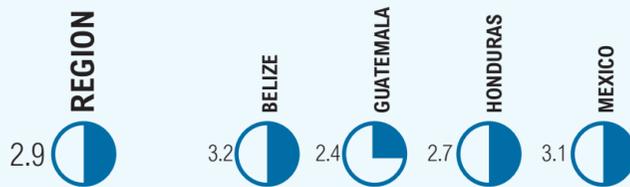


RESULTS BY THEME



The 2014 Eco-Audit overall regional score for all themes was 2.9 (out of a possible score of 5), ranking as Fair. This indicates that, in general, the actions needed to adequately manage the MAR ecosystem are not being fully or almost fully implemented. Belize demonstrated the highest degree of implementation, followed closely by Mexico, Honduras, then Guatemala. However, Belize was also the only country that did not increase its score since 2011. The theme with the highest ranking (Good) was *Research, Education and Awareness*, followed by *Marine Protected Areas*. *Sanitation and Sewage Treatment* and *Sustainability in the Private Sector* had the lowest overall rankings (Poor). The other themes were ranked as Fair in their level of implementation.

1. Marine Protected Areas



- a. Percent of a country's territorial sea included in gazetted MPAs: 5.0
- b. Percent of a country's territorial sea included in fully protected zones: 2.0
- c. Percent of mapped coral reef area included in fully protected zones: 3.8
- d. Percent of MPAs with good management: 3.3
- e. Percent of MPAs with good enforcement: 2.7
- f. Generation of alternatives for fishers within the network of MPAs ★: 2.8

MPAs are one of the main tools for protecting reef resources and providing managed stakeholder benefits. Regionally, this theme received the second-highest score (Fair) and had the most improvements since 2011. Five new MPAs were designated across the region since the last Eco-Audit. The targeted extent of territorial sea included in MPAs (20%) was fully achieved in all the countries (the only indicator with a perfect score) (Table; back cover). However, there remains a deficiency of area under full protection from fishing (3% regionally), although there were small increases in this area in each country. There was a high degree of variability among countries in their level of management and enforcement of MPAs, due mainly to insufficient funding.** The new indicator measuring alternative income sources for fishers scored poor overall, calling for greater effort and attention.

2. Ecosystem-based Fisheries Management



- a. Harmonizing fisheries regulations among countries: 3.0
- b. Special regulations for grouper / spawning sites: 3.3
- c. Protection of key grazers (parrotfish): 2.5
- d. Transform all open-access fisheries to rights-based sustainable fisheries management systems ★: 1.8

Historic and current fishing for local and global consumption continues to extract key species at levels that are not sustainable, even using traditional methods. This theme measures the efforts to protect key species and ecological processes, the harmonization of fishing regulations across the region, and the implementation of rights-based strategies. The region scored Fair overall (2.6), but results varied considerably. Belize scored Good (3.5), maintaining its full protection of almost all grouper spawning sites and protection of parrotfish. Honduras was the only country demonstrating any improvement in this theme.

3. Coastal Zone Management



- a. Status of coastal zone plan or zoning regulations: 3.3
- b. Watershed management plans related to coastal zone planning ★: 2.3
- c. Mangrove extent as an indicator of the effectiveness of the coastal zone management plan implementation ★: 2.5

The human population (local and tourist) continues to increase throughout the region, causing increased demand for coastal land and natural resources. This theme measures the spatial extent of coastal zone and watershed management plans, or steps toward developing such plans, and mangrove protection. This theme scored Fair (2.7) based on the existence of either draft of adopted CZM Plans and regulations in each country. Mexico scored Good overall, assisted by the comprehensiveness of their coastal planning, although it is recognized that enforcement is severely lacking throughout the region.

4. Sanitation and Sewage Treatment



- a. Standards for wastewater management / sewage treatment: 2.5
- b. New infrastructure for sewage treatment: 2.0
- c. Reduce upstream watershed pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) through better management practices, action plans and regulations in each sector ★: 2.5

Nutrients, pathogens and contaminants associated with human sewage and industrial effluents are known stressors to coral reefs. This theme measures the extent to which regional standards for wastewater management and sewage treatment have been adopted by countries and applied to the construction of new sewage treatment infrastructure. It also measures efforts to reduce other pollution sources upstream in the watersheds. It had the overall lowest score (2.3), with no example of improvement. The Cartagena Convention's LBS Protocol is considered an important framework for countries to address land-based pollution. Honduras is the only MAR country that hasn't yet signed the treaty, although commitments have been made to sign soon.

5. Research, Education and Awareness



- a. Effective, standardized, monitoring of coral reef health and management of that information: 4.0
- b. Assessment of coral reef economic values: 3.5
- c. Understandable information on reef condition, threats and values, available to the general public and stakeholders: 4.8
- d. Development of interdisciplinary partnerships that combine social and ecological research: 3.5

This theme measures efforts to develop standardized methods to monitor coral reef health, implement economic valuations of coral reefs, disseminate information on reef condition and threats, and conduct interdisciplinary socio-ecological research. The high score reflects a consistency in monitoring reef health across the region, complemented by good availability of information on reef condition and threats, particularly now that the HRI Reef Health Database is online. Mexico's score increased as a result of information made available in 2013 that could not be sourced in 2011.

6. Sustainability in the Private Sector



- a. Develop a voluntary eco-standards program for marine recreation providers: 2.0
- b. Assessment of coral reef economic values: 1.8
- c. Adoption of seafood eco-labeling programs: 2.8
- d. Level of incentives the government provides for conservation and sustainable businesses: 3.3
- e. Provision of financial, staff or technical assistance to coastal protected areas by the private sector: 2.0

This theme measures the degree of development and implementation of eco-standards for marine recreation providers, eco-certification of hotels, seafood eco-labeling programs, government incentives to support conservation, and private sector support of MPAs. Mexico continues to lead the region with established seafood eco-labeling and government sponsored incentive programs for green technology. Honduras increased the percentage of certified marine recreational providers. In general, the private sector, although a direct beneficiary of reef resources, has not invested heavily in reef management, contributing to the second lowest performing theme in the Eco-Audit, 2.4 (Poor).

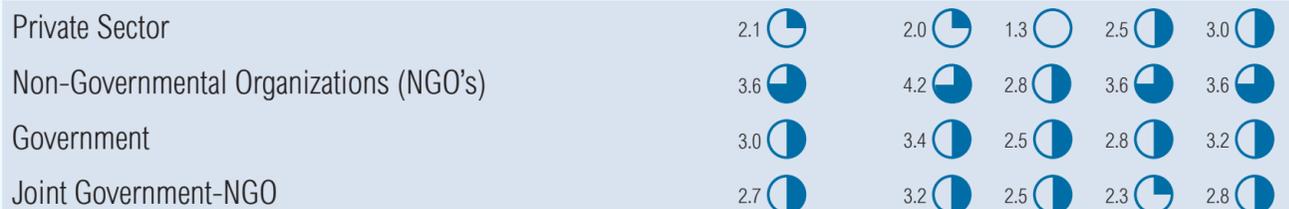
7. Global Issues



- a. Research to identify and map reefs most likely to be resilient to warming seas / coral bleaching: 2.0
- b. Engagement in international /regional treaties that support conservation: 3.0
- c. Develop incentives for carbon sequestration programs ★: 3.3

This theme measures the extent to which a regionally accepted map of potentially resilient reefs has been adopted and utilized in the region, the number of treaties that support conservation that have been ratified by each country, and the existence of carbon sequestration programs. Performance in this theme remained mostly unchanged, except for the addition of carbon sequestration (C-Seq) programs as a form of payment for ecosystem services. Belize and Guatemala have established c-seq projects and Mexico intends to establish projects within the MAR region in 2014.

RESULTS BY SECTOR



Ultimately, we do not manage coral reefs – **we manage human actions** that impact the reef. Governments, NGO's, Academia and the private sector are key players in this effort. The 2014 results were grouped by sector to stimulate examination of these efforts. NGO's and Academia maintained the highest score (Good) with the consistent monitoring and effective communication of results. HRI's development of a new online Reef Health Database is also an important achievement. Most governments ranked Fair, assisted by declarations of new MPAs, fiscal incentives and coastal zone plans. However, the challenge of MPA management and enforcement is a **responsibility** shared jointly by Government and NGO with a resulting Fair performance. The Private Sector continues to be the lowest performing sector (Poor). A notable exception is Mexico's eco-certification for sustainable lobster (CHAKAY). A combined and cohesive effort among all sectors is needed to reverse the tide of reef decline.

- Private Sector:** marine recreation eco-standards; hotel eco-certification; seafood eco-labeling; and private sector assistance to MPAs.
- NGOs & Academia:** monitoring of reef health; valuation of reefs; availability of information; interdisciplinary partnerships; and mapping of reef resilience.
- Government:** territorial sea in gazetted MPAs; territorial sea in protected zones; mapped coral reef area in protected zones; harmonization of fisheries regulations; coastal zone management; wastewater / sewage standards; treatment infrastructure; watershed management; mangrove habitat conservation; reduction of watershed pollution; incentives for the private sector; carbon sequestration programs; and regional/international treaties.
- Joint Govt / NGO:** MPA management; MPA enforcement; special grouper / spawning site regulations; protection of grazers; transform fisheries to right-based sustainable fisheries; and alternative income generation for fishers.

KEY

Results for each theme are an average of individual indicator results for that theme. Results for individual indicators were reported as whole numbers.

PwC-Costa Rica did not implement the Eco-Audit process, but provided feedback and recommendations on the ranking criteria and the proposed means of verification before the Eco-Audit process began. The recommendations provided relate to the process and not on which indicators should be included. PwC is not expressing an opinion, asseveration or other assurance form regarding the results of the MAR Eco-Audit. PwC Costa Rica refers to Pricewaterhouse Coopers Consultores S.A., Costa Rican member firm of the global PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.



**Mexico's MPAs are managed by the National Commission of Protected Areas (CONANP), which is funded by the national government. In general, Mexico's MPAs are considered to have adequate or nearly adequate staff and equipment, and moderate to good enforcement. The information regarding indicators 1d, 1e and 6e was not received in time for this publication, so the indicator scores were left blank for Mexico. Average scores were calculated based only on indicators that were ranked. An electronic revision will be provided on our webpage (www.healthyreefs.org) once the information is submitted.