



## International Coral Reef Initiative (ICRI)

Member's Report | 37<sup>th</sup> General Meeting

**BRAZIL**

19<sup>th</sup> – 23<sup>rd</sup> September 2023 Hawai'i, – United States of America

**Reporting Period: 2021 – 2023**

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### A. Member Information:

- Name of ICRI member: Ana Paula Prates and Beatrice Padovani Ferreira
- Name of person(s) completing member's report: Ana Paula Prates, Beatrice Padovani Ferreira and Mariana Vitali
- Email: [ana.prates@mma.gov.br](mailto:ana.prates@mma.gov.br), [doceano@mma.gov.br](mailto:doceano@mma.gov.br)
- Are you a Focal Point:  Yes  No
  - If no, who are you completing the form on behalf of:
- Which was the last General Meeting you attended:  
Last reporting period: December 2017 – November 2018 for the 33rd ICRI General Meeting. The last General Meeting we attended was the 33rd General Meeting, Monaco
- Will you be attending the 37<sup>th</sup> ICRI General Meeting:  Yes  No
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**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?  
(Refer to the RBM policy brief: <https://icriforum.org/resilience-hub/>)

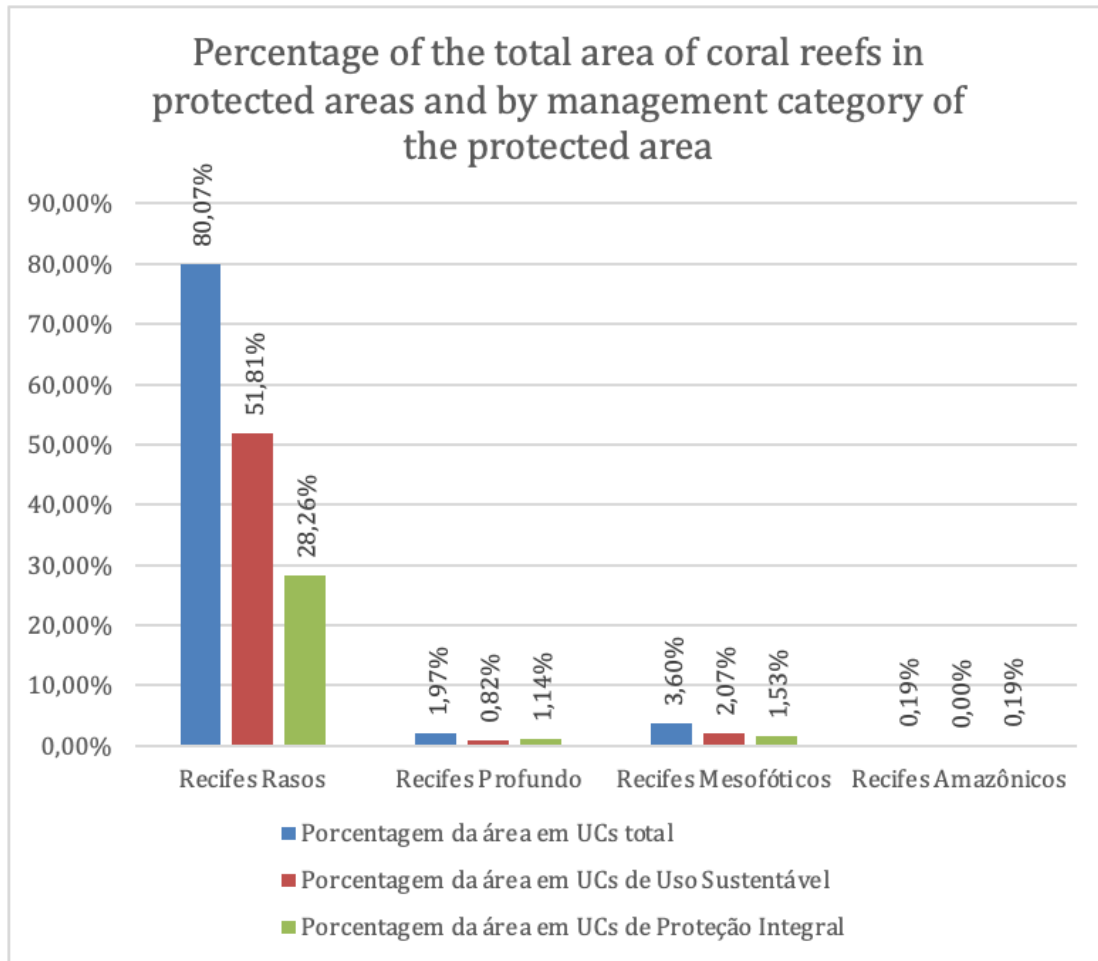
*Background: A wide range of management strategies implemented around the world to support reef resilience*

Resilience based management is embedded in many coral reef policies implemented in Brazil, however a resilience based management plan was not effectively developed and adopted in the country in the last years. The newly established Department of Ocean and Coastal Management (DOCEANO) was created within the National Secretariat for Climate Change at the MMA. DOCEANO's main objective is to include the ocean and coastal zone in climate policy in an integral and permanent way. To this end, the following priorities are being developed: implementation of Marine Spatial Planning; resumption of Integrated Coastal Management within the Interministerial Commission for Marine Resources (CIRM); development of national strategies for the conservation and sustainable use of vulnerable ecosystems - mangroves and coral reefs; and the inclusion of the ocean and coastal and marine ecosystems in the National Climate Change Plan. For the National Strategy for the Conservation and Sustainable Use of Coral Reefs, the following wide range of management strategies to support reef resilience to be continued and expanded.

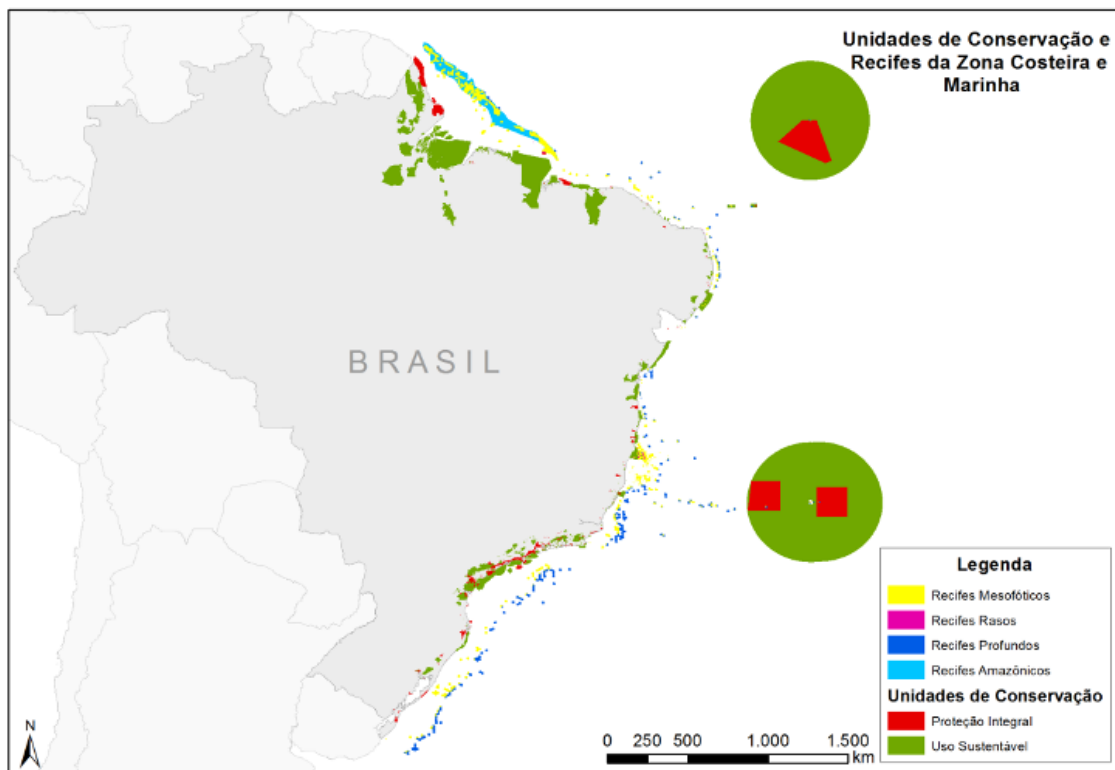
Below we list results from policies and actions taken towards reef resilience.

### **Marine Protected Areas (MPAs) and resilient MPA design:**

Area of coral reefs inside protected areas, which assesses the percent of areas of coral reef occurrence in Brazil that are under protection within protected areas. The scientific publication of the existence of Amazonian coral reefs occurred in April 2016. Its relevance for the maintenance of the area's biodiversity and the threats to this area due to oil drilling interests point to the need to protect these corals within protected areas. Currently, only 0.19% (12,144.12 hectares) of the coral reefs in the Amazon River estuary (6,511,962.34 hectares) is protected within PAs. There is also little protection of the biodiversity of coral reefs in deep-water and mesophotic areas inside protected areas (60,420.69 hectares and 224,611.49 hectares, respectively). On the other hand, the shallow-water coral reefs are better protected inside protected areas (60,335.65 hectares of a total of 76,556.8 hectares of occurrence area). Challenges apparently lay on maintaining the rich biodiversity that occurs in coral reef areas, which may be possible through the creation of new protected areas.



The figure shows the percentage of the total area of coral reefs in protected areas and by protected area management category. In blue the percentage of the area in total MPA; in red the percentage of the area in sustainable use MPA and in green the percentage of the area in full protection. Note: The data for Amazonian reefs refers to the potential area of distribution of this ecosystem.



The figure shows the map of Brazil with the marine protected areas today covering 26.3% of the country's exclusive economic zone.

Second update of the priority areas and actions for the conservation of the coastal and marine biodiversity, with the use of free software especially developed to select areas based on the analysis of criteria and data defined by the user. Four workshops were carried out with the participation of over 200 experts on the coastal and marine zone, in addition to representatives of governmental agencies, non-governmental organisations, traditional communities and the private sector. The concluded update was published through MMA Administrative Ruling no 463, of 18 December 2018. These Priorities Areas highlight the indication of new protected areas on coral reefs.

**Threatened species:**

Percent of National Action Plan for the Conservation of Coral Environments - *PAN Corais* actions that were implemented. The PAN Corals, approved by ICMBio Administrative Ruling no 19/2016 and prepared in partnership with the Coral Vivo Project, establishes a conservation strategy in the form of a pact to face the threats to coral habitats. The preparation of PAN Corals took into consideration the species included on the current official lists of threatened species in Brazil or those effective at the time of the plan's preparation (MMA Normative Rulings n° 5/2004 and n° 52/2005, and MMA Administrative Ruling n° 445/2014). It has 10 objectives and originally included 146 proposed actions, which were reduced to 123 after the 2017 monitoring process. PAN Corais, which consists of an action

plan addressing 52 threatened species, with the main objective of improving the conservation status of coral environments by reducing anthropic impacts, increasing protection and knowledge, promoting sustainable use and socio environmental justice. The Plan comprises nine specific objectives and their respective actions, with an implementation period planned until 2021 and annual supervision and monitoring of the implementation process.

Five projects supported by the Petrobras Socio-Environmental Program form the Marine Biodiversity Conservation Network (BIOMAR) and bring together knowledge and experience to carry out joint actions in the areas of conservation, research, environmental education, social inclusion and communication at Petrobras' sites: Projeto Coral Vivo, Projeto Meros do Brasil, Projeto Golfinho Rotador, Projeto Baleia Franca and Projeto Albatroz.

### **Managing for climate change impacts:**

Implementation of the National Climate Change Adaptation Plan – PNA (MMA Administrative Ruling no 150, of 10 May 2016). The Brazilian Ramsar Strategy envisions the incorporation of information on climate change in the management plans of protected areas (including the Ramsar sites). A new Climate Plan is being designed by the Brazilian government within the framework of the Interministerial Committee on Climate Change - CIM (Decree n. 11.550/2023), where working groups are being set up to draw up new National Plans for Adaptation and Mitigation to climate change. These plans will draw up specific strategies for the ocean and vulnerable ecosystems such as coral reefs.

### **Reducing land-based sources of pollution:**

Domestic and industrial sewage, together with the runoff of agricultural chemicals and fertilizers, are the main contributors to the pollution of Brazilian water bodies. Even though no significant change occurred in Brazilian aquatic ecosystems from 2010 to 2015, the Water Quality Index rated “marginal” or “poor” for waters inside or close to large urban centers, according to the report “2017 Outlook of water resources in Brazil”, of the National Water Agency – ANA. Brazil has made progress with the publication of the National Solid Waste Policy; signing of reverse logistics agreements for packaging in general, with the inclusion of waste pickers in the recycling chain; the collection of used or contaminated lubricating oil and unusable tires; among other progress. However, it should be noted that, concerning pollution and biodiversity, there is still much to be done to prevent environmental impacts such as those that occurred in Mariana, Minas Gerais state, involving iron ore mining corporations, which resulted in the breach of mine tailing dams, causing socioenvironmental impacts impossible to estimate.

### **Controlling invasive species:**

Brazil revised its National Strategy on Invasive Alien Species through CONABIO Resolution no 7, of 29 May 2018, which presents the objectives and indicators developed for the 2030 deadline. The National Strategy focuses on species that threaten or impact biological diversity, considering the integrated vision with other sectors that are also affected in terms of economic losses, health issues and social and cultural impacts. The objective of the National Strategy is to guide the implementation of measures to control, avoid the introduction and

dispersion and reduce the impact from invasive alien species on Brazilian biological diversity and ecosystem services.

**Sun Coral:** As a result of the increased dispersal of the sun coral on the Brazilian coast, and concern about the current and potential environmental impacts associated with this invasion process, the Ministry of the Environment (MMA) has listed the sun coral (*Tubastraea* spp.), along with the wild boar (*Sus scrofa*) and the golden mussel (*Limnoperna fortunei*), as priority invasive alien species for the preparation and implementation of National Prevention, Control and Monitoring Plans. The target was set by the Federal Government in its Multi-Year Plan (PPA 2016-2019) with the aim of "Controlling three invasive alien species, mitigating the impact on Brazilian biodiversity". Two species of sun coral are found in the country today: *Tubastraea coccinea* and *Tubastraea tagusensis*. The genus was first recorded in the 1980s on an oil platform in the Campos Basin, Rio de Janeiro, but without any systematic studies or records of its distribution. The first record on a stable natural substrate, on a rocky shore, was recognized in 1998, in Arraial do Cabo/RJ. These two species are considered to be the first scleractinian corals to invade the Western Atlantic, and are found in natural environments and artificial structures. To deal with the sun coral, the MMA set up the Sun Coral Working Group (MMA Ordinance No. 94 of April 6, 2016) to provide technical advice and coordinate the preparation of the Plan to control and monitor the bioinvasion of the sun coral (*Tubastraea* spp.).

**Lionfish:** The Lionfish in Brazil was first detected in Rio de Janeiro state in 2014. Later, invasion was detected starting from north mesophotic amazonian reefs towards southeast through the equatorial margin and reached both the continental shelf of northeast costa and the oceanic areas, being detected first in Fernando de Noronha and later in Atol das Rocas. In terms of prevention, there are educational and scientific dissemination activities. These include the lecture "Lionfish: everything you need to know", which is given free of charge every month in the TAMAR Project auditorium to the local population and visitors to the island. Classes were also given to students at the Arquipélago School and information was disseminated through interviews and digital media materials. In addition, more than 60 divers working in Fernando de Noronha received a theoretical and practical training course on the invasive species with biologist Paulo Bertuol, the manager responsible for lionfish management in Bonaire, in the Caribbean. Another two courses were given by the ICMBio team to 17 new diving instructors, strengthening the partnership with these professionals.

ICMBio's elaborated the Guidance for the Management of Invasive Alien Species in Federal Protected Areas. The Guide aims to inform and guide managers in dealing with biological invasions of invasive alien species. Access here: <https://bit.ly/guiamanejo>

### **Managing fisheries:**

Recovery plans and measures are in place for depleted species. Recovery plans have been established for species considered under threat, including parrot fishes and groupers. The implementation of recovery plans occurs through the publication and implementation of MMA regulations that recognize species as eligible for sustainable use and fisheries regulations. To-date, nine MMA Administrative Rulings were published, as well as nine Inter-ministerial Administrative Rulings and Normative Instructions. Recurrent changes in institutional jurisdictions at the federal level for fisheries management may delay the future

definition of regulations.

**Responding to coral disease:**

Stony coral disease has not reached Brazil but managers and researchers are aware and in contact with colleagues to detect in case the disease reaches the area.

**Managing for social resilience:**

Establishment of Resex (Marine Extractive Reserves), management Councils, participation of local communities in recovery plans of threatened species, establishment of fisher women networks (with support of TerraMar Project). Implementation of the TerraMar Project (GIZ) with the objective of supporting the integrated environmental territorial management of the continental and marine space, to contribute to biodiversity conservation. The project supports the strengthening of the environmental territorial management, implementation of conservation and sustainable use measures for the marine and coastal biodiversity, development of strategies to integrate environmental quality monitoring initiatives, and promotes the capacity building and training of participatory networks at the project's target areas. The new Fisheries Ministry has an artisanal fisheries Secretary for the first time and several policies including fair trade initiatives are underway.

*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.
- *capacity building for applying resilience-based management*
- leading practices, techniques and strategies for building reef resilience that your organisation/country is involved in



### Awareness and capacity Building

There have been several initiatives for capacity building of local community members on coral reef conservation promoted by different Institutions and Projects, NGOs and Foundations. Those initiatives have been directed to coral reef monitoring by local communities, including women and indigenous people; strengthening of fisheries management on MPAs and other activities. Some of those activities are extension activities, regulated in recent years by the Ministry of Education (Resolution 07/2018) and that may be included under the Marine Sciences Curricula. Many Public Universities are making efforts to reaffirm extension and its formative role as an instrument of social transformation between the university and society. Under this new vision extension included a two way path of knowledge communication where traditional and local knowledge is included as part of the formation as much as academic knowledge.

Coral reef monitoring capacity building is often the center of the activities, with both citizen science and participatory or community based management trainings conducted. Those included trainings for coral reef monitoring of local communities (Reef Check Brasil, Coral Vivo, Ecomar, Projeto Conservação Recifal, De Olho nos Corais, and University Extension Courses as mentioned above)

### LINKS:

Coral Vivo Project: <https://coralvivo.org.br/quem-somos/> @projetocoralvivo

Reef Check Brasil <https://www.lecor.org/reefcheckbrasil>

IRCOS <https://www.recifescosteiros.org.br/en/s-projects-side-by-side>

Long-term Ecological Research Program (PELD):  
<https://www.gov.br/cnpq/pt-br/acesso-a-informacao/acoes-e-programas/programas/peld/sitios-peld-vigentes>

Terramar Project (GIZ/MMA): <https://www.giz.de/en/worldwide/40476.html>  
@rede.terramar

Toyota Foundation: <https://fundacaotoyotado brasil.org.br/>



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

1) The Conscious Behaviour in Reef Environments campaign informs tourists and users of conservation units and environments where coral reefs occur about the importance of conserving these areas. The idea is to encourage responsible practices during recreational and leisure activities. In addition, the campaign aims to inform tourist guides and environmental agents in the states and municipalities about responsible tourism in sensitive environments such as reefs.

Developed in 2001 by the Biodiversity Secretariat and updated in 2018 in partnership with the TerraMar Project, a cooperation between the MMA/ICMBio and GIZ, the campaign includes promotional materials such as posters and a manual with information about coral reefs, which can be accessed below:

<https://www.gov.br/mma/pt-br/assuntos/ecossistemas-1/ecossistemas-costeiros-e-marinhos/campanhas-de-conservacao-da-biodiversidade-marinha>

2) Ferreira, Gaspar, Coxey, and Monteiro. (2018). Manual de Monitoramento Reef Check Brasil.

<https://www.gov.br/mma/pt-br/assuntos/ecossistemas-1/areas-umidas/publicacoes/manual-de-monitoramento-reef-check-1.png/view>

*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.

Restore ecosystem functioning through establishment of MPAs has been the main strategy adopted so far (see previous session). Inside multiple use MPAs (IUCN V categories) establishment of no take zones has been one main strategy, however maintenance of those areas still remains a challenge, with few examples such as in Tamandare APA Costa dos Corais, effectively persisting in the long term.

Active restoration experiments involving gardening of coral fragments nursed in laboratories or in situ and redistributed to restore depleted areas are under development since the last mass coral bleaching. Those activities, conducted by Universities, NGO and Start Ups with support from donors and Government research funds, have been in some cases already associated to regenerative tourism activities, although still small scale. The initiative is a partnership between the Biofabrica de Corais, the Center for Conservation of Northeast Biodiversity, Cepene, ICMBIO, The federal University of Pernambuco, The Brazilian Research Council CNPQ, FACEPE and the World Wildlife Fund WWF  
some links <https://biofabricadecorais.com/>

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

*2.A – Coral monitoring capacity building*

The Brazilian Research Council PELD Program is a network of Long Term Ecological Research Sites that are part of the ILTER Network. There are Four Peld sites which include coral reefs: Peld Abrolhos, Peld ILOC, Peld TAMS and Peld CCAL, all conducting research and coral reef monitoring activities that include several technology advancements in satellite imagery, ROVs and underwater cameras, sidescanning, telemetry, metagenomics and other tools to monitor coral reefs.

Links:

Peld Abrolhos: <https://abrolhos.org/a-rede/>

Peld ILOC: <https://peldiloc.sites.ufsc.br/pt/>

Peld TAMS: <https://www.lecor.org/peld-tams>

Peld CCAL: <https://sites.google.com/view/peld-costa-dos-corais-al/>

- (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

Manual Rebentos Protocolos para o monitoramento de habitats bentônicos costeiros. Turra, A; Denadai, M R 2015

<https://doi.org/10.7476/978859872925> (<https://books.scielo.org/id/x49kz>)

Manual Reef Check- Ferreira, Beatrice & Gaspar, Ana & Coxey, Mariana & Grillo Monteiro, Ana. (2018). Manual de Monitoramento Reef Check Brasil.

<https://www.gov.br/mma/pt-br/assuntos/ecossistemas-1/areas-umidas/publicacoes/manual-de-monitoramento-reef-check-1.png/view>

- (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)?

See section 1B and 2A and related projects

## *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:
  - o Have you read the report?
  - o Did you utilise the report and/or use the results and contents?
  - o How could the next report be improved (considering the entire process from data acquisition to reporting)?

Brazil has contributed and participated in the Report and Chapter 11- Status and Trends of coral reefs of the Brazil region- (<https://gcrmn.net/2020-report/>) is dedicated to Brazil coral reefs report. The report has been disseminated and presented in several occasions including seminars, talks etc. In relation to how could the next report be improved, considering the entire process from data acquisition to reporting. Data acquisition: The Ocean and Coastal Management Department of MMA will establish a hub for coral reef monitoring sharing and reporting linked to the GCRMN and to the Status report. It is desirable that products developed for data acquisition and analysis are open for use so regional and local processes can be also established and vice versa. Data analysis and report workshops would be useful to maintain monitoring and reporting of status and trends, needed to support management decisions.

- (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:

YES. The Department of Ocean and Coastal Management is reaching out to coral reef monitoring programs and initiatives in order to establish a network that will discuss, share information and participate in a task force to report on the status of coral reefs in Brazil and to link to the GCRMN. In that regard we are interested in participating in all related initiatives.

### 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.

YES, there are invasive species control plans (sun coral and lion fish, please see 1 B acting at the state level and MPAs). In addition the IBAMA (Brazilian institute of Environment) disaster management control task Force is dealing with disasters and emergencies that may affect coral reefs such as oil spills, floods and other events. A bleaching task force will be discussed by the Department of Ocean and Coastal Management of MMA with potential partners. Several NGOs and institutions are also getting organised and networking in face of the likeness of upcoming bleaching events.

### 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?

As one of the priorities of the Department of Ocean and Coastal Management, a national strategy for the conservation and sustainable use of coral reefs is being drawn up, which will include components such as: monitoring, conservation, recovery, communication and dissemination, training, traditional communities and others.

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?

In January 2023, the MMA recreated the National Council of Traditional Peoples and Communities, which aims to monitor and improve public policies for Traditional Peoples and Communities who identify themselves as culturally differentiated groups and recognize themselves as such, ensuring that their cultural, religious, economic and territorial traditions are preserved. Indigenous peoples and traditional communities have extensive knowledge of nature and promote the conservation of biodiversity and the ecosystems in which they live. Respect for their territorial rights and the reproduction of their ways of life is a pillar for promoting a sustainable economy of the sea.

As mentioned in the previous question, one of the priorities of the Department of Ocean and Coastal Management is the development of a national strategy for the conservation and sustainable use of coral reefs and mangroves, which should be developed from the outset in partnership with the various users, including local communities.

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

One of the ways to incorporate indigenous and local knowledge into policies and management frameworks is to hold regional consultations with traditional and indigenous peoples. Present the proposal in collegiate bodies that deal with issues of interest to these peoples and regional communities. Encourage the training of leaders and representatives of traditional communities and indigenous peoples, as well as making it possible to implementation of the EPANB.

### **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 NBSA



YES, our current National Biodiversity Strategies and action plans incorporate coral reefs. Important to emphasize that some of the aims of the Department of Ocean and Coastal Management (DOceano/Ministry of the Environment) is to propose actions, strategies and guidelines to protect and conserve mangroves and coral reefs to climate change. In this sense is being designed a proposal to create the National Coral Reef Conservation and Monitoring Program that includes the climate perspective and the capacity for the restoration of resilient coral reefs.

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

The new Brazilian NBSAP is under construction with the inclusion of the strategy for implementing the new targets of the Kunming-Montreal Global biodiversity framework and the new National Biodiversity Commission (CONABIO) is also being restructured, which will be plural, transparent and representative of Brazilian society.

#### D. Upcoming events

*Please tick the most appropriate box/boxes:*

September 19<sup>th</sup> – 23<sup>rd</sup> 2023: 37<sup>th</sup> ICRI GM, USA, Hawaii

30<sup>th</sup> November – 12<sup>th</sup> December 2023: 28<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change

26<sup>th</sup> February – 1<sup>st</sup> March 2024: 6<sup>th</sup> session of the United Nations Environment Assembly

10<sup>th</sup> – 12<sup>th</sup> 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   |
|--|---|
| Manual Reef Check- Ferreira, Beatrice & Gaspar, Ana & Coxey, Mariana & Grillo Monteiro, Ana. (2018). Manual de Monitoramento Reef Check Brasil.  | <a href="https://www.gov.br/mma/pt-br/assuntos/ecossistemas-1/areas-umidas/publicacoes/manual-de-monitoramento-reef-check-1.png/view">https://www.gov.br/mma/pt-br/assuntos/ecossistemas-1/areas-umidas/publicacoes/manual-de-monitoramento-reef-check-1.png/view</a> |
| Recifes brasileiros: o legado de Laborel/ Françoise Laborel-Deguen... [et al.]. – Rio de Janeiro: Museu Nacional, 2019. 376 p. : il. color. ; 26 cm. – (Série Livros; 64). “Les Peuplements de Madréporaires des Côtes Trop” | <a href="https://coralvivo.org.br/nossas-publicacoes/">https://coralvivo.org.br/nossas-publicacoes/</a>   |
| Conhecendo os Recifes Brasileiros: Rede de Pesquisas Coral Vivo / Editores: Carla Zilberberg et al. – Rio de Janeiro: Museu Nacional, UFRJ, 2016.  | <a href="https://coralvivo.org.br/nossas-publicacoes/">https://coralvivo.org.br/nossas-publicacoes/</a>   |
| Melo, T. H. M. 2022. Guia do naturalista do litoral sul da Bahia. Instituto Coral Vivo, Santa Cruz de cabrália, 2022. 80p.   | <a href="https://coralvivo.org.br/nossas-publicacoes/">https://coralvivo.org.br/nossas-publicacoes/</a>   |
| Manual Rebentos Protocolos para o monitoramento de habitats bentônicos costeiros. Turra, A; Denadai, M R 2015.   | <a href="https://doi.org/10.7476/978859872925">https://doi.org/10.7476/978859872925</a><br>( <a href="https://books.scielo.org/id/x49kz">https://books.scielo.org/id/x49kz</a> )  |
| Ferreira et al, Chapter 11 The Status of Status and trends of coral reefs of the Brazil region, In Souter, David, et al. "Status of coral reefs of the world: 2020: executive summary." (2021).                              | <a href="https://gcrmn.net/2020-report/">https://gcrmn.net/2020-report/</a>   |

**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:

- Improve data integration and analysis to facilitate regional reporting.
- Maintain the ICRI Restoration Hub as a source of relevant information, key contacts, and initiatives.

**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):*



|   |   |
|---|---|
| <b>Focal Point 1:</b>   |   |
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| <b>Focal Point 3:</b>   |   |
| <i>Name:</i>  |   |
| <i>Title/Organisation:</i>  |   |
| <i>Email:</i>   |   |
| <b>Member page updates:</b>   |   |
| <i>Section</i>  | <i>Update</i>   |
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| <b>Do you have new resources (reports, guidelines etc.) that you would like to display?</b> |   |
| <i>Resource description</i>   | <i>URL</i>  |
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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/>