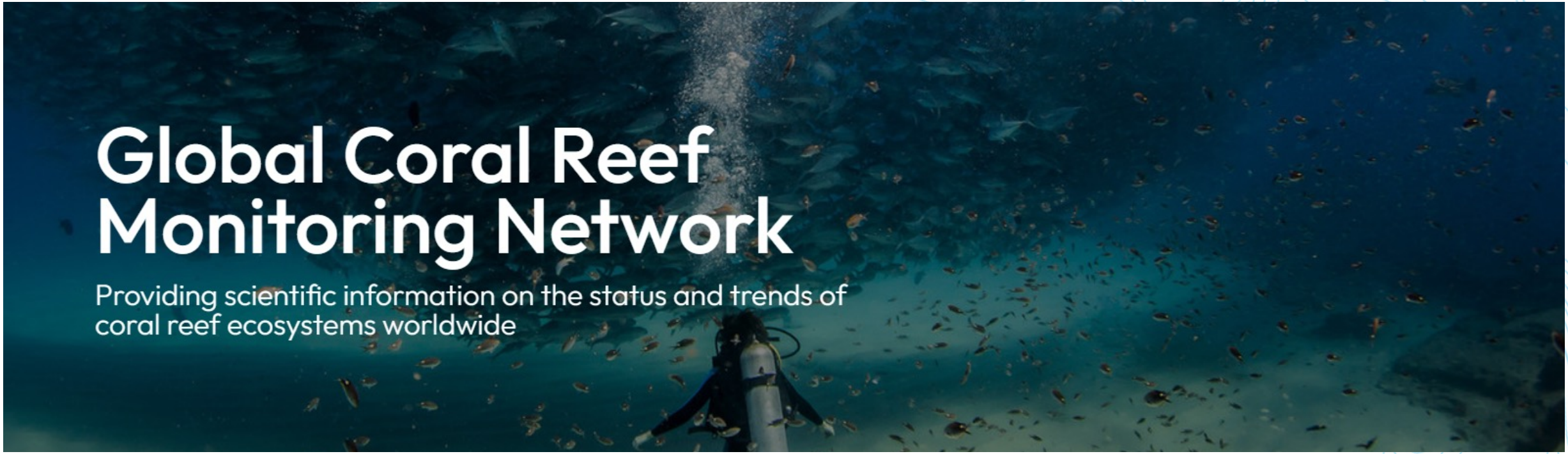
GCRMN
Global Coral Reef Monitoring Network



Britta Schaffelke, GCRMN Global Coordinator

37th ICRI General meeting, Kailua-Kona, Hawai'i, 20-23 August 2023

ICRI
International Coral Reef Initiative

Australian Government

Australian Institute of Marine Science

www.gcrmn.net

Meeting of the GCRMN Steering Committee - 18 & 19 September 2023

GCRMN
Global Coral Reef Monitoring Network

Global Coral Reef Monitoring Network

GCRMN
Global Coral Reef Monitoring Network

- Established in 1995 as an operational network of ICRI
- Global network of coral reef scientists, managers, and organisations
- Primary role is to report on the status of and trends in the condition of coral reefs worldwide

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Focus of the meeting

- Continue the re-invigoration of the network
- Looking forward- our niche, our focus
- Production of next global report

www.gcrmn.net

ICRI www.icriforum.org GCRMN www.gcrmn.net Gouvernement Princier PRINCIPAUTÉ DE MONACO www.gouv.mc

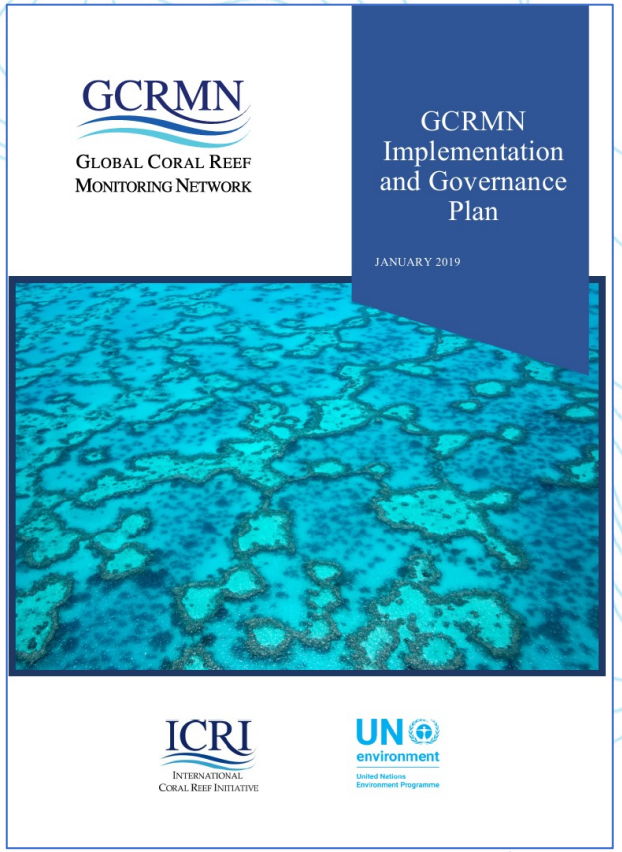
Goals of the GCRMN

GCRMN
Global Coral Reef Monitoring Network

Vision 2030:

By 2030, the GCRMN should be established as the core framework for aggregating and reporting on open access data on coral reef health and status, responding to national, regional and international priorities.

GCRMN's outputs should provide the measure of, and motivate successful global action for, the long-term sustainability of coral reefs worldwide.



Australian Government

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GCRMN

Vision for 2030

- The GCRMN is established as the core framework for collaborative measuring and reporting of coral reef status and trends, responding to national, regional and international priorities.

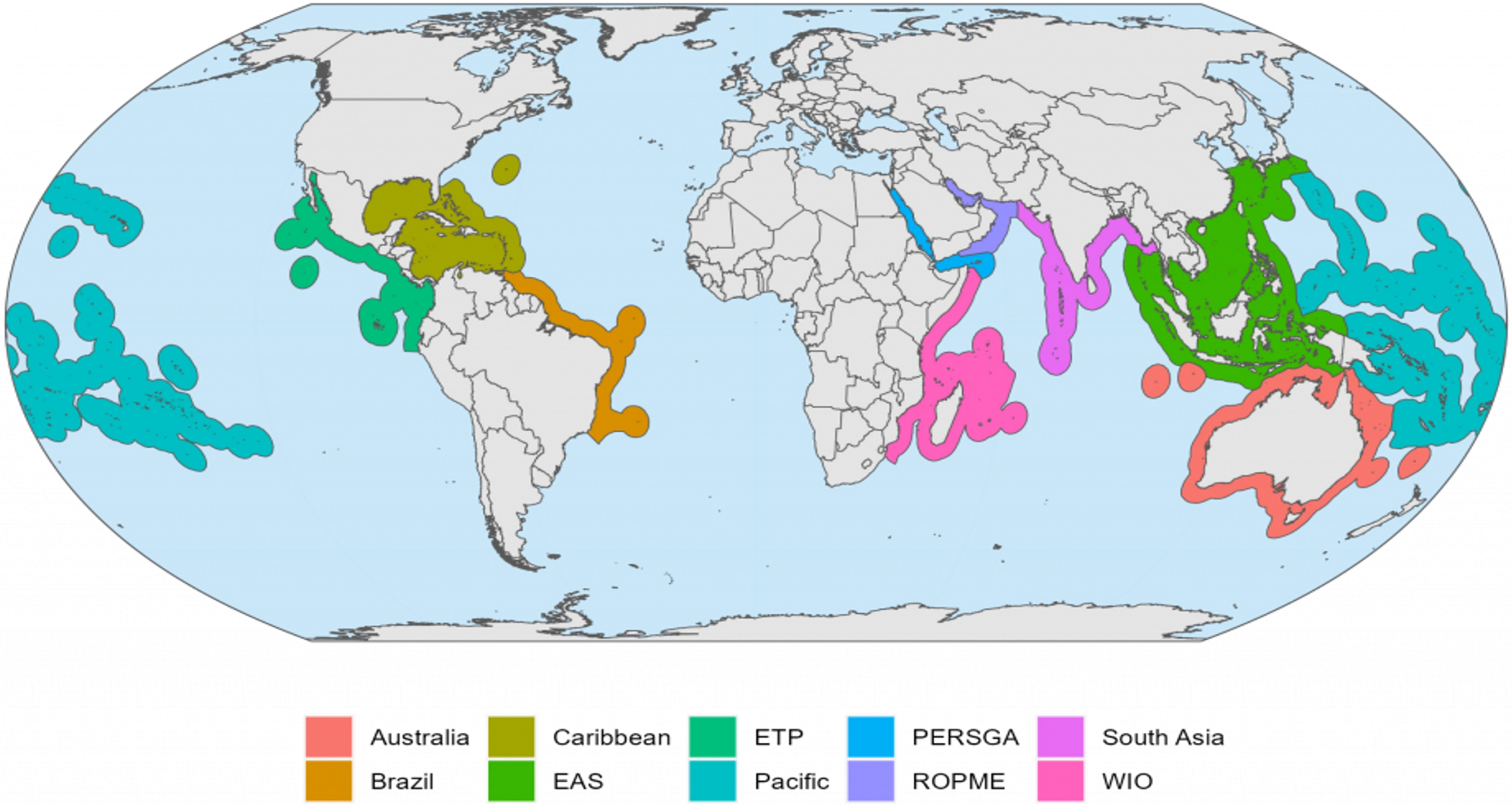
- The outputs of the GCRMN motivate successful global action for the long-term sustainability of coral reefs and associated ecosystems for nature and people.

The GCRMN Data Task Force

- To improve data integration and analyses for production of future GCRMN reports
- To promote good data management practices based on FAIR[1] data principles

[1]Findability, Accessibility, Interoperability, and Reusability of digital assets (Wilkinson et al. 2016)

Regional updates



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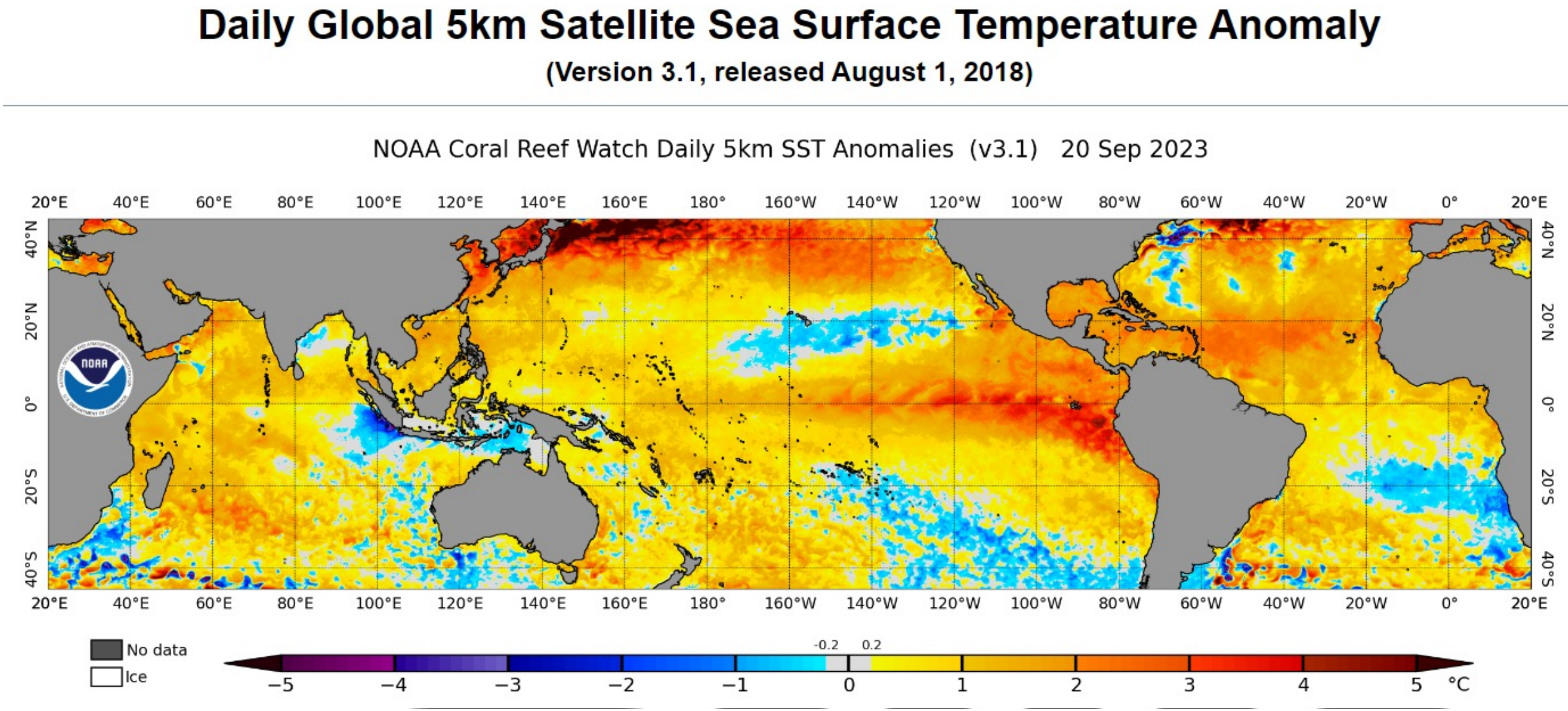
Uncertain outlook



The next global report

GCRMN

The reporting landscape is complex

- Different objectives
- Statutory requirements
- Report cards
- Dashboards

- **Which niche does a GCRMN Global report fill?**

Healthy Reefs
for healthy people
Arrecifes Saludables
para gente saludable

ESSENTIAL REPORT CARD FOR THE MESOAMERICAN REEF

Reef Health Index (RHI)
Índice de Salud Arrecifal (ISA)
The RHI ranks from 1 (critical) to 5 (very good) | *El ISA va de 1 (crítico) a 5 (muy bien)*

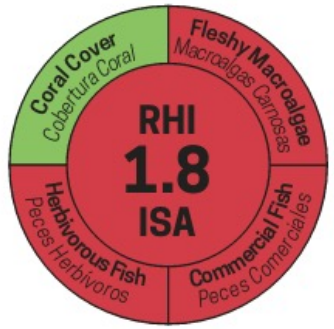
- Very Good | *Muy bien*
- Good | *Bien*
- Fair | *Regular*
- Poor | *Mal*
- Critical | *Crítico*

2021 REEF HEALTH INDEX BY COUNTRY

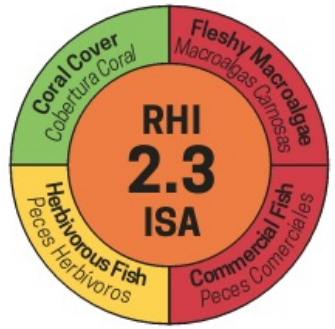
2021 ÍNDICE DE SALUD ARRECIFAL POR PAÍS

MEXICO
MÉXICO

BELIZE
BELICE



GUATEMALA
GUATEMALA



HONDURAS
HONDURAS

https://www.healthyreefs.org

U.S. CORAL REEFS ARE **IN FAIR CONDITION, BUT ARE VULNERABLE AND DECLINING**

...condition of indicators used to measure the overall health of U.S. coral reefs (see basin ...ing). U.S. coral reefs were scored based on indicators within four major themes: **Corals & Algae** make up the ... the coral reef ecosystem, providing food and shelter for fish and other reef creatures; **Fish** are key to healthy reefs, coastal economies, and the livelihoods of local communities; **Climate**, especially temperature and ocean chemistry, indicate the level of environmental stress to the reef (changing climate conditions can vary on both regional and local levels); **Human Connections** to coral reefs help gauge local support for reef management, conservation, and community engagement.

90–100% Very Good

All or almost all indicators meet reference values. Conditions in these locations are unimpacted, or minimally impacted or have not declined. Human connections are very high.

80–89% Good

Most indicators meet reference values. Conditions in these locations are lightly impacted or have lightly declined. Human connections are high.

70–79% Fair

Some indicators meet reference values. Conditions in these locations are moderately impacted or have declined moderately. Human connections are moderate.

60–69% Impaired

Few indicators meet reference values. Conditions in these locations are very impacted or have declined considerably. Human connections are lacking.

0–59% Critical

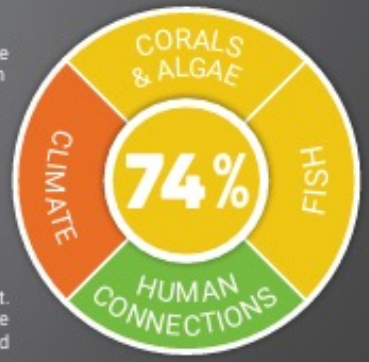
Very few or no indicators meet reference values. Conditions in these locations are severely impacted or have declined substantially. Human connections are severely lacking.

REEF DEGRADATION CONTINUES

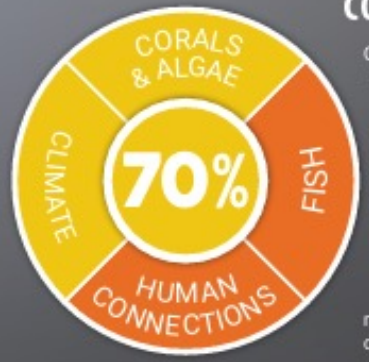
Pacific and Atlantic data from 2012–2018 indicate that U.S. coral reefs are in fair condition. Most themes did not meet their historical references, meaning they are moderately to very impacted. There are exceptions, but overall, the data suggest that reefs are vulnerable to further decline due to threats from ocean warming and acidification, coral disease, and fishing impacts. Residents from all coral reef jurisdictions who took the human connections surveys believe coral reef conditions have generally declined over the past decade, and they lack optimism about future conditions. If we do little to protect and conserve coral reefs, they will continue to decline and more reefs will receive impaired scores in the future. Luckily, there are many actions we can take to turn the tide on coral reef degradation. Human connections surveys indicate that support for management is relatively high. Support for management, including protecting reefs, reducing pollution, and increasing reef restoration, is a start, especially at the local level. Globally, climate actions are necessary to reduce greenhouse gas emissions and slow the warming of ocean waters. Conservation cannot be achieved without an informed and engaged public; human connections to reefs can always be strengthened, even in places that already have high human connection scores. Communities, and their support for management, are a major component to improving the trajectory of coral reef conditions.

CORAL REEFS IN THE PACIFIC

Overall, Pacific reefs are in fair condition. The U.S. jurisdictions that were included in this score include the Main Hawaiian Islands, the Northwestern Hawaiian Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Pacific Remote Islands. Climate indicators are impaired. Frequent and severe heat stress has led to coral bleaching and mortality, and water chemistry is becoming less suitable for reef material growth because of ocean acidification. Overall, corals & algae are fair, but this represents a range of degraded to pristine reefs throughout the Pacific. Degradation is attributable to both local impacts as well as global climate change. Fish indicators are fair, which in part reflects the inclusion of reefs in remote areas that are not subjected to fishing pressure. Fish in populated areas, conversely, are less abundant. Human connections to coral reefs are good: residents are moderately aware of coral reef threats, show moderate support for coral reef management, and demonstrate high engagement in pro-environmental behaviors.

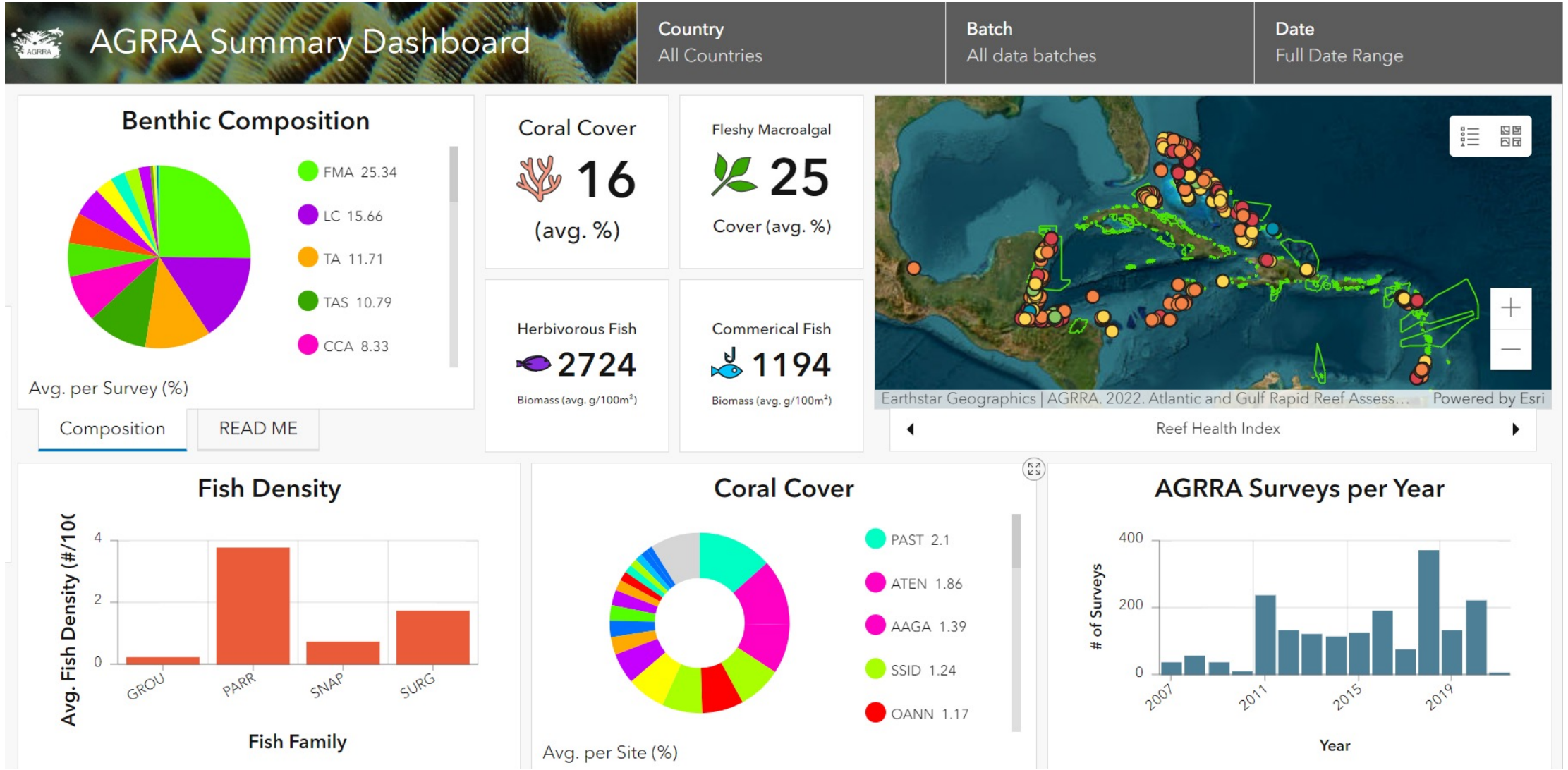


CORAL REEFS IN THE ATLANTIC



Overall, Atlantic reefs are in fair condition but are on the cusp of being impaired. The U.S. jurisdictions that are included in the Atlantic score are Florida, the U.S. Virgin Islands, Puerto Rico, and Flower Garden Banks. Corals & algae are fair but declining. While the climate score is fair, many reefs are experiencing habitat loss. Additionally, fish populations are experiencing fishing impacts. The removal of commercially and recreationally important fishes from the reefs is not sustainable for future populations. Atlantic and Caribbean corals are also experiencing a multi-year outbreak of Stony Coral Tissue Loss Disease (SCTLD), an infection unique for its geographic range, rapid progression, and high mortality rate. Researchers are working to identify potential pathogens. Human connections are impaired. Residents demonstrate moderate support for coral reef management but have limited awareness of coral reef threats and rarely engage in pro-environmental behaviors.

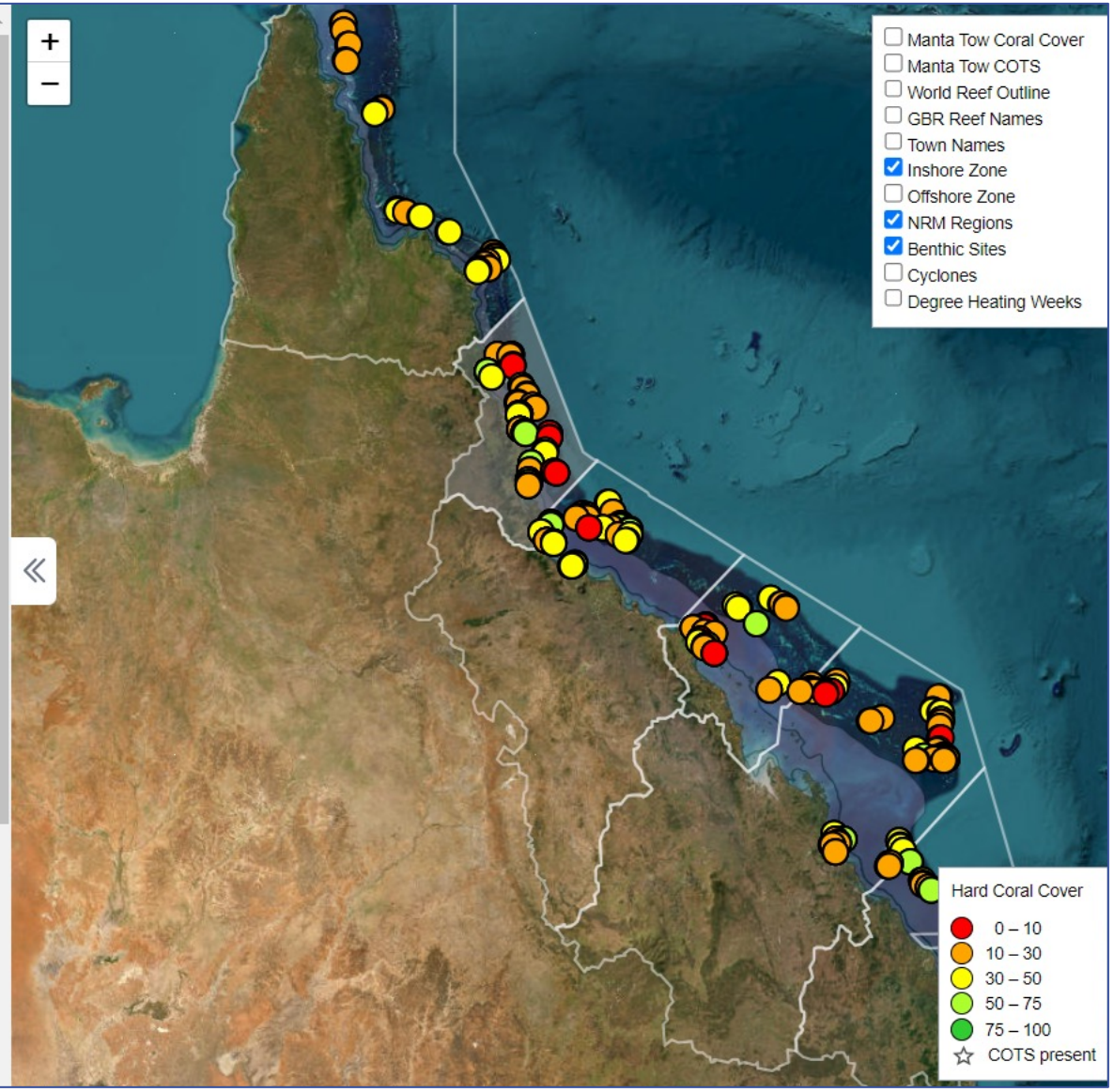
AGRRA Data Explorer



https://agrra-data-explorer-oref.hub.arcgis.com/

AIMS reef reports hub

www.aims.gov.au

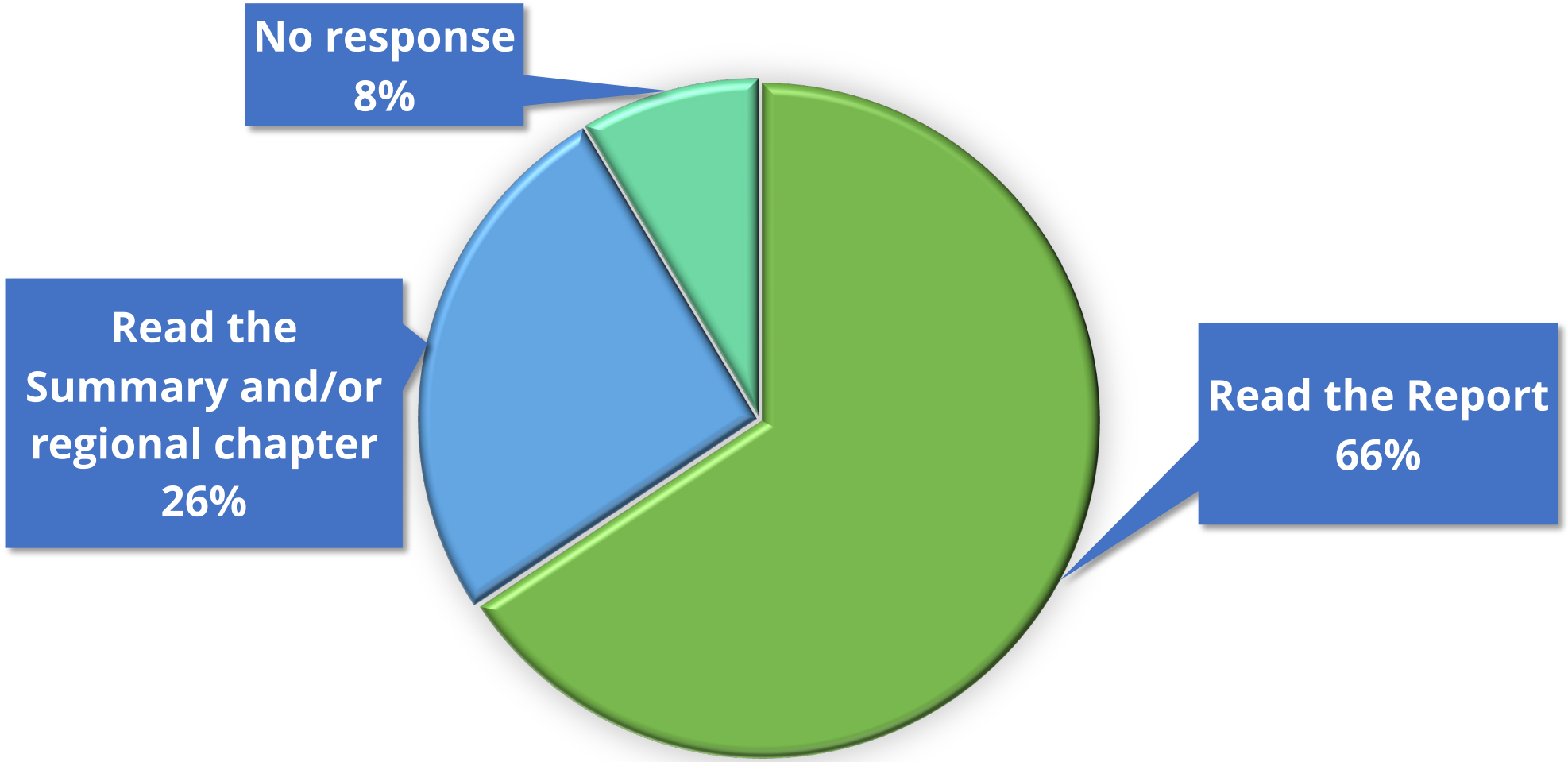


Regional lens

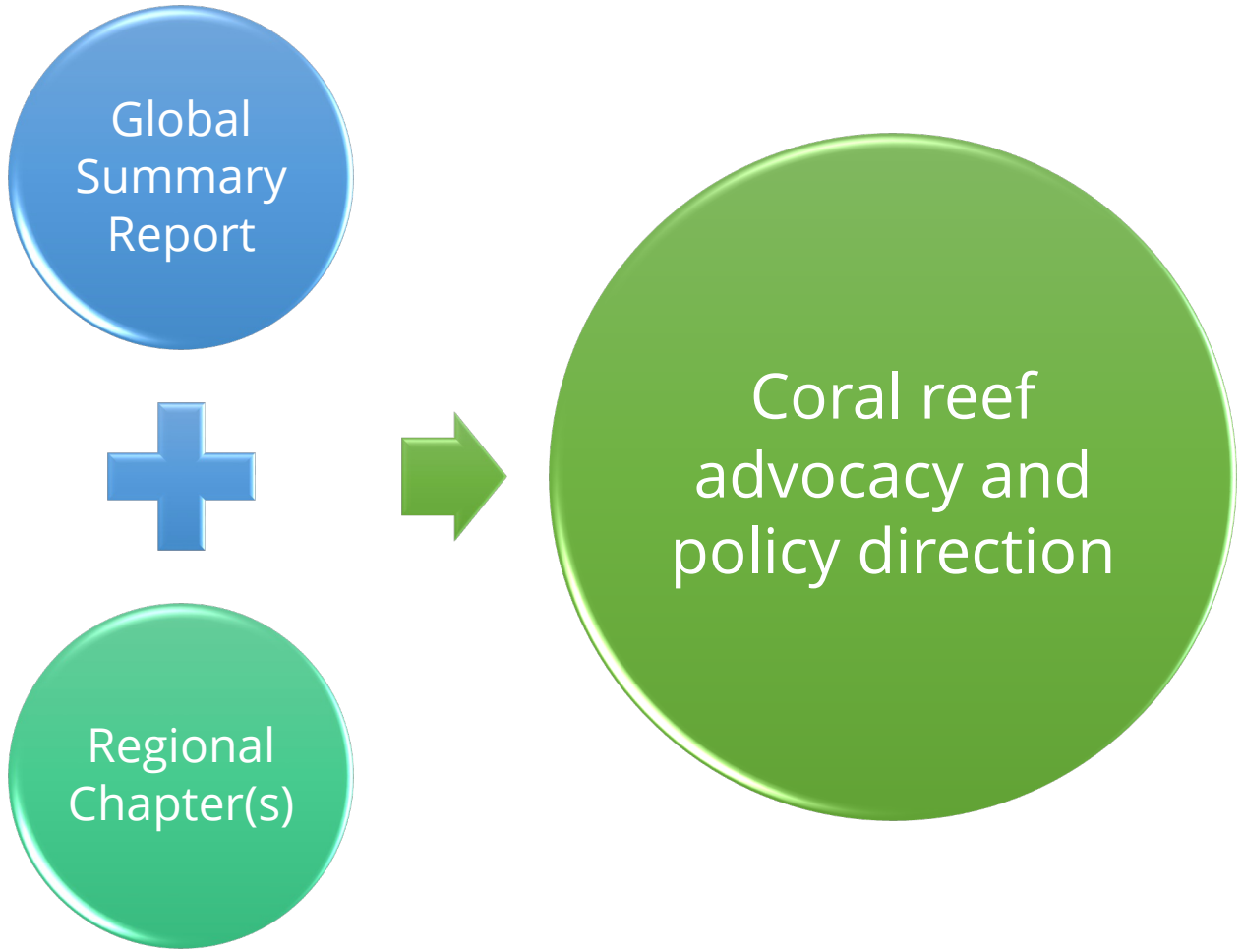
Region	GCRMN Regional Report planned?
Australia	No, but other national products regularly produced
Brazil	Not yet
Caribbean	Yes, 2024 or 2025
East Asia	Yes, 2026
Eastern Tropical Pacific	Yes, 2024
Pacific	Yes, 2023/24
Red Sea & Gulf of Aden	2025, State of the Marine Environment
ROPME	No, contribution to global report & regional spin off products
South Asia	?
Western Indian Ocean	~ 2025, focus is Red Lists of Ecosystems for coral reefs assessment

ICRI lens – feedback from members' reports

Have you read the GCRMN Global Report?



How did you utilise the report and/or use the results and contents?



The next Report….

‘User-friendly reporting’

‘Easy to share and understand’

‘Easily understandable graphics’

‘Policy recommendations’

‘Key messages’

Report dimensions

1. Context & audience – the WHY

2. Delivery – the HOW

3. Data – the HOW

4. Scope – the WHAT

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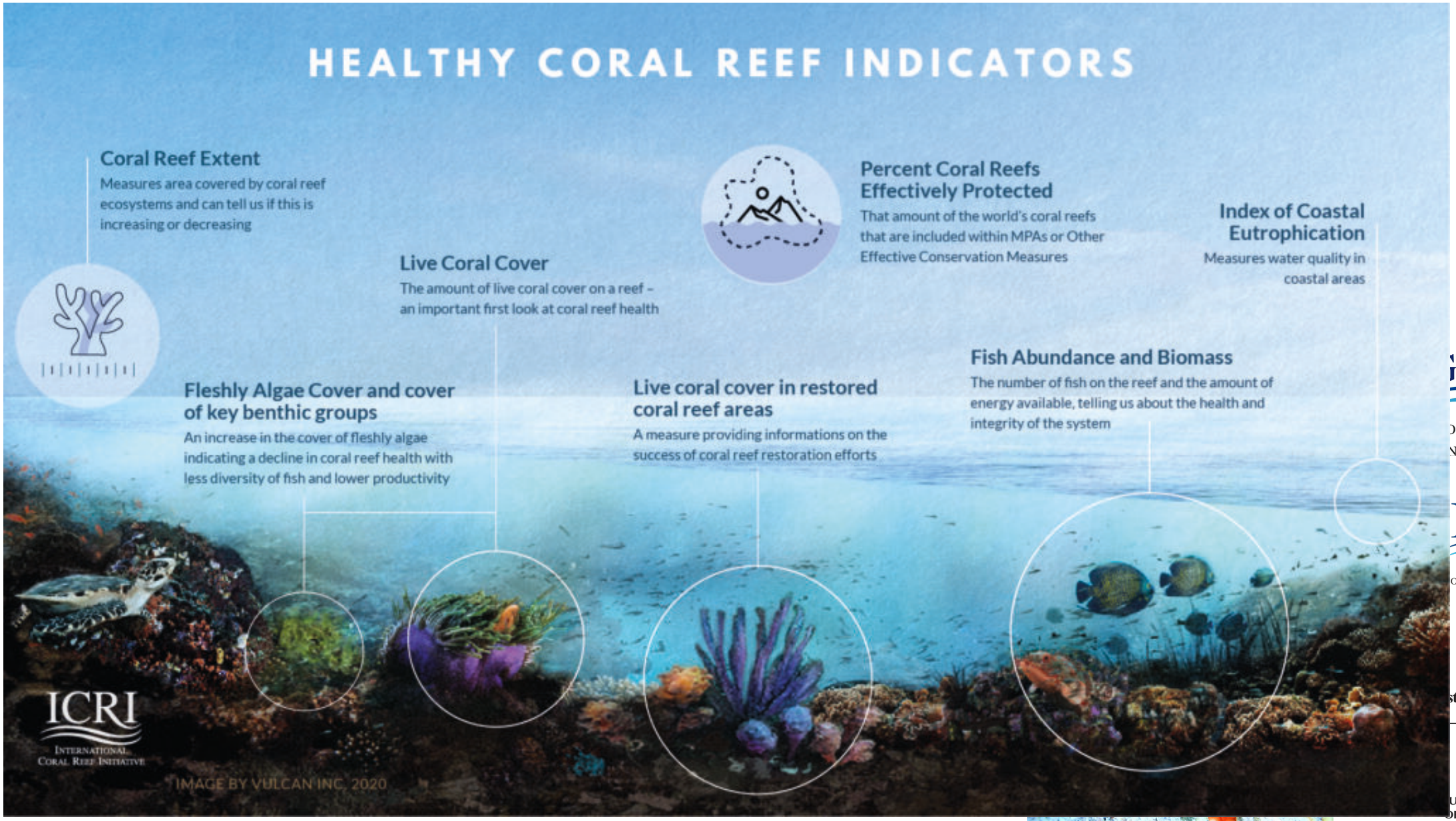
Concept for production of the next report



GCRMN forward workplan -

GCRMN
Global Coral Reef Monitoring Network

Short-term focus (next 2-3 years)

1. Data Taskforce progressing towards recommendations
2. Improved communication within GCRMN community
3. Improved external visibility
4. Regional reports
5. Global report

Medium-term focus (next 5+ years)

- Integrating ecological and socio-economic monitoring
- Explore other indicators for future global reports
- Updating manuals and protocols

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ICRI
INTERNATIONAL CORAL REEF INITIATIVE

GCRMN
GLOBAL CORAL REEF MONITORING NETWORK

A global partnership for the preservation of the world's coral reefs and associated ecosystems.

An ICRI network to provide scientific information on the status and trends of coral reef ecosystems.

Britta Schaffelke, GCRMN Global Coordinator b.schaffelke@aims.gov.au
Francis Staub, ICRI Global Coordinator fstaub@icriforum.org
Tom Dallison, ICRI Secretariat thomas.Dallison@icriforum.org

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