IUCN WORLD PARKS CONGRESS SYDNEY 2014

# Brave New World: Innovative approaches for adapting and transforming marine protected areas in a changing climate

## Experiences from the Coral Triangle Region

**Saturday 15 November 2014**

CORAL TRIANGLE INITIATIVE ON CORAL REEFS, FISHERIES AND FOOD SECURITY

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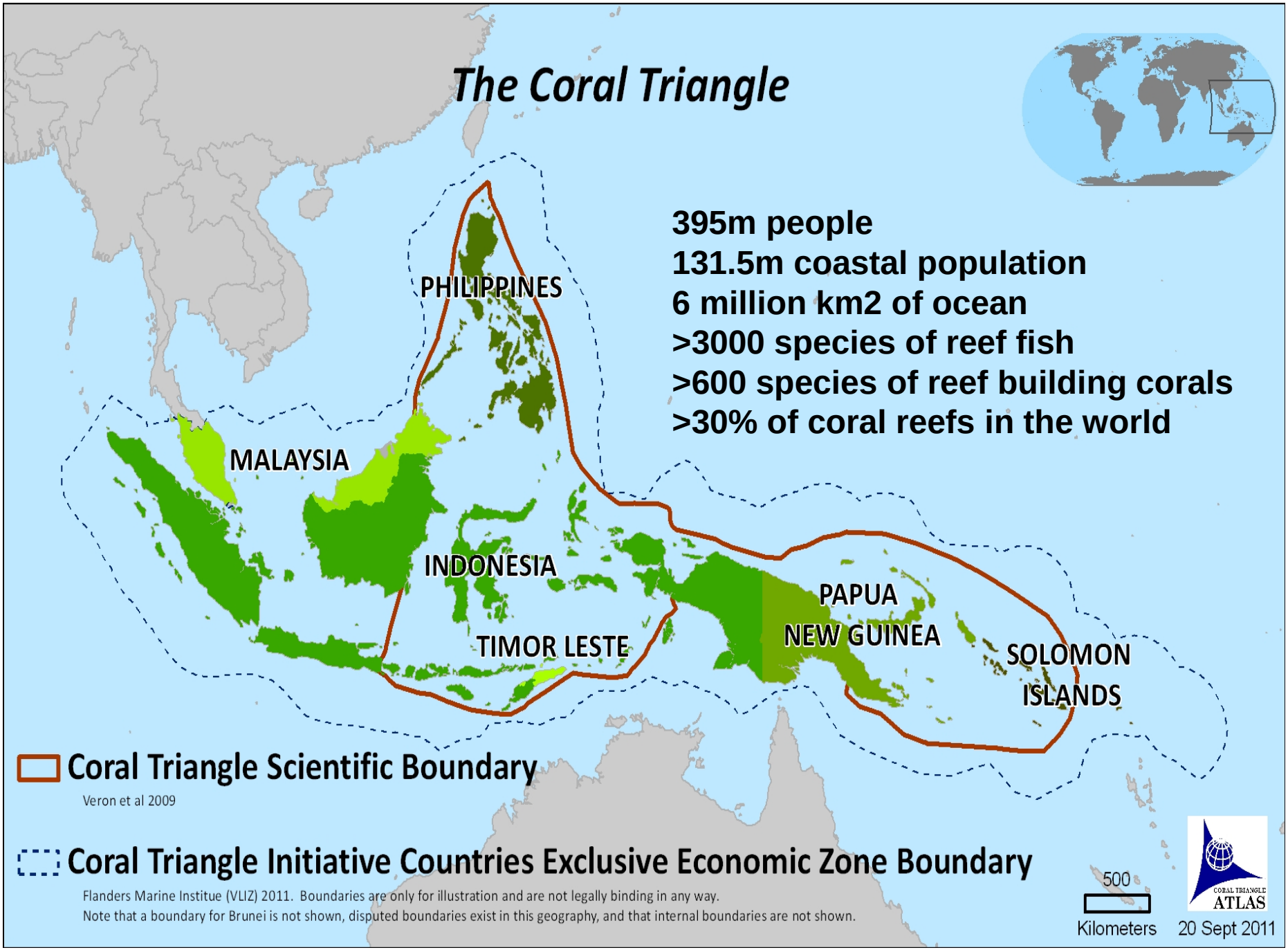
The Coral Triangle
395m people
131.5m coastal population
6 million km2 of ocean
>3000 species of reef fish
>600 species of reef building corals
>30% of coral reefs in the world
PHILIPPINES
MALAYSIA
INDONESIA
TIMOR LESTE
PAPUA NEW GUINEA
SOLOMON ISLANDS
Coral Triangle Scientific Boundary
Veron et al 2009
Coral Triangle Initiative Countries Exclusive Economic Zone Boundary
Flanders Marine Institue (VLIZ) 2011. Boundaries are only for illustration and are not legally binding in any way.
Note that a boundary for Brunei is not shown, disputed boundaries exist in this geography, and that internal boundaries are not shown.
500
Kilometers
CORAL TRIANGLE ATLAS
20 Sept 2011

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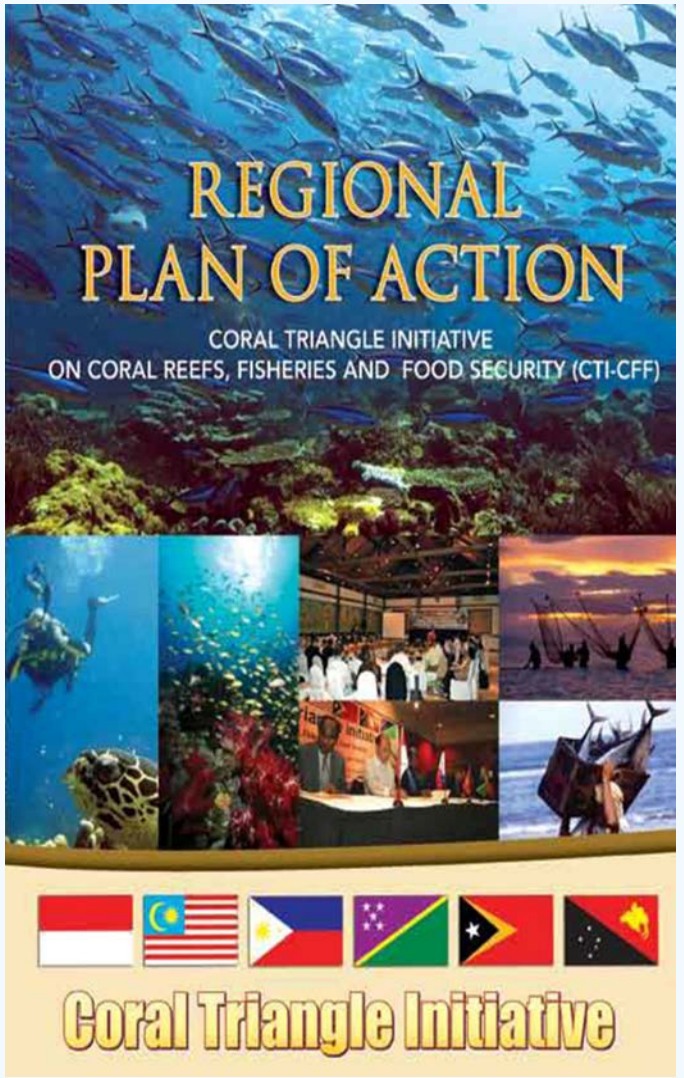
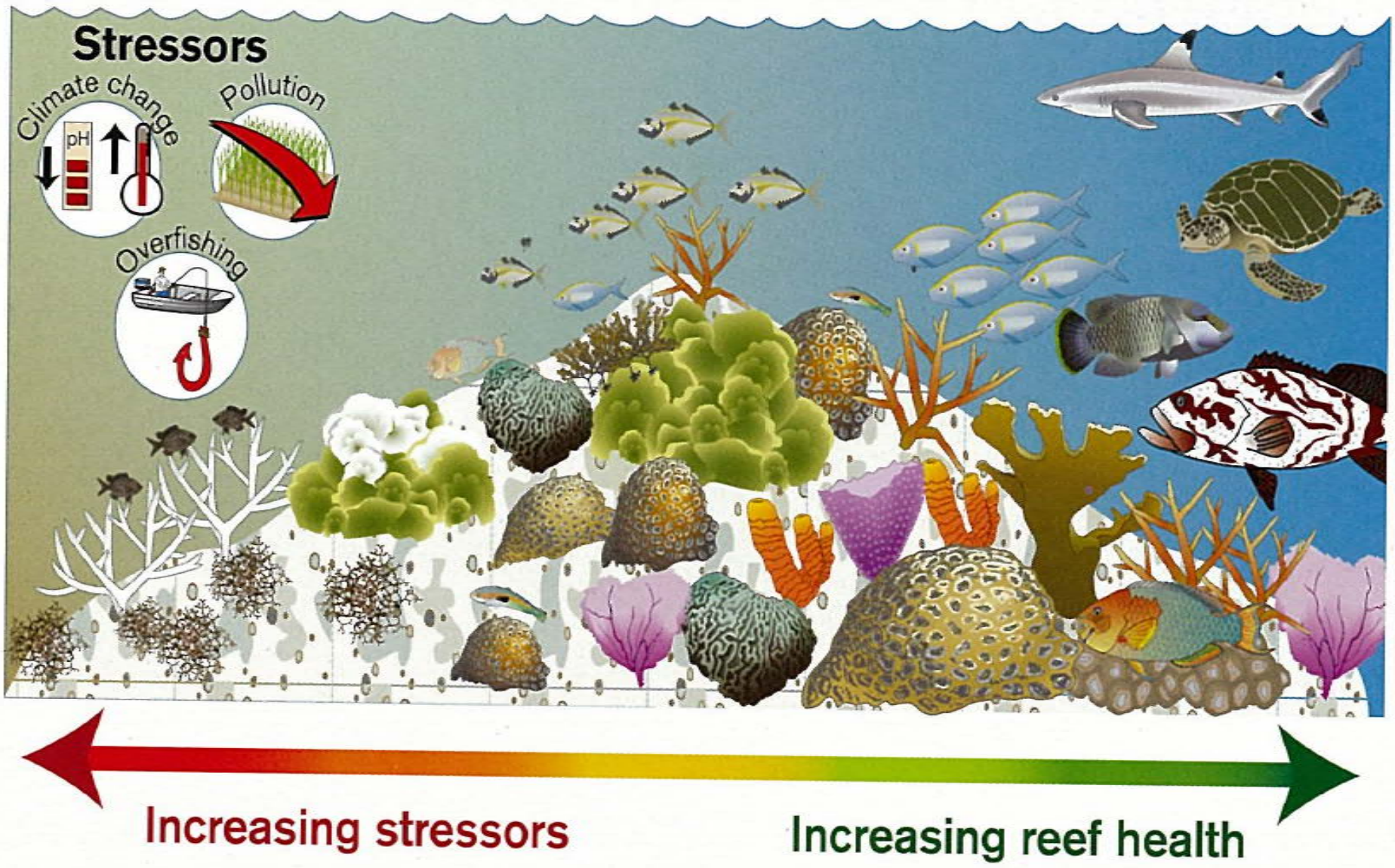
# Overarching Goals of Initiative: CTI-CFF Regional Plan of Action

- Designate and effectively manage priority seascapes
- Apply ecosystem-based approach to fisheries
- Establish networks of marine protected areas
- Strengthen resilience and adaptation to climate change
- Strengthen measures to protect threatened marine species



# MPAs are critical to healthy oceans and reefs (fisheries, income, biodiversity, resilience)

Credit: Conservation International



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# Healthy Marine Habitats in a Changing Climate

With appropriate design, effective management and investment these areas can contribute to multiple objectives for fisheries management, biodiversity conservation & climate change adaptation.

In the Coral Triangle – several resources have been developed to support design and effective management i.e.

- ***Designing Marine Protected Area Networks to Achieve Fisheries, Biodiversity and Climate Change Objectives in Tropical Ecosystems: A practitioner guide***.

- ***The Coral Triangle Marine Protected Area System (CTMPAS) Framework & Action Plan***

- Supported by capacity building through Regional Exchanges

# CTMPAS Design Principles & Objectives & Criteria

Ecological– ecosystem function, fisheries, CCA, biodiversity, threatened species

Governance— regional, national local, information, M&E

Society– communications, learning networks, livelihood, resource use

CT MPAS

# Elements for Effective MPAs and Networks (1)

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For MPAs and networks to be useful in supporting fisheries productivity, marine conservation and also building resilience to climate change they need the following basic elements:

- A location and design that includes all we know about building resilient networks of MPAs – ecological considerations
- Effective implementation and management
- Designed to address social and governance considerations; and
- Be integrated within broader fisheries and coastal management regimes.

(1) Alison L. Green , Leanne Fernandes , Glenn Almany , Rene Abesamis , Elizabeth McLeod , Porfirio M. Aliño , Alan T. White , Rod Salm , John Tanzer & Robert L. Pressey (2014): ***Designing Marine Reserves for Fisheries Management, Biodiversity Conservation, and Climate Change Adaptation, Coastal Management,*** 42:2, 143-159, DOI: 10.1080/08920753.2014.877763

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# Ecological Design Principles for successful networks of MPAs

***"Designing marine protected area networks to achieve fisheries, biodiversity, and climate change objectives in tropical ecosystems: A practitioner guide" -***

15 biophysical principles for designing resilient networks of MPAs including:

- Habitat representation
- Risk spreading
- Protecting critical, special and unique areas
- Reserve size, spacing, location, and duration
- Protecting climate resilient areas
- Minimizing and avoiding threats

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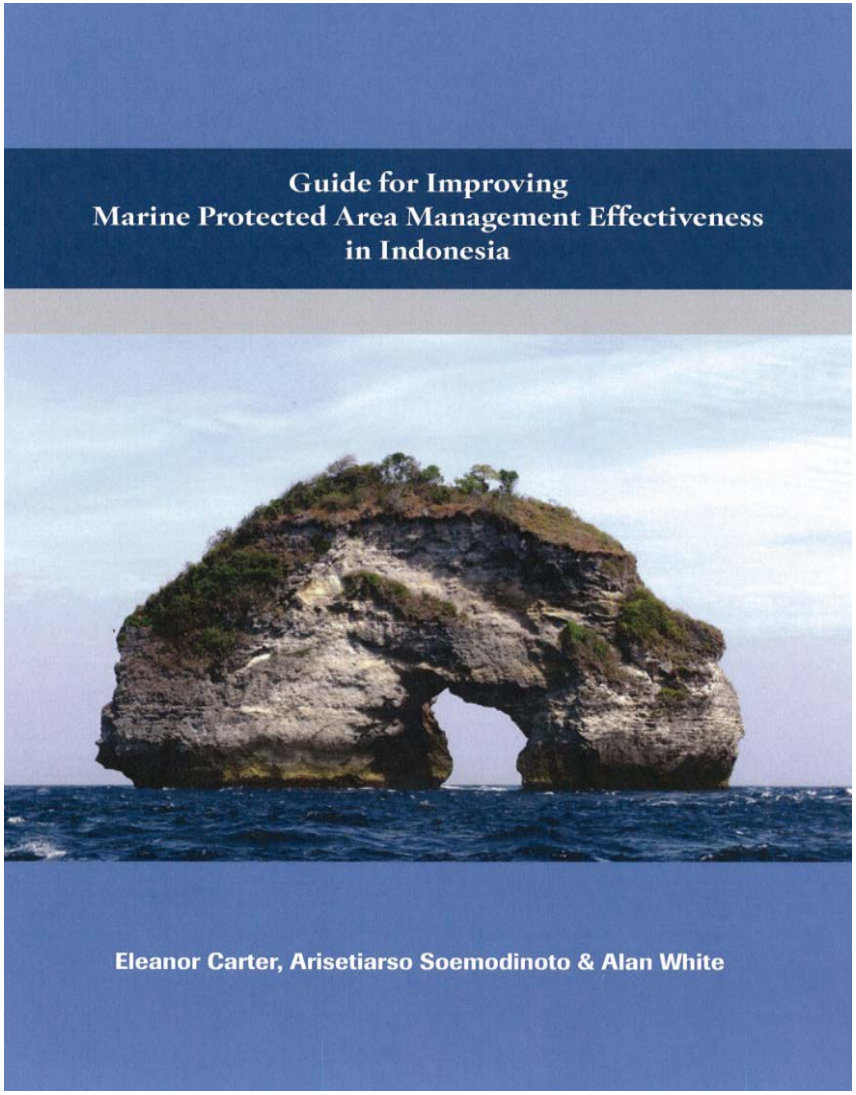
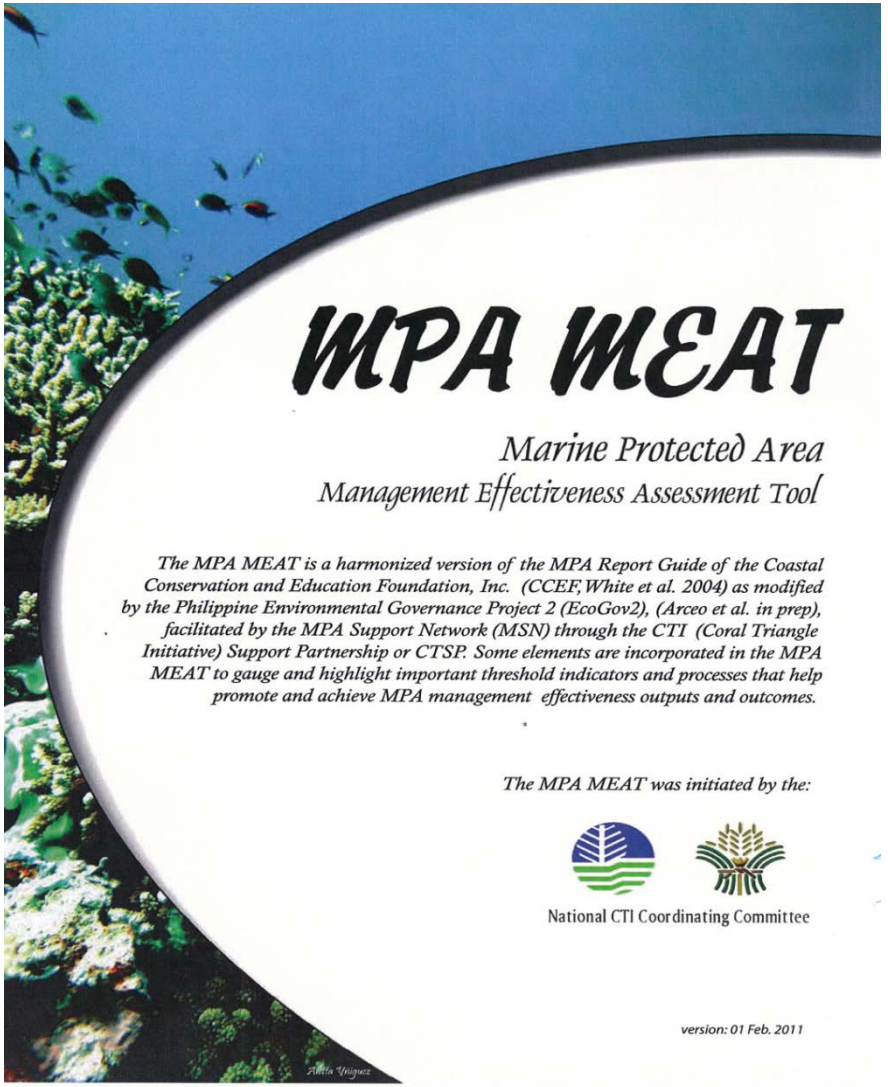
# Management Effectiveness

To support management effectiveness - MPAs & networks require:

- Monitoring & evaluation and feedback loops established - management can continually be refined
- Regional scale monitoring/information systems, such as the Coral Triangle Atlas, so that progress across larger scales can be tracked and gaps can be filled through regional gap analysis etc.
- Incentives and systems to reinforce good management

# MPA Management Effectiveness Systems in The Philippines and Indonesia input to CTMPAS



# Tubbataha Reefs National Park
# World Heritage

- Nationally designated no-take MPA (970 km2) Sulu Sea
- Established 1988,  largest no-take MPA in the Philippines
- Widely recognized as exemplifying good practice in MPA management
- Met Coral Triangle MPA System Framework criteria for - “Category 4: Flagship Sites,” defined as “large, already effectively managed sites that have regional ecological, governance and socioeconomic importance.”

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# Tubbataha – what makes it a success

- Achieving MPA effectiveness through regular monitoring
- Application of responsive governance incentives in the Tubbataha reefs - Economic, Interpretative and Participative incentives to develop a constituency that supports the Park eg:
  - Green marketing of products/services from MPA i.e. dive tourism & conservation fees – supports park management, local livelihoods, infrastructure & improvement of public facilities
  - Public communication, education and awareness raising
  - Regulatory obligations
  - Participative governance structures and processes
  - Equity and stewardship:

# Effective MPAs and Networks for Multiple Integrated Objectives (2)

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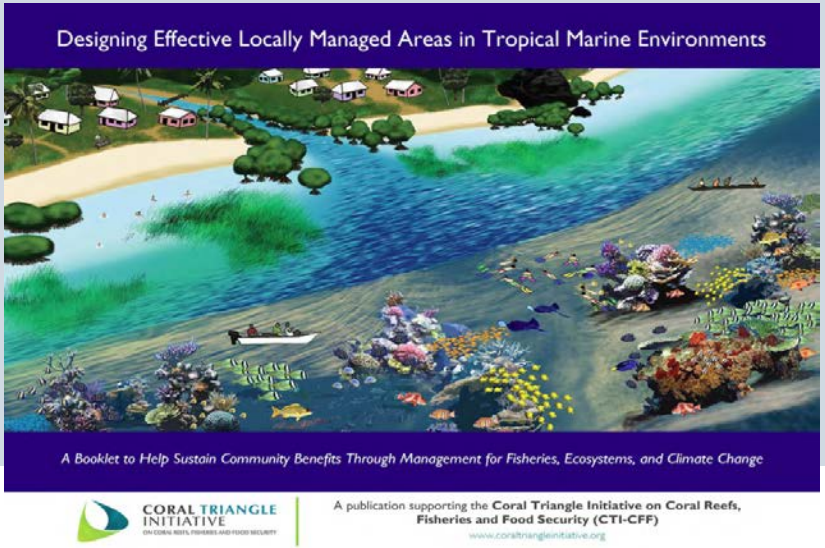
Effective MPAs and networks of MPAs can help achieve a number of integrated objectives for biodiversity, fisheries and building resiliency against climate and other environmental change:

- Protecting climate resilient areas to achieve biodiversity conservation benefits fisheries management
- Improved fisheries management benefits CCA through protection of key fish species that play a critical role in maintaining ecosystem resilience
- Integration of Marine reserves within broader spatial planning & management frameworks can address multiple threats.

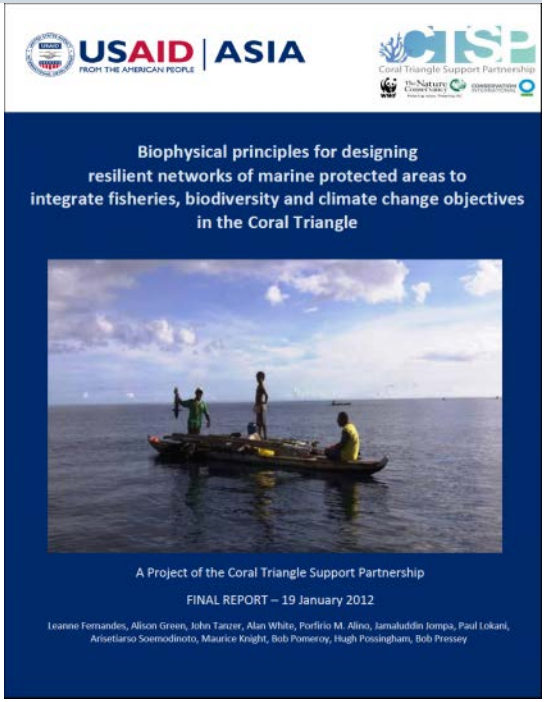
*2: Ref: A.L. Green et al*

# Guidance materials: Different Versions for Different Audiences at multiple scales and sites

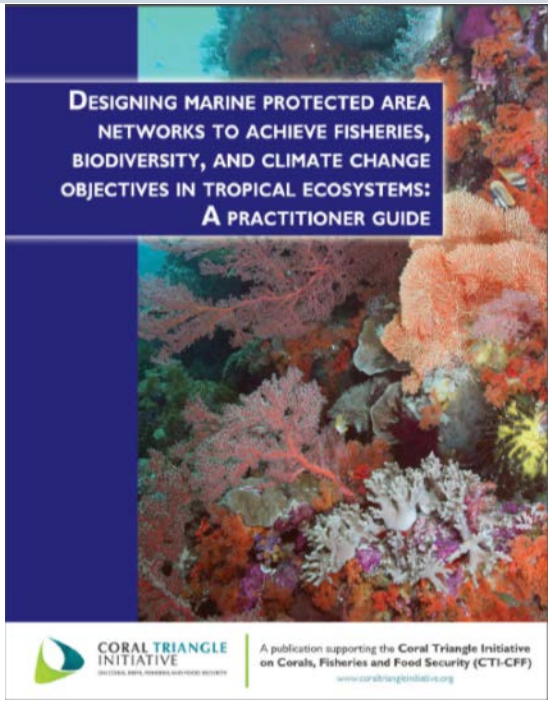
## Guide for Community Based Managers



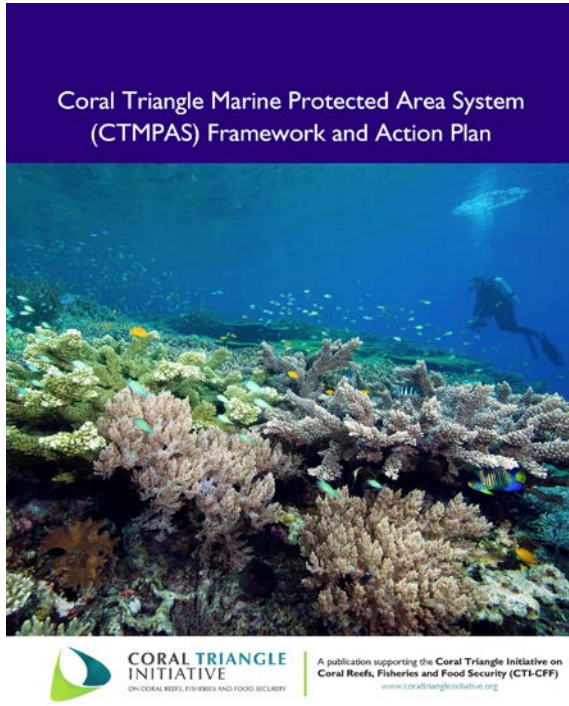

## Technical Report




## Practitioner Guide




## CTMPAS Framework



# References and Sources

The Coral Triangle Initiative

Green, A., White, A., Kilarski, S. (Eds.) 2013. ***Designing marine protected area networks to achieve fisheries, biodiversity, and climate change objectives in tropical ecosystems: A practitioner guide***. The Nature Conservancy, and the USAID Coral Triangle Support Partnership, Cebu City, Philippines. viii + 35 pp. Printed in: Cebu City, Philippines, Feb 2013

***Achieving MPA effectiveness through application of responsive governance incentives in the Tubbataha reefs.*** Marivel Dygico, Angelique Songco, Alan T. White, Stuart J. Green.

Alison L. Green , Leanne Fernandes , Glenn Almany , Rene Abesamis , Elizabeth McLeod , Porfirio M. Aliño , Alan T. White , Rod Salm , John Tanzer & Robert L. Pressey (2014): ***Designing Marine Reserves for Fisheries Management, Biodiversity Conservation, and Climate Change Adaptation, Coastal Management,*** 42:2, 143-159, DOI: 10.1080/08920753.2014.877763

Wet and Salm 2003; IUCN-WCPA 2008

**Climate SMART MPAS** – Conservation International Philippines

Dr Alan White, The Nature Conservancy

Luz Baskinas , WWF Philippines

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# For more on the CTI…

CORAL TRIANGLE INITIATIVE
ON CORAL REEFS, FISHERIES AND FOOD SECURITY

**www.coraltriangleinitiative.org**

**www.ctatlas.reefbase.org**

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CTSP
Coral Triangle Support Partnership

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Protecting nature. Preserving life.

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CORAL TRIANGLE ATLAS

NOAA