



Coral Reef Data Hub and Profile on Ocean Watch

- Laretta Burke, Sustainable Ocean Initiative, World Resources Institute (WRI)
- ICRI 35th General Meeting, February 3, 2021

Research, Data, Information, and Resources

Four elements covered:

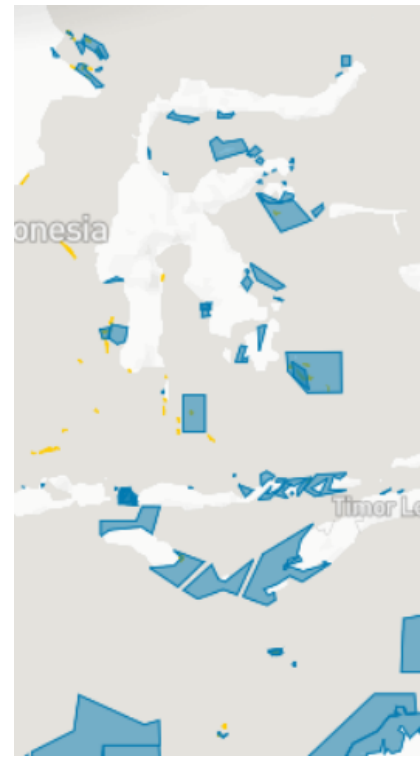
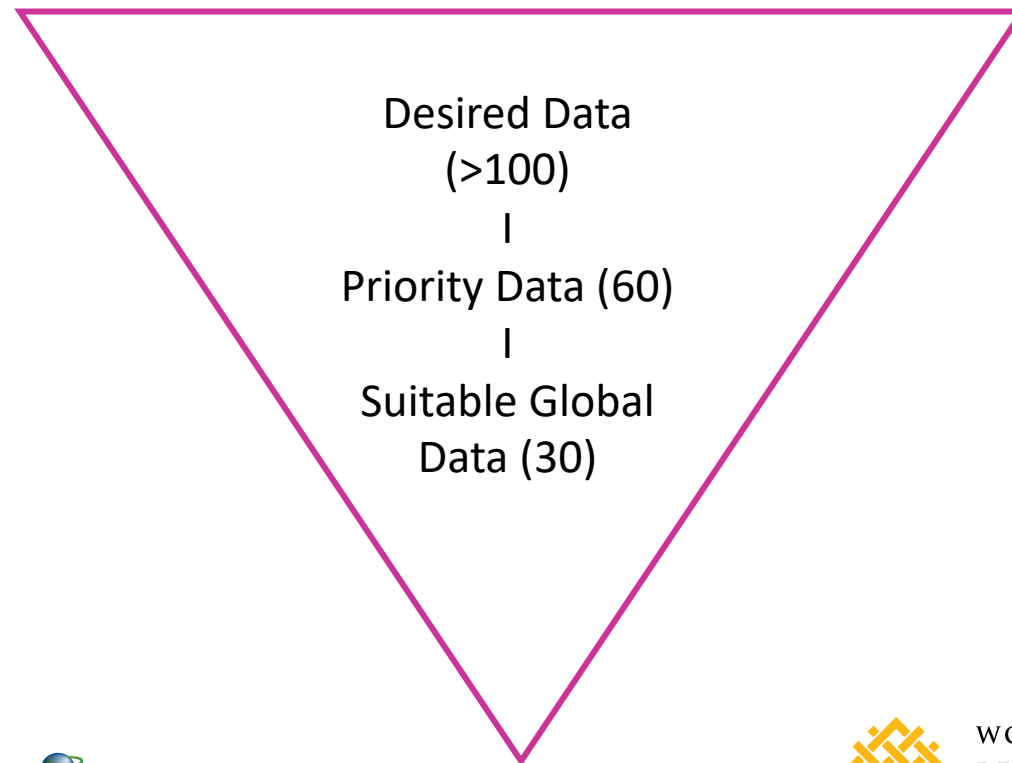
1. Underlying research – on data needs for decision-making
2. Data Hub for Coral Reefs ← Live – ready for review
3. Global Coral Reef Profile ← Live – ready for review
4. Regional Dashboards for 10 GCRMN regions ← Planned

1. User Needs Assessment related to coral reefs

- Data needs to support decision-making relevant to coral reefs (WRI, TNC, NatGeo and Vulcan) – [summary on ICRIforum](#)

- Audiences:

1. Coastal and Marine Planners
2. Risk and Insurance Sector
3. MPAs
4. Conservation NGOs / Scientists



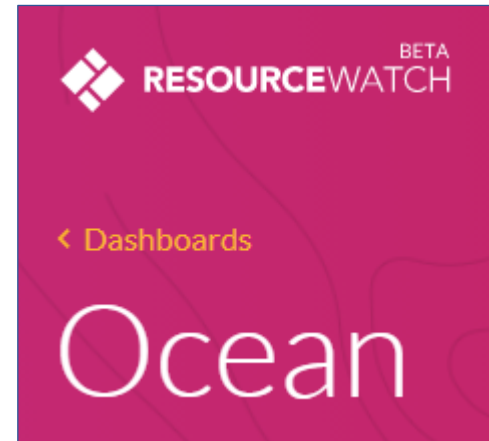
2. Coral Reef Data Hub (on Ocean Watch / Resource Watch)

Resource Watch (since 2018)

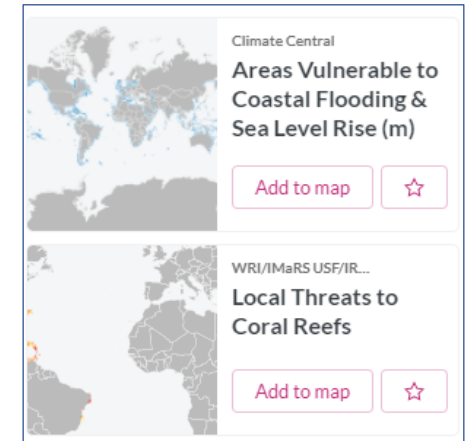
- WRI's spatial data platform
- +300 data sets
- 50 near real-time
- <https://resourcewatch.org/>



Ocean Watch (Sept. 2021)



Open data platform
under development on the
Resource Watch Platform



Sharing **curated**
ocean data sources
and products

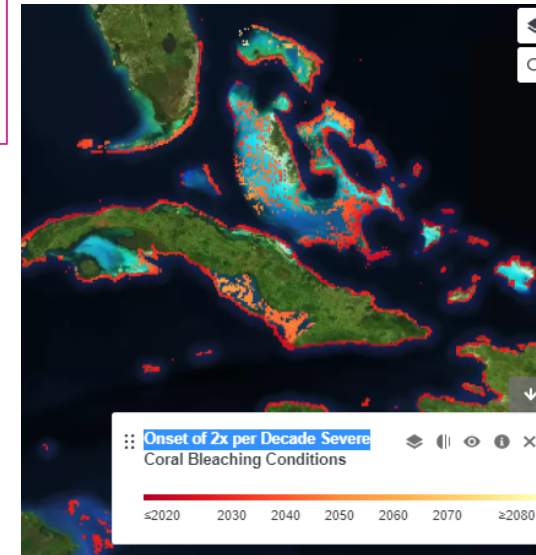
2. Coral Reef Data Hub – “Explore Data”

- **Habitats** - coral, mangrove (current and change)
- **Coral values** - tourism, fisheries, shoreline protection
- **Physical data** –
 - bathymetry, coastal elevation
 - wave height, cyclones
- **Global Change**
 - **SLR** - Historic and projected
 - **SST** – Historic, current, projections of bleaching level stress, variability
 - **Coral bleaching** and disease (outdated)
 - **Ocean Acidification** - projections
- **Local threats**
 - Turbidity – TSM, Chlorophyl
 - Pollution – nutrient, plastics inputs to oceans
 - Shipping lanes
 - Modeled local threats
- **MPAs**
- **Coral connectivity** (50 reefs)
- **Social and economic vulnerability** to coral degradation

Filtered subset of
data from broader
Resource Watch
data library

<https://resourcewatch.org/>

(Use CORAL REEF or OCEAN
filters)

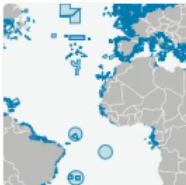


Search datasets

SORT BY DATE ADDED

315 DATASETS

- Discover
- All Data
- Near Real-Time
- Topics
- Areas of Interest
- Your favorites



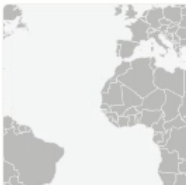
bio.007b Marine Protected Areas

Add to map



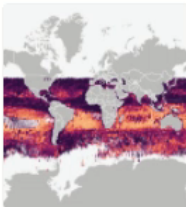
YCELP/CIESIN
Environmental Performance Index

Add to map



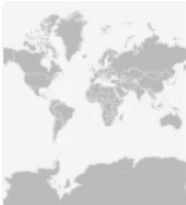
ocn.017 Coral Reef Connectivity

Add to map



1/17/2021
ocn.011.nrt.rw0
Total Suspended Matter

Add to map



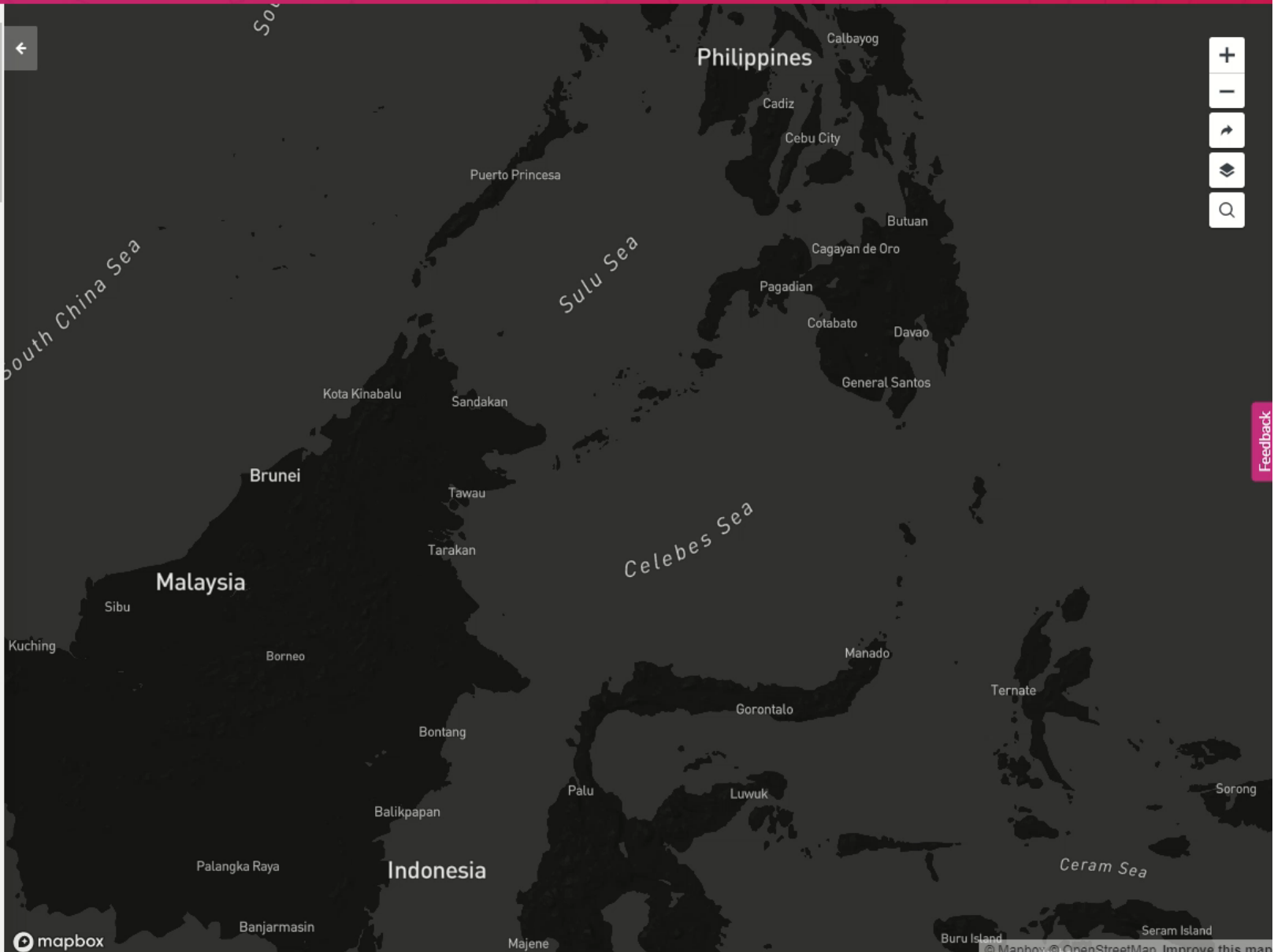
TNC/WRI/Cambridge
Index of Coastal Protection by Coral Reefs

Add to map



TNC/WRI/UWash/C...
Coral Reef Tourism Value

programme



Feedback



Global Coral Reef Profile

- consolidated information on value, threats, status, trends and management of coral reefs
- interactive maps and graphics
- international target indicators for coral reefs
- <https://resourcewatch.org/dashboards/coral-reefs>

Topics

- Coral reef dependence and values
- Local threats to coral reefs
- Global threats to coral reefs
- Coral reef condition
- Management, resilience, and signs of hope
- Vulnerability to coral degradation
- Conclusion and Key Resources

< Dashboards

Coral Reefs

Status and outlook of coral reefs around the world

↗ Share

Coral reefs are wondrous, diverse, productive, valuable ecosystems, upon which millions of people around the world depend. Despite their importance and value, reefs are severely threatened by both local and global threats, including climate change. This global profile summarizes available information on the status and outlook for coral reefs, including their value, threats, legal protection, and the dependence of coastal communities on these ecosystems.

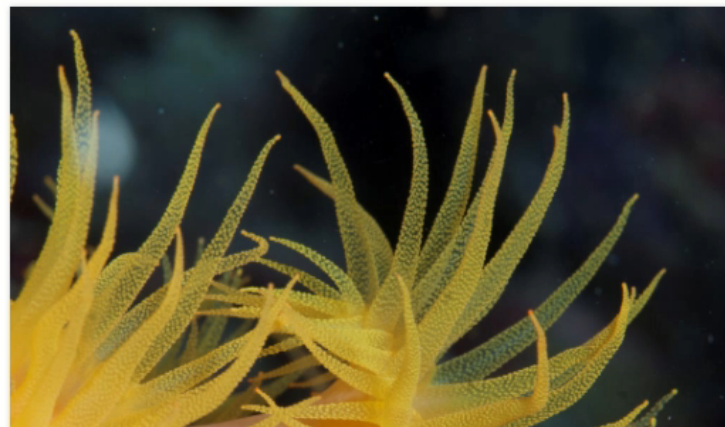


Table of Contents

This **Beta version** of a global coral reef profile will be augmented and improved in response to feedback from reviewers. We plan to improve navigation in the future. At present, users scroll through the following topics:

- **Coral reef dependence and values** - tourism, fisheries, and shoreline protection
- **Local threats to coral reefs** - overfishing, coastal development, watershed-based pollution, and marine-based pollution

Signs of Hope

Coral reefs are important and valuable but are threatened and in decline in many locations around the globe. There are, however, signs of hope including healthy, resilient, and recovering reefs in many locations.



Photo: Matt Curnock - Coral Reef Image Bank

“[Hope Spots](#)” are places that are scientifically identified as critical to the health of the ocean, in an effort coordinated by [Mission Blue](#). Some Hope Spots are already formally protected, while others still need defined protection. The areas vary in size, and are often included due to one or more of several characteristics: a special abundance or diversity of species; unusual, rare, threatened or endemic species; importance as a migration corridor or spawning ground; significant historical, cultural or spiritual value; or particular economic importance to the community. Hope Spots are championed by local conservationists, with communications, expeditions, and scientific advisory support from Mission Blue.

An analysis of “[Bright Spots](#)” identified 15 areas where reefs were found to be healthier and coral reef fisheries more productive than expected given local environmental and socioeconomic conditions. These areas were characterized by strong sociocultural institutions (such as customary tenure), high levels of engagement in local management, high dependence on marine resources, and beneficial environmental conditions such as proximity to deep-water refuges. (The contrasting “dark spot” areas were characterized by intensive capture and storage technology and a recent history of environmental shocks.) The bright spots analysis approach can be used to inform the types of investments and governance structures that can help to sustain coral reefs (e.g. participatory management and improved property rights).

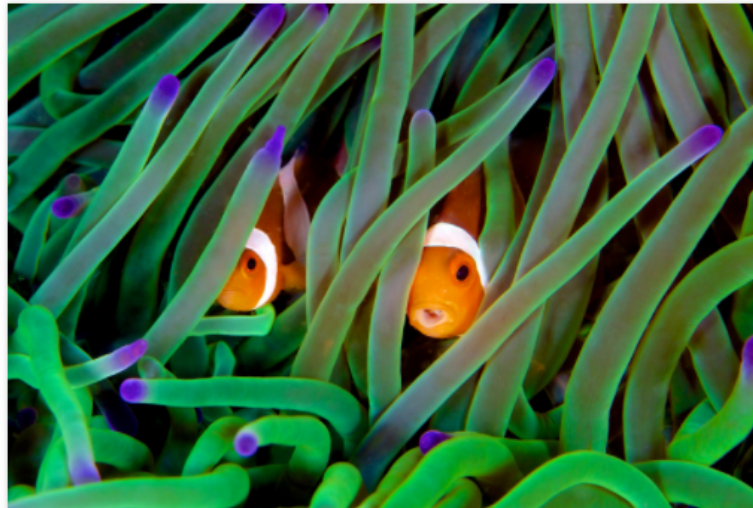
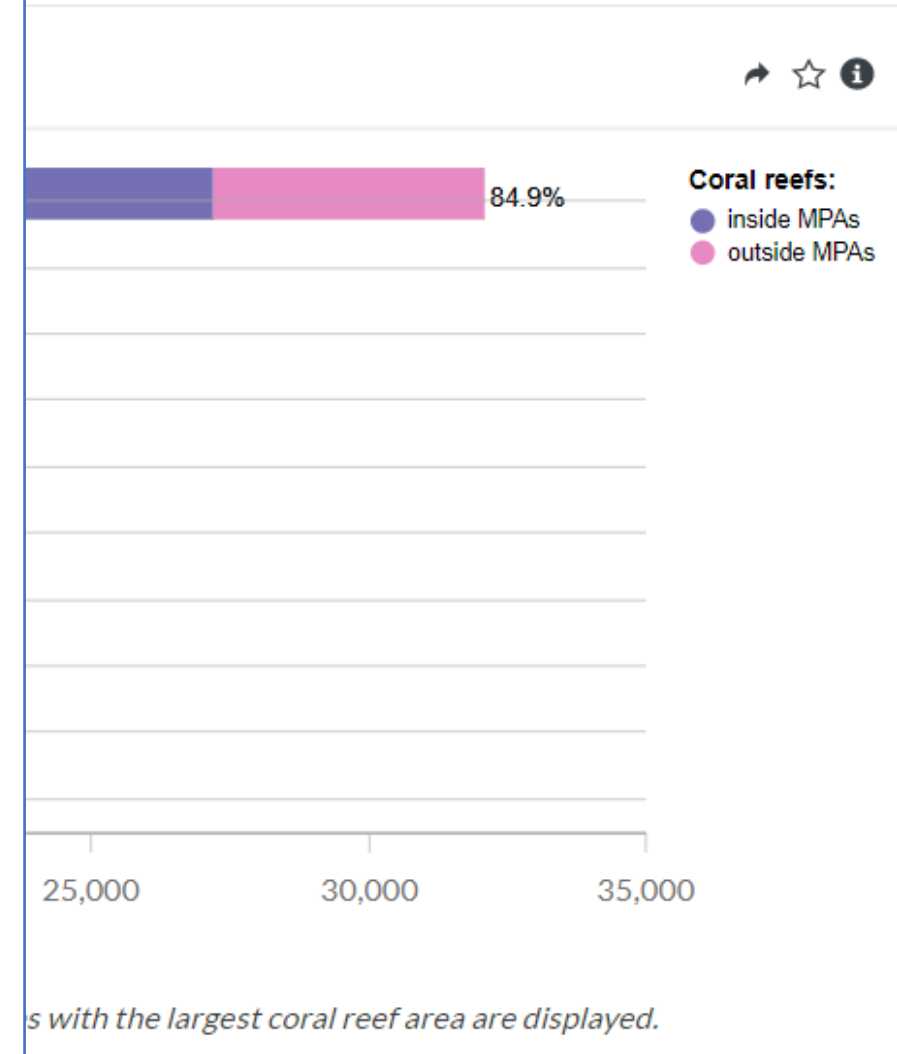


Photo: Gregory Pipe - Coral Reef Image Bank



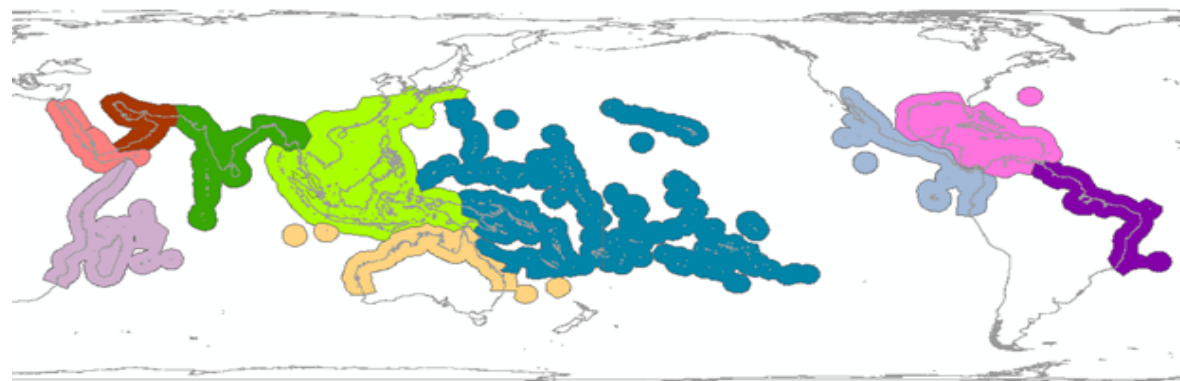
Plans for Enhancements

- **Addition of Fully-Protected (NoTake) areas** – on map and in summary statistics
- **Mangroves** – add loss and gain (1996-2016)
- **Nutrient Pollution** – wastewater...
- **Improve Navigation** o Profile
- **Develop 10 Regional Dashboards**

Global Coral Reef Profile and Regional Dashboards

Regional Dashboards

- 10 GCRMN regions
- Key indicators and regional maps



GCRMN report provides trends for live coral cover and algal cover.

Feedback Requested

Please send your comments on the Global Coral Reef Profile

(<https://resourcewatch.org/dashboards/coral-reefs>)

to Laretta Burke (lauretta@wri.org).

- overall impression of the profile
- appearance
- topics covered
- text layout and readability
- data / map appearance
- “Signs of Hope” and “Key Resources” sections



Feedback Requested –
lauretta@wri.org

Thanks