

# Regional Collaborative Monitoring & Evaluation Healthy Reefs Initiative

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**Healthy Reefs**  
*for healthy people*

# The Mesoamerican Reef





Healthy Reefs  
for healthy people

# Objectives of HRI

**Promote the application of Healthy Reefs indicators by managers, policy makers and other leaders concerned with the integrity of the Mesoamerican Reef Ecosystem. *Common voice***

**Provide standardized analyses of reliable scientific data to improve and track reef management. *Regular reporting***

**Serve as an open forum for information sharing and networking among science and conservation partners. *Collaboration***

# Healthy Reefs Initiative Conceptual Diagram

## REEF MONITORING & DATABASE

Standardized protocols and training \* online database

## REEF REPORT CARDS

Evaluate Reef Condition  
Make mgt Recommendations

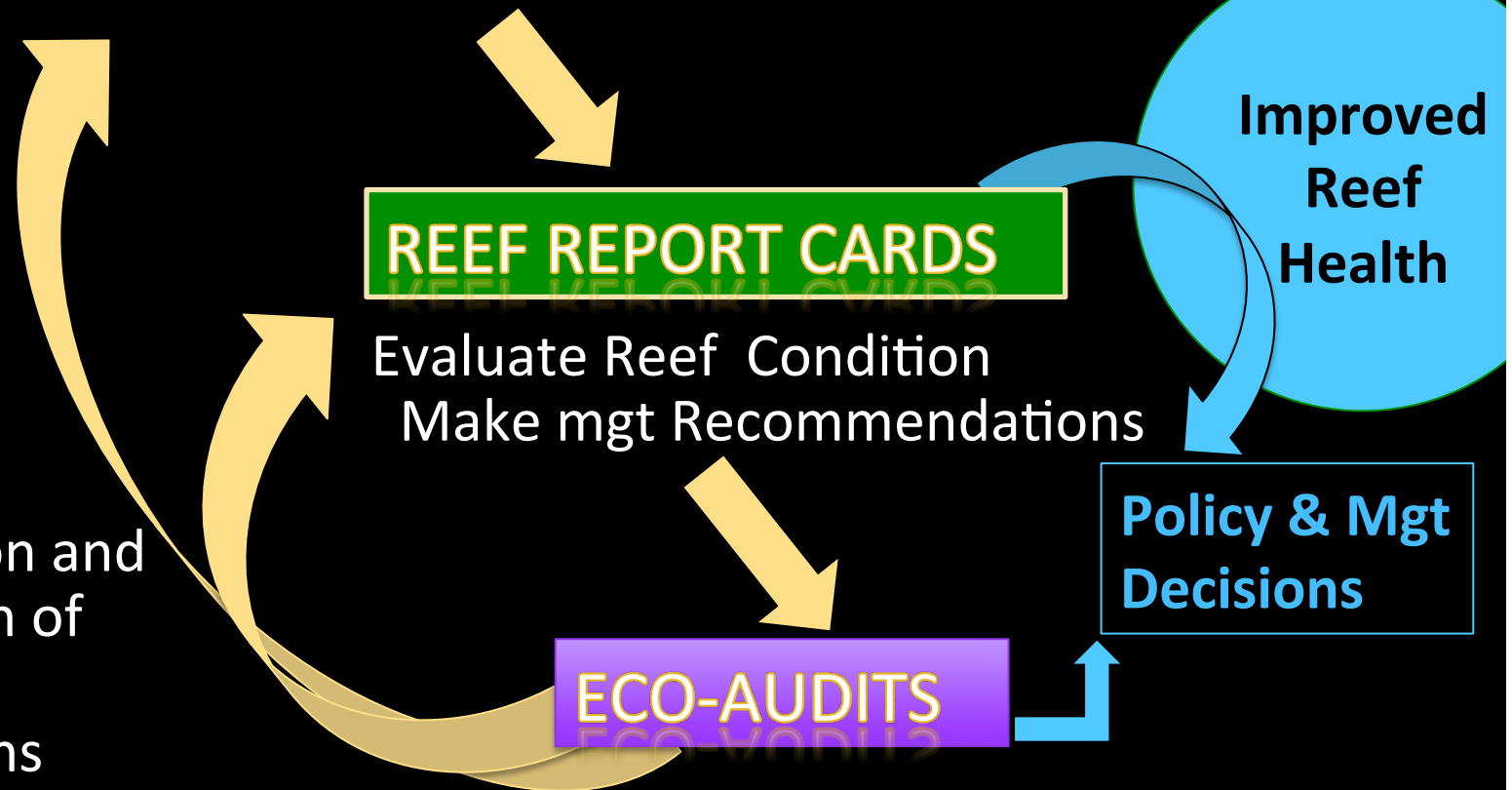
## ECO-AUDITS

Evaluate Implementation  
of Recommendations

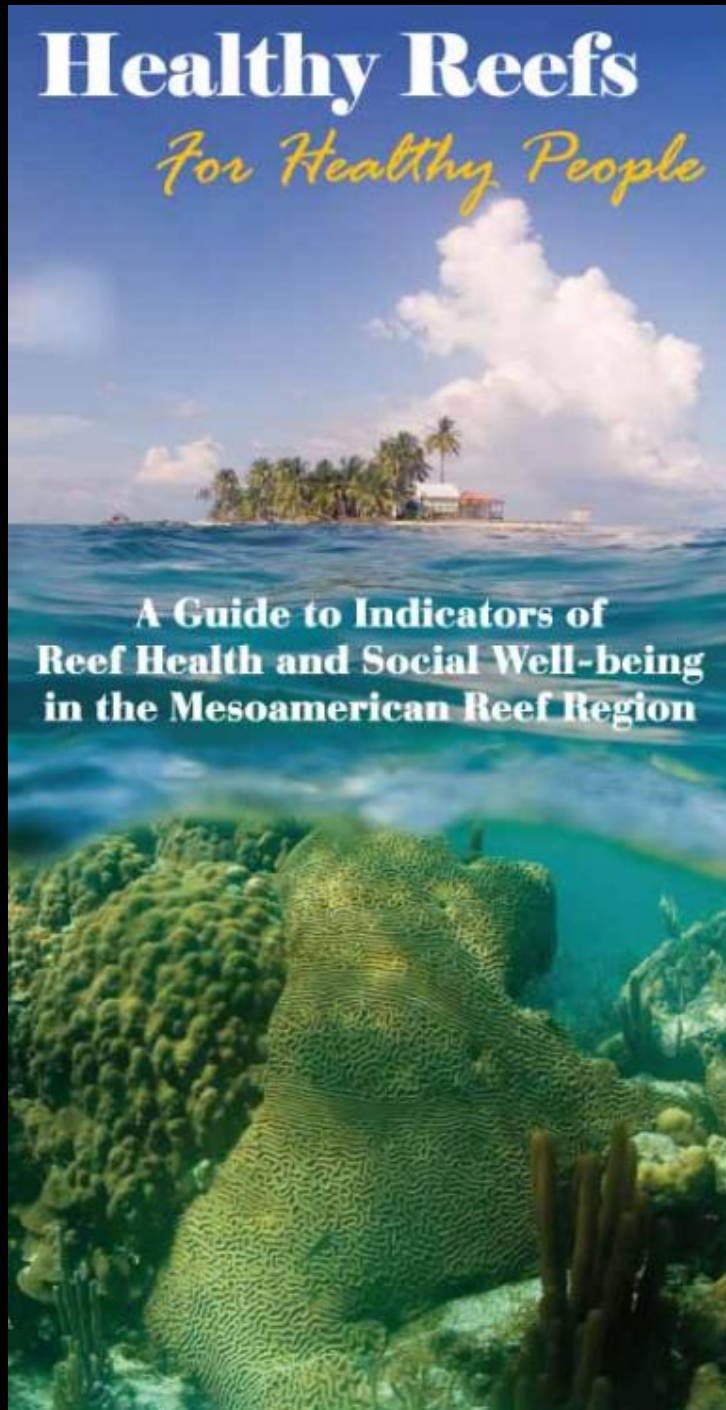
Improved  
Reef  
Health

Policy & Mgt  
Decisions

Collaboration and  
Participation of  
Partner  
Organizations



# What is a Healthy Reef?



Healthyreefs.org

Conceptual Framework

4 Themes

58 Indicators

Target values

Red Flag values

Links to Mgt Questions

Re

Meso

Very good



Good



t  
Mesoamerican  
reef



n of Ecosystem Health

2010

# Report Card for the Mesoamerican Reef

2012



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An Evaluation of  
Ecosystem Health

# Key Indicators of Reef Health



**Coral Cover**

**Macroalgal Cover**



**Key Herbivorous Fish**



**Key Commercial Fish**



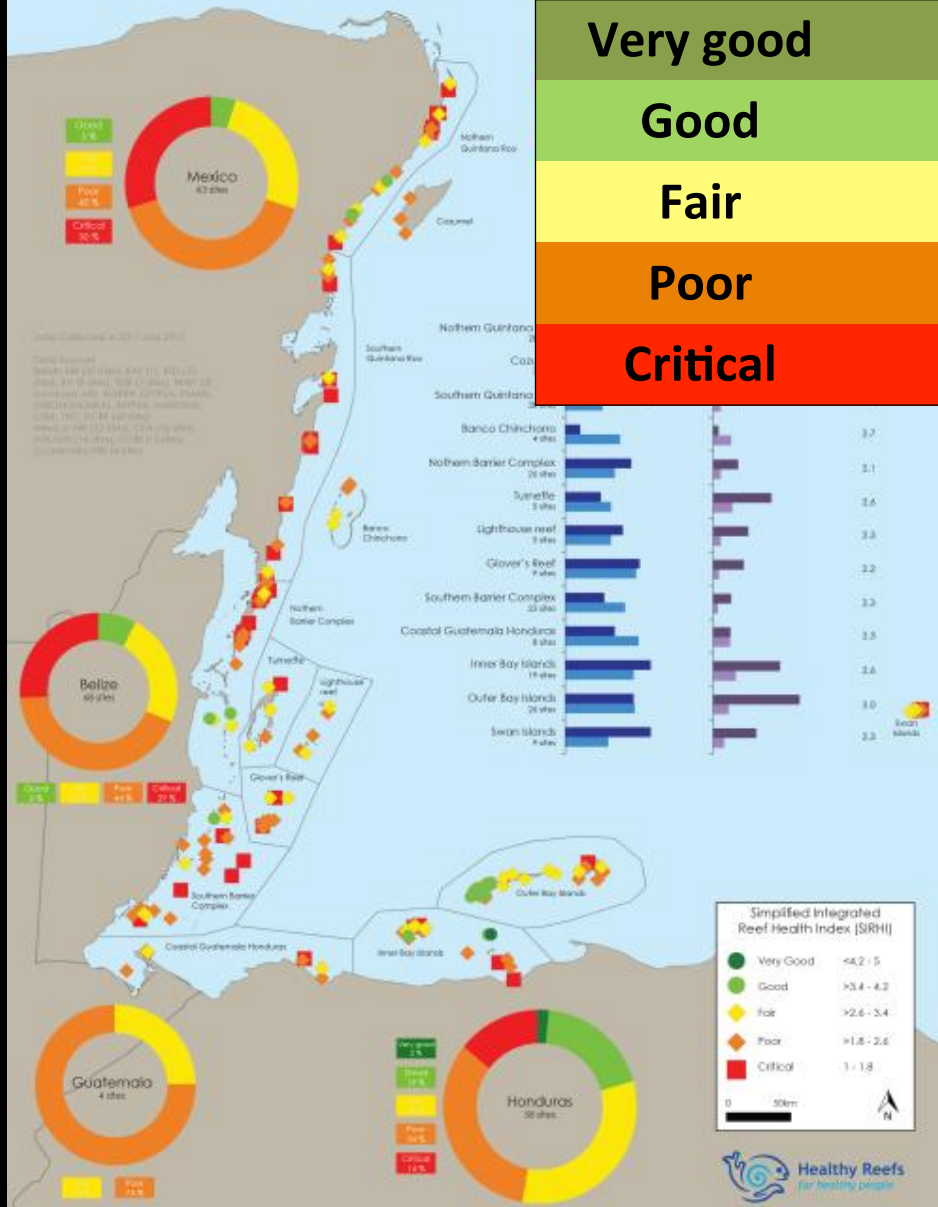
# Reef Health Grading Criteria

SIRHI INDICATORS	VERY GOOD (5)	GOOD (4)	FAIR (3)	POOR (2)	CRITICAL (1)
Coral cover (%)	≥40	20.0-39.9	10.0-19.9	5.0-9.9	<5
Fleshy macroalgae cover (%)	0-0.9	1.0-5.0	5.1-12.0	12.1-25	>25.0
Key herbivorous fish (g•100 m <sup>2</sup> ) note: only parrotfish and surgeonfish	≥3480	2880-3479	1920-2879	960-1919	<960
Key commercial fish (g•100 m <sup>2</sup> ) note: only snapper and grouper	≥1680	1260-1679	840-1259	420-839	<420



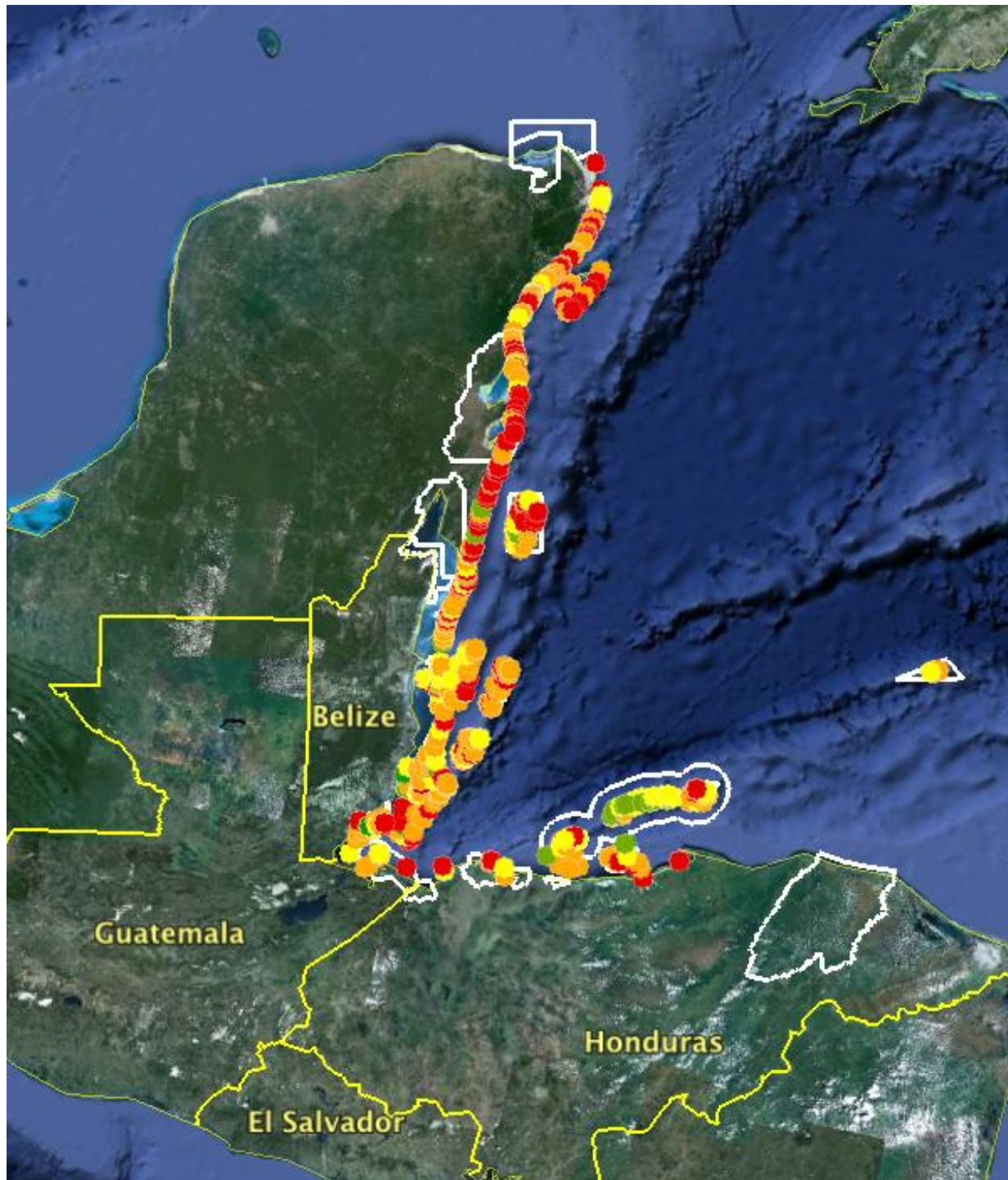
# Reef Health in the Mesoamerican Reef

Regional	(193 sites)
Very good	1%
Good	9%
Fair	25%
Poor	40%
Critical	24%



A full set of data contributors can be found online in the 2012 Report Card supplement. See [www.healthyreefs.org](http://www.healthyreefs.org)





## A Growing Database

2005 to 2012

508 sites in total

90 sites with temporal replication

85 % sampled using AGRRA

Online access

Training for data-collectors


Species –level data

# Reports and Recommendations are a Collective Effort of 48 Partners



# The 2011 Eco-Audit

## Measuring Management Progress at a National Scale



The Mesoamerican Reef (MAR) provides a diverse array of goods and services to the people of Belize, Guatemala, Honduras, and Mexico. It is our shared heritage. Unfortunately, the health of the reef is declining, as documented by the 2008 and 2010 Report Cards published by the Healthy Reefs Initiative. The decline stems, at least in part, from inadequate management of threats to coral reefs. 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).

### AN INNOVATIVE, RIGOROUS PROCESS

The Healthy Reefs Initiative (HRI), in collaboration with the World Resources Institute (WRI) and local partners, developed and implemented the first-ever multinational Eco-Audit of the Mesoamerican Reef Countries.


**Evaluation criteria are comprehensive and inclusive.**  
Twenty-two standardized management indicators were developed across seven themes, such as fisheries management and coastal zone management. The Eco-Audit draws on input from a variety of NGOs, governmental agencies, and the private sector, and includes transparently verified and publicly available results. In September and October 2011, HRI and WRI convened four national workshops, whose purpose was for participants to collectively rank each indicator and to complete documents to verify the rankings.

**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 Proactivar/Instituto Cooperativo Costa Rica (PwC) reviewed the methodology and provided feedback on the processes, indicators, and quality of the verification documentation.

**Data quality will be enhanced over time.**  
This first Eco-Audit establishes a baseline regarding the status of reef ecosystem management efforts. The results are intended to guide data collection and completion for future Eco-Audits, which will occur every two years. These biennial Eco-Audits and the biennial HRI Reef Report Cards will occur in alternating years, thereby providing a routine accounting of reef health and efforts to improve it. As data collection becomes more complete and the database grows, we anticipate that the Eco-Audit will evolve, becoming more quantitative and comprehensive in its evaluation of management efforts.

### A CALL TO ACTION

The results of the Eco-Audit are intended to instill a sense of urgency, accountability, and shared purpose among all stakeholders—NGOs, governments, and the private sector—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 build high-level decision-maker accountability, while identifying actions needed to protect the MAR.






Mesoamerican Reef Ecoregion Map



### 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 22 indicators across 7 themes and over 200 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 Kushlan 2011)
- Detailed worksheets of Eco-Audit results and observations for each country
- Compilations of all publicly available verification documentation for each indicator by country

These products, along with additional information about the Eco-Audit, are available online at [www.healthyreefs.org](http://www.healthyreefs.org) and [www.wri.org/traff](http://www.wri.org/traff).

Organized by:   

Followed by:  

All docs on [www.healthyreefs.org](http://www.healthyreefs.org)

Indicators taken directly from Report Card recommendations

All Countries held to the same bar

## 2013 ECO-AUDIT



## Description of Indicators

### Overview

In collaboration with The World Resources Institute (WRI) and local partners, the Healthy Reefs Initiative

# 2011 ECO-AUDIT

of the Mesoamerican Reef Countries

Are we protecting our most valuable natural asset?










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- Unprecedented in scale and scope
- Four countries
- Over 40 organizations
- Over 100 individuals
- Over 300 supporting documents collected
- Evaluated 22 indicators over 7 themes
- Serves as basis for measuring future progress



# Key to Results at a Glance



REGION	BELIZE	GUATEMALA	HONDURAS	MEXICO	
<b>RESULTS BY THEME</b>	2.7 	3.3 	2.2 	2.7 	2.7 
Marine Protected Areas					
Ecosystem-based Fisheries Management					
Coastal Zone Management					
Sanitation and Sewage Treatment					
Research, Education and Awareness					
Sustainability in the Private Sector					
Global Issues					

All docs on [www.healthyreefs.org](http://www.healthyreefs.org)

# REAL MEN

use their hands



**Spearfishing**

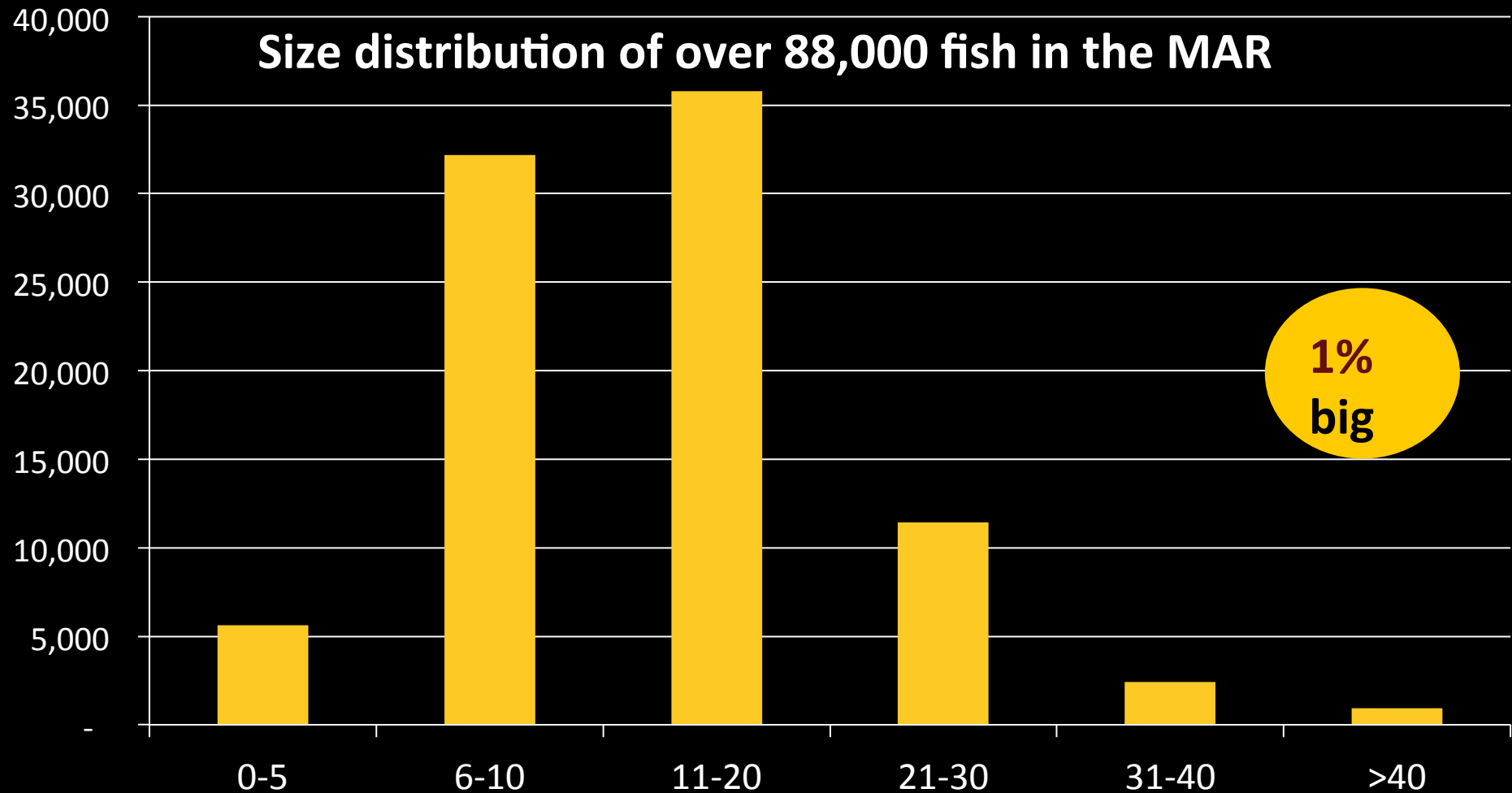


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is a particularly harmful way to fish. It selectively targets the biggest, rarest, and fittest fish, leaving behind breeding populations that are diminished in size and vigor. Using hand lines and other traditional fishing methods are more sustainable for reef health. Belize no longer allows spearfishing inside marine reserves. Report any violations to your local MPA managers or the Fisheries Department 223-2623.



# Large Fishes (>40cm) are virtually gone



# SCRAP THE TRAPS!



# FISH FOREVER!



# Successes: Grazers Get Protection

THANKS



Photo: Brian Skerry / National Geographic

33% increase in biomass in Belize from 2009 to 2011/12