Juan Maté by STRI-Panama
- Which was the last General Meeting you attended: 34th
- Will you be attending the 37th ICRI General Meeting: Yes No
- Member social media:
 - Twitter: @MiAmbientePma
 - LinkedIn: <https://www.linkedin.com/in/lissette-trejos-lasso-20060929/>
 - Facebook: Ministerio de Ambiente de Panamá miambiente.gob.pa
 - socialmedia@miambiente.gob.pa
 - Instagram: [miambientepma](https://www.instagram.com/miambientepma)

B. Reporting on the implementation of ICRI Plan of Action 2021-2024: turning the tide for coral reefs. *Your responses will help inform the Secretariat about members' contributions toward the current Plan of Action*

Theme 1 - Preparing for the Future: Promoting Resilient Coral Reefs

1.A - Strengthening policies - Supporting conservation and recovery of coral reefs and associated ecosystems through resilience-based management frameworks.

- (ICRI) How have you embedded resilience-based management into your policies? (Tip – refer to the RBM policy brief: <https://icriforum.org/resilience-hub/>)

Answer:

- *Law 304 of May 31, 2022. Establishes the integral protection of coral reef systems, ecosystems and species associated in Panama.*

1.B - Promote capacity building for applying resilience-based management approaches to coral conservation Ad Hoc Committee on Resilience-based Management.

- (ICRI) Please list any examples of leading practices, techniques and strategies for building reef resilience that your organisation/country is involved in. Include their location and extent, methods of implementation, financing, and an assessment of their results (or likely results), with links for more information if possible.

Answer:

- *Smithsonian Tropical Research Institute's scientists put new tools to work as they revolutionize ocean science research. We developed collaboration with Conservify, a non-profit with funding from Google and others to develop low-cost sensor arrays called FieldKits that have been deployed in rainforests across the Amazon, and will be modified for marine applications for this project. For this project, they will develop custom marine sensor arrays to measure pH, temperature and light next to the corals throughout the 4-year program. The project will also use advances from Silicon Valley including Structure from Motion and Machine Learning to create high resolution 3D photographic reef models. "Conservation tech is really changing the way we study reefs," says David Kline. "We can use 3D scanners developed for autonomous cars, and machine learning to identify the organisms in millions of photos." The Coral Reef Sentinels Program: A Mars Shot for Blue Planetary Health. <https://doi.org/10.4031/MTSJ.55.3.51>.*

- (ICRI) Have you developed, or are you aware of, training materials that you can share?

Answer:

Panama Non-native Estuarine and Marine Organisms (Pan-NEMO) database (<https://invasions.si.edu/nemesis/Panama/overview>)

Panama Non-native Estuarine and Marine Organisms (Pan-NEMO) is a joint effort by the Smithsonian Institution's Environmental Research Center (SERC) and Tropical Research Institute (STRI) to document the distribution of nonindigenous species in the Republic of Panama's coastal and estuarine waters. It was supported by the Smithsonian Institution and Panama's Secretaría Nacional de Ciencia, Tecnología e Innovación (SENECYT) in collaboration with the Autoridad de Canal de Panama (ACP) and Autoridad Maritima de Panama (AMP). The baseline inventory was supplemented by existing data, including

historical surveys and literature sources. To keep the data as accessible as possible records from Panama are merged into the National Estuarine and Marine Exotic Species Information System (NEMESIS). (Fofonoff PW, Ruiz GM, Steves B, Simkanin C, Carlton JT, Schlöder C & Torchin ME. 2020. Panama Non-native Estuarine and Marine Organisms (Pan-NEMO) System. <https://invasions.si.edu/nemesis/Panama>).

1.C - Promote and build capacity for the restoration of resilient coral reefs Ad Hoc Committee on Reef Restoration

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

Answer:

- In Caribbean side, REEF TO REEF organization, is working with *Acropora* spp., they have a nursery of *A. cervicornis* and are doing a growth rate of *A. palmate*.
- Artificial coral reefs, *Pixvae*.

Theme 2 – Coral Reef Science and Oceanography: Advancing and Utilizing the Latest Science and Technology

2.A – Coral monitoring capacity building

- (ICRI) Do you have information / case studies that could contribute to the update of the “Methods for ecological monitoring of coral reefs” (<https://portals.iucn.org/library/efiles/documents/2004-023.pdf>), especially related to the use of new technologies.

Answer:

- Kline, David, I., Dehgan, Alex, Bunje, Paul, Selbe, Shah, Chirayath, Ved, Pizarro, Oscar, Leray, Matthieu, Connolly, Sean, Bongaert, Pim, Treibitz, Tali, Levy, Oren, Kriegman, David, Andersson, Andreas, McField, Melanie D., and Duffy, J. Emmett. 2021. "The Coral Reef Sentinels Program: A Mars Shot for Blue Planetary Health." *Marine Technology Society Journal*, 55, (3) 118–118. <https://doi.org/10.4031/MTSJ.55.3.51>

- (ICRI) Are you aware, developing, or involved with, any capacity building activities related to the use of coral reef monitoring mechanisms, especially regarding the advancement of monitoring practices (noting technology)?

Answer:

Smithsonian Tropical Research Institute

Internships:



The Smithsonian Tropical Research Institute (STRI) offers different types of internship programs Internships offer a way-in for undergraduates, recent graduates and beginning graduate students Inters learn more about the research process, scientists get to know you, leading to future opportunities.

- *61 internships were granted among 2019-2023 related to research/monitoring on coral reefs.*

Fellowships:

Much of STRI's success is due to its ability to attract some of the brightest scholars from diverse fields of tropical research. We invest more than \$3 million every year to support creative young researchers at critical stages in their careers. Fellowships range from three months to three years and allow young scholars to explore their own research questions across Panama's rich tropical ecosystems while based at our state-of-the-art facilities.

- *21 Fellowships were granted among 2019-2023 related to research/monitoring on coral reefs. B.A/B.s Level: 1; Master's Program: 2; PH.D. Students: 18*

Courses:

Revisionary Systematics of Tropical Marine Organisms (<https://bocasarts.weebly.com/>)

This program supports research and training in taxonomy and systematics of marine invertebrates and algae from Panama. Funded by an NSF ARTS grant, we aim to make information and tools for systematics research widely accessible. How can we preserve, foster, and grow taxonomic expertise? The goal of the project is to integrate research with training to overcome the taxonomic impediment for 6 groups of tropical marine organisms: sponges, hydroids, sea anemones, tunicates, nemerteans, and algae. We are working together in Panama to enhance expertise and develop the next generation of taxonomists. Through a combination of original research, training workshops and development of online tools we hope to make the taxonomy and identification of these organisms more accessible to both expert and non-specialist workers in biodiversity and conservation.

2.B – The Global Coral Reef Monitoring Network (GCRMN)

The GCRMN would like to receive feedback on the [Status of Coral Reefs of the World: 2020 report](#) to improve the production of future regional and global reports. As such, please kindly respond accordingly to the questions below:

- (ICRI) In reference to the Status of Coral Reefs of the World: 2020 report:
 - Have you read the report? *We did read the report*
 - Did you utilise the report and/or use the results and contents? *No*
 - How could the next report be improved (considering the entire process from data acquisition to reporting)?

- (ICRI) The GCRMN intends to establish time-bound task forces to address specific priority issues and to build capability and capacity across the network. As a first priority, a Data Task Force was established. The Task Force brings together subject matter experts to increase the transparency, reproducibility, and robustness of future GCRMN reports alongside capacity in monitoring, data collection, analysis, management and sharing of coral reefs and associated ecosystems. The Task Force will focus on:
 - Improving data integration and analyses to facilitate the production of GCRMN regional and global reports; and
 - Promoting good data management practices based on FAIR data principles for the coral reef scientific community.

Tell us if you will be interested in joining the Data Task Force, or upcoming task forces. More so, please inform us if you have data to contribute to upcoming regional, or global, reports and if you will be organising and/or partaking in any capacity building activities regarding data monitoring:

Answer:

1. *Taskforces: none.*
2. *Data to contribute (GCRMN Region Country, Data description):No.*
3. *Upcoming capacity building activities: No.*

Theme 3 - Local Threat Reduction: Integrating Response Planning Frameworks

Please tick the most appropriate box/boxes:

- (ICRI) Do you have (or in the process of developing) a coral reef response plan(s) on, for example, but not limited to:
 - coral disease
 - vessel groundings
 - bleaching
 - invasive species outbreaks (lionfish and COTS)
 - large storm events
 - other:

If yes, please provide us with more information.

Answer:

- Identification of invasive species in the communities of coral reefs in the core areas of CMAR

Theme 4 - Diversity and Inclusion: Expanding the Coral Reef Community

4.A – Connect with youth audiences:

- (ICRI) Are you developing (or planning to develop) any communication campaigns or outreach materials? What will your primary target audiences be and what would your key messages include?

4.B - Collaborate with Indigenous people and seek to incorporate indigenous and local knowledge into policies and management plans:

- (ICRI) How do you incorporate indigenous and local knowledge into policies and management frameworks. Please provide us with some examples. Do you have any plans or strategies to further promote this incorporation?

Answer:

We start conversation for the mapping and identification coral reef and sea grass areas in Panama, we did exploratory framework at the Escudo de Veraguas at Nöbe Buglé comarca and Guna Yala comarca indigenous territory.1

- (ICRI) Do you have any, or know of, best practices to solicit Indigenous and local community knowledge?

C. Kunming-Montreal Global biodiversity framework

- (ICRI) Do your current National Biodiversity Strategies and Action Plans (NBSAP) incorporate coral reefs? If not, what kind of material will be useful for your Country/organisation to ensure coral reefs are integrated in the revision of NBSAPs?

Answer:

Si, named: National Biodiversity Strategy and Action Plan 2018-2050.

Panama national ocean policy since 2022.

- (ICRI) How are you planning to implement the Kunming-Montreal Global biodiversity framework. For you, which targets are the most relevant for coral reefs?

Answer: We have not a plan to implement the Kunming-Montreal Global biodiversity framework. Just mapping and identification coral reef and seagrass areas in Panama,

D. Upcoming events

Please tick the most appropriate box/boxes:

- September 19th – 23rd 2023: 37th ICRI GM, USA, Hawaii
- 30th November – 12th December 2023: 28th Conference of the Parties to the United Nations Framework Convention on Climate Change
 - Not me some co-worker at Climate Change Division by Environmental Ministry and CMAR Secretariat
- 26th February – 1st March 2024: 6th session of the United Nations Environment Assembly
- 10th – 12th April 2024: 2024 UN Ocean Decade Conference, Barcelona, Spain.
- 2024: United Nations Biodiversity Conference (COP16) of the Parties to the UN Convention on Biological Diversity (CBD), Turkey.
- Other

Please list any upcoming regional / international events relevant to ICRI that your organisation plans to attend:

E. Publications. Please list relevant publications / reports you have released recently (+ add a link if possible)

Publication	URL

F. ICRI Member Feedback. What do you find most valuable about being a member of ICRI as well as completing the ICRI member reports? If you have any ideas to improve the Member Reports, please list below:

G. Contact information & member information. (Note that this information will be posted on the ICRI website on your member page: <https://icriforum.org/members/>).

Please use the table below to provide us updates to your member’s focal points as well as the blank cells to indicate changes to information (please add more rows, as needed):

Focal Point 1:	
Name:	Lissette Trejos Lasso
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Focal Point 3:	
<i>Name:</i>	Juan Maté
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Member page updates:	
<i>Section</i>	<i>Update</i>
Do you have new resources (reports, guidelines etc.) that you would like to display?	
<i>Resource description</i>	<i>URL</i>

Thank you very much for sharing your valuable experiences and information with ICRI. Members reports, meeting outputs and resources will be uploaded to: <https://icriforum.org/events/37th-icri-general-meeting/>