

# 2014 ECO-AUDIT of the Mesoamerican Reef Countries

©JOSE ALEJANDRO ALVAREZ



Measuring the progress today for a better tomorrow

The Mesoamerican Reef (MAR) is a natural, cultural and economic asset to the people of Belize, Guatemala, Honduras, and Mexico. This Eco-Audit seeks to **catalyze** faster, more effective implementation of management actions and to increase **accountability** within the public and private sectors, among nongovernmental organizations (NGOs) and academia. It **evaluates** the extent to which recommended management actions have been implemented within each country. It also seeks to highlight, **communicate** and **celebrate** the main successes in our collective efforts to protect and sustainably manage the region's amazing coral reefs. Unfortunately the pace of these achievements is slower than the pace of reef's decline. The reef decline stems, at least in part, from inadequate management of threats despite decades of recommending management solutions.

## WHAT IS AN ECO-AUDIT?

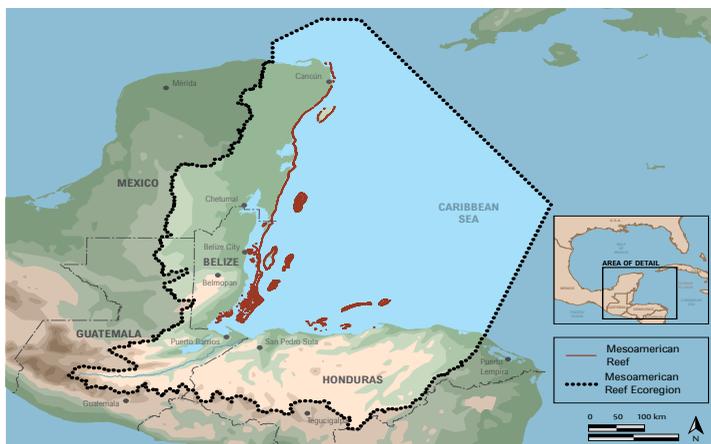
An eco-audit is a systematic multinational evaluation of the implementation of recommended reef management actions by governments, NGOs, and the private sector. This Eco-Audit includes 28 indicators across 7 themes and over 300 supporting documents within the following components:

- An orientation document that provides an overview of each indicator, including its justification, ranking criteria, and data collection methods (McField and Kushner 2011)<sup>1</sup> and (HRI 2013)<sup>2</sup>.
- Detailed worksheets of Eco-Audit results and observations for each country.
- Compilations of all publicly available verification documentation for each indicator by country.

## AN INNOVATIVE, RIGOROUS PROCESS

The Healthy Reefs Initiative (HRI), in collaboration with PricewaterhouseCoopers Costa Rica (PwC) and local partners, presents the second multi-national evaluation of reef management efforts in the Mesoamerican Reef countries. Twenty-eight standardized management indicators were assessed on a five point ranking criteria that is evenly applied in all countries. The indicators are organized into seven major themes.

The analysis is objective, science-based, and validated. HRI and its regional partners are committed to maintaining audit standards that are unbiased, fact-based, transparent, and replicable. The financial and management auditing firm of PricewaterhouseCoopers Costa Rica (PwC) reviewed the conceptual methodology (in 2011) and verified the presence and quality of the supporting documentation for each score in this 2014 Eco-Audit.



Mesoamerican Reef Ecoregion Map

## WHAT'S NEW THIS YEAR?

The 2014 Eco-Audit draws on the foundation and experience gained in the 2011 Eco-Audit and includes a comparison of changes within the 22 indicators evaluated during both assessments. It also includes six new indicators that were selected and developed through a collaborative process by regional partners during the 2012 and 2013 HRI Regional Partners meetings.

The six new indicators of management implementation include:

### 1f. Generation of alternatives for fishers within the network of MPAs

Fisheries management strategies should provide alternative livelihoods for fishers and other communities whose income may be affected by the establishment of "Fully Protected (Replenishment) Zones" which prohibit fishing. This indicator measures the spatial extent of such programs within MPAs.

### 2d. Transform fisheries to rights-based fisheries

The lack of a clear allocation of fishing rights is a major factor contributing to overfishing, and tends to encourage unsustainable fishing practices such as the race-to-fish and illegal fishing. This indicator evaluates the development and implementation of these systems for some of the most economically valuable species.

### 3b. Watershed management plans related to coastal zone planning

Proper watershed management includes appropriate land-use practices in erosion-prone areas and is essential for preserving water quality and ensuring that the transport of sediment, nutrients, and other pollutants to coral reefs is minimized. This indicator measures the existence of integrated watershed management plans that protect water quality.

### 3c. Mangrove extent as an indicator of effective coastal zone management

Mangroves protect critical ecosystem functions, including shoreline protection, provision of fisheries habitat, and biodiversity. This indicator measures the extent of mangrove cover compared to baseline and the existence of mangrove protection regulations.

### 4c. Reduce upstream watershed pollution sources

Upstream watershed pollution sources and practices have an effect on our coral reef systems. This indicator measures the "better management practices", action plans and/or regulations addressing the pollution sources occurring in the watersheds.

### 7c. Develop incentives for carbon sequestration programs.

Rapidly increasing atmospheric carbon dioxide contributes to global warming, threatening coral reefs, fisheries, and coastal communities. Carbon sequestration programs aim to reduce this impact. This indicator measures the existence of such programs or incentives to develop them within the MAR watersheds.

## ACCOUNTABILITY & TRANSPARENCY

HRI's biennial Eco-Audits and Report Cards are produced in alternating years, thereby providing a routine accounting of reef health and our efforts to improve it. The results are intended to instill a sense of urgency, accountability, and shared purpose among all institutions—NGOs, governments, private sector and academia—with a stake and responsibility for maintaining the MAR as a healthy, biologically vibrant, and economically viable resource for generations to come. The audit seeks to hold high-level decision-makers accountable, while also celebrating the highest achievements across the MAR.

# LOOKING FOR CHANGE

The following highlights of changes in the Eco-Audit scores by country, based on the original 22 indicators evaluated in 2011 compared to those same indicators in 2014.

## BELIZE

Belize maintained the top ranked position with a comparative (original indicator) score of 3.3 in 2011 and 2014. The major accomplishments were within marine protected areas, with the landmark declaration of the largest MPA in Belize, the Turneffe Atoll Marine Reserve in late 2012. This new reserve increased the percent of Belize's territorial sea within MPAs from 14% to 20%. Turneffe's designation also helped increase the area under full protection from 2% to 3% of the territorial sea, also improving that score.

However, these two increases in scores are countered by one declining score in the implementation of eco-standards for marine recreation providers. Unfortunately, momentum that was building to implement voluntary standards for marine recreation providers, and the transition to local groups, slowed after the organization driving the program suspended its operations in Belize.

Other notable indicators whose scores didn't improve as expected included the Coastal Zone Management Plan. The draft plan was developed with public and technical input, but was not formally submitted for approval by the Eco-Audit deadline. The formal approval has been delayed by the need to reconstitute the CZM board. There was also no improvement in the level of adopted government incentives for sustainable private enterprises. The Belize Trade and Investment Development Services (BELTRAIDE) and the Ministry of Energy report that incentives are under development, although nothing has been adopted.

Belize maintains the highest scores in Ecosystem-based Fisheries Management, Research, Education and Awareness, Sewage and Sanitation and Global Issues, although there were no additional improvements within these themes.



## MEXICO

Mexico had the largest increase in comparable scores from 2.7 (2011) to 3.3 (2014) with increases in six of the 22 indicators and no decreases. This change was mainly due to increases in the Sustainability in the Private Sector and the Marine Protected Areas themes.

New MPAs and fully-protected zones were created including the Cozumel Marine Protected Area, and the Alianza Kanan Kay's network fish refuges established through the fisheries cooperatives and an alliance of NGOs and government agencies. The area of fully protected (replenishment) zones increased from 261km<sup>2</sup> to 549km<sup>2</sup>, representing an increase of 1.4% to 2.9 % of the territorial sea. Likewise, the percent of Mexico's coral reef area under full protection increased from 7% to 13.5%, fully achieving that targeted amount.

The effort to encourage sustainable seafood production was boosted by the Marine Stewardship Council's full eco-certification award to CHAKAY sustainable lobster from Sian Ka'an and Banco Chinchorro, making this the only example of fully eco-certified seafood produced in the MAR.

The new Mexican government (2013) continued one former conservation incentive and initiated another involving: a) RECICLATÓN - waste reduction and recycling program where people can exchange their waste for food; and b) New financial incentives for investment focused in the production of bioenergy and renewable energy for productive activities. Efforts currently under development include thermic solar systems to heat water and projects for the production of bio and organic fertilizers.

The largest single increase was recorded for Coastal Zone Planning, which scored 2.0 in 2011 and increased to 5.0 in 2014. This important change was mainly due to a misinterpretation of the indicator in 2011, when the lack of enforcement of these zoning regulations and plans led to the lower score. In reality, this audit process has no verifiable means to evaluate the enforcement levels among countries and thus can only evaluate the existence of legally adopted plans as an important first step.

## GUATEMALA

The overall score for Guatemala went up slightly from 2.2 (2011) to 2.3 (2014). The Sustainability in the Private Sector score went up from 1.4 to 1.6 specifically for the level of incentives the government provides for conservation and sustainable businesses. The two major government programs are: (1) Tax incentives to companies that use renewable energy and (2) Forestry incentives for holders of small land extensions. One of the major objectives of this program is to contribute to sustainable forest management through the generation of employment in the rural areas of Guatemala.

Although there was no increase in MPA scores, an important accomplishment was fulfilled through the declaration of the country's first fully-protected replenishment zones. This effort was led by three fishing communities of Punta de Manabique and the Trammel and Fishing Committee of Puerto Barrios, with the support of many organizations including HRI. Guatemala went from having 0 ha of its territorial sea inside a fully protected zone to designating 960 ha under full protection. This effort also sets an important precedent for the country, although much work lies ahead to enforce the restrictions and monitor the recovery of marine life inside the protected zones.

# LOOKING FOR CHANGE

## HONDURAS

Honduras' overall comparative score increased from 2.7 (2011) to 2.9 (2014) with 7 of 22 indicators increasing and 1 decreasing (due to a technicality). The greatest increase was Ecosystem-based Fisheries Management, from 2.3 to 3.0, due to protection of key herbivores inside the Cordelia Banks Site of Wildlife Importance and adoption of a nation-wide closed season for Nassau grouper. A new Fisheries Law has been drafted and includes protection of key herbivores (including parrotfish), but was not counted in this audit as it has not yet been approved. There are also 5 new fully protected Nassau grouper spawning aggregation sites (4 in Cayos Cochinos & 1 in Cordelia Banks). Two more are planned for protection within the new Tela MPA. These new regulations are very important for rebuilding key commercial fish populations, like groupers, which are highly vulnerable to overfishing during spawning events.



©Miguel Angel de la Cueva LLC

The theme with the second highest increase was Sustainability in the Private Sector, where the score changed from 2.2 to 2.8 with 3 of the 5 indicators improving. The number of marine recreation providers implementing eco-standards to encourage reef-friendly dive practices doubled from 6 providers to 12. The number of hotels eco-certified through Nat Geo's Go Blue Central America Program increased to 13 hotels. In addition, there are more programs supporting seafood eco-labeling and providing sustainable choices to consumers.

MPAs also increased in score, from 2.8 to 3.0, for both the percent of MPAs with good management and for good enforcement, recognizing the increased financial investment of individual members and NGOs into MPA management. However, they are still at the minimal implementation level with much room for increased management capacity. The score for the percentage of coral reefs under full protection actually decreased, but this was due to improved data collection and mapping of previously uncharted coral reefs near Tela. There were actual gains in the area under full protection, which were masked by this 'increase' in the total reef area.

There is still much room for improvement in government's providing incentives for sustainable businesses, and for more private sector assistance to MPAs which support their businesses, and engagement in ratifying international treaties and conventions, including the very important "Land Based-sources of Marine Pollution Protocol".

## MEETING THE CHALLENGE



©Melanie McField, HRI

The four MAR countries have reached a landmark milestone by collectively protecting 35% of their territorial sea and 67% of their coral reef habitat within MPAs. This exceeds most international targeted amounts. While the area under full protection from fishing needs to increase, these advancements warrant pause for celebration and reflection.

Marine Protected Areas (MPAs) and Fisheries replenishment zones, also known as No-Take Zones (NTZs) in the Mesoamerican Reef.

	Reef area km <sup>2</sup>	TS km <sup>2</sup>	MPA area km <sup>2</sup>	NTZs Area km <sup>2</sup>	% of TS inside MPAs	% of TS inside NTZs	Reef area inside NTZs km <sup>2</sup>	% of reefs inside NTZs
Mexico	491	18,640	7,854	549	42	3	66	13
Belize	649	18,768	3,671	529	20	3	78	12
Guatemala	62	1,560	936	10	60	1	0	0
Honduras	160	23,987	9,806	523	41	2	13	8
<b>MAR</b>	<b>1,362</b>	<b>62,954</b>	<b>22,267</b>	<b>1,610</b>	<b>35</b>	<b>3</b>	<b>157</b>	<b>12</b>

TS = Territorial seas, defined as the belt of 12 nautical miles extending from the coast

This table provides the information used to calculate indicators 1a, 1b and 1c measures the theme with the most progress in implementation. Visit the new HRI Database - Geoportal at [www.healthyreefs.org](http://www.healthyreefs.org) for the sources and visualization of this information.

**PROJECT TEAM: Healthy Reefs Initiative (HRI)** is a collaborative international partnership that aims to improve reef management and decision-making to effectively sustain an economically and ecologically thriving MAR eco-region. HRI's work in the MAR includes Reef Report Cards on ecosystem health and encouraging the implementation of effective management recommendations. For more information, contact Melanie McField ([mcfield@healthyreefs.org](mailto:mcfield@healthyreefs.org)).

**Pricewaterhouse Coopers (PwC)** is a multinational professional services firm with offices in Mesoamerica. Under one of its Corporate Responsibility focal areas, Environmental Stewardship, PwC's believes that its greatest potential for influence is to impact the environment positively through its work with clients such as Healthy Reefs for Healthy People.

The project was implemented in collaboration with local **Eco-Audit Project Partners**. The full list of partners can be found in the 2014 *Eco-Audit of the Mesoamerican Reef Countries: Description of Indicators*, available online. For more information and full documentation visit HRI at [www.healthyreefs.org](http://www.healthyreefs.org)

### NOTES

<sup>1</sup>McField and Kushner, 2011. *Eco-Audit of the Mesoamerican Reef Countries: Description of Indicators*. Healthy Reefs Initiative and World Resources Institute. 2011. 56pp.

<sup>2</sup>HRI, 2013. *Description of New Indicators for the 2014 Eco-Audit*.

Thanks to the HRI Team and Patricia Kramer for assistance with this publication. Design by Dolphin Productions ([www.dolphinbz.com](http://www.dolphinbz.com)).

## CALL TO ACTION

While we celebrate the full achievement of this 20% in MPA indicator, we also recognize that if we continue at this current slow pace of management implementation, it will take over 50 years to fully implement the remaining 27 management actions. Over the next 50 years our reefs will face greater stress from increasing population, growing seafood demand, and climate change. We can—and we must—pick up the pace of reef management in order to safeguard this Mesoamazing Reef.



First HRI Regional Partners Meeting, Playa del Carmen, Mexico, Aug. 2012. HRI