

# 2011 ECO-AUDIT of the Mesoamerican Reef Countries

The Mesoamerican Reef (MAR) is our shared heritage, but the health of the reef is declining. This Eco-Audit evaluates our efforts to protect and sustainably manage the region's coral reefs; celebrates management success stories; and documents the extent to which recommended management actions have been implemented in Belize, Guatemala, Honduras, and Mexico. It seeks to catalyze faster, more effective management responses and to increase accountability within the public and private sectors and among nongovernmental organizations (NGOs).

REGION

BELIZE

GUATEMALA

HONDURAS

MEXICO

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## RESULTS BY THEME



The 2011 Eco-Audit shows only a moderate degree of effort in implementing the Reef Report Card management recommendations. In general, threats along MAR are not being adequately managed. Averaging across the region and for all thematic areas, the overall score is 2.7 out of 5, which is in the Fair category. Research, Education, and Awareness received the only Good score; Marine Protected Areas (MPAs) and Ecosystem-based Fisheries Management both scored a solid Fair, while Global Issues and Coastal Zone Management both barely reached a score of Fair. Sanitation and Sewage Treatment, as well as Sustainability in the Private Sector, had the lowest overall scores of Poor.

### Marine Protected Areas



Indicator	Belize	Guatemala	Honduras	Mexico
Percent of a country's territorial sea included in gazetted MPAs	4.5	1.5	3.5	3.0
Percent of a country's territorial sea included in fully protected zones	1.5	3.5	3.0	2.3
Percent of mapped coral reef area included in fully protected zones	3.5	3.0	3.0	2.3
Percent of MPAs with good management	3.0	3.0	3.0	3.0
Percent of MPAs with good enforcement	2.3	3.0	3.0	3.0

This theme explores the spatial extent of MPAs and the degree of management and enforcement capacity in those MPAs. In most countries, the extent of territorial sea included in MPAs scored Very Good. However, all countries scored Very Poor to Poor for the percent of territorial sea under full protection ("no take" areas). There was high variability among countries in their management and enforcement of MPAs. A lack of sufficient funding was cited by Eco-Audit Workshop participants as the key reason for this underachievement.\*

### Ecosystem-based Fisheries Management



Indicator	Belize	Guatemala	Honduras	Mexico
Harmonizing fisheries regulations among countries	3.0	3.0	3.0	3.0
Special regulations for grouper / spawning sites	3.0	3.0	3.0	3.0
Protection of key grazers (parrotfish)	2.3	3.0	3.0	3.0

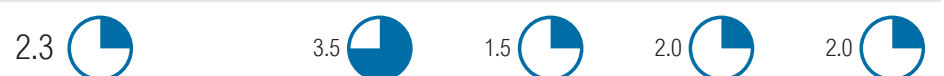
This theme measures the extent of harmonization of fishing regulations for lobster size limits and closed seasons, efforts to protect grouper spawning sites and parrotfish. The results varied considerably by country. Belize scored Good, as a result of full protection of almost all grouper spawning sites and protection of parrotfish (a key reef grazer). The other three countries received scores of Poor. A key regional success has been the harmonization of regulations for the lobster fishery by Belize, Guatemala, and Honduras.

### Coastal Zone Management



This theme measures the spatial extent of coastal zone management plans or steps toward developing such plans. Only Honduras scored Good, owing to its adoption of an integrated coastal zone plan for the Bay Islands—the country's most popular tourist destination. Theme scores reflect results for the one indicator, Coastal Zone Planning Regulations.

### Sanitation and Sewage Treatment



Indicator	Belize	Guatemala	Honduras	Mexico
Standards for wastewater management / sewage treatment	2.5	3.5	1.5	2.0
New infrastructure for sewage treatment	2.0	3.5	1.5	2.0

This theme explores the extent to which regional standards for wastewater management and sewage treatment have been developed, adopted by countries, and applied to the construction of new sewage treatment infrastructure. The Cartagena Convention's Protocol Concerning Pollution from Land-Based Sources is considered an important framework for countries to address land-based pollution and has been ratified by Belize, and signed by Guatemala and Mexico. Belize scored Good for adopting these standards and approving a new sewage treatment plant that meets these standards, while the other countries scored Poor to Fair.

### Research, Education and Awareness



Indicator	Belize	Guatemala	Honduras	Mexico
Standardized monitoring of coral reef health and information management	4.0	4.8	3.0	4.0
Economic valuations of coral reefs	3.3	4.8	3.0	4.0
Availability of understandable information on reef condition and threats	4.8	4.8	3.0	4.0
Interdisciplinary partnerships combine social and ecological research	3.5	4.8	3.0	4.0

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 the long-standing efforts to monitor reef health across the region, complemented by good availability of information on reef condition and threats. The Atlantic and Gulf Rapid Reef Assessment program (AGRRA), which monitors coral reef health, has a publicly available database. Belize has implemented a national-extent valuation of coral reefs, as has Honduras for the Bay Islands.

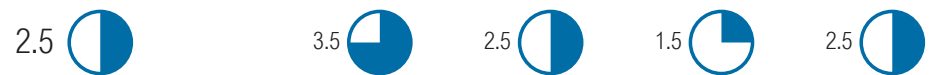
### Sustainability in the Private Sector



Indicator	Belize	Guatemala	Honduras	Mexico
Voluntary eco-standards program for marine recreation providers	2.0	2.0	1.4	2.2
Participation of hotels in eco-certification schemes	1.5	2.0	1.4	2.2
Adoption of seafood eco-labeling programs	2.3	2.0	1.4	2.2
Government incentives for conservation and sustainable businesses	2.8	2.0	1.4	2.2
Private sector assistance to MPAs	2.0	2.0	1.4	2.2

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. Individual indicator scores varied widely, with an average of Fair for government incentives for conservation and sustainable businesses, and Poor to Very Poor for hotel participation in eco-certification schemes. Mexico received a score of Good for their recent submission of the Sian Ka'an and Banco Chinchorro lobster fishery for Marine Stewardship Council certification, while most other countries showed less progress in this field. Overall, private sector assistance for MPAs shows a great opportunity for improvement.

### Global Issues



Indicator	Belize	Guatemala	Honduras	Mexico
Mapping of potentially resilient reefs to warming seas / coral bleaching	2.0	3.5	2.5	1.5
Engagement in international / regional treaties that support conservation	3.0	3.5	2.5	1.5

This theme measures the extent to which reef resiliency to climate change and international treaties are being incorporated into marine conservation efforts. Although engagement in international and regional conservation treaties varies widely by country, it could provide a legal foundation for increased reef conservation. Efforts to map reefs that are potentially resilient to warming seas have been initiated, but are not yet adopted or fully incorporated into management plans.

## RESULTS BY SECTOR

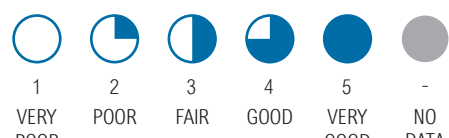
Sector	Belize	Guatemala	Honduras	Mexico
Private Sector	2.0	2.3	1.3	1.8
Non-Governmental Organizations (NGO's)	3.5	4.2	2.8	3.6
Government	2.8	3.1	2.2	3.1
Joint Government-NGO	2.6	3.8	3.0	1.5

The government, private, and NGO sectors each influence regional management in their own way, and partnerships among sectors will be a key to the long-term health of the reef. The results displayed above provide a general understanding of how these different stakeholder groups and organizations are contributing to conservation and management of the MAR. NGOs scored highest (Good), followed by government (Fair), particularly in Belize and Honduras. Overall, the Joint Government-NGO Sector received a Fair score; in Belize and Guatemala, the score was a level higher than for government alone, but in Honduras and Mexico the collaboration ranked a level lower. The private sector scored the lowest for the region (Poor), with only Mexico receiving a Fair score. Each sector result is an average of the indicators listed below.

- Private Sector:** marine recreation eco-standards; hotel eco-certification; seafood eco-labeling; and private sector assistance to MPAs.
- NGOs:** monitoring of reef health; valuation of reefs; availability of information; interdisciplinary partnerships; and mapping of reef resiliency.
- 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; incentives for the private sector; and regional/international engagement.
- Joint Govt / NGO:** MPA management; MPA enforcement; special grouper / spawning site regulations; protection of grazers.

### KEY

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



\* 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 administrators of Mexico's MPAs were unable to complete the Eco-Audit survey due to competing demands on their time. As a result, indicator scores derived from the results of the Eco-Audit survey were left blank for Mexico for: MPA management; MPA enforcement; and incentives for the private sector. Average scores were calculated based only on ranked indicators.

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### 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, please contact Melanie McField (mcfield@healthyreefs.org).

The **World Resources Institute (WRI)** is an environmental think tank that goes beyond research to create practical ways to protect the earth and improve people's lives. WRI's work in coastal ecosystems includes the Reef Report Card, as well as the Coastal Gap project, which supports sustainable management of coral reefs and mangroves by quantifying their economic value. For more information, please contact Benjamin Kushner (bkushner@wri.org).

The project was implemented in collaboration with local **Eco-Audit Project Partners**. The full list of partners can be found in the 2011 Eco-Audit of the Mesoamerican Reef Countries: Description of Indicators, available online.

### CREDITS

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### POLL FOR MORE INFORMATION

Please visit HRI at: [www.healthyreefs.org](http://www.healthyreefs.org) and WRI at [www.wri.org/reefs](http://www.wri.org/reefs).