



# Climate Resilient Coral Reefs: A View Towards 2030



**Diwigdi Valiente**  
Senior Program Manager  
Coral Reef Conservation  
Wildlife Conservation Society



**Dr Emily Darling**  
Director  
Coral Reef Conservation  
Wildlife Conservation Society





# Operating in 18 countries, the WCS Coral Reef Program focuses on:

- Identifying and conserving resilient coral reefs with local rights holders
- Building capacity for long-term monitoring to advance coral reef conservation science
- Partnerships to drive policy wins from community to global scales

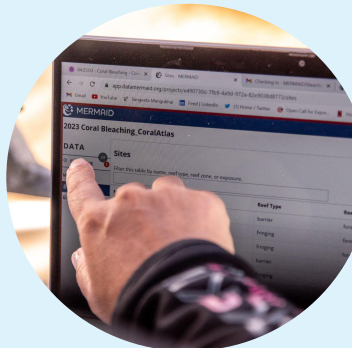






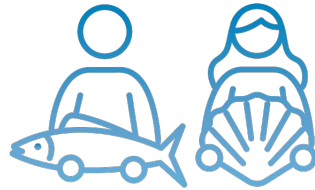
# WCS Global Coral Reef Conservation Portfolio

Science | Monitoring | On-the-ground Conservation | Policy





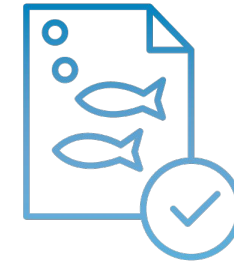
# WCS and ICRI: Partners for 15+ years



On the ground conservation work: scaling up best practices



Advocacy for underwater monitoring and new tools, including MERMAID



Linking science to policy action at local, national, and international scales

MEETINGS OTHER RELEVANT EVENTS

## Webinar: The Impacts of Land-based Sources of Pollution on Coral Reefs

Webinar

April 4th 2024 | Time: 21:00 BST | 16:00 EDT

Registration Open

### HEALTHY CORAL REEF INDICATORS

- 2 Coral Reef Extent**  
Measure area covered by coral reef ecosystems and can tell us if this is increasing or decreasing
- Live Coral Cover**  
The amount of live coral cover on a reef – an important first look at coral reef health
- 3 Fleshy Algae Cover and cover of key benthic groups**  
An increase in the cover of fleshy algae indicating a decline in coral reef health with less diversity of fish and lower productivity
- 4 Fish Abundance and Biomass**  
The number of fish on the reef and the amount of energy available, telling us about the health and energy of the system
- 5 Percent Coral Reefs Effectively Protected**  
The amount of the world's coral reefs that are included within MPAs or Other Effective Conservation Measures
- 6 Index of Coastal Eutrophication**  
Measures water quality in coastal areas

ICRI

### EXECUTIVE SUMMARY & KEY MESSAGES

#### Opportunities for coral reefs at the ocean-climate policy nexus

A Vibrant Oceans Initiative Whitepaper | NOVEMBER 2021

- [Introduction](#) Page 2
- [The Scientific Consensus](#) Page 3
  - Coral reefs are distinct ecosystems within broader ecological networks.
  - Coral reefs are exceptionally biodiverse and provide ecosystem services for millions.
  - However, coral reefs are highly vulnerable to climate change and other threats.
  - Strategic management can help enable coral reefs to play their key role in climate adaptation.
  - Connectivity between coral reefs and 'blue carbon' ecosystems supports overall functionality.
- [The International Policy Consensus](#) Page 5
  - Hundreds of policy instruments address coral reefs, and other coastal ecosystems.
  - Coral reefs do receive political attention as important, threatened ecosystems.





# Towards 2030, A Renewed Focus On Climate Resilience

Three types of climate resilient coral reefs should be prioritized for conservation and policy action:

**01**

**Avoidance: Escape intense thermal stress** Reefs with fewer and less intense past temperature anomalies.



**02**

**Resistance: Withstand severe bleaching** Reefs with species that can survive bleaching and mortality events



**03**

**Recovery: Rebound after bleaching mortality** Well-connected reefs and/or opportunistic species that can recover quickly after bleaching losses

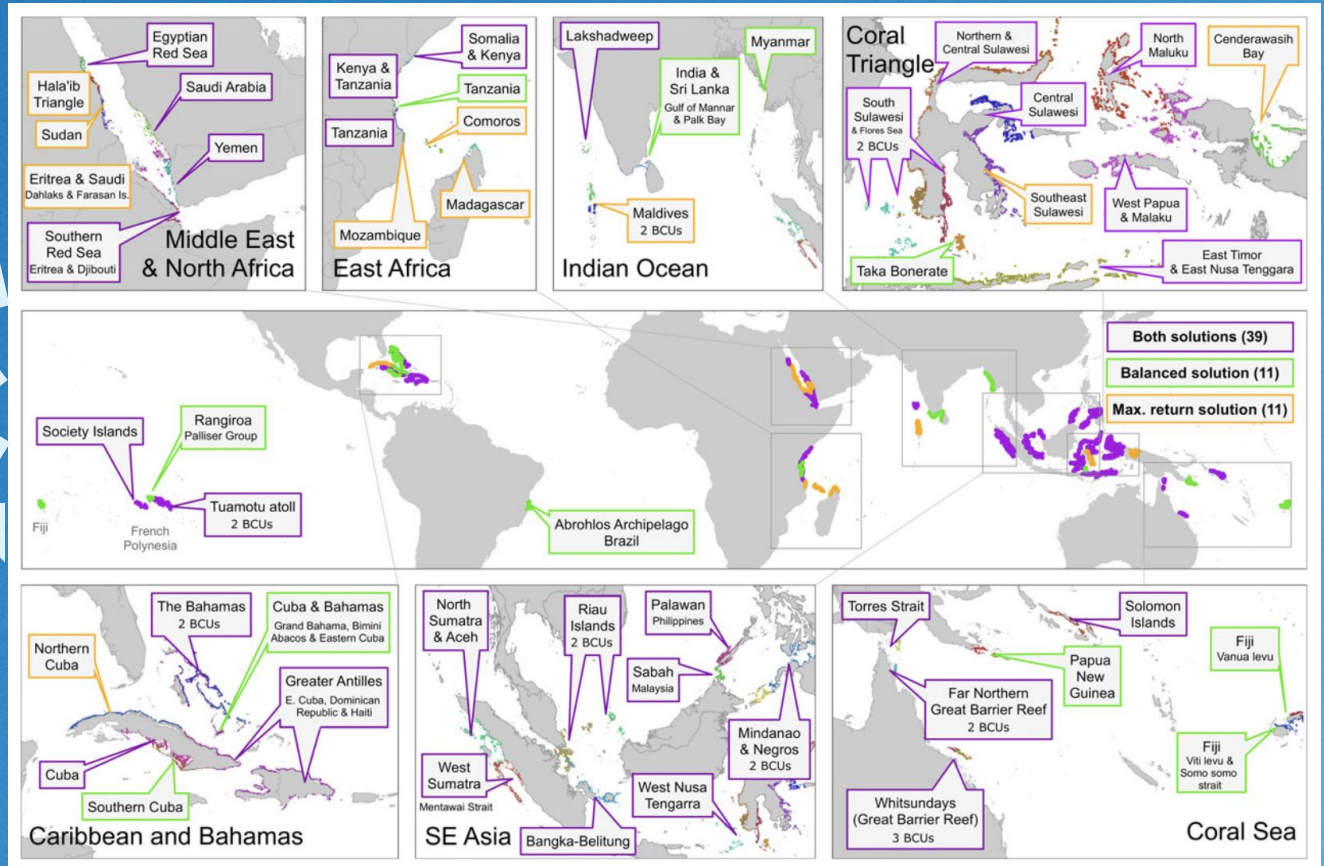
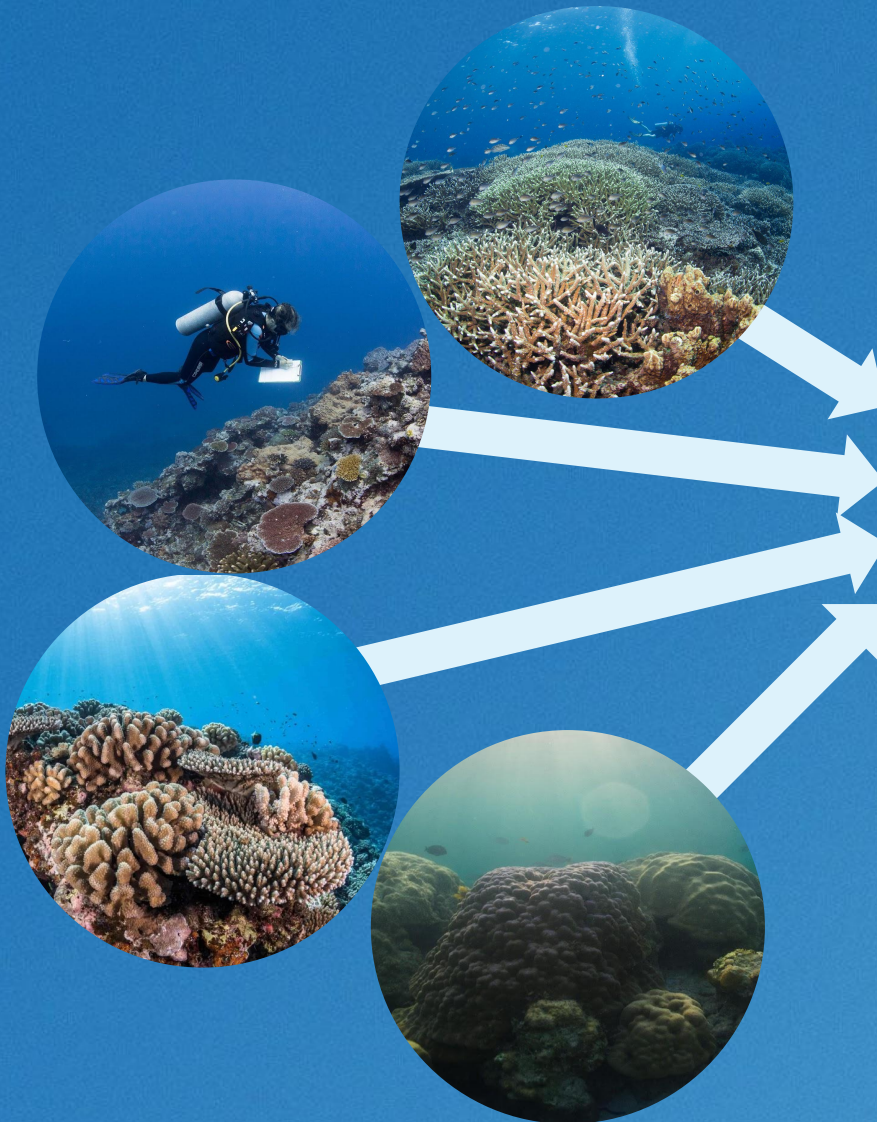






# Mapping The Next Portfolio Of Climate Resilient Coral Reefs

Compiling global datasets of coral reef communities / life histories to add more resilient reefs to the original 50 Reefs map:

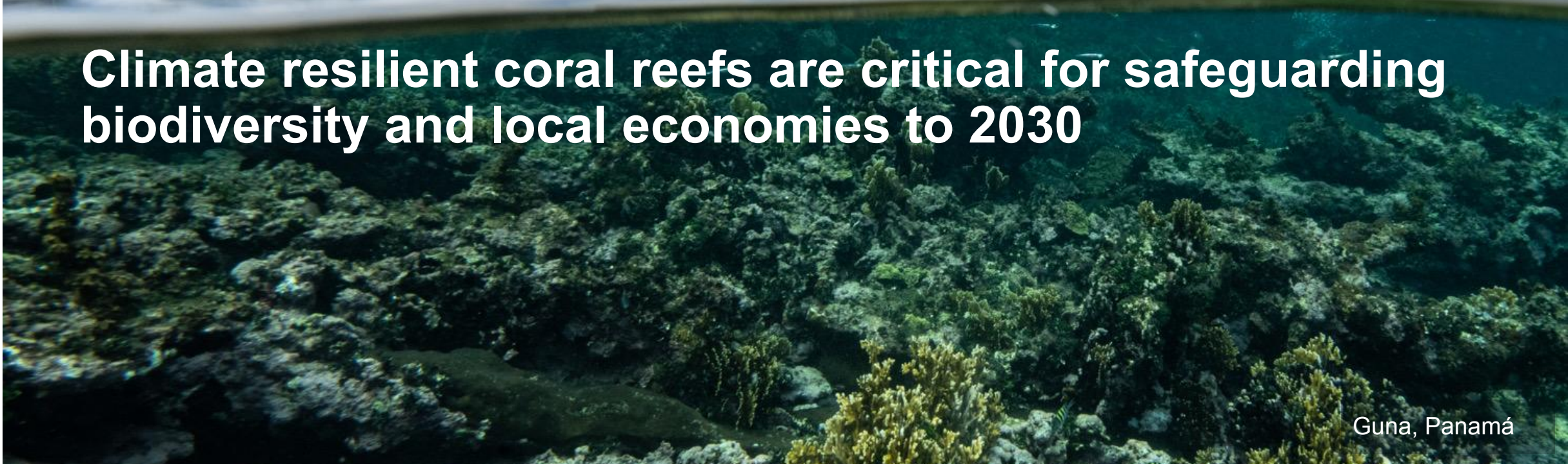


McClanahan, Maina, Zawada, Darling et al. *in prep*





**Climate resilient coral reefs are critical for safeguarding biodiversity and local economies to 2030**





# Elevating Policy Action

At COP16, UN Ocean, and beyond, ICRI and partners can support governments to protect climate resilient coral reefs through the Global Biodiversity Framework



BLOOMBERG  
PHILANTHROPIES  
OCEAN INITIATIVE

**Mozambique:** Expanding and creating MPAs to rebuild food security (Target 3)



**Fiji:** Reducing upstream water pollution (Target 7) and scaling impact through the National Coral Reef Hub



GLOBAL FUND FOR  
CORAL REEFS

**Kenya & Tanzania:** Supporting reef-positive businesses by mobilizing blended finance (Target 19)

*...and many more success stories!*





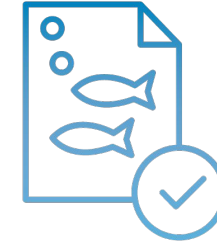
# Free Tools and Resources for ICRI Members



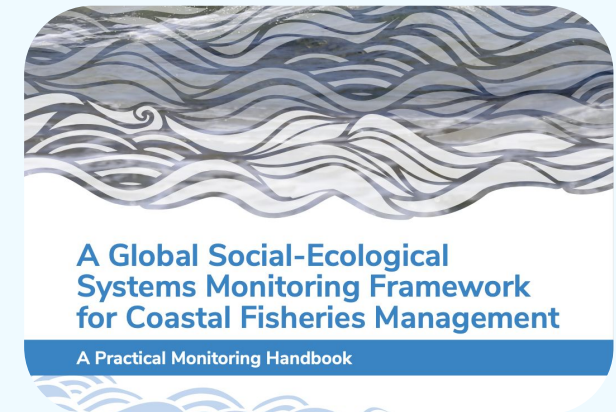
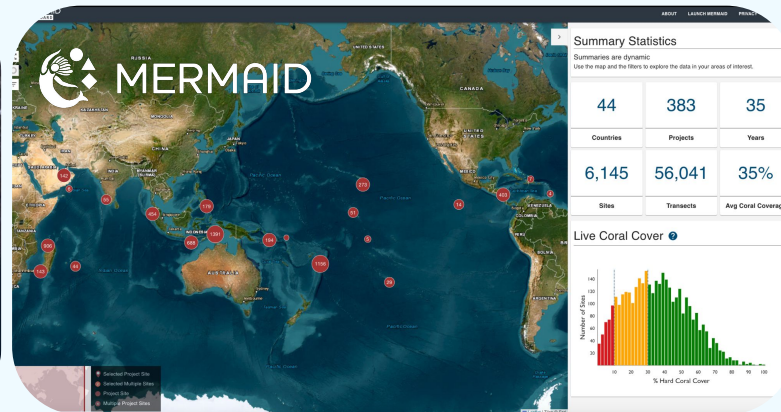
New! [Coastal Pollution Toolkit](#) and [A Guide for Integrated Conservation & Sanitation Programs & Approaches](#)



[MERMAID](#) - a secure online/offline data platform to collect, manage and visualize your coral reef data



[MACMON](#) (Marine and Coastal Monitoring): A social-ecological monitoring protocol for coral reefs







## In summary:

- Climate resilient coral reefs are critical to biodiversity and coastal economies
- WCS is leading new science to identify more types of climate resilient coral reefs and add to the original 50 Reefs portfolio
- Strategic partnerships can elevate success stories of climate resilient coral reef conservation and drive new policy wins
- WCS looks forward to many more years of partnership with ICRI to safeguard the world's coral reefs







# Thank you!

[WCS.ORG/CORAL](https://www.wcs.org/coral)

[X @WCSOCEAN](https://twitter.com/WCSOCEAN)



**Diwigdi Valiente**  
[dvaliente@wcs.org](mailto:dvaliente@wcs.org)



**Dr Emily Darling**  
[edarling@wcs.org](mailto:edarling@wcs.org)