

# Coral Triangle Marine Protected Area System (CTMPAS) Framework and Action Plan



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# Coral Triangle Marine Protected Area System (CTMPAS) Framework and Action Plan

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## **Coral Triangle Marine Protected Area System (CTMPAS) Framework and Action Plan**

**Created by:** The CTI-CFF Marine Protected Areas Technical Working Group composed of representatives from each Coral Triangle Country.

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Back photos: "Fish sellers in Timor Leste" and "Fishermen in Manus, Solomon Islands" © CTSP Tory Read.

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# LIST OF ACRONYMS AND ABBREVIATIONS

ACB	ASEAN Centre for Biodiversity
APFIC	Asia-Pacific Fishery Commission
BSSE	Bismarck-Solomon Seas Ecoregion
CBD	Convention on Biodiversity
CCA	climate change adaptation
CCEF	Coastal Conservation and Education Foundation
CI	Conservation International
CMT	customary marine tenure
CSO	Council of Senior Officials (CTI-CFF)
CT	Coral Triangle
CT6	CT Countries (Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and Timor-Leste)
CTC	Coral Triangle Center
CTI	Coral Triangle Initiative
CTI-CFF	Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security
CTMPAS	Coral Triangle Marine Protected Area System
CTSP	Coral Triangle Support Partnership
EAFM	ecosystem approach to fisheries management
EBM	ecosystem-based management
EEZ	exclusive economic zone
FAO	Food and Agriculture Organization
FSPI	Foundation of the Peoples of the South Pacific International
GBRMPA	Great Barrier Reef Marine Park Authority
ha	hectare
ICM	integrated coastal management
ICRI	International Coral Reef Initiative
IUCN	International Union for Conservation of Nature
km	kilometer
LMMA	Locally Managed Marine Area
m	meter
M&E	monitoring and evaluation
MEAT	Management Effectiveness Assessment Tool
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology (Solomon Islands)
MPA	marine protected area
MPA REX	MPA Regional Exchange
MPA-MEAT	MPA Management Effectiveness Assessment Tool
MPA-TWG	MPA Technical Working Group



MSN	MPA Support Network (Philippines)
NCC	National Coordination Committee
NGO	non-governmental organization
NOAA	National Oceanic and Atmospheric Administration
OA	ocean acidification
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PNG	Papua New Guinea
PNG CLMA	Papua New Guinea Centre for Locally Managed Areas
Ramsar	Secretariat for the Ramsar Convention on Wetlands
REX	Regional Exchange
RPOA	Regional Plan of Action
SCTR	State of the Coral Triangle Report
SEAFDEC	Southeast Asian Fisheries Development Center
SOM	Senior Officials Meeting (of CTI-CFF)
SOM7	7 <sup>th</sup> Senior Officials Meeting (of CTI-CFF)
SPC	Secretariat of the Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SSME	Sulu-Sulawesi Marine Ecoregion
TNC	The Nature Conservancy
TOR	terms of reference
TWG	Technical Working Group
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USCTI	United States CTI Support Program
WCPA	World Commission on Protected Areas (IUCN)
WCS	Wildlife Conservation Society
WSSD	World Summit on Sustainable Development
WWF	World Wildlife Fund

# FOREWORD

Marine resources and the ecosystem services they provide are critically important in the world's most biodiverse marine area known as the Coral Triangle, but these resources and ecosystems are under serious threat (*Reefs at Risk: Coral Triangle*, WRI 2012). To protect the area and its vital resources, the six countries of the Coral Triangle (Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and Timor-Leste) established in 2007 the *Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF)*, which is pursuing “*marine protected areas (MPAs) established and effectively managed*” as a major goal.

Marine protected areas (MPAs) are acknowledged worldwide as an important tool for conserving marine biodiversity and sustaining critical fisheries and other marine resources. There are more than 1900 MPAs in the Coral Triangle. In recent years, MPA managers have worked towards networking these MPAs for cooperative marine resource management as a cost-effective approach to increasing the benefits of individual MPAs over large areas. All six CTI-CFF countries are developing MPA networks to access these benefits nationally, but there is also a growing realization that cooperation must be scaled up regionally to protect many key species and resources whose range and habitats extend throughout the Coral Triangle.

Recognizing the need for concerted action at the regional scale for marine conservation and resource management, the leaders of the six Coral Triangle countries endorsed in 2009 a 10-year (2010-2020) *Regional Plan of Action (RPOA)* that defines the establishment and effective management of MPAs as one of the primary goals of CTI-CFF. There is one target under this goal: *A region-wide Coral Triangle MPA System (CTMPAS) in place and fully functional*. A first step towards achieving this target is to scale up the initiatives of each of the national MPA network programs and create a guiding document for a nationally managed, regionally coordinated system of MPAs for CTI-CFF.

Developed through five regional workshops and reviewed by the six Coral Triangle countries, this *CTMPAS Framework and Action Plan* represents a consensus of the current general ecological, governance and social principles of national and smaller-scale MPA networks. It includes a roadmap and prescribes a process for facilitating regional collaboration among individual sites and national programs.

We are extremely proud of this accomplishment. We hope that it will serve as a cornerstone for building the CTMPAS and maximizing the contribution of MPAs towards achieving fisheries management and biodiversity conservation and enhancing the resilience of our coastal resources amid climate change and local human pressures. We thank all those who contributed to this process and look forward to working together in the implementation of the *CTMPAS Action Plan* as part of the *CTI-CFF Regional Plan of Action*.



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The *CTMPAS Framework and Plan* was created by the following focal points for MPA from the CTI-CFF member-countries who comprise the MPA-TWG, members of the MPA primary resource team, and other members of the MPA-TWG who participated in the five MPA regional workshops organized between 2010 and 2013 under the USCTI's MPA work plan:

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# EXECUTIVE SUMMARY

## CONTEXT

The third of five goals identified under the 2010-2020 *Regional Plan of Action (RPOA)* of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) is “*marine protected areas (MPAs) established and effectively managed,*” and this goal has one target, “*a region-wide Coral Triangle MPA System (CTMPAS) in place and fully functional.*” This target, which calls for regional planning and action among the Coral Triangle (CT) countries, underscores the importance and cross-jurisdictional nature of the national and international marine corridors that connect the Pacific and Indian Oceans, and the need to address at a regional level the various ecological, political and economic issues that impact the region’s vital marine resources. At the same time, it harnesses cooperation and collaboration to accelerate cross-learning and the implementation of best practices at local, national and regional scales across the CT.

To support this target, the MPA-Technical Working Group (TWG) was formally established in 2011. The MPA-TWG guides the regional MPA efforts under CTI-CFF and serves as the main coordinating body on MPAs between the CTI-CFF Regional Secretariat, individual partners and country teams. This *CTMPAS Framework and Action Plan* is the MPA-TWG’s primary guiding document and the first joint policy product on MPAs for CTI-CFF. It aims to advise the CT countries through the opportunities, options, discussions and actions needed to find new regional solutions to current and emerging coastal resource and fisheries management challenges.

## RATIONALE

Six Southeast Asian and South Pacific countries – Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and Timor-Leste (CT6) – make up CTI-CFF. The sheer number and variety of MPAs in these countries, combined with increasing pressure from the region’s rapidly expanding and culturally diverse populations, makes the management of coastal activities for sustainable use extremely challenging. This document defines a collaborative structure and agreed approaches (*Framework*) and a roadmap of next steps (*Action Plan*) for the CT6 and partners to navigate these challenges through 2020. It is a foundational, not a fixed, document, and it will evolve as we work towards implementation, incorporating lessons learned and new innovations, and flexing as adaptation is recommended by the CTI-CFF MPA-TWG and approved by the CTI-CFF Council of Senior Officials (CSO).

This *Framework and Action Plan* was built on consensus among the six nations and across levels of governance. Five regional workshops and numerous side discussions, along with parallel work done by partners and countries on various pieces of the framework and plan, contributed to its development. The document includes the advice of many experts and partners who, as well as helping with and supporting the research and analyses that informed the countries’ discussions, participated in the workshops and meetings. It was endorsed by the CTI-CFF during their 7<sup>th</sup> CTI-CFF Senior Officials Meeting (SOM7) in November 2012.

The CT6 have determined that a region-wide system will be more efficient and effective than individual national systems at reducing threats across the region. In addition, they agreed that the following important reasons make a compelling case for the creation of the CTMPAS:

- Similarities in marine ecosystems, resources and shared fishing stocks in the region;

- The need to address common resource threats, e.g., habitat degradation, overfishing and dwindling fish stocks that often cross national boundaries;
- Ongoing challenges of MPAs (which are mostly small and scattered) that require learning networks, design and implementation tools, incentives, and an effective means of monitoring and improving effectiveness and ecosystem quality locally and across the region;
- Shared and interdependent sources and sinks of marine populations that support fisheries and form structural habitat for exploited species;
- Management resource sharing that creates efficiencies of scale (i.e., tap into existing programs, create economies of scale, attract funding through branding, and maximize the individual expertise of municipalities, provinces and countries); and
- Planning at scales that consider broad ecological affinities and movements.

Moreover, as well as being widely accepted as an effective method of addressing marine conservation and fisheries issues, MPAs also contribute towards climate change objectives. Through the CTMPAS, the CT6 are now expanding the role of MPAs and MPA networks in the context of long-term integrated coastal resource management to build and sustain natural and social resilience to climate impacts. This widens the application of MPAs to encompass the five goals of the CTI-CFF RPOA.

## DESIGN STRATEGIES

MPAs and MPA networks can operate at all levels, from the community and local government levels to national and regional levels. In many cases, harmony across neighboring jurisdictions of the same level, and between the various community-to-regional level managers, is a critical component to success for participating MPA and MPA networks across the CT6. In view of this and in consideration of the objectives of the RPOA, the CTMPAS has been designed and will be implemented based on the following five basic strategies:

**Strategy 1:** *Use and strengthen existing regional mechanisms, partners, programs, in developing and operating the CTMPAS.*

**Strategy 2:** *Prioritize activities that develop effective MPAs and networks and MPA/network sites that can immediately contribute strength or effectiveness to a regional network or system.*

**Strategy 3:** *Start and learn with “flagship” MPA sites that are already established, managed and of high conservation value. Phase in other prioritized sites that fill regional conservation and management gaps in subsequent years or stages.*

**Strategy 4:** *Define and recognize four Categories of Sites in the CTMPAS: a) Flagship Regional Sites, b) Priority Development Sites, c) Effectively Managed Regional Sites, and d) Recognized CTMPAS Sites, to be inclusive of all willing sites while prioritizing some more valuable sites for management effectiveness.*

**Strategy 5:** *Direct governance and socioeconomics to protect ecosystem functions.*

These strategies are built into the CTMPAS design and implementation and build on the objective and vision of the CTMPAS, which are set out in the RPOA as follows:

- The objective of the CTMPAS is a “*comprehensive, ecologically representative and well-managed region-wide system*” in place and fully functioning by 2020.
- The vision of the CTMPAS is a system of “*prioritized individual MPAs and networks of MPAs that are connected, resilient, and sustainably financed,*” and designed in ways that (i) *generate significant income, livelihoods, and food security benefits for coastal communities;* and (ii) *conserve the region’s rich biological diversity.*
- The CTMPAS should include “*most critical resources and the full range of use categories*” (from strict to many allowed uses).

Three recurring themes shape and will contribute to the success of a comprehensive and effective CTMPAS: 1) Ecology, 2) Governance and 3) Society. In the *CTMPAS Framework*, Ecology, Governance and Socioeconomics are considered components of the overall system. Ecology serves as the *source* of the benefits, Governance represents the *management institutions* that have jurisdiction over shared resources and facilitate cooperative actions, and Society or Socioeconomics represents the *people* who both use the resources and are impacted by good or poor resource management. MPAs should have at least one of these components to be included in the CTMPAS. For any MPA site or network, there may be elements of one or more of these components. If a site is engaged all at once in socioeconomic, governance and ecological networks, it is deemed to be a more effectively managed and stronger site.

## SITE CATEGORIES IN CTMPAS

The inclusion of MPA sites and networks in the CTMPAS is based on their regional value, uniqueness or importance, and the level of effectiveness they achieve in meeting basic criteria as MPA sites or networks. Four site categories will comprise the CTMPAS:

**Category 4: “Flagship Sites”:** These include large, already effectively managed sites that have regional ecological, governance or socioeconomic importance. These are “no-regret sites” that are clearly important within the system. Nominations for Flagship Sites will be reviewed and approved by a regional CTMPAS Advisory Committee.

**Category 3: “Priority Development Sites”:** These are sites of regional ecological, governance or socioeconomic importance that are not yet effectively managed and thus need additional assistance. These are also new sites added to the system as recommended by a regional gap analysis because they make a specific contribution to the regional system as a whole. Similar to Category 4, these are sites that are clearly of regional importance. Nominations for Priority Development Sites will be reviewed and approved by a regional CTMPAS Advisory Committee.

**Category 2: “Effectively Managed Regional Sites”:** These are existing sites that meet agreed minimum criteria for design and management effectiveness as specified in the *CTMPAS Framework*. Nominated sites are reviewed and approved for inclusion in Category 2 by each country’s National Advisory Committee based on a national management effectiveness system if it exists, and the criteria set out in the CTMPAS. The national decision process may vary among countries, but MPAs accepted into Category 2 should at least achieve the minimum criteria.

**Category 1: “Recognized CTMPAS Sites”:** These are sites that meet the minimum data requirements and are included in the CT Atlas<sup>1</sup>.

The CTMPAS will thus include all recognized MPAs and networks within the Coral Triangle region, which will be qualified by level of accomplishment, contribution and purpose. The *Framework* states that MPAs under Categories 1 and 2 should be selected by the countries based on their own internal management effectiveness monitoring system and the criteria set out in the *CTMPAS Framework*. Nominations for Categories 3 and 4 must be reviewed by the Regional CTMPAS Advisory Committee working with the MPA-TWG.

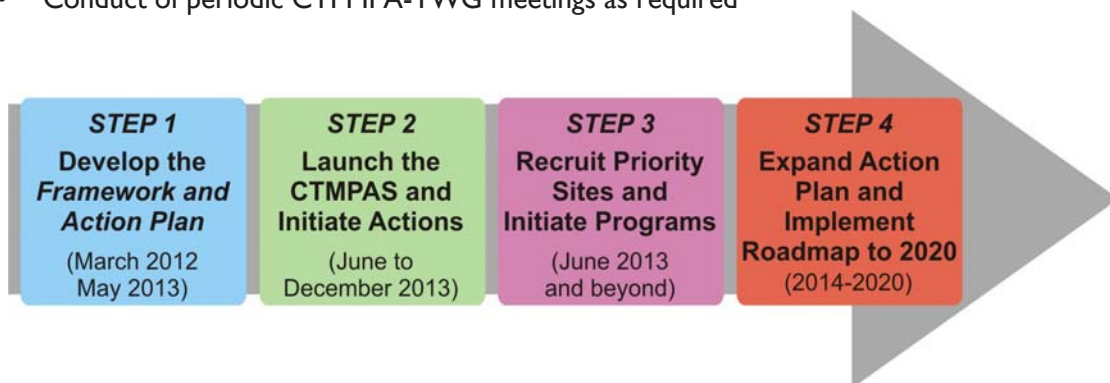
## BUILDING THE CTMPAS

There are three major elements in the CTMPAS building process: (1) establish the CTMPAS mechanism; (2) nominate the initial sites; and (3) conduct early actions that operationalize the CTMPAS. Effectively, the CTMPAS serves as the umbrella under which most CTI-CFF MPA activities come together. The organizational structure of the coordination mechanism of CTMPAS therefore follows that of the MPA-TWG and falls within the overall structure of the CTI-CFF.

The CTMPAS is considered to be an indefinite, long-running program through 2020 and beyond. As a part of the decentralized CTI-CFF, the system may involve up to three complementary institutions or organizations that have major roles in its implementation. The following organizations will have a part to play in its operations, policy development and technical leadership: (1) CTI-CFF Regional Secretariat; (2) MPA-TWG; (3) CTMPAS supporting institutions or individuals; (4) CTMPAS home institution (to be determined), (5) National Coordination Committees, (6) Regional CTMPAS Advisory Committee, and (7) partners and other collaborating organizations, including the CT Atlas, which is hosted by the WorldFish Center, and the regional Coral Triangle MPA Learning Networks as they develop.

The Action Plan for completing the *CTMPAS Framework* and putting it into operation involves several essential actions which include:

- Formalization of the CTMPAS Advisory Committee for reviewing site nominations
- Country nominations of their Flagship Sites and Priority Development Sites for inclusion in the CTMPAS
- Input of all national MPA data into the CT Atlas for tracking national and regional progress
- Employment of the MPA Coordinator to guide CTMPAS implementation
- Conduct of periodic CTI MPA-TWG meetings as required



<sup>1</sup> [ctatlas.reefbase.org](http://ctatlas.reefbase.org)

# I. INTRODUCTION

## PURPOSE OF THE CTMPAS FRAMEWORK AND ACTION PLAN

The Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) is a multilateral partnership founded on the commitment of six countries in Southeast Asia and South Pacific to accelerate efforts to safeguard the coastal and marine resources and communities of the Coral Triangle (CT) region. These six countries, or CT6, include Indonesia, Malaysia, Papua New Guinea (PNG), the Philippines, Solomon Islands and Timor-Leste. In May 2009, the leaders of these countries committed to implementing a Regional Plan of Action (RPOA) for the 10-year period 2010-2020 (CTI-CFF 2009).

This *CTMPAS Framework and Action Plan* is the foundation document of the regional Marine Protected Area Technical Working Group (MPA-TWG) under CTI-CFF. In response to demand for more and greater protection for marine areas, the CT6 prioritized in May 2010 two actions towards achieving the goals and targets listed as follows under Goal 3 on MPAs in the RPOA (see Annex I for details):

- **Action 1:** Jointly establish overall goals, objectives, principles, and operational design elements for a CTMPAS that is centered around priority MPA networks, and
- **Action 3:** Build capacity for effective management of the CTMPAS.

This *Framework and Action Plan* is the first guiding product towards accomplishing the above Actions 1 and 3. It has the following objectives:

- Define the fundamental **strategic approach** and **structural design** of the CTMPAS at the regional scale, and
- Help guide the CT6 through an adaptive and iterative **process** in achieving their specific contributions to the RPOA by defining annual collective actions and activities to be accomplished over the long term (through 2020).

This document is designed for use by regional and national government marine resource managers and technical staff, as well as partners of CTI-CFF, including national and regional organizations, non-governmental organizations (NGOs), academia, donors and the private sector, that are interested in providing technical assistance or supporting shared activities.



The *CTMPAS Framework and Action Plan* draws on ecological, governance and social assessments and models from the region and world, and builds off a series of CTI-MPA specific planning events and activities that took place between 2010 and 2013 (Annex 2). Developed, reviewed and approved by the MPA-TWG and Regional Secretariat, and endorsed by the CTI-CFF during their 7<sup>th</sup> Senior Officials Meeting (SOM7) in Malaysia in November 2012, this document recognizes and guides the MPA-TWG, the CT6 and their partners in planning and implementing a series of activities towards achieving the two abovementioned priority Actions 1 and 3.

The document is organized into four sections and eight annexes. The four sections are as follows:

1. **Why Section:** An introduction to the CT region, CTI-CFF, and the role of MPA systems in achieving CTI-CFF objectives and targets;
2. **What Section:** A brief description of the methods used in developing the CTMPAS elements, including guiding principles and strategies;
3. **Steps to Implementation Section:** An overview of the *CTMPAS Framework*: its concept, the technical and geographic structure of the system, and criteria for defining and selecting MPAs and networks to be included in the system, and
4. **Actions Needed Section:** An *Action Plan* for the CTMPAS covering the short term, medium term and long term.

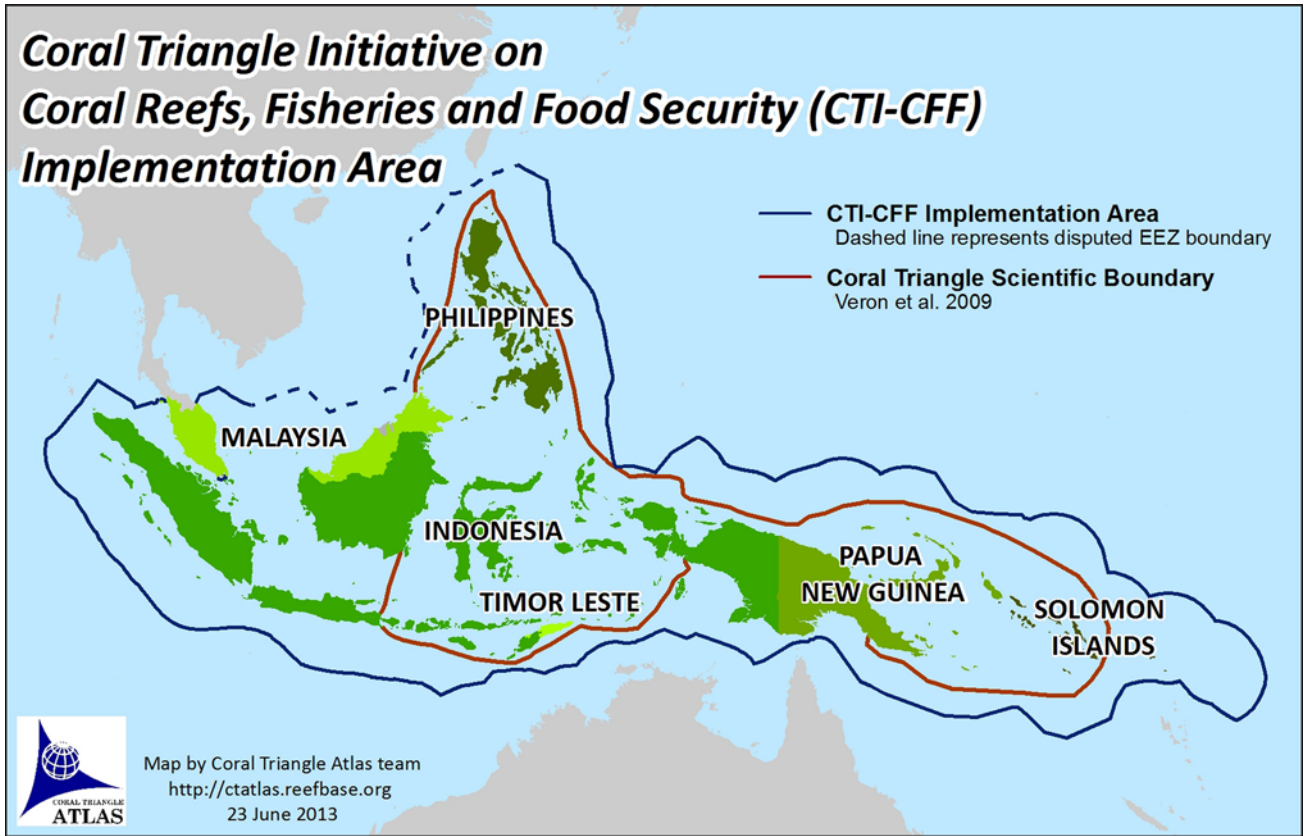
The Annexes include:

1. Full text of Goal 3 of the CTI-CFF RPOA
2. Events leading to the formulation of CTMPAS Framework
3. Template for evaluation of national nominations to CTMPAS Categories 3 and 4
4. Attributes for MPA site submissions to CT Atlas for CTMPAS Category 1
5. Process and terms of reference (TOR) for CTMPAS Advisory Group
6. Indicators of progress towards the MPA goal of CTI-CFF RPOA (*Goal 3: MPAs Established and Effectively Managed*)
7. Legal basis for MPAs in each CT country
8. International MPA conservation commitments

## THE CORAL TRIANGLE AND CTI-CFF

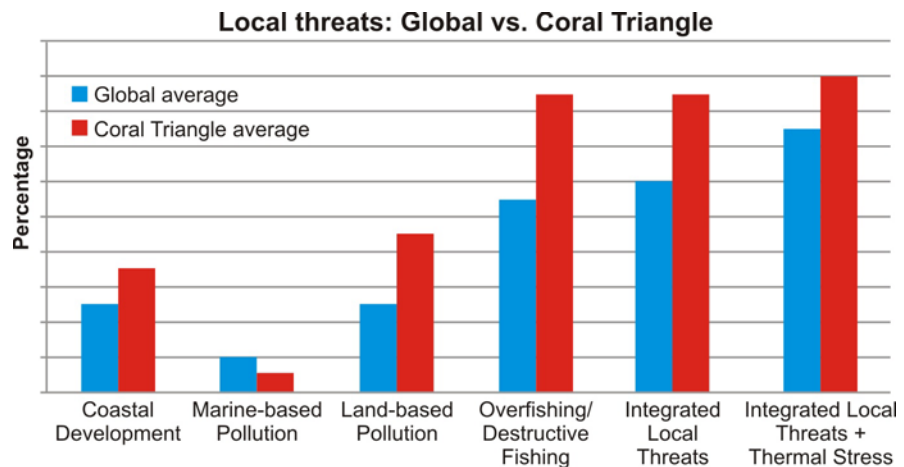
Stretching across marine waters that bridge the natural resources of the Pacific and Indian Oceans and their related seas, the CT is recognized as the global center of marine diversity (Veron *et al.* 2009; Figure 1). It is home to more than 600 species of coral (over 75% of the global diversity), more than 3000 species of reef fishes (almost 40% of the global diversity), six out of seven marine turtle species, over 30% of the world's coral reef area, and the largest extent of mangrove forests in the world (Burke *et al.* 2012). More than 120 million people in the CT6 depend directly on these fish and marine resources as their principal source of income, food and livelihoods (Burke *et al.* 2012).

But these resources are under significant and increasing threat, with more than 85% currently threatened by local stressors, particularly overfishing, destructive fishing, watershed-based pollution, and the impacts of coastal development (Burke *et al.* 2012). When the influence of rising sea temperatures is combined with these local threats, the portion of reefs rated as threatened increases to more than 90%, which is greater than the global average of 75% (Figure 2).



**Figure 1.** The six Coral Triangle countries, with their estimated national jurisdiction (solid and dotted line representing their approximate and non-official Exclusive Economic Zones) and the scientific boundary (solid red line) determined as the area of highest marine biodiversity (Veron et al. 2009; Allen 2007).

MPAs have been proven to directly reduce local direct exploitation (fishing) and pollution, which account for about 85% of all threats. By increasing reef resilience and reducing the compounding effects of multiple threats, MPAs can also indirectly mitigate coastal and thermal stress-related threats.



**Figure 2.** Threats on coastal resources in the Coral Triangle compared to the global community (Burke et al. 2012).

## EXISTING MARINE PROTECTED AREAS IN THE CORAL TRIANGLE

Individually, the CT6 initiated the establishment of MPAs in the mid-1970s, at about the same time as other countries around the world. Since then, MPAs have increasingly been emphasized in international forums as tools to maintain and improve the status of critical coastal habitats, improve fisheries and enhance adaptation to climate change.

MPAs that include no-take areas or other restrictions and management measures that prohibit or limit extractive and other uses can reduce the impacts of human activities on coastal and marine ecosystems, in particular, pollution and overfishing that degrade reef quality and the ability of the ecosystem to continue providing benefits to human communities (Figure 3). When effectively implemented, MPAs can also mitigate climate impacts on the reefs and marine ecosystems and improve or restore reef health and productivity. Maintaining or increasing reef health can sustain fish stock diversity and abundance, and ensure the continuity of environmental services that support human communities through shoreline protection, attractions for nature-based tourism, biodiversity, food security and the strengthening of community resilience.

There are more than 1900 MPAs listed or established in the CT6 (Table I). The Philippines has the greatest number of MPAs (about 1600 or 80% of the total) while Indonesia has the largest total area (more than 90%). These numbers reflect the different approaches to establishing MPAs in the CT, with some countries (particularly Indonesia) tending to establish mostly large MPAs while others (the Philippines, PNG and Solomon Islands) are more apt to establish small community- or local government-based MPAs (Green *et al.* 2011; Green *et al.* 2012).

Overall, only a very small area in the CT region is managed or protected: 1.6% of the total Exclusive Economic Zone and about 9.4% of coastal waters out to 12 nautical miles offshore (Table I). This is way below the RPOA target of 20% of all marine areas in the region under protection by the year 2020 (See Annex I).

Furthermore, while many MPAs exist within the CT, very few are effectively managed (Green *et al.* 2009; Burke *et al.* 2012; Maypa *et al.* 2012) and fewer still have been planned as ecological networks (e.g. Green *et al.* 2009; Wilson *et al.* 2011). The MPAs altogether include 17.8% of the region’s coral

**Table I.** Summary of the number and area of MPAs in Coral Triangle countries.

CT Country	Total Number of MPAs	Number of MPAs with Known Boundaries	Total Area (km <sup>2</sup> ) for Known Boundaries	Percentage of EEZ	Percentage of Territorial Waters (12 nautical miles)
Indonesia	108	83	170,841 157,841*	2.7%	13.1%
Malaysia	51	50	13,653 15,661*	3.5%	12.7%
Papua New Guinea	59	35	4,558 4,558*	0.2%	1.3%
Philippines	1,653	348	17,164 20,940*	1.1%	4.2%
Solomon Islands	100	82	1,325 1,325*	0.1%	0.9%
Timor-Leste	1	1	557 556*	1.3%	3.4%
<b>REGION</b>	<b>1,972</b>	<b>599</b>	<b>208,152</b> <b>200,881*</b>	<b>1.6%</b>	<b>9.4%</b>

Compiled by the Coral Triangle Atlas at WorldFish from sources including Reefbase, the World Database of Protected Areas (WDPA), national agencies and The Nature Conservancy, and validated with each country.

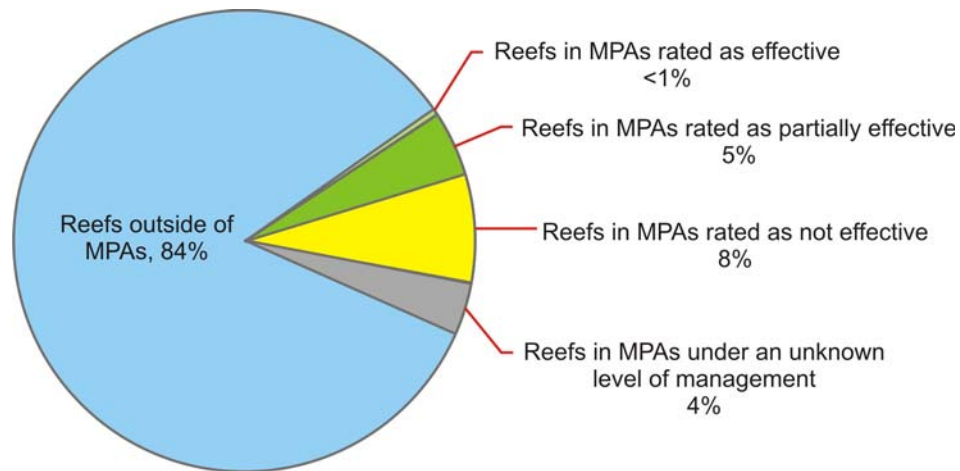
\*Data as reported by governments and slightly different from the CT Atlas due to discrepancies from new or missing polygon data for a few MPAs.





**Figure 3.** Healthy marine ecosystems (top) provide abundant resources for human use, while unhealthy marine ecosystems damaged by destructive activities such as blast fishing (bottom) are unable to provide as many resources (Gombos et al. 2013).

reef area, but less than 6% of them are considered partially or fully effective in achieving their objectives (Figure 4). Generally, the MPAs suffer from a lack of good governance and enforcement and do not achieve the objectives for which they were intended. Through partnership and collaboration, the CTMPAS can promote and encourage the strengthening of individual MPA sites and networks needed to create or improve national or regional coastal and marine resource management.



**Figure 4:** “Effective” Coral Triangle MPAs (Burke *et al.* 2012 and CT Atlas).

In addition to MPA management effectiveness as a concern, MPAs within the CT need more area that is designated as a no-take zone. No-take zones, which provide the most powerful tool for achieving conservation and fisheries benefits, only represent a small proportion (<10%) of the existing area of MPAs in the CT. There is a need to increase not only the coverage of MPAs, but also the coverage of no-take areas.

## STATUS OF CORAL TRIANGLE COUNTRIES NATIONAL MPA PROGRAMS

A regional review of the status of MPA programs<sup>2</sup> in the CT6 was compiled by Green *et al.* (2012). The following summaries are drawn from this review, the countries’ State of the Coral Triangle Reports (SCTR) and the CT Atlas.

**Indonesia** – The Government of Indonesia has set a target for marine conservation of 20 million ha by 2020, of which 17.3 million ha are now under legal protection (Figure 5). The country has completed a national gap analysis to assess ecological gaps in their protected area network (MF/MMAF 2010). Key results from this analysis relating to the marine environment are listed below:

- 18%-22% of critical habitats (coral reefs, mangroves and seagrass beds) are currently within MPAs, and the area targeted for protecting these habitats have been achieved in at least three of the 12 ecoregions defined by Government.
- Approximately 45%-50% of prime dugong and turtle nesting habitats are within protected areas.
- Large portions of legally declared MPAs are not effectively protected or managed, so the actual protection of critical habitats is much less than the area of legally declared MPAs.
- The Halmahera region is underrepresented in the established MPAs.

<sup>2</sup> [http://www.uscti.org/uscti/Resources/CTSP\\_Resilient%20MPA%20Design%20Project.pdf](http://www.uscti.org/uscti/Resources/CTSP_Resilient%20MPA%20Design%20Project.pdf)



Indonesia emphasizes the effective implementation of MPAs through the adoption of a national management effectiveness monitoring system (Carter *et al.* 2010; DCAFS 2012). The Government is establishing and strengthening their national strategy on MPAs, MPA networks and transboundary protected areas by collaborating with related neighboring countries, improving the planning and management of MPAs to address local and global threats, enabling policy and institutions for MPAs, building institutional and human capacity for managing MPAs, and ensuring the financial sustainability of MPA management.

**Malaysia** – Malaysia has a well-established national system of MPAs (Figure 6). It has completed a national marine gap analysis (BMRI 2009), which includes an analysis of MPAs in Peninsular Malaysia and the two eastern states of Sarawak and Sabah in Borneo. The MPA gap analysis focuses on critical habitat coverage and their representation within MPAs, and addresses the extent to which habitats of threatened species, particularly sea turtles, are represented within MPAs. The government is working to integrate fisheries, biodiversity, and climate change objectives into an MPA network design at the national level, given that most MPAs were originally established to protect small island coral reefs and sea turtle nesting beaches. It is also initiating an MPA management effectiveness system which it has tested in MPAs in Sabah.

Malaysia is currently planning to establish a large new MPA network in Tun Mustapha Park as their contribution to the management of the ecological “hotspot” of the Sulu-Sulawesi Marine Ecoregion (SSME). The globally significant Tun Mustapha Park spans an area of land and sea covering more than 1.08 million ha, three districts (i.e. Kudat, Kota Marudu and Pitas) and over 50 islands. It is home to approximately 80,000 coastal inhabitants, habitat for a significant number of endangered migratory species (e.g. green turtle and dugongs) and thus a strategic area for sustainable management. Official designation of the Park is planned for 2015.

**Papua New Guinea (PNG)** – There is currently no official recognition of large-scale MPAs in PNG, but there are Wildlife Management Areas in parts of the country that have been established under the Fauna (Protection and Control) Act, as well as community-based locally managed marine areas (LMMAs; Figure 7). One example is the Maza Wildlife Management Area in Western Province, which focuses on the protection of turtles and dugongs. In another area, local communities, the West New Britain Provincial Government and The Nature Conservancy (TNC) have designed a climate-resilient MPA network at Kimbe Bay consisting of 11 Locally Managed Marine Areas (LMMAs) that are community managed and formally part of the Kimbe Bay Marine Management Area. LMMAs have also been established at Milne Bay, New Ireland, Manus and Madang Provinces. The LMMAs will become part of an MPA system once the MPA policy is formalized by the PNG Government.

In 2012, the Government released a discussion paper on a National Protected Area System. It now plans to conduct consultations on a draft National Protected Area System Policy, which will provide the framework for establishing the protected area system in PNG. After the protected area policy is officially endorsed, specific policies on MPAs will be drafted that will include protocols for a monitoring and evaluation (M&E) system.

As a signatory to the Convention on Biological Diversity (CBD), PNG is obliged to complete a national gap analysis to assess ecological gaps in their existing protected area network, and there are plans to complete the marine gap assessment as part of the National Protected Area System policy work.

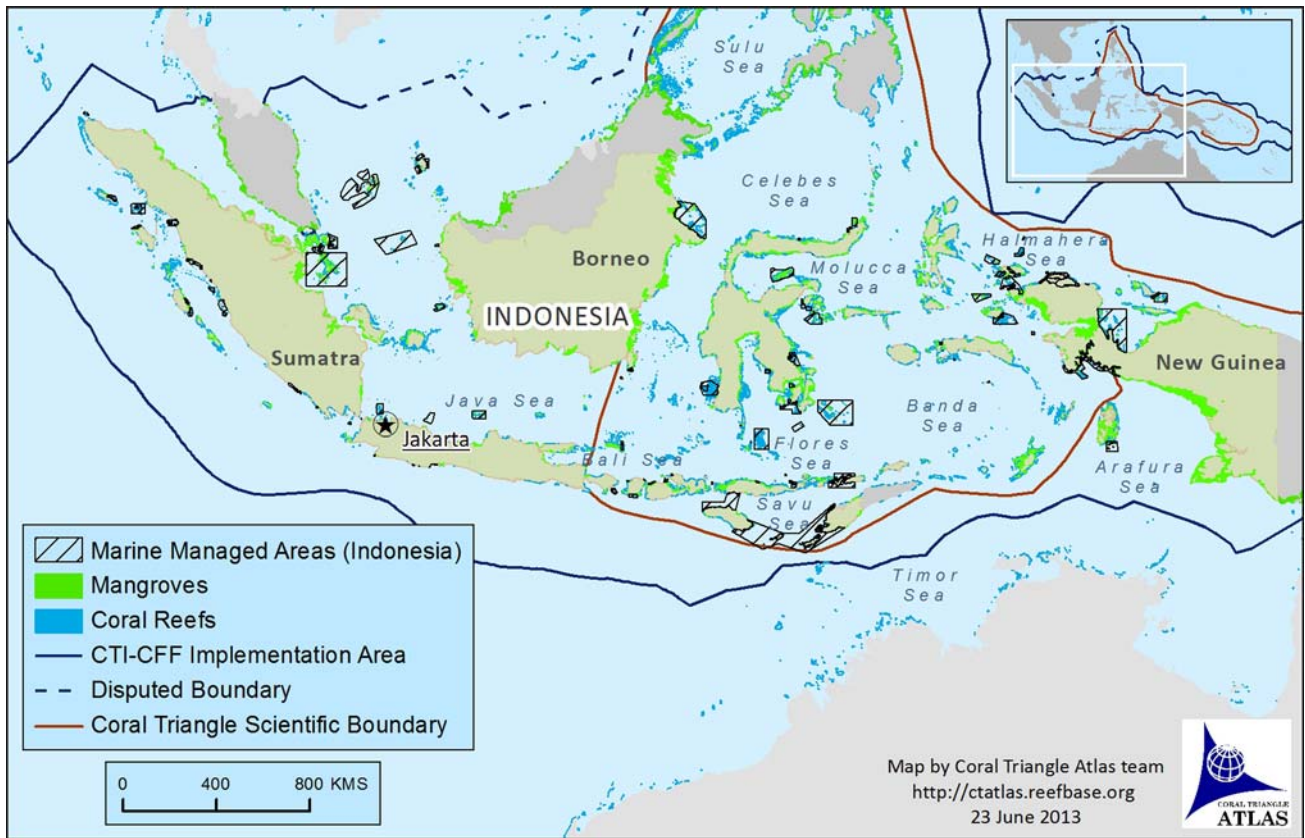


Figure 5. MPAs, coral reefs and mangroves in Indonesia.

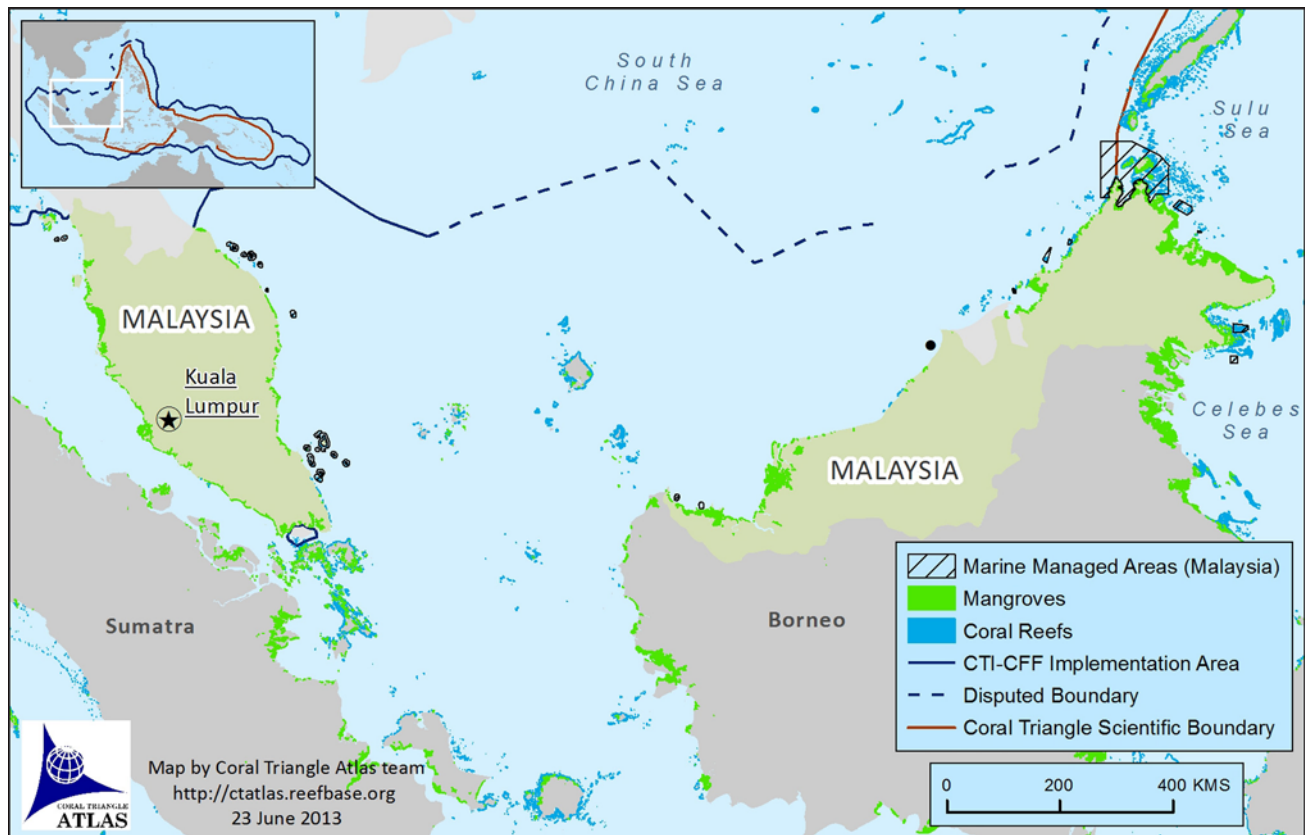


Figure 6. MPAs, coral reefs and mangroves in Malaysia.

Currently, the government is focused on implementing the PNG Marine Program (DEC and NFA 2010), completing the marine policy and supporting community-based conservation (including LMMA networks) at the provincial and site levels. Once the marine gap analysis is completed, it will guide the process of determining priority areas for marine conservation and management.

**Philippines** – The Philippines has completed a national marine gap analysis to assess ecological gaps in their protected area network (Aliño *et al.* 2009). The gap analysis integrated best available information and used existing targets as agreed during nationwide consultations and with CTI-CFF. The gap analysis demonstrates a dearth of data, which has implications on systematic MPA network design. For example, only half of the identified MPAs have coordinates and site descriptions, largely because of decentralized, uncoordinated planning by local governments and communities.

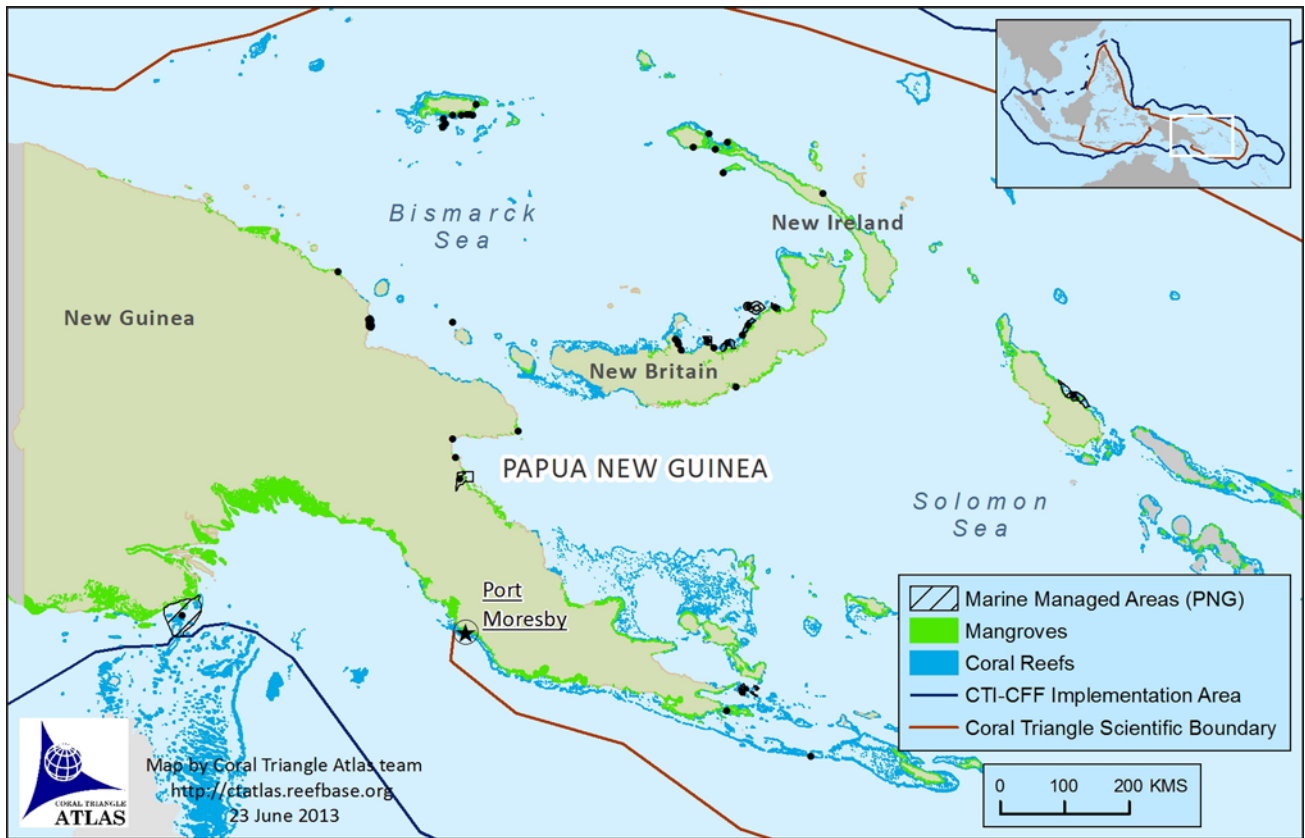
Using the MPA Management Effectiveness Assessment Tool (MSN 2010), the MPA Support Network (MSN), a national organization of NGOs and government agencies that support MPA implementation, facilitated the assessment in 2011 of 110 out of 1557 locally managed MPAs and 9 out of 33 nationally established MPAs (Figure 8). MEAT results show that 70 of the benchmarked locally managed MPAs and three out of the nine assessed nationally established MPAs are effectively managed.

Advancing systematic MPA network design will require coordinated and integrated efforts that address a combination of objectives ranging from biodiversity protection to sustainable use. It will be necessary to build the capacity of local government units to achieve their goals for subnational areas where MPA networks are being developed.

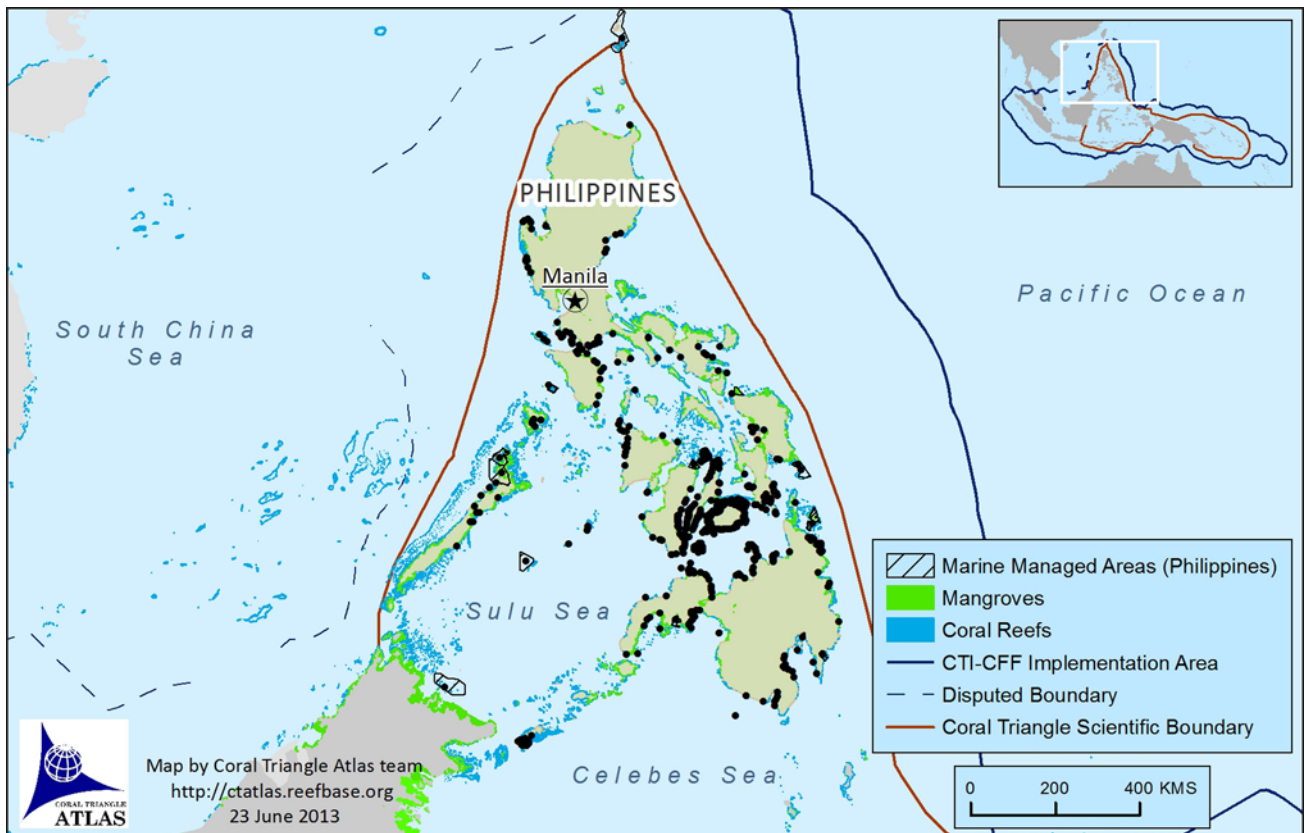
**Solomon Islands** – There is a system of community-based LMMAs that dot the country, mostly along the coasts of its more remote islands (Figure 9). Solomon Islands Government has completed a national conservation plan that includes a marine component (Kool *et al.* 2010) and prioritizes biodiversity objectives required by the country's obligations under CBD. The plan, which has been tabled in Parliament, needs to be reviewed to ensure that it is implementable and aligns with national and provincial government programs and the communities' needs and interests.

A high priority for the country's Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) is the institutionalization of the MPA strategy contained in Solomon Island Protected Area Act (2010). The implementing regulations of this Act were issued in February 2012, and Government is now seeking technical assistance to help reorganize their protected area activities around the Act. Currently, Government and their NGO partners are developing a national MPA management effectiveness framework for their community-based MPAs.

**Timor-Leste** – Timor-Leste has one large formally designated MPA, the Nino Konis Santana National Park, within which localized planning is being conducted with the communities to set up LMMAs. Several no-take areas at the community level were recently agreed upon (Figure 10). The country has completed a national ecological gap analysis, which included an assessment of marine ecological gaps in their protected area network (Grantham and Possingham 2011). The marine component of the gap analysis was based on the scientific design of a resilient network of MPAs for the Lesser Sunda Ecoregion (Wilson *et al.* 2011), which proposed a network of seven shallow and five deep-water MPAs for the country, of which only the Nino Konis Santana Park has so far been designated.

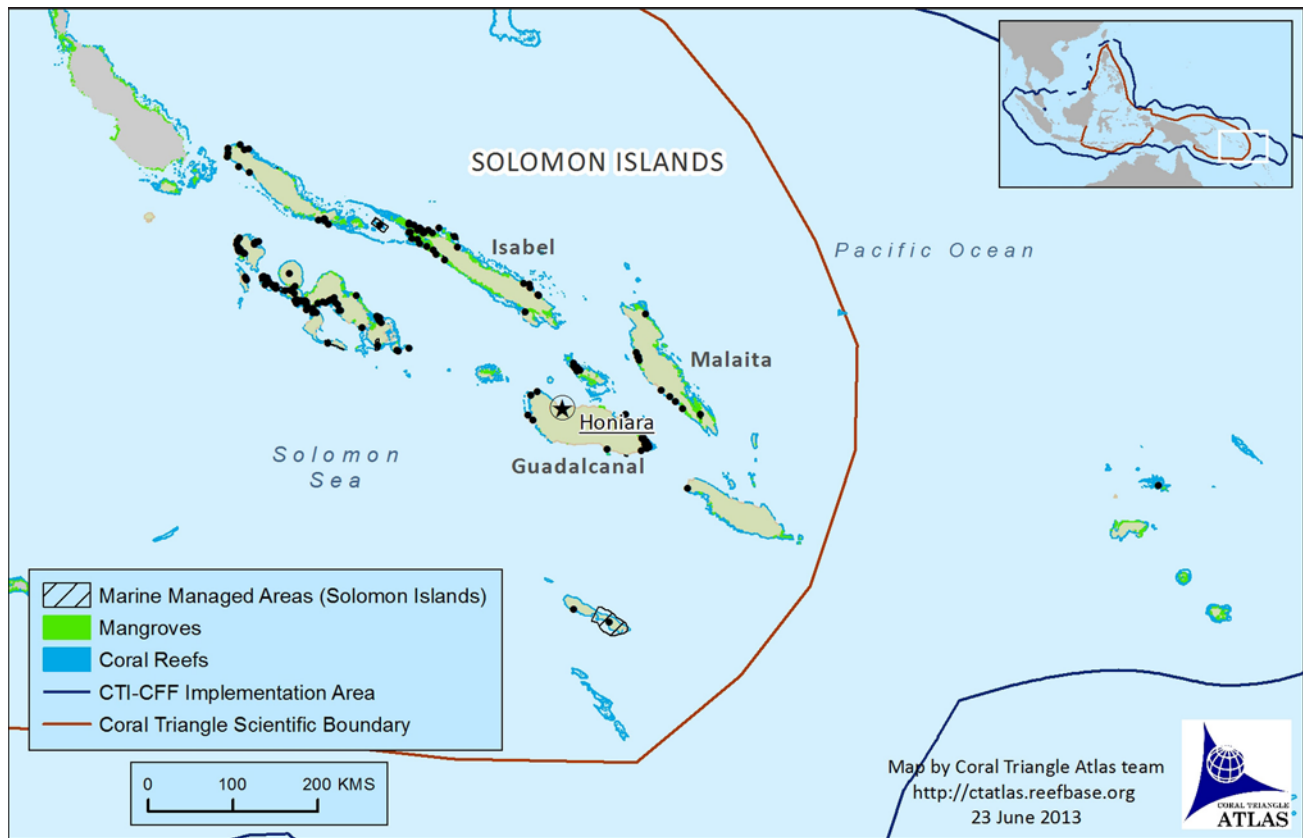


**Figure 7.** MPAs, coral reefs, and mangroves in Papua New Guinea.

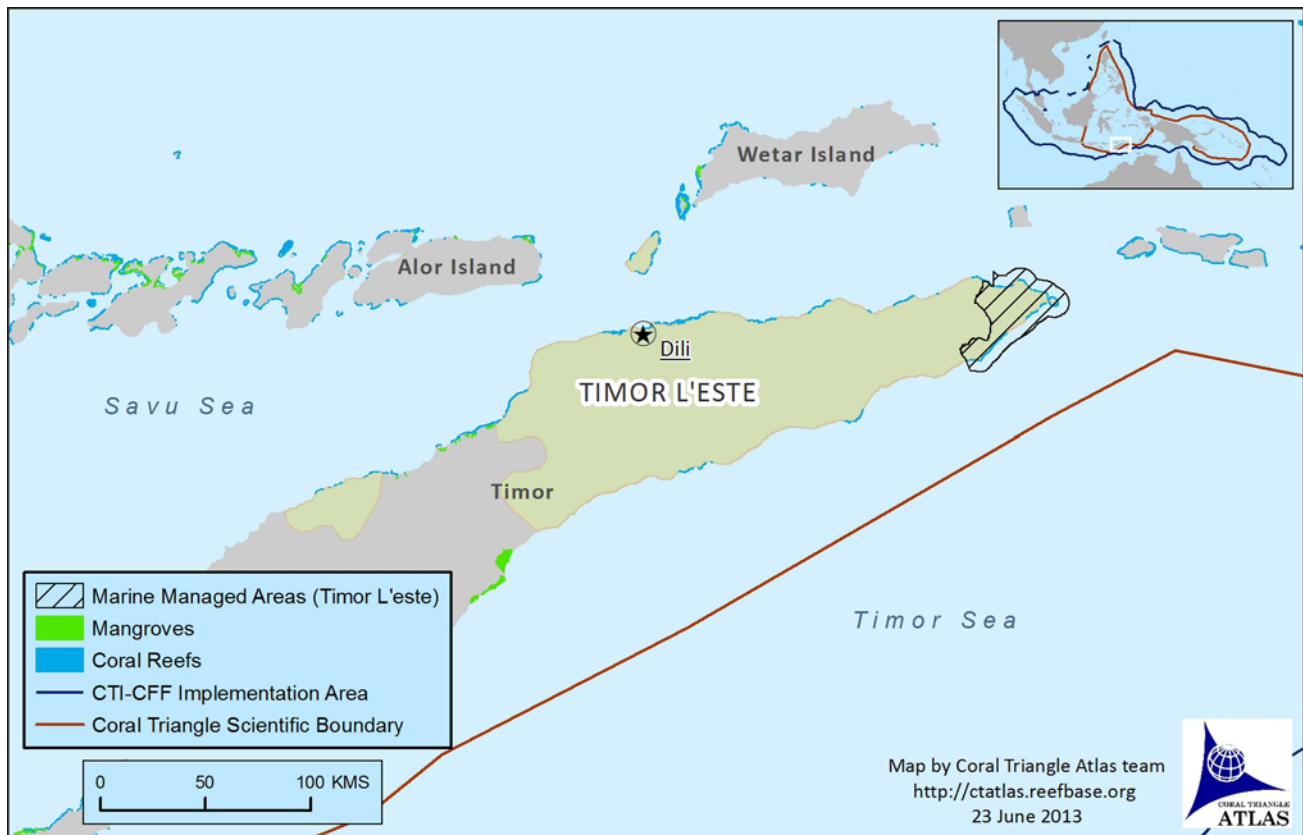


**Figure 8.** MPAs, coral reefs, and mangroves in the Philippines.





**Figure 9.** MPAs, coral reefs, and mangroves in Solomon Islands.



**Figure 10.** MPAs, coral reefs, and mangroves in Timor-Leste.

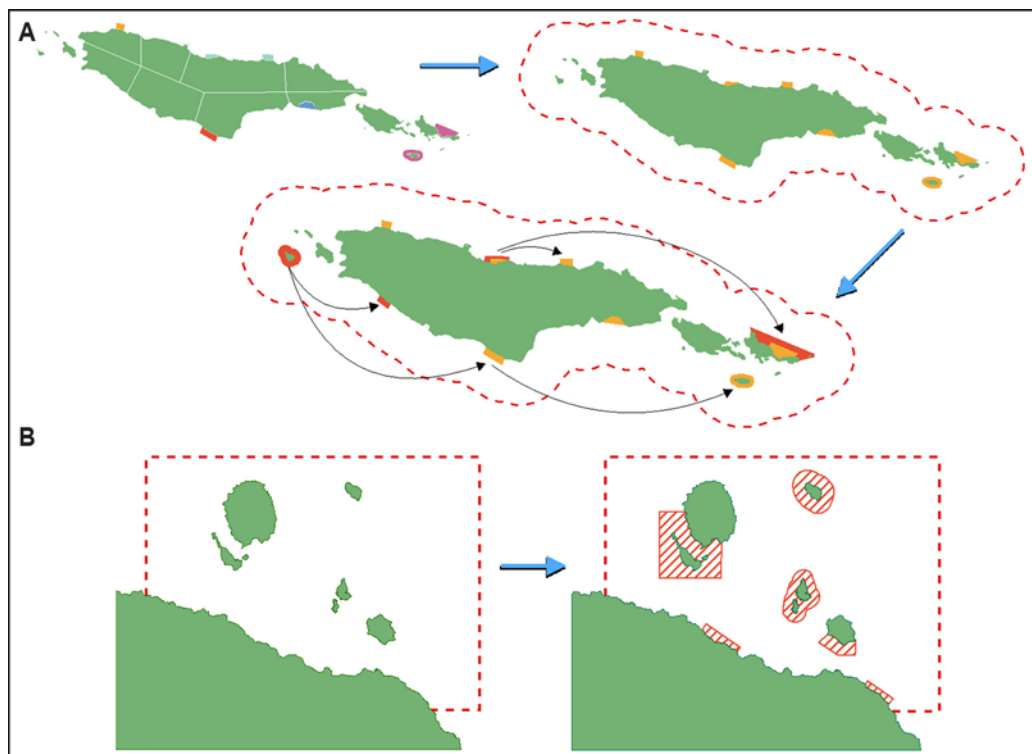


**Transboundary Areas** – Two transboundary areas are identified for MPA network design and coordination within CTMPAS: the SSME and the Lesser Sunda Ecoregion. The SSME is the most advanced transboundary seascape model within the CT. It has a Conservation Plan, ratified in 2004 by its three member-countries (Indonesia, Malaysia, and the Philippines). Within the vision of this plan, the Sulu Sulawesi Seascape Program has a core activity to develop action plans for key species and ecosystems.

The Lesser Sunda Ecoregion design is developed but its designation is still in process. For both of these initiatives and others being considered, there is a need for coordination with CTMPAS to avoid reporting and other redundancies. The MPA-TWG and the institutions responsible for managing these ecoregions will define such coordination.

## THE NEED TO CREATE A REGIONAL MPA SYSTEM

A current approach to developing MPA networks in some locations within the CT is to start with existing MPAs and later link together these MPAs in an ecological and/or governance network, adding additional sites as time, resources and need allow. In other cases, large MPAs are designated and the resulting network is created through zones within the MPA. The result is that there are many MPAs and a few small-scale networks of MPAs across the region. This approach can be suboptimal, in that it requires more area or higher numbers of constituent small MPAs to achieve regional goals compared to a pre-planned and coordinated approach to establishing regional networks. There are no cases where MPA networks have been designed at a scale that covers whole countries or the region. In fact, the development of the CTMPAS is the first step to plan for and develop a framework for all MPAs in the CT in relation to broader marine conservation objectives and human needs (Figure 11).

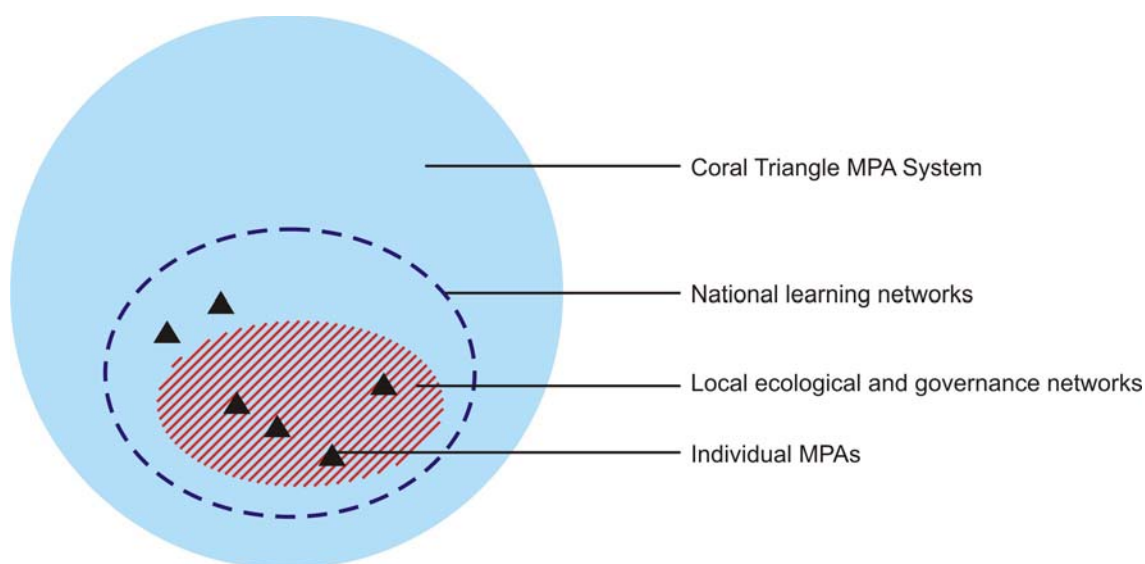


**Figure 11.** Two main approaches have been practiced to develop MPA networks in the Coral Triangle: In the first (A), existing MPAs are linked together in a governance network before additional sites are added to the system (or existing MPAs are extended) to fill in gaps and form an ecologically connected network. In the second (B), large MPAs are designated and then zoned to create an MPA network.

The CT countries have determined that a region-wide system will be more efficient and effective at reducing threats across the region. This and other important reasons listed below make a compelling case for the creation of the CTMPAS:

- Similarities in CT marine ecosystems, resources and shared fishing stocks;
- The need to address common resource threats, e.g., habitat degradation, overfishing and dwindling fish stocks that often cross national boundaries;
- Ongoing challenges of MPAs (which are mostly small and scattered) that require learning networks, design and implementation tools, incentives, and an effective means of monitoring and improving quality locally and across the region;
- Shared and interdependent sources and sinks of marine populations that support fisheries and form structural habitat for exploited species;
- Management resource sharing that create efficiencies of scale (i.e., tap into existing programs, create economies of scale, attract funding through branding, and maximize the individual expertise of municipalities, provinces and countries); and,
- Planning at scales that consider broad ecological affinities and movements.

The CT6 envision a system of “networks” of MPAs which are scaled from small to larger areas and from sites to national and regional networks, as depicted in Figure 12.



**Figure 12.** The CTMPAS will be composed of individual MPAs that form local ecological and/or governance networks that are nested within larger-scale social networks, such as the national learning networks. A multi-level system of nested initiatives allows for ecological connectivity processes to be managed at the appropriate scale and for social and economic benefits from management to be received by those undertaking those actions.

By 2020, it is envisaged that the primary outcomes of a functioning CTMPAS will be:

- Effectively managed marine areas and networks throughout the CT6;
- Multi-objective MPAs/networks that support sustainable fisheries, biodiversity conservation, and coastal and community resilience to climate, social or economic changes; and
- MPAs/networks that support sustainable livelihoods and maintain ecosystem integrity that enhances human well-being by providing continuous services to resource users and coastal communities.

# II. METHODOLOGY OF CTMPAS DEVELOPMENT

The process for formulating this *CTMPAS Framework and Action Plan* was developed by the CT6 through the MPA-TWG. Three general sources of guidance were used: (1) the CTI-CFF RPOA; (2) regional dialogues and/or workshops among MPA leaders in the region with their advisors; and (3) technical reviews, studies of lessons learned, and recommendations on how to integrate fisheries management and climate change into the design of MPAs and MPA networks.

## CTI-CFF REGIONAL PLAN OF ACTION GUIDELINES

The CTI-CFF RPOA sets five goals, and its Goal 3 on MPAs has a single target that specifically relates to the development of the CTMPAS (Table 2). The complete text of Goal 3 is included in this document as Annex 1.

**Table 2.** CTI-CFF RPOA MPA goal, target and actions for 2010-2020 (CTI-CFF 2009).

<p style="text-align: center;"><b>CTI on Coral Reefs, Fisheries, and Food Security Regional Plan of Action</b> <b>Goal 3: Marine Protected Areas (MPAs) Established and Effectively Managed</b> <b>(including community-based resource utilization and management)</b></p> <p><b>Target #1:</b> Region-wide Coral Triangle MPA System (CTMPAS) in place and fully functional by 2020. <i>Ultimate targets: A significant percentage of total area of each major near-shore habitat type within the Coral Triangle region (e.g., coral reefs, seagrass beds, mangroves, beach forests, wetland areas and marine/offshore habitat) will be in some form of designated protected status, with 20% of each major marine and coastal habitat in strictly protected “no-take replenishment zones” (to ensure long-term sustainable supplies of fisheries). Interim targets for the area under protection by 2020 are to be determined.*</i></p> <p><b>**Regional Action 1:</b> Jointly establish overall goals, objectives, principles, and operational design elements for a CTMPAS centered around priority MPA networks by 2010</p> <p><b>Regional Action 2:</b> Complete and endorse a comprehensive map of MPA networks to be included in the CTMPAS by 2012.</p> <p><b>**Regional Action 3:</b> Build capacity for effective management of the CTMPAS</p> <p><b>Regional Action 4:</b> Collaborate around mobilizing sustainable financing for the CTMPAS</p> <p><b>Regional Action 5:</b> Establish MPA networks, particularly those involving more than one country</p> <p><b>Regional Action 6:</b> Establish a public/private partnership or Working Group for engaging relevant industries in supporting CTMPAS by 2010</p> <p>*The CT6 have defined a target of 10% in accordance with CBD 2010 **Denotes Prioritized Actions defined in May 2010 Note: For a more complete description of CTI-CF RPOA Goal 3, see Annex 1.</p>
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## CTI-CFF REGIONAL EXCHANGES AND DIALOGUE

Through the CTI-CFF Regional Exchange (REX) program and the especially convened 4<sup>th</sup> MPA-TWG formal meeting in March 2013, the MPA-TWG coordinated five regional workshops to formulate the *CTMPAS Framework*, establish basic criteria for what constitutes effective MPAs and MPA networks at the national and regional levels, and establish a body and system to take forward the CTI-CFF MPA goal and priority actions. The focus of these regional workshops was to:

1. Establish principles, objectives, criteria and structure for the CTMPAS, review status of MPA networks in each country, and select one initial flagship site from each country for inclusion in the CTMPAS (June 2010, Phuket).
2. Review the status of MPA management effectiveness systems in each country and develop action plans for MPA management effectiveness system refinement or establishment. Identify primary criteria for MPA management effectiveness pertinent to each country (May 2011, Philippines).
3. Refine CTMPAS principles and determine objectives and criteria for achieving specific RPOA ecological, socioeconomic and governance objectives. Determine means for creating an ecologically coherent MPA system and a structure that works across the region (March 2012, Indonesia).
4. Determine the CTMPAS structure, criteria for categories of MPAs in the CTMPAS and relevant operational processes, and develop an action plan to move the CTMPAS forward (October 2012, Philippines).
5. Finalize CTMPAS structure for implementation and determine a regionally relevant set of and standards for effective MPAs as defined within the *CTMPAS Framework* (March 2013, Solomon Islands).

## TECHNICAL ADVICE

The five regional workshops and other activities supporting the development of the *CTMPAS Framework* at the national and regional levels resulted in a series of technical reports that provided guidance on the development of the CTMPAS. These documents, listed in Table 3 below, also summarize MPA-related experiences in the region to-date and provide a foundation upon which to plan and implement the CTMPAS.

**Table 3.** Key reports supporting the development of the *CTMPAS Framework*, including those directly relevant to CTMPAS process and design

- **State of the Coral Triangle Report** (CTI 2013) – a living document that covers the status of critical ecosystems, species, resources, threats, and progress towards the CTI-CFF goals and targets. It is intended to be an evolving report that will support M&E and build on data stored in the CT Atlas.
- **National Conservation and Management Gap Analyses** – gap analysis reports from five countries (Indonesia, Malaysia, the Philippines, Solomon Islands and Timor-Leste) that support regional planning for the CTMPAS. (The PNG gap analysis report is expected to be completed in 2014.)
- **MPA Regional Gap Analysis** – regional study being conducted through the University of Queensland (still in progress).
- **Biophysical Design Principles for MPA Networks** (Fernandes *et al.* 2012) – a report that provides the biophysical principles to guide the design of resilient MPA networks which integrate fisheries, biodiversity and climate change objectives. The report is also available in a user-friendly format for practitioners (Green *et al.* 2013) and as a guide for LMMAs (Gombos *et al.* 2013)
- **MPA Workshop Reports** – Proceedings reports from the five MPA workshops that chronicle the development of the CTMPAS and describe workshop deliberations. They include a review of progress on developing national MPA networks/systems, critical background information on designing MPA networks and systems that are resilient to climate change and integrated with fisheries management objectives, and definitions of common vocabulary and objectives for the CTMPAS.





(Clockwise from top left) Fishers in the Philippines; Reef Monitoring Training in Solomon Islands; Monitoring and Evaluation Workshop in Manila; Reefcheck divers in Solomon Islands.

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## STRATEGIES FOR DEVELOPING AND OPERATING CTMPAS

Six strategies were identified for developing the CTMPAS.

**Strategy I:** *Use and strengthen existing regional mechanisms, partners, and programs in developing and operating the CTMPAS.*

This approach is prescribed by the CTI-CFF RPOA to reduce costs, administrative burdens and time otherwise needed to establish the CTMPAS. The strategy also serves to build the prestige and capacity of existing mechanisms that are already engaged in partnerships with individual MPAs or countries. Numerous national and regional marine resource management institutions, mechanisms and programs already exist and operate in some or all of the CT6, and many of them already have strong marine conservation or MPA network objectives, activities and sites (Table 4). Creating strategic partnerships between individual CTMPAS sites and their most relevant regional MPA-related organization benefits both the sites and the supporting organization. The CTMPAS sites gain access to experienced programs, advisors, activities and mature “sister” sites to expedite development of the CTMPAS, and the regional organization is strengthened by access to CTI-CFF’s capacity-building programs, learning networks, advocacy and branding. This strategy only requires an effective partnering exercise involving the CTMPAS site leaders and relevant regional organizations, along with follow-up, coordination of activities and shared progress reporting.

The strategy will build on and enhance institutional linkages and cross-sector coordination within the countries to ensure that objectives related to fisheries and adaptation to climate change are addressed

**Table 4. Key regional MPA-related organizations and programs.**

- ASEAN Centre for Biodiversity (ACB)
- Locally Managed Marine Area (LMMA) Networks
- Sulu Sulawesi Marine Ecoregion (SSME) Seascape Program
- National MPA agencies, projects in CT countries
- Asia-Pacific Fishery Commission (APFIC)
- Food and Agriculture Organization (FAO)
- Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)
- Secretariat for the Ramsar Convention on Wetlands (Ramsar)
- Southeast Asian Fisheries Development Center (SEAFDEC)
- Foundation of the Peoples of the South Pacific International (FSPI)
- Secretariat of the Pacific Community (SPC)
- Secretariat of the Pacific Regional Environment Programme (SPREP)
- Papua New Guinea Centre for Locally Managed Areas (PNG CLMA)
- United Nations Environment Programme (UNEP) Regional Seas Programme
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Centre and Man and the Biosphere Programme
- World Commission on Protected Areas /International Union on Conservation of Nature (WCPA/IUCN)
- The Nature Conservancy (TNC)
- World Wildlife Fund (WWF)
- Conservation International (CI)
- Wildlife Conservation Society (WCS)
- Coral Triangle Center (CTC)
- Coastal Conservation and Education Foundation (CCEF)

within the *CTMPAS Framework*. Such linkages help ensure that the CTMPAS is an integrated strategy and approach that will lead to holistic ecosystem-based management within the region (Flower *et al.* 2013).

**Strategy 2:** *Prioritize activities that develop effective MPAs, MPA networks and sites that can immediately contribute strength or effectiveness to a regional network or system.*

The strength of a network or system relies on the cumulative strength and effectiveness of its individual members. Effective MPAs are the core means of the CTMPAS for achieving its objectives and delivering ecological and economic benefits to CT6 stakeholders. This strategy focuses on increasing the management effectiveness of individual MPAs and networks, so that the CTMPAS becomes stronger as new sites are developed and become operational. Since sites are managed by national and subnational organizations, the initial focus will be on conducting joint and regional activities that share or demonstrate tools and build capacity among sites already prioritized or nominated for the CTMPAS. This builds the CTMPAS more quickly, makes it stronger, and helps to develop lead or teaching sites for national replication. Oversight of the administrative system and regional coordination through the CTI-CFF regional mechanisms would be the secondary focus of the CTMPAS effort.

**Strategy 3:** *Start and learn with “flagship” MPA sites that are already recognized, managed and of high conservation value. Phase in other prioritized sites that fill regional conservation and management gaps in subsequent years or stages.*

The CT6 recognize that the development of the regional CTMPAS would be a long-term undertaking (the target is 2020) and that it will continue to evolve in the decades ahead as national and transboundary



MPA systems develop. None of the CT6 has fully developed their MPA systems but strong initial steps have been made in all countries, and existing capacity is ready to begin looking at a regional scale for national and regional links and benefits. The CT6 have already prioritized geographic areas as national priorities to contribute to the CTMPAS. Many other sites include pilot MPAs and MPA networks and activities to link conservation, fisheries and climate resilience/adaptation objectives to appropriate partners for support and advice.

**Initial Phase:** In order that the regional system can begin to develop, each CT country will initially nominate to the CTMPAS between one and five national sites drawn from their existing priority geographies and “flagship” sites. These sites will typically be marine parks with several no-take and other zones that form part of a network. By beginning with a few, strong, well-supported MPA sites, the CTMPAS can establish holistic administrative and structural approaches that can accommodate the full range of country sites and MPA types as they develop. This phase also allows the countries to take advantage of shared experiences and practices to adapt national guidance early in their own development and to select regional standards and conservation targets for the CTMPAS.

**Subsequent Phase(s):** Using the conservation and management priorities identified in the ongoing regional gap analysis being conducted by the University of Queensland, a second cohort of Category 4 “flagship” and Category 3 “development” CTMPAS sites can be nominated for review and inclusion in 2014 and thereafter. Nominations will be repeated either until targets and objectives are met, or indefinitely as conditions, scientific information and needs change.

**Strategy 4:** *Define and recognize four categories of sites in the CTMPAS: a) Flagship Regional Sites, b) Priority Development Sites, c) Effectively Managed Regional Sites, and d) Recognized CTMPAS Sites (see page 46 and Table 8 for full definitions).*

A system with four categories was adopted to allow for the CTI-CFF/CTMPAS guiding principle of inclusivity (i.e. all MPAs listed in the CT Atlas will be included in the CTMPAS) while also recognizing that some sites contribute more towards regional-scale objectives (Category 2: Effectively Managed Regional Sites), while others will primarily focus on achieving local-scale objectives (Category 1: Recognized CTMPAS Sites). The system further distinguishes a small number of sites of exceptional regional importance that are already effectively managed (Category 4: Flagship Regional Sites) or that should be prioritized for assistance to help them achieve their goals and improve management effectiveness (Category 3: Priority Development Sites). The system is not intended to be hierarchical.

**Strategy 5:** *Direct governance and socioeconomics to protect ecosystem functions*

It is recognized that each MPA or MPA network requires effective governance at the local scale and the full engagement of stakeholders in a manner that allows both governance bodies and stakeholders to benefit from and contribute to the effective implementation of the MPA or network. In this regard, this strategy supports the development and implementation of national to local MPA management effectiveness systems and tracking mechanisms that are cognizant of social and economic values and benefits. Linking MPAs to human well-being and effective governance, and ecosystem functions and resource benefits to management systems, is essential.

# III. FRAMEWORK: CORAL TRIANGLE MPA SYSTEM

## INTRODUCTION – USE OF TERMS

The CTMPAS is called a “system” so as not to confuse it with the normal use of the term “network.” MPA networks are usually designed to develop ecologically connected sites and benefits, but because of the expanse of the CT, it is not realistic for the CTMPAS to create a regional ecological network at the outset. In the long term, ecological connectivity is an objective at increasingly larger scales, but this is not considered feasible for present planning of the region-wide system. Furthermore, new science indicates that the distance needed for ecological connectivity is smaller than previously thought, allowing smaller areas to provide adequate ecological benefits. In order to differentiate between the numerous smaller MPA ecological networks being compiled into the regional level program, the preferred vision or description considers the broader, larger area of multiple networks as the CT MPA System.

Our use of the term “MPA” coincides with the standard definition of MPA as a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Dudley 2008). MPAs include a wide variety of governance types (including community-based), and include but are not limited to no-take areas, often referred to as “marine reserves.”

The CTMPAS is inclusive of the range of MPA types that exist in the CT6. The spectrum includes large national MPAs and marine parks as well as small community-based LMMAs. The primary criterion for inclusion is that the “MPA” is formally recognized through the means common to the country or area of concern. Such formal recognition varies from national and local laws to community agreements that constitute an accepted management regime.

Finally, we are calling this document a “Framework” which can be defined as a basic structure underlying a system or context. Thus the *CTMPAS Framework* serves as a basis for policies and approaches that is accepted widely enough to serve as a guide in the design and operation of a system.

## VISION AND GOAL

After reviewing the designs and approaches of several regional MPA systems, the CT6 continue to support the guidance provided by the CTI-CFF RPOA while building on the experiences of the other models. They have agreed to adopt the following *Goal* and *Vision* for the CTMPAS:

The **Goal** of the CTMPAS is Target 1 of Goal 3 of the CTI-CFF RPOA: “A region-wide Coral Triangle MPA System in place and fully functioning by 2020”.

The **Objective** of the CTMPAS is a “comprehensive, ecologically representative and well-managed region-wide system” in place and fully functioning by 2020.

The **Vision** of the CTMPAS is a system of “prioritized individual MPAs and networks of MPAs that are connected, resilient, and sustainably financed,” and designed in ways that (i) generate significant income, livelihoods, and food security benefits for coastal communities; and (ii) conserve the region’s rich biological diversity.

CTMPAS should include “most critical resources and the full range of use categories” (from strict to many allowed uses)

**Ultimate targets:** Twenty percent of the total area of each major nearshore habitat type within the CT region (e.g., coral reefs, seagrass beds, mangroves, beach forests, wetland areas and marine/offshore habitat) will be in some form of designated protected status, with 20% (10%<sup>3</sup> in the interim until 2020) of each major marine and coastal habitat in strictly protected “no-take replenishment zones” (to ensure long-term sustainable supplies of fishery resources).

## TRACKING PROGRESS: RESULTS AND INDICATORS

The CT6 have defined a core minimum set of indicators to track progress towards Goal 3 of the RPOA and are committed to achieving the overall target of 10%<sup>3</sup> of the total marine habitat areas included in the CTMPAS. Table 5 shows the indicators for tracking progress on Goal 3 for MPAs. Additional details for tracking the indicators are provided in Annexes 4 and 6.

**Table 5.** Indicators for tracking progress on Goal 3: MPAs established and effectively managed.\*

Indicator	Sources and means to verify results
1. CTMPAS Framework developed and adopted by CT6	Copy of CTMPAS Framework; Minutes of CTI MPA-TWG meeting; SOM decision document endorsing CTMPAS for implementation
2. Percent/Area of total marine habitat area in CT region in marine protected or managed areas	CT Atlas map; CTMPAS progress report; Area of MPAs by country and in region; Trend map showing change over time in percentage/area of total marine habitat area in CT region inside MPAs
3. Percent/Area of each major marine and coastal habitat type in strictly protected “no-take replenishment zones”	CT Atlas map, CTMPAS progress report; Area of habitat in no-take zones by country and in region; Trend map showing change over time in percentage/area of total marine habitat area in strictly protected “no-take replenishment zones”
4. Percent/Area of marine protected areas under “effective” management	MPA management effectiveness assessment ratings/Report for each MPA recorded in CT Atlas; CT Atlas map and percent of MPAs with level of effectiveness meeting CTMPAS Category 2 criteria.
5. Percent/Area of marine protected/managed areas included in CTMPAS	CT Atlas map/database; CTMPAS progress reports; Area and list of MPAs in CTMPAS by country and in the region

\*Indicators 2, 3 and 4 imply numerical targets. Although strict numerical targets are not established in the RPOA for MPAs, the CTI MPA-TWG has adopted the CBD target of 10% for Indicator 3 and 20% for Indicator 2 by 2020.

<sup>3</sup> The CTI-CFF *Regional Plan of Action* sets an “ultimate target” of “20% of each major marine and coastal habitat type in strictly ‘no-take replenishment zones,’” but it does not specify a target for 2020. As interim target, this Framework adopts the CT6’s target under the CBD to place 10% of each major and marine and coastal habitat type in no-take replenishment zones and at least 20% under some less restrictive forms of protection by 2020.

In the long term, the results or **outputs** of the CTMPAS are expected to include:

- A commitment from nations, MPA sites and impacted society to contribute to, learn from, and follow good practices in coastal and marine resource use and management;
- A coordination mechanism for the CTMPAS nested in CTI-CFF organizations, guided in part by the MPA-TWG, and including a Coordinator and information-sharing platform;
- A living *Framework and Action Plan* for the CTMPAS that is revised as needed every 5-10 years with new goals, targets, actions, members and work plans;
- Biannual Reports submitted to the CTI-CFF organization by the CTMPAS sites through their national representatives based on a common set of information on the status of each site's ecological, governance and social aspects. Reporting may be assisted by the use of an agreed set of templates designed to reduce the countries' and sites' reporting burden.
- A set of well-managed MPA sites in the CT6 that contribute to the CTI-CFF regional ecological objectives (connectivity, resilience, representation, etc.) and at the same time provide sustainable livelihoods to local communities and stakeholders;
- An annual set of priority activities coordinated by the CTMPAS mechanism, supported by the CT6, communities and partners, and designed to strengthen the CTMPAS as a whole and the CTMPAS sites individually to meet CTI-CFF objectives;
- Representation of the CTMPAS in other international forums to inform, advocate, coordinate and learn with other regional organizations and thus help achieve the CTMPAS objectives; and,
- An active communication program that links implementers within the CTMPAS and enables them to work smarter, informs the public sector on the benefits they can receive from and the actions they can take to contribute to the success of the CTMPAS, and presents the CTMPAS to the global community as a case study and partner in sustainable conservation.

This *CTMPAS Framework and Action Plan* is designed to facilitate and guide the CT6 and their partners and supporters as they work towards achieving these measureable objectives and results.

## GUIDING PRINCIPLES/CRITERIA

Seven principles guide the process of designing and implementing the CTMPAS. The first principle endorses the nine CTI-CFF RPOA principles that apply in general to the entire CTI-CFF process (Table 6).

**Table 6.** Seven MPA principles and nine CTI-CFF principles to guide the CTMPAS.

MPA Principle #1	Develop and implement all programs and activities with the principles stated in the CTI-CFF RPOA.
RPOA Principle #1:	CTI-CFF should support people-focused biodiversity conservation, sustainable development, poverty reduction and equitable benefit sharing.
RPOA Principle #2	CTI-CFF should be based on solid science.
RPOA Principle #3	CTI-CFF should be focused on quantitative goals and timetables adopted by governments at the highest political levels.
RPOA Principle #4	CTI-CFF should use existing and future forums to promote implementation.
RPOA Principle #5	CTI-CFF should be aligned with international and regional commitments.
RPOA Principle #6	CTI-CFF should recognize the transboundary nature of some important marine natural resources.
RPOA Principle #7	CTI-CFF should emphasize priority geographies.
RPOA Principle #8	CTI-CFF should be inclusive and engage multiple stakeholders.

**Table 6. (continued)**

RPOA Principle #9	CTI-CFF should recognize the uniqueness, fragility and vulnerability of island ecosystems.
MPA Principle 2	Be inclusive. Include a wide spectrum of partners and stakeholders to encourage commitment and appropriate design/approaches; include in the CTMPAS all sites that are listed in the CT Atlas.
MPA Principle 3	Integrate seascapes, fisheries, climate change adaptation, as well as threatened, charismatic and migratory species in all aspects of MPA selection, networks and management.
MPA Principle 4	Aim for social equity in all interactions, sharing of costs and benefits among stakeholders, and respect for the culture and indigenous heritage of all impacted stakeholders.
MPA Principle 5	Acknowledge and respect the national processes of other countries in recruiting sites and networks, actions or reporting.
MPA Principle 6	Acknowledge and respect the rights and sovereignty of each country over their international boundaries and mandates for MPA establishment.
MPA Principle 7	Strive to apply the most current science and knowledge towards improving MPA design and implementation within an adaptive management system.

## STRUCTURE OF COMPONENT SYSTEM

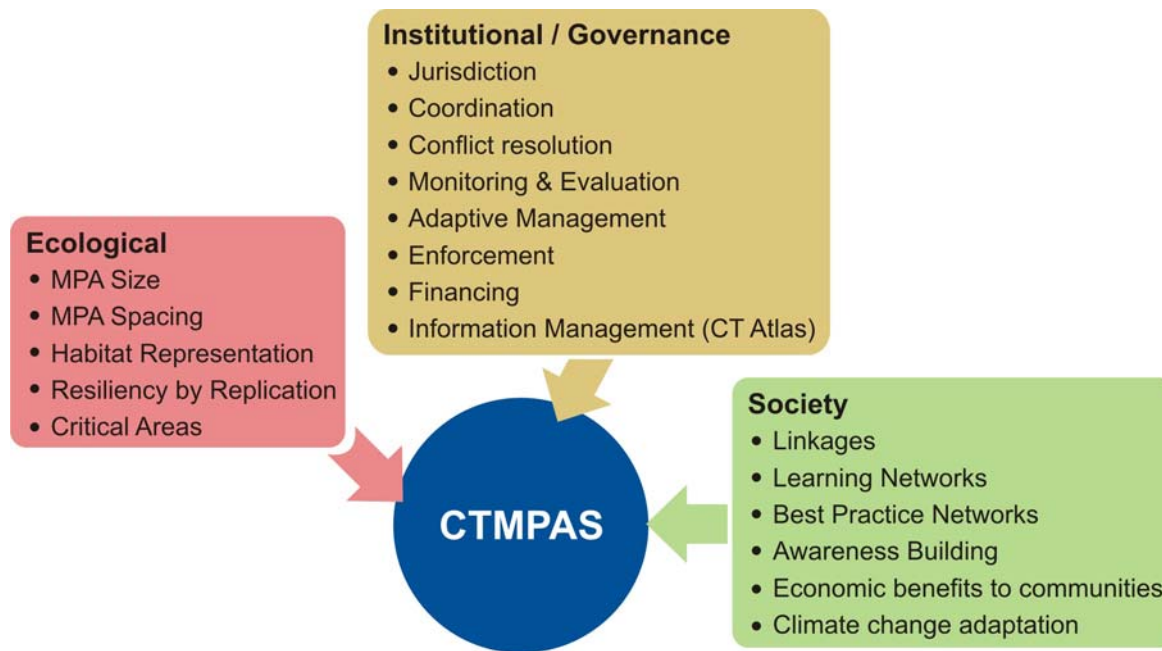
### CTMPAS Technical Approach

The overall CTMPAS technical approach is:

- To focus management efforts on a critical and strategic subset of the CT marine and reef ecosystems using areas already located in protected areas, in particular protecting the natural processes related to sustaining fisheries, biodiversity, threatened species and resilience to climate change;
- To improve the management of MPAs by building governance capacity and strengthening best practices in regional, national and local jurisdictions, particularly by exercising leadership and by supporting integrated coastal management activities, information sharing, monitoring and reporting.
- To engage and strengthen society by helping communities achieve socioeconomic benefits through social media and education, livelihoods, cultural development and a high quality of life while they comply with best practices and contribute to the efforts of resource management.

Three recurring themes shape and contribute to the success of a comprehensive and effective CTMPAS: 1) Ecology, 2) Governance<sup>4</sup> and 3) Society (Figure 13). In this framework, ecology, governance and socio-economics are considered components of the overall system. Ecology serves as the *source* of the benefits, Governance represents the *management institutions* that have jurisdiction over shared resources and facilitate cooperation, and Society represents the *people* who both use the resources and are impacted by good or poor resource management. MPAs should ideally be part of at least one of these types of networks to be included in the CTMPAS. For any MPA site or network, there may be elements of one or more types of networks. If a site is all at once engaged in socioeconomic, governance and ecological networks, it is deemed to be a more effectively managed and stronger site. Also, well-managed MPAs are sites where change (ecological, social and governance-related) can be monitored and measured through time.

<sup>4</sup> Note that the term “governance” is used rather than “government” or “governors.” Although many of these actions will rely on governments, non-governmental institutions also have a role in supporting actions and recommending best practices, etc.



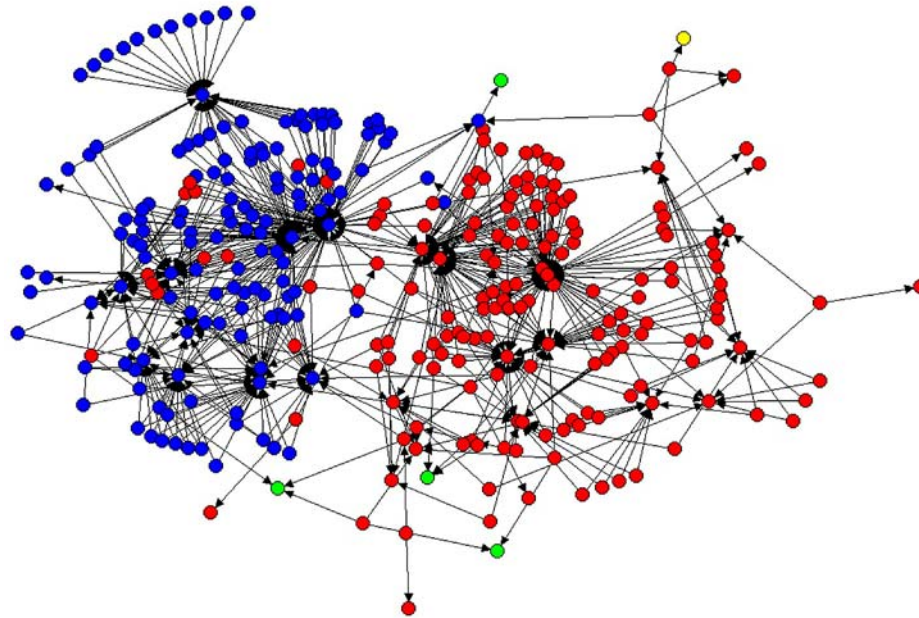
**Figure 13.** Three essential components of the CTMPAS and their basic contributions (from Varney *et al.* 2010).

**Ecological Network** An ecological network of MPAs allows for the maintenance of ecological processes and ecosystem functions by encompassing relevant temporal and spatial scales of the marine environment. In rare instances, ecological MPA networks might develop fortuitously, but ordinarily, they should be designed as ecological networks in the first place, so that MPA size, spacing and placement consider the local species ecology. For example, the size of individual MPAs should be informed by the home ranges of key species; spacing of MPAs within the network should be informed by larval dispersal distances, spawning migrations and ontogenetic shifts in habitat use; and placement should be determined by the location and distribution of habitats used throughout the species' life history (Green *et al.* 2013). Planning an MPA network to support holistic ecosystem functions and processes will also help to achieve local fishery goals (IUCN-WCPA 2008; Fernandes *et al.* 2012).

**Governance Network** Governance networks comprise collaborative efforts between neighboring management institutions to manage their resources collectively. These administrative-based networks link jurisdictions to facilitate coordination, joint actions and approaches in MPAs. A governance network ensures that management standards are consistently applied, that M&E systems are in place, and that efficiencies of scale for pooling resources, joint enforcement, accessing financing and reporting on progress are facilitated across the network. Institutional linkages and coordination among agencies and stakeholders are a focus. Governance networks may include those designed for biodiversity, fisheries, climate resilience or all combined, and more importantly, they can act to extend the management capacity of lower level institutions (e.g. communities, municipalities) to manage ecological processes that operate across broad spatial scales and can lead to the formation of ecological networks.

**Social Network** A social network comprises people and institution-based linkages and tools to facilitate learning, engagement and stewardship (Figure 14). These networks ensure that stakeholders are able to share lessons, progress and resources, and provide guidance towards achieving economic benefits accruing to people in the system.



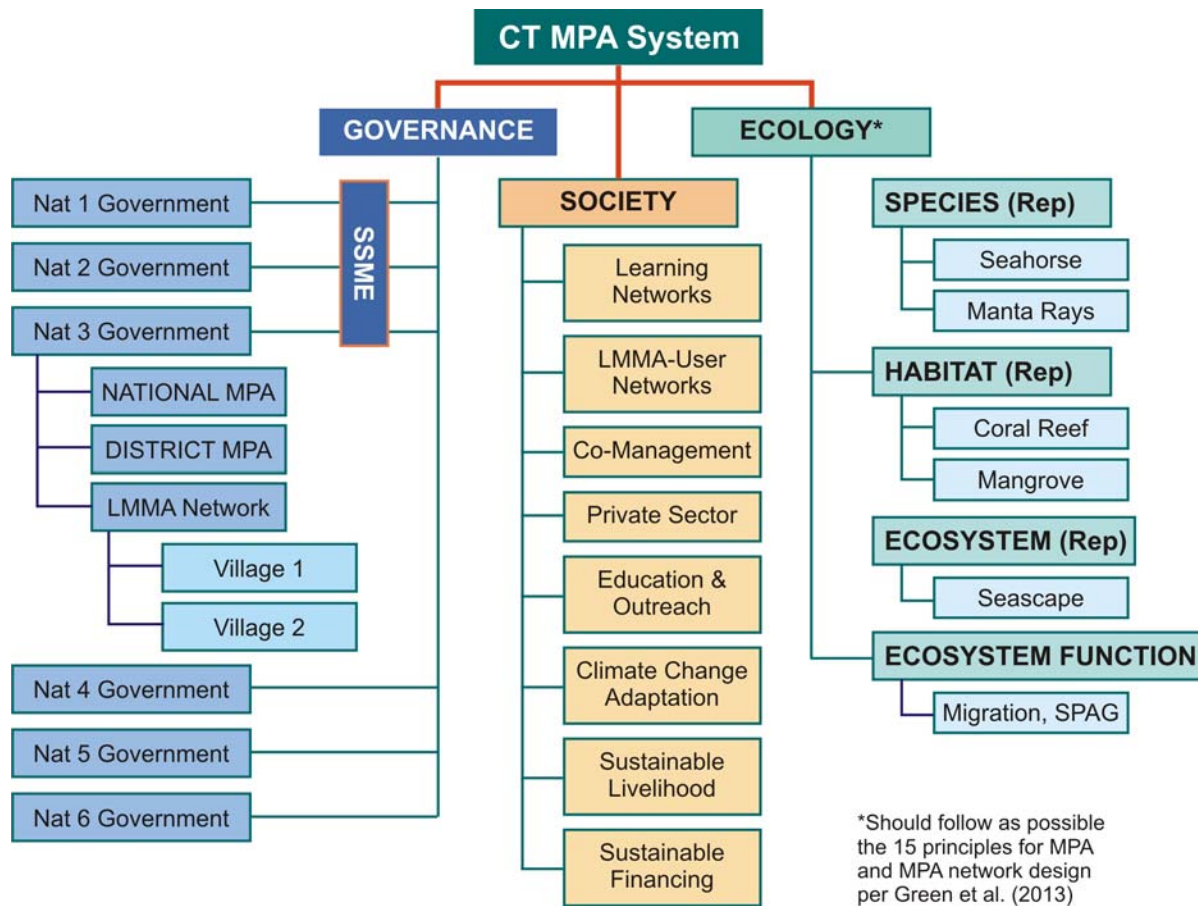


**Figure 14.** For MPA management, two local government barangays in the Philippines have social network connections within each barangay and across their boundaries. Red and blue circles represent each barangay. Such social networks are important to engage a large number of stakeholders who both benefit from and influence the success of the MPA. (Gonzalez and Christie 2011).

A social network continually assists in raising awareness among stakeholders and engaging them productively in the MPA network system. While many local governance networks perform this role, social networks within the CT also include national learning networks (e.g. the Philippines' MPA Support Network, Solomon Islands LLMA Network [SILMMA] and the PNG Centre for Locally Managed Areas [PNG CLMA]) that facilitate cross-scale knowledge exchange between local level managers and provincial and national organizations (Cohen *et al.* 2012).

An MPA network and the entire CTMPAS rely on the members' willingness for institutional collaboration and their recognition that such coordination leads to more effective management. A network therefore includes ecological, social and institutional or governance components, each consisting of important design and planning elements (Figure 15). The ecological, social and institutional components are considered equally important in designing and planning an MPA network and the CTMPAS. Ideally, at the outset, they are considered together as parts of one system to achieve the best outcomes, such as compliance, stewardship and responsibility, as well as associated human benefits.

The three components or types of networks each have subcomponents that define them geographically or by purpose. The hierarchy of the CTMPAS below illustrates the structure of the three types of MPA component networks at different geographic scales or by theme of interaction. It can be used as a "map" to see which steward (Governance) or what mechanism and themes (Socioeconomics) can be engaged to address various ecological issues or targets of conservation (Ecology). The three sets of components are very different, but all are part of the web of the MPA system. For Governance, the breakdown is by jurisdictional level, including the multinational seascape example of the SSME. For Ecological networks, the breakdown is by the conservation target or purpose. Social networks are typically defined by their purpose. Figure 15 indicates that the Human Networks of Governance and Socioeconomics can be directed to enhance the Ecology Network and bring benefits to society and the economy.



**Figure 15.** Framework: Ecology, Governance and Social Network Structures in an MPA System.

### Principles, Objectives and Tools for the Three Components

As decided by the CT6, the three CTMPAS components each have their own principles and objectives. These principles and objectives are summarized in Table 7.

The inclusion of MPA sites and networks in the CTMPAS is based on their regional importance, level of effectiveness and activity, and meeting some basic criteria as MPA sites or networks. There are four Site Categories. These are listed below and in Figure 16 and explained in Table 8.

**Category 4: “Flagship Sites”:** These include large, already effectively managed sites that have regional ecological, governance or socioeconomic importance. These are “no regret sites” that all agree are important within the system. Nominations for the Flagship Sites will be reviewed and approved by a regional CTMPAS Advisory Committee (see Table 8 and Figure 16).

**Category 3: “Priority Development Sites”:** These are sites of regional ecological, governance or socioeconomic importance that are not yet effectively managed and thus need additional assistance to achieve their full potential, or new high priority sites that are added to the CTMPAS as recommended by the regional gap analysis because they make a specific contribution to the regional system as a whole. Similar to Category 4, these are sites that all agree are of regional importance. Nominations for

**Table 7.** Summary of the principles and objectives of the Ecology, Governance and Society components of CTMPAS, examples and proposed tools for the technical approach.

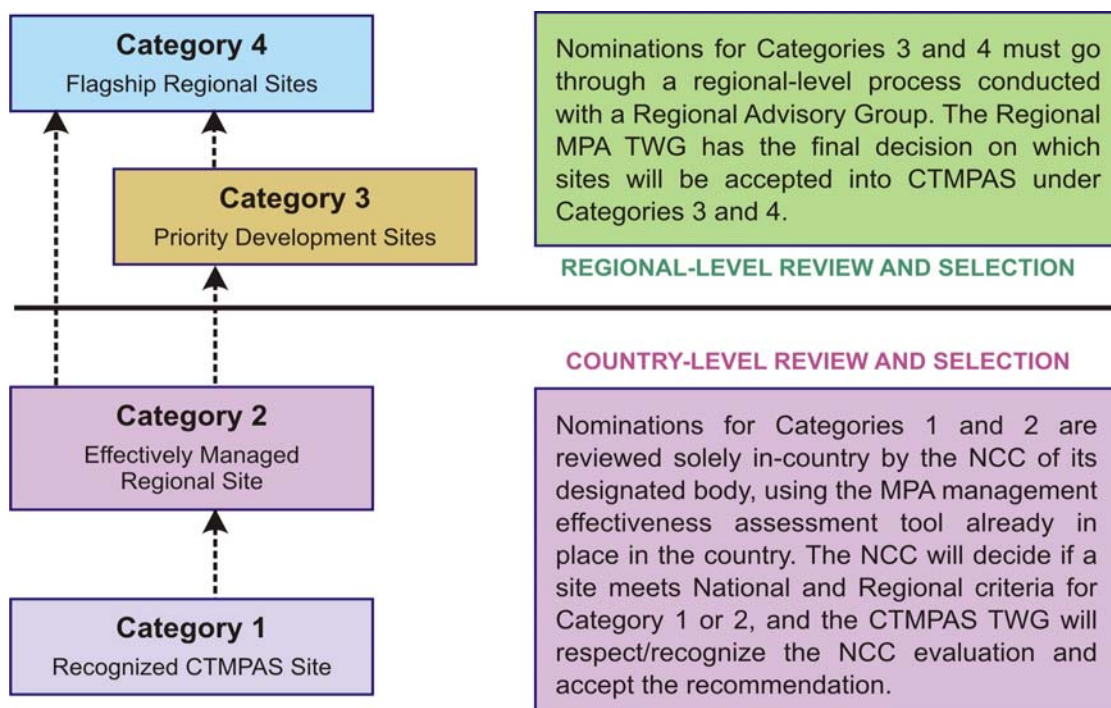
Theme	Ecology	Governance	Society
<b>Principles</b>	Define specific desired ecological characteristics for MPA sites to use in prioritizing and categorizing the nominated individual sites, creating a strategic “subset” of the CT ecosystem. Principles include representation, replication, connectivity, resilience, MPA size, unique and critical habitats, source population, full life cycle, and viability	Define a shared platform and mechanisms to act on common resources, administer activities to manage sites, coordinate, support, and represent the sites in the larger network. Includes political will, leadership, science-based decision-making, monitoring and evaluation, leveraged resources, participatory decision-making, legal frameworks and sustainable finance	Define the targeted stakeholders, key issues and ways for them to engage positively in the MPA system for their benefit. Includes cultural considerations, economic impact, public awareness and consultations, shared learning, stewardship and empowerment
<b>Examples of objectives</b>	<ul style="list-style-type: none"> <li>• Maintaining ecosystem function and biodiversity that can protect resilient coral reef habitats and allow them to survive threats</li> <li>• Supporting increase in populations of fish and other living resources representing the full range of ecosystems (EAFM), habitats and species in the system</li> <li>• Maintaining populations of threatened species for intrinsic value, education and scientific value and human heritage value</li> </ul>	<ul style="list-style-type: none"> <li>• Using an integrated management framework for ecosystem-based management</li> <li>• Defining and coordinating authorities across boundaries</li> <li>• Operating at the highest political level within the CT countries (advocating)</li> <li>• Managing own sites using a few CT-agreed common standards (e.g., management effectiveness scoring),</li> <li>• Using best management practices (even if different from other sites)</li> <li>• Contributing information and support to regional activities</li> <li>• Creating value-added partnerships with scientists, private sector, NGOs, and user groups</li> </ul>	<ul style="list-style-type: none"> <li>• Valuing cultural heritage and social welfare in sites,</li> <li>• Educating users and beneficiaries on coastal resources and best practices</li> <li>• Promoting and building capacity for participatory management and partnerships,</li> <li>• Using social tools like learning networks,</li> <li>• Expanding livelihood options</li> <li>• Engaging schools and civil society through communication programs</li> <li>• Strengthening gender balance</li> </ul>
<b>TOOLS</b>	<ul style="list-style-type: none"> <li>• Ecological gap analysis</li> <li>• MPA design document</li> <li>• CT Atlas</li> <li>• State of the Coral Triangle Report</li> <li>• Monitoring and status assessments</li> <li>• Local expertise from resource users</li> </ul>	<ul style="list-style-type: none"> <li>• Management councils</li> <li>• MPA management effectiveness assessment</li> <li>• Science and management needs/gap analysis</li> <li>• Governance benchmarks for MPA management and integration tools</li> <li>• Support to learning networks</li> <li>• State of the Coral Triangle Report and CTI-CFF progress reports</li> </ul>	<ul style="list-style-type: none"> <li>• Communication and public outreach</li> <li>• Operating/joining learning networks</li> <li>• Climate Change Adaptation Toolkit</li> <li>• Socioeconomic monitoring and feedback</li> </ul>

Priority Development Sites will be reviewed and approved by a regional CTMPAS Advisory Committee (see Table 8, Figure 16, and Annex 4).

**Category 2: “Effectively Managed Regional Sites”:** These sites meet the agreed minimum criteria for design and management effectiveness specified in the *CTMPAS Framework*. Nominated sites are reviewed and approved for inclusion in Category 2 by each country’s National Advisory Committee based on that country’s national management effectiveness system if it exists and the regional criteria set out in the CTMPAS. The national decision process may vary between countries, but MPAs accepted into Category 2 should at least achieve the minimum criteria specified (Table 8, Figure 16, and Annex 4).

**Category 1: “Recognized CTMPAS Sites”:** These are sites that meet the minimum data requirements and are included in the CT Atlas (ctatlas.reefbase.org; see Table 8 and Figure 16, and Annex 4).

The CTMPAS will thus include all recognized MPAs and networks within the CT region, qualified by their level of accomplishment, contribution to the regional system, and purpose. MPAs under Categories 1 and 2 should be selected by the respective countries based on their own internal management effectiveness monitoring system and the criteria set out in the *CTMPAS Framework*. Nominations for Categories 3 and 4 must be reviewed by the CTMPAS Advisory Committee working with the MPA-TWG (Figure 16).



**Figure 16.** Site categories for CTMPAS inclusion. All sites with the basic information required to be recorded in the CT Atlas can be Category 1. The arrows show potential movement pathways to other categories, all of which depend on the qualifications of a site within the CTMPAS relative to the criteria for each category.

**Table 8.** Criteria for site nomination and inclusion in the CTMPAS.

<p><b>**** Flagship Regional Sites—Category 4</b></p>	<p>Sites that are of 1) exceptional regional importance in terms of ecology, socioeconomics and governance as determined by a regional review/evaluation; and, 2) meet the highest-level criteria for management effectiveness based on the rating system used by the nominating/endorsing country.</p>
<p><i>Flagship sites will be nominated by the six NCCs; 1-5 sites will be nominated by each country in the first nomination round. Priority development sites may be recognized as flagship sites once they become effectively managed.</i></p>	
<p><b>*** Priority Development Sites—Category 3</b></p>	<p>Sites identified as having high regional importance in terms of ecology, socioeconomics and governance but still require further development and assistance to attain their full management potential. To be accepted under Category 3, a site must be formally recognized and endorsed by the country and must pass a regional review.</p>
<p><i>Priority development sites will be nominated by the country with the aim of fulfilling regional needs and to prioritize those sites that require more development. They may also fill gaps as identified in a regional or national gap analysis. Nominated sites might be existing category 2 sites, or new sites.</i></p>	
<p><b>** Effectively Managed Regional Sites—Category 2</b></p>	<p>Sites recognized as contributing towards CTMPAS objectives at national and regional scales.</p>
<p><i>Effectively Managed Regional Sites will be nominated by the six NCCs and accepted subject to their fulfilling the criteria below:</i></p>	
<p>Sites should form a network</p>	<p>Regional scale objectives will be achieved through networks, rather than individual MPAs; exceptions might include large no-take or fully zoned MPAs. A network can be constituted through ecological, governance or social-learning attributes or a combination thereof as defined in the <i>CTMPAS Framework</i>.</p>
<p>Sites should target an identified regional priority area, habitat or species</p>	<p>These may include: key biodiversity areas; world heritage sites; biosphere reserves, global priorities, priority seascapes; critical or threatened habitats; threatened, charismatic or migratory species; national priority / heritage or other identified priorities</p>
<p>Sites should achieve a threshold level of management effectiveness</p>	<p>Pending the development of a regional management effectiveness rating system, sites under national jurisdiction should be rated and classified as “effective” under a national rating system or equivalent, e.g. NCC assessment, and transboundary sites should be assessed as “effective” by a committee with representatives from all relevant countries. MPAs in a network should achieve a threshold standard for effectiveness whereby the majority are effectively managed which will generally equate to level 3 in existing management effectiveness systems.</p>
<p>Formal or legal basis for establishment</p>	<p>— Legal or formal recognition or document establishing MPA</p>
<p>Management body established and functioning</p>	<p>— Record from regular meetings (or similar) — Management body structure in place</p>
<p>Management and / or zoning plan approved and implemented, including</p> <ul style="list-style-type: none"> <li>- clearly stated objectives</li> <li>- standard operating procedures for monitoring &amp; enforcement</li> <li>- sustainable financing <i>strategy</i>/budget</li> </ul>	<p>— Management plan document</p>



**Table 8. (continued)**

Resource and socioeconomic baseline assessment completed	— Assessment reports
Biophysical and socioeconomic monitoring (designed to address objectives) conducted regularly, results analyzed	— Monitoring results / reports
Information, Education, Communication, awareness programs	— Outputs / materials
Effective enforcement	— Violators apprehended and penalized
Community involvement and participation in management	— Community members participate in resource assessments — Community members on enforcement team — Community members on management body
Multi-stakeholder involvement in management	— E.g. Presence multi-stakeholder management body — Collaborative programs — Various levels of stakeholder engagement — Stakeholder consultative body
Increased livelihood opportunities	— Alternative livelihoods program linked to MPA — Income from MPA tourism
Research and development	— Science applied to inform management — Adaptive management cycle followed
<b>Sites should adhere to at least two of the following ecological design criteria:</b>	Sites are most likely to be ecologically effective if they adhere to at least two, and preferably more of the ecological design criteria below:
Representation	Sites should represent the full diversity of species and habitats within their region.
Replication	Habitats and species should be replicated within highly protected areas to safeguard against disturbance events.
Resilience	Critical sites for ensuring the resilience of coral reefs and associated habitats should be identified and protected.
Connectivity	The size, spacing and location of MPAs should be informed by the home range, larval dispersal distances, and habitats utilized by focal management species.
Critical areas protected	Spawning aggregations, nesting and nursery areas, critical habitats for key species etc.
<b>* Recognized CTMPAS Sites—Category I</b>	<b>Sites that contribute towards CTMPAS objectives at local scales.</b>
All MPAs and MPA networks listed in the CT Atlas are recognized as contributing to the CTMPAS. Sites must remain current in the CT Atlas for essential data parameters, but no additional nomination or reporting requirements for this level are required ( <a href="http://ctatlas.reefbase.org/">http://ctatlas.reefbase.org/</a> )	

The overall nomination and site selection process for the CTMPAS sites is shown in Figure 17. The determination of Category 1 and 2 sites or networks is done in the country following the criteria listed in Table 8. Sites nominated at the national level for Categories 3 or 4 must be reviewed and approved by a regional advisory committee working with and reporting to the MPA-TWG (Figure 17). A hypothetical map showing how the CTMPAS may look in the future is shown in Figure 18.

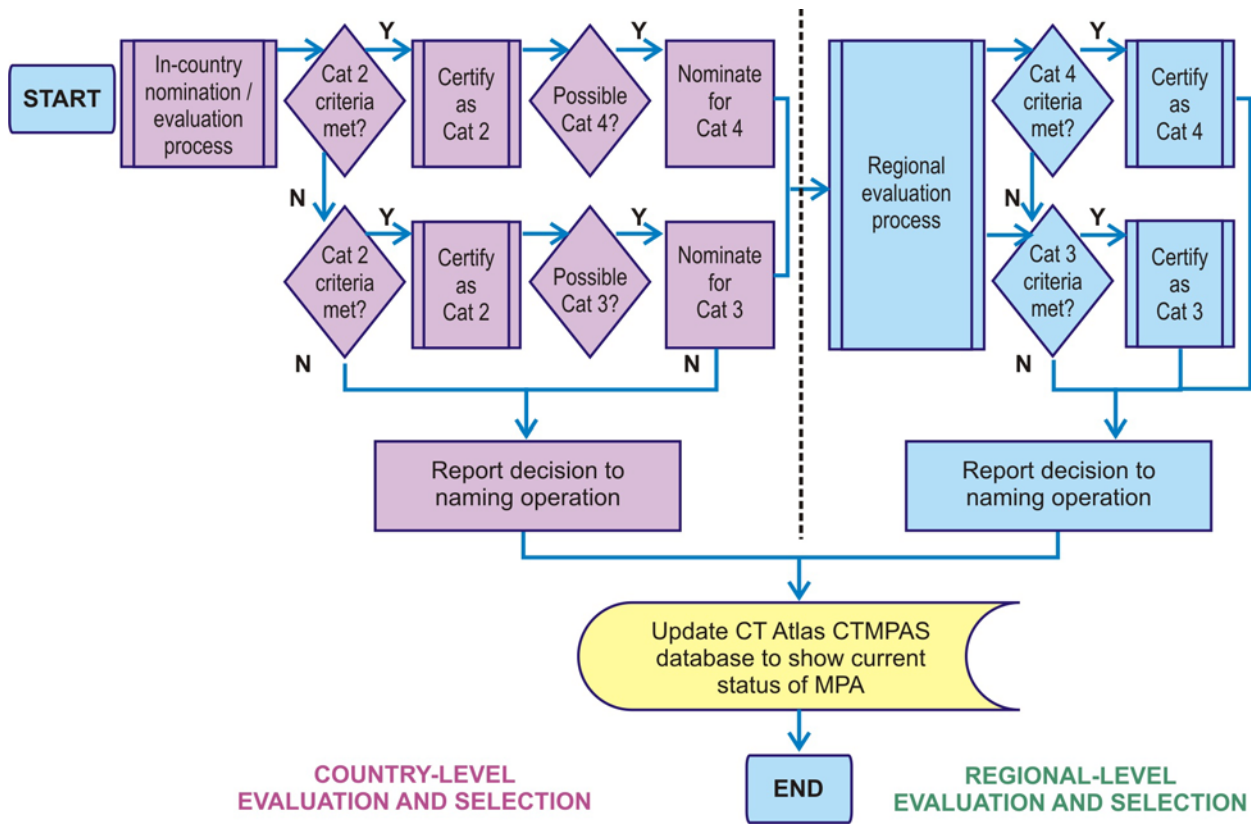


Figure 17. The CTMPAS site selection and review process.

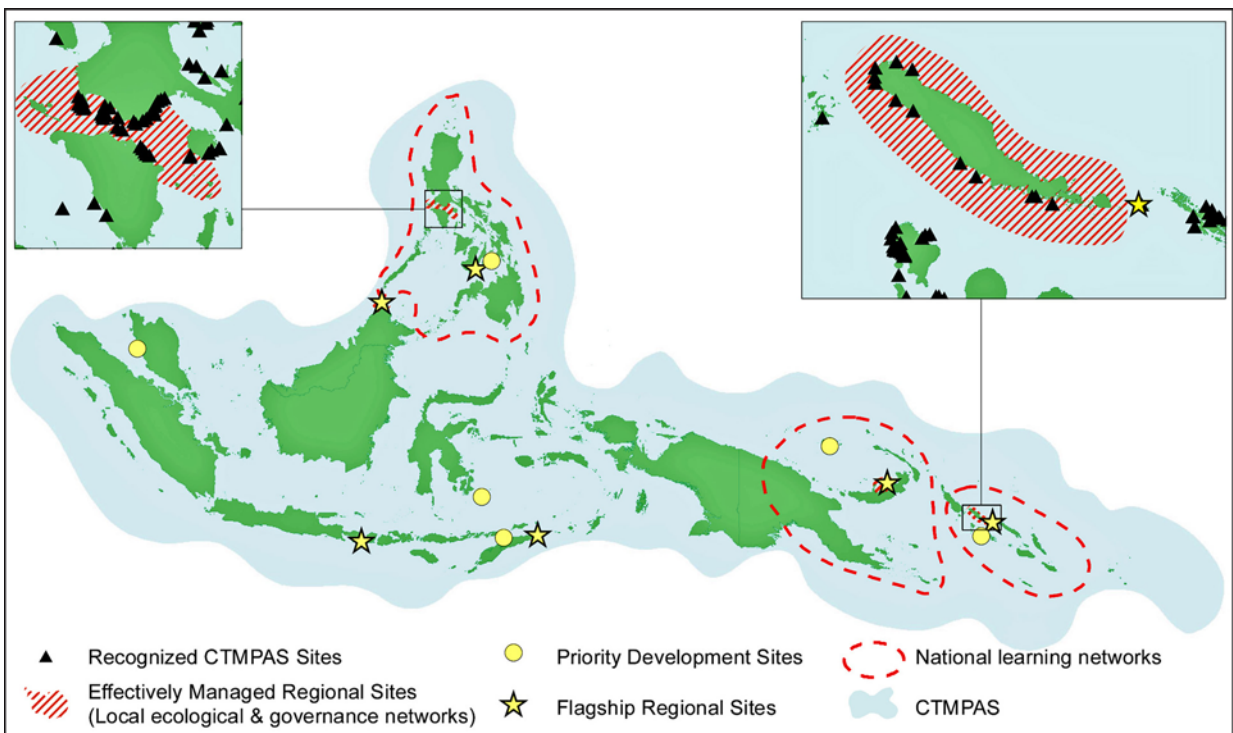


Figure 18. Hypothetical geographic structure of local and national MPA networks and sites showing the four CTMPAS categories.

The following additional principles are not mandatory for sites to be included in the CTMPAS but are provided as aspirational guidelines to improve sustainability and equitable distribution of MPA benefits to stakeholders.

- Management should involve all stakeholder groups.
- Local communities should play a key role in decision-making.
- Planning and implementation should incorporate local knowledge.
- Sites should provide economic benefits to communities.
- Management should be relevant and sensitive to local and cultural context; networks should protect culturally important sites.
- Information, education and communication materials should be available in local languages.
- Sites should assist with conflict resolution.
- Sites should provide opportunities for research.
- Sites should demonstrate/foster political will and leadership.
- Sites should provide opportunities for training and building local capacity (develop future conservation practitioners/leaders).
- Costs and benefits are equitably distributed among stakeholders.
- Sites should seek opportunities for financing through Blue Carbon initiatives and other avenues of financing.

The benefits of being included in one or more of the four CTMPAS categories are shown in Table 9. Sample information that may be submitted to satisfy some of the criteria for acceptance into CTMPAS Categories 2, 3 and 4 is shown in Table 10.

**Table 9.** Benefits of achieving different levels in the CTMPAS.

CTMPAS level	Benefits
**** <b>Flagship Regional Sites</b>	Presented with a certificate of CTMPAS four-star status on Coral Triangle Day.
*** <b>Priority Development Sites</b>	Presented with a certificate of CTMPAS three-star status and a progress report on Coral Triangle Day. Prioritized for <i>site-specific</i> capacity building, trainings, technical and financial assistance, and other activities as required.
** <b>Effectively Managed Regional Sites</b>	Presented with a certificate of CTMPAS two-star status achievement and a CTMPAS map on Coral Triangle Day. Membership of a social network and distribution list, which provides opportunities for participating in CTMPAS events, trainings and learning networks.  Additionally, sites may be able to use their CTMPAS two-star status to leverage funding and resources independently.
* <b>Recognized CTMPAS Sites</b>	Presented with a certificate of CTMPAS membership and a CTMPAS map on Coral Triangle Day.

**Note:** Sites may be downgraded in the CTMPAS if they no longer meet the criteria for their level, or if they fail to update their data in the CT Atlas.

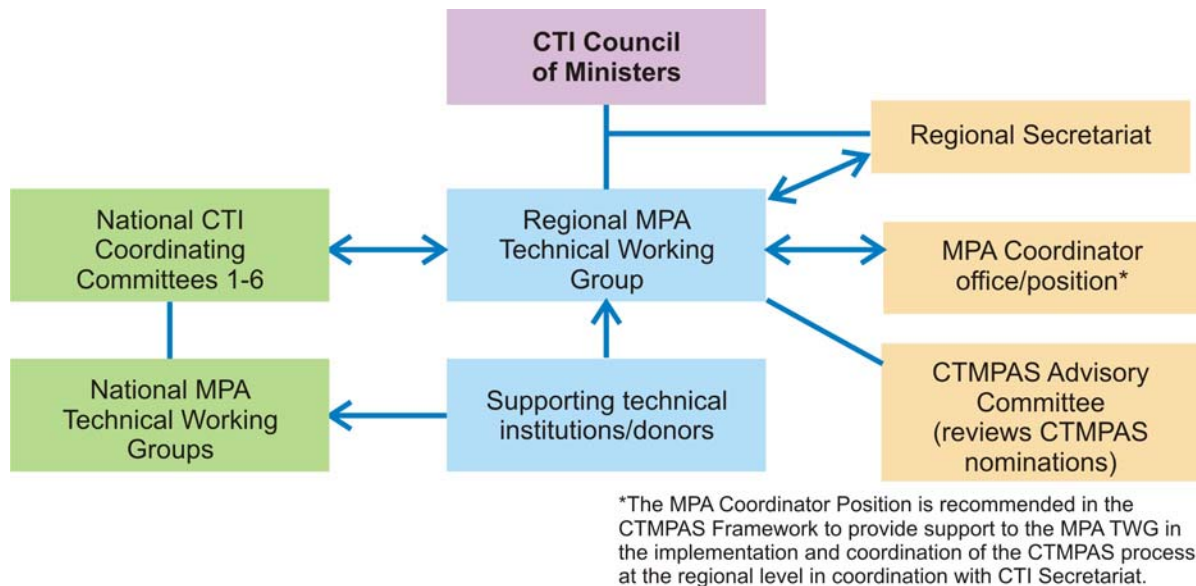
**Table 10.** Sample information that may be submitted to satisfy some criteria for CTMPAS Categories 2, 3 or 4.

Criterion	Comment / explanation		EXAMPLE of Possible Evidence
Network is effectively managed	Site is rated and classified as "effective" under a national rating system	✓	Statement of M&E score, e.g. "All sites in network achieved MPA MEAT level 3 or higher"
Management plan in place	Formal plan with objectives, decision-making structure etc.	✓	Attach pdf of management plan
Co-management framework adopted	Local communities are involved in management	✓	Narrative of management structure / list of management bodies or meeting minutes
Adheres to CTMPAS guiding principles for management	Network managers commit to aspirational principles	✓	Evidence from M&E score of the country M&E system being used

## CTMPAS COORDINATION AND ORGANIZATIONAL STRUCTURE

The major elements the CTMPAS building process are to establish the CTMPAS mechanism, nominate the initial sites and conduct early actions that operationalize the CTMPAS. The outputs of this step are (1) an operational pilot CTMPAS in 2013 and (2) continued implementation of the process in succeeding years.

For all practical purposes, the CTMPAS is the umbrella under which most CTI-CFF MPA activities come together. The organizational structure of the coordination mechanism of the system is shown in Figure 19.



**Figure 19.** Illustrative organizational structure of CTMPAS.

The CTMPAS is considered to be an indefinite, long-running program through 2020 and beyond. As a part of the decentralized CTI-CFF, the system may involve up to three complementary institutions that have major roles in its implementation. Each of the institutions listed below will have a part to play in CTMPAS operations, policy development and technical leadership:

**CTI-CFF Regional Secretariat** – The CTI-CFF Regional Secretariat is the official institutional home for coordination of the CTMPAS. With their supported resources, the Regional Secretariat is regarded as the most stable location for official correspondence and coordination between the CTMPAS and other sectors of the CTI-CFF. It will be responsible for incorporating MPA information and planning into the general CTI-CFF planning and reporting cycle; facilitating the incorporation of fisheries, seascapes and climate change linkages with MPA and threatened species; and representing the CTMPAS in various forums. Currently, however, the Regional Secretariat serves only on an interim basis and, until it is fully established and operational, it can only provide limited technical support to the CTMPAS, which may grow into one of the CTI-CFF's larger programs.

**MPA-TWG** – The MPA-TWG serves as the steering and oversight committee for the design, development and operation of the CTMPAS and its regional level activities, including fundraising. The MPA-TWG reviews, recommends and reports on the CTMPAS to the CTI-CFF Council of Senior Officials (CSO) through the Regional Secretariat. They liaise regularly with the National Coordination Committees (NCCs), other thematic TWGs, and supporting partners and will provide direction to a CTMPAS supporting institution (if and when established) and any science advisors. The MPA-TWG meets at least once a year to perform their functions of reviewing nominations to the CTMPAS and providing overall guidance to the CTMPAS operation.

**Supporting Institution or Individuals** – Although it is recognized that most of the operations of the individual MPAs and networks will be overseen by local managers and the NCCs and agencies, the CTMPAS needs institutional support for its daily operations, activities and coordination. The MPA-TWG recommends seeking a partnership with an institution or individuals with regional MPA expertise that will report directly to the MPA-TWG. The supporting institution or individuals will handle the routine and technical operational tasks, coordination and other secretariat functions of the CTMPAS, specifically the following primary functions: 1) Coordinate and support the internal and technical operations of the CTMPAS; 2) Seek and facilitate funding; and 3) Coordinate/liaise with other CTI-CFF bodies and MPA-related international forums on CTMPAS matters. Internal and technical tasks could include:

- Maintenance of an updated distribution list,
- Coordination with the CT Atlas team on the MPA database and related tasks,
- Routine correspondence with all CTMPAS members and the web portals,
- Sharing news updates and an events calendar,
- Hosting the MPA Joint Workspace and conference calls,
- Preparing for a Regional Exchange Workshop,
- Supporting the MPA-TWG,
- Coordinating regional level activities with countries and partners, and
- Compiling CTMPAS monitoring data into periodic progress reports.

The draft Terms of Reference for the supporting home institution is appended here as Annex 5. The supporting institution or individuals may represent the CTMPAS outside of the CTI-CFF upon the instruction of the MPA-TWG Chair.

**CT6 NCCs** – The NCCs are responsible for developing, strengthening and operating their own national MPA systems as well as any of the sites or programs that they contribute to the CTMPAS. Their functions may include recruiting MPAs to join local and national networks and register with the





**MPA patrollers in Batangas, Philippines**

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CT Atlas, validating national MPA members of the CTMPAS, and developing support programs that provide local and higher level benefits. The NCCs represent their national MPA system and any CTMPAS-designated sites to the regional CTMPAS both directly and through the MPA-TWG. NCCs should develop and facilitate financial and program support to strengthen their domestic MPA programs.

**Advisory Committee** – The MPA-TWG will need expert review, analyses and inputs from technical experts on emerging or adaptation issues relating to the development and operation of the CTMPAS. The primary task of the Advisory Committee will be to review national site nominations to the CTMPAS. Options for selecting an Advisory Committee include using existing mechanisms, such as the Lists of Experts compiled under the SSME Program, or the proposed CTI-CFF Regional Advisory Group or other affiliated institutions and partners on an as-needed basis. A detailed scope of work for the Advisory Committee is shown in Annex 8.

**Partners and other collaborating organizations** – Partners and other collaborating organizations can support and benefit from the CTMPAS by providing technical and advisory services and funding, leveraging contributions or in-kind services, and other means. The MPA-TWG, the six NCCs, their partners and other collaborating organizations will work with the Regional Secretariat to adopt short term (one-year), medium term (1-2-year) and long term (2020) roles and tasks in support of the CTMPAS at national and regional levels. In addition to the seven founding CTI-CFF partners,<sup>5</sup> key partners will include:

- ***CT Atlas Team:*** This program is presently located in the WorldFish Center and is assisted by TNC. It operates an online database with analytical tools and GIS-mapping capacity and currently holds the location and some status information on MPAs in the region, with the objective of compiling information on all of the region’s approximately 1900 MPAs so as to support decision-making in the CT6. CTI-CFF and the CTMPAS aim to develop a long-term arrangement with the CT Atlas for hosting the CTMPAS database and operations.

<sup>5</sup> Asian Development Bank, Global Environment Facility, Australian Government, US Government, Conservation International, The Nature Conservancy and World Wildlife Fund.

- *CT MPA Learning Network*: The CT MPA Learning Network, presently supported by the Coral Triangle Center (CTC), will partner with the CTMPAS team in sharing and conducting outreach, developing and conducting applied MPA research and training for CTMPAS sites and counterparts, and solidifying its existing role in information-sharing and cross-learning on MPA in the CT with clearer and more specific tasks related to the CTMPAS.
- *Other MPA networks and organizations*: There are several other MPA networks, systems and supporting institutions presently operating in the CT region that the CTMPAS can learn from and exchange information and collaborate with. These include national networks such as the LMMA Network (Asia and Pacific), MSN (Philippines), PNG CLMA, SILMMA, and other organizations such as the International Union for Conservation of Nature (IUCN), CTC, Asean Centre for Biodiversity (ACB, Philippines), Foundation of the Peoples of the South Pacific International (FSPI), and the TWGs supporting the SSME and Bismark-Solomon Seas Ecoregion (BSSE), among others.

## FINANCING THE CTMPAS

As a regional initiative under the RPOA, the CTMPAS operations and programs will likely be supported by financing from multiple sources. Options include but are not limited to:

- Funds committed by the CT6 to the regional operational mechanisms and to national MPAs and networks,
- Grants and loans from donors,
- In-kind assistance and grants from NGOs and private parties,
- Partnerships with the private sector,
- In-kind contributions from participating or hosting NCC and agencies, and
- In the future, a sustainable finance mechanism such as a revolving fund from membership fees or similar revenue streams.

## BUILDING THE CTMPAS

The creation of the CTMPAS requires several steps or phases that are either currently underway or projected to occur within 1-2 years of the system's initiation. These steps include:

- **Build the system of sites to populate the four categories of the CTMPAS**
  - Recruit and evaluate nominations for Categories 3 and 4 sites and process the inclusion of all sites in Category 1 as stipulated in Table 11 (2013 and 2014).
  - Proceed with annual nomination of sites according to the agreed criteria and process.
  - Work to fill system gaps based on regional conservation gap analysis and national MPA network planning processes.
- **Build the administrative platform**
  - Solicit proposals for and select a home operational and coordination institution.
  - Finalize initial TOR of Coordinator/institution and assign tasks.
  - Strengthen agreement and working arrangement with CT Atlas.
  - Define least cost and most effective tasks and reporting system.
- **Build the CTMPAS and coordinate with other programs**
  - Define common needs (e.g., training) or regional needs (e.g., outreach to other international forums).

- Source funding support for “Priority Development Sites” once nominated.
- Develop annual program plan to address needs and assign responsibilities.
- Coordinate with other regional MPA programs (e.g. SSME, etc.).

## TERMS OF REFERENCE FOR CTMPAS PROGRAM

For the CTMPAS overall to become a dynamic guide for MPAs across the Coral Triangle, it will need to combine efficient operation with strategic guidance and technical assistance to the member countries, MPA networks and, in some cases, individual MPAs. The basic TOR for the CTMPAS operation will include:

- Support operation of coordinator, MPA-TWG, and advisory committee;
- Enhance regional cooperation, collaboration and planning on MPAs within the CT6 as well as globally;
- Develop and promote best practices, tools, database and knowledge, particularly those that incorporate fisheries and climate change adaptation or contribute to regional objectives;
- Strengthen site management systems that contribute to regional objectives;
- Compile and report regional M&E information related to CTMPAS and the CTI-CFF goals; and,
- Help analyze and guide adaptive management approaches.

## ANTICIPATED TYPES OF ACTIVITIES UNDER CTMPAS

- Conduct of REX once or twice a year on specific hot topics or needed tools
- Identification of best practices teams that define and promote management effectiveness or introduce new tools at national sites of regional interest or value
- Outreach, monitoring and learning/sharing among partners, sites and programs
- Preparation of annual report cards on status of the resources and management effectiveness
- Regional training programs that build capacity
- Scientific studies on the ecosystems and their changes over time
- Facilitation of training and graduate degrees

## CTMPAS ACTION PLAN (SHORT AND LONGER-TERM)

Once the CTMPAS sites are nominated and selected, site managers and countries must commit to supporting and strengthening these sites with their own resources and with targeted region-wide or shared activities to maximize the effectiveness of MPAs and their flow of benefits. When a family of MPA sites and networks are defined (and later expanded), the governing bodies of the sites, countries and partners must commit to supporting the region-wide CTMPAS mechanisms, including monitoring, reporting, planning and implementing activities that strengthen the system. As governing mechanisms evolve, civil society must also commit to working together for common benefits. In short, countries, organizations and communities will all need to commit to engaging in positive action and contributing to the system. An action plan for the implementation of the CTMPAS is shown in Table 11.

The actions listed in Table 11 are scheduled mostly for 2013 and then annually or more frequently in certain cases. The focus in 2013-14 is to complete the design of the ecological structure of the system, pilot first round of nominations, define regional ecological gaps and launch the system regionally and nationally in the CT6.

**Table II.** Short and longer-term actions for CTMPAS implementation. This is the CTMPAS Regional Action Plan adopted by the 4<sup>th</sup> CTI-CFF MPA-TWG formal meeting last March 2013. (Green – Done; Red – On-going; White – Not started).

Key Steps/ Strategies	Activities	Date	Responsible Person
CTMPAS Framework Development and Refinement	1. Conduct MPA Regional Exchange to facilitate refinements to <i>CTMPAS Framework</i> document	March 2013	NCC and country focal points to MPA REX
	2. Work with CT Atlas on the nomination process including forms for application and inclusion	2013-2014	CT Atlas and MPA Technical team, MPA REX
	3. Identify and agree on the supporting organization (including the TOR and financing) to coordinate the implementation of the CTMPAS	2013	MPA-TWG and MPA Technical team, NCCs at MPA REX
	4. MPA management effectiveness case by each country in MPA REX and clarification of management effectiveness within CTMPAS	March 2013	NCCs and MPA-TWG at MPA REX
CTMPAS Framework Adoption and Distribution	1. Review <i>CTMPAS Framework</i> document by National MPA-TWG and all concerned <sup>1</sup>	April 2013	NCCs, MPA-TWG, resource persons
	2. Final document prepared for printing	July 2013	MPA-TWG, resource persons
	3. Distribute the updated version of brochure for CTMPAS Launch on Coral Triangle Day	June 2013	TWG Chair
	4. Launch of the full document during the Regional Priorities Setting Workshop	August 2013	TWG Chair
	5. SOM presentation on updates and full implementation	2013	TWG Chair, SOM
CTMPAS Annual Cycle	1. CT Atlas report on the country MPA status <sup>2</sup>	2013	CT Atlas Team, MPA-TWG
	2. Prepare materials for the first round of nominations to CTMPAS (see country work plans)	2013	Country focal points with partners
	3. Submission of nominations for Categories 3 and 4	2013	NCCs/MPA Focal Points
	4. Organize the MPA Advisory Group to review the nominations	2013	MPA-TWG Chair
	5. Review nominations for Categories 3 and 4	2013	MPA-TWG/Advisory Group
	6. Mobilize partners and other donor projects to generate support (including funding) for CTMPAS implementation during the Regional Priorities Workshop	2013 onwards	TWG, Regional Secretariat, partners, donors
	7. CT Atlas makes status report for the NCC/TWG	Annual	CT Atlas Team, resource persons
	8. NCC/CSO reviews program status, recommendations and activities	Annual	MPA-TWG, Focal points
	9. MPA-TWG meets, reviews and decides on the nomination status and program activities periodically	Biannual, 2013 onwards	MPA-TWG
	10. Annual recognition (awards) of CTMPAS sites and progress	CT or Ocean Day 2014	TWG, MPA focal points

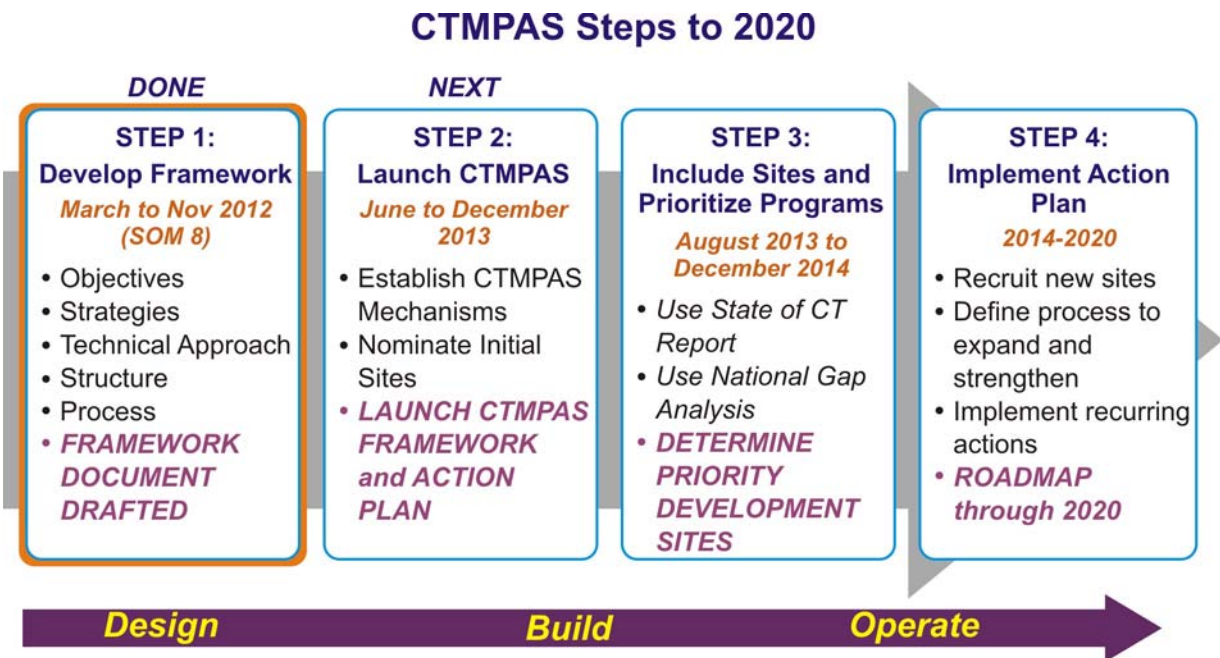


**Table 11. (Continued)**

Key Steps/ Strategies	Activities	Date	Responsible Person
	1.1. Regional MPA gap analysis input to CTMPAS design and refinement	Annually	TWG, Partner universities and researchers
	1.2. Plan, organize and conduct capacity building activities (REX, training) to support the members and CTMPAS implementation	Annually	TWG meetings
Notes: 1. Regional Secretariat will help circulate documents and remind countries to submit inputs. 2. CT Atlas MPA report will be based on most current data available in the CT Atlas CTMPAS database.			

In the medium term (2014-2015), the primary task will be to process MPA nominations, finalize all procedures, do early activities and ensure that all eligible MPA and network sites are included in the CTMPAS and CT Atlas. It is important that reporting on the status of MPAs, MPA networks and MPA management effectiveness becomes more robust through time.

In the longer term (2015-2020) the focus will be to strengthen the sites, add sites and fill gaps, monitor, evaluate and report progress through the system. The major activities required to implement the CTMPAS Framework are shown in Figure 20.



**Figure 20.** Four basic steps to develop, populate and implement the CTMPAS Framework.



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# GLOSSARY OF TERMS

**Climate Change Adaption (CCA)** – the ability of society to plan for and respond to change in a way that makes it better equipped to manage its exposure and sensitivity to climate change. Adaptive capacity depends on economic well-being, ecological well-being, the extent of dependency on natural resources, infrastructure (human-built or natural), effectiveness of institutions and governance systems, insurance, secure land tenure and mediation measures, and information and communication systems. A community with the capacity to adapt is likely to be more resistant to impacts or able to recover from stressful events and conditions (USAID 2009).

**Customary Marine Tenure (CMT)** – a form of property holding where an identifiable group of people has informal or formal rights to sea areas, where their rights to use and access resources are, in principle, excludable, transferable, and enforceable, either on a conditional or permanent basis (Ruddle 1996).

**Ecosystem Approach to Fisheries Management (EAFM)** — “an approach to fisheries management and development that strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic, and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries” (FAO 2003). The purpose of EAFM is to plan, develop, and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems.

**Ecosystem-Based Management (EBM)** – a management framework that integrates biological, social, and economic factors into a comprehensive strategy aimed at protecting and enhancing the sustainability, diversity, and productivity of natural resources. EBM “emphasizes the protection of ecosystem structure, functioning, and key processes; is place-based in focusing on a specific ecosystem and the range of activities affecting it; explicitly accounts for the interconnectedness among systems, such as between air, land, and sea; and integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependencies.” Sometimes used interchangeably with ecosystem approach (McLeod *et al.* 2005)

**Ecoregion** – a relatively large unit that contains a distinct assemblage of natural communities sharing a large majority of species, dynamics and environmental conditions, and consequently functioning effectively as a conservation unit (Omernik 2004).

**Exclusive Economic Zone (EEZ)** – a sea-zone prescribed by the United Nations Convention on the Law of the Sea over which a country has special rights over the exploration and use of marine resources. It stretches from the seaward edge of the country’s territorial sea out to 200 nautical miles from its coast.

**Integrated Coastal Management (ICM)** – a mechanism that involves a systematic process for managing competing issues in marine and coastal areas, including diverse and multiple uses of natural resources. It puts into practice effective governance, active partnerships, practical coordinating strategies, sustainable financial resources and strengthened technical institutional capacities.

**Marine Protected Area (MPA)** – a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Dudley 2008). MPAs include a wide variety of governance types (including community-based areas and sizes), and include but are not limited to no-take areas, often referred to as marine reserves.

**Marine Protected Area Networks (MPA Networks)** – a collection of individual MPAs or reserves operating cooperatively and synergistically at various spatial scales and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve (IUCN-WCPA 2008).

**Marine Reserve** – a type of MPA or zone within a larger MPA where no extraction is permitted. It is primarily established to “reserve” marine life for the future.

**Ocean Acidification (OA)** – a condition that occurs when CO<sub>2</sub> in the atmosphere reacts with water to create carbonic acid, decreasing both ocean pH and the concentration of the carbonate ion, which is essential for calcification by marine organisms such as corals (Kleypas *et al.* 2006).

**Seascape** – large multiple-use marine areas, defined scientifically and strategically, in which government authorities, private organizations and other stakeholders cooperate to conserve the diversity and abundance of marine life and promote human well-being (Atkinson *et al.* 2011).

**Transboundary Areas** – areas of land and/or sea that straddle one or more borders between countries, subnational units such as provinces and regions, autonomous areas and/or areas beyond the limit of national sovereignty or jurisdiction, whose constituent parts are especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed cooperatively through legal or other effective means (Sandwith *et al.* 2001).

**USCTI Implementation Partners** – lead national agencies for MPAs, fisheries and environment, CTSP consortium members and other NGOs, key academic and technical persons involved in setting policy for MPAs, fisheries and climate change, and CTSP field staff who lead projects in each country supported by the US-CTI.

**USCTI Integration Sites** – project sites where integration of MPA, fisheries and climate change adaptation strategies are being planned and implemented.

**USCTI Priority Geographies** – broad geographies within which project sites are located, where CTSP is providing technical and financial support for field conservation.



# ANNEXES

## ANNEX I: FULL GOAL 3: CTI-CFF REGIONAL PLAN OF ACTION<sup>6</sup>

### GOAL #3

#### MARINE PROTECTED AREAS (MPAs) ESTABLISHED AND EFFECTIVELY MANAGED

TARGET #1	
<p><b>REGION-WIDE CORAL TRIANGLE MPA SYSTEM (CTMPAS) IN PLACE AND FULLY FUNCTIONAL</b></p> <p>A comprehensive, ecologically representative and well-managed region-wide <i>Coral Triangle MPA System (CTMPAS)</i> in place — composed of prioritized individual MPAs and networks of MPAs that are connected, resilient, and sustainably financed, and designed in ways that (i) generate significant income, livelihoods, and food security benefits for coastal communities; and (ii) conserve the region’s rich biological diversity. In accordance with emerging scientific consensus, <i>CTMPAS</i> will include the following aspirational quantitative targets for the region as a whole:</p> <ul style="list-style-type: none"> <li>• <u>Ultimate targets</u>: Significant percentage of total area of each major near-shore habitat type within the Coral Triangle region (e.g., coral reefs, seagrass beds, mangroves, beach forests, wetland areas and marine/offshore habitat) will be in some form of designated protected status, with 20% of each major marine and coastal habitat type in strictly protected “no-take replenishment zones” (to ensure long-term, sustainable supplies of fisheries).</li> <li>• <u>Interim targets for 2020</u>. At least X* hectares of total marine areas across the region in some form of designated protected status, and at least Y* percent of each major marine and coastal habitat type across the region in strictly protected “no-take replenishment zones”.</li> </ul> <p>* <u>Note</u>: still to be determined</p>	2020
<p><b>Annotations explaining Target #1</b></p> <ul style="list-style-type: none"> <li>• The CTMPAS may include all designated MPAs in our countries, and will help protect the <i>most critical</i> marine and coastal biological resources across the CTI Implementation Area. The CTMPAS will include the broad range of MPA categories: strictly protected multiple use, government-managed, locally managed marine areas (LMMAs), etc. The “total marine area” targets will include the full range of MPA <i>use</i> categories, from strict protection to resource utilization. Coastal and marine habitat types will include coral reefs, seagrass beds, mangroves, beach forests, wetland areas and others.</li> <li>• Significant discussions and in-depth consideration will be given to how the CTMPAS relates to other systems and international designations, such as World Heritage Sites and ASEAN</li> </ul>	

<sup>6</sup> CTI-CFF 2009

<p>Heritage Sites, and RAMSAR sites. The CTMPAS could include all of these sites, and go beyond these systems by also incorporating — as central features — key innovations such as:</p> <ul style="list-style-type: none"> <li>⇒ ecologically connected “networks” of MPAs, (e.g., “friends of marine parks”) rather than just isolated individual MPAs;</li> <li>⇒ new approaches to achieve effective data management to support MPAs;</li> <li>⇒ an emphasis on <i>climate change resilience</i> principles; and</li> <li>⇒ an emphasis on <i>trans-national</i> MPAs, where <i>trans-national activities under CTI should not prejudice recognized boundaries or ongoing negotiations on legal boundaries between nations.</i></li> </ul> <ul style="list-style-type: none"> <li>• To be fully functional, the CTMPAS will need to: (i) promote co-management arrangements that contribute towards securing sustainable livelihoods for coastal communities; (ii) be ecologically representative (covering marine habitat types as well as coastal forests and coastal wetlands); (iii) be sustainably financed, (iv) be resilient to climate change and other impacts; and (v) be effectively managed. A more rigorous definition of “fully functional” will be further developed and agreed by the CTI governments.</li> <li>• It is assumed that most sites within the CTMPAS could include both <i>resource utilization zones</i> as well as appropriately sized <i>no-take replenishment zones</i> required for replenishing / sustaining fisheries resources.</li> <li>• The above “ultimate goal” of 20% of each major marine / coastal habitat type in strictly protected “no-take replenishment zones” recognizes an emerging scientific consensus that at least 20%-30% of all such habitat types need to be strictly protected in order to ensure long-term, sustainable fisheries benefits. (This has been recognized by governments at the 2003 World Parks Congress and the 2004 COP-7 meeting under the Convention on Biological Diversity.) The interim targets (by 2020) recognize the complex socio-economic issues that need to be considered, and are viewed as realistic within a 10-year timeframe.</li> </ul>	
<b>REGIONAL ACTION #1</b>	
<p><b>Jointly establish overall goals, objectives, principles, and operational design elements for a CTMPAS centered around priority MPA networks</b></p> <p>Jointly agree on goals, objectives, principles, and other operational design elements of a region-wide CTMPAS, drawing on relevant existing processes, networks and institutions (e.g., national MPA systems, SSME and BSSE tri-national processes, World Heritage Sites Network, ASEAN Heritage Sites Network, RAMSAR Sites Network, and UNESCO Man and Biosphere Reserve Network). CTMPAS should take into account solid scientific information, enforcement, financing, livelihood, networking, monitoring and evaluation, and other elements.</p>	2010
<b>REGIONAL ACTION #2</b>	
<p><b>Complete and endorse a comprehensive map of MPA networks to be included in CTMPAS</b></p> <p>Jointly complete and endorse a comprehensive map and corresponding geo-referenced database delineating a region-wide CTMPAS, based on (i) extensive biophysical and socio-economic data analysis and geographic prioritization; and (ii) extensive consultation processes (including local community and stakeholder consultations within each country, and consultations among CT governments). Special collaboration and external assistance from leading institutions will be required to analyze key information not addressed in previous spatial analysis exercises, such as spatial mapping of (i) areas with climate change resilience characteristics; (ii) fisheries-based food-security data; and (ii) poverty data overlaid with data on climate change vulnerability of marine ecosystems.</p>	2012

REGIONAL ACTION #3	
<p><b>Build capacity for effective management of the CTMPAS</b></p> <p>Collaborate (within the CTI grouping of governments and with other partners) to build capacity of MPA managers through the following types of actions:</p> <ul style="list-style-type: none"> <li>• <u>Capacity building programs and institutions.</u> Establish, strengthen, and support long-term capacity building programs and institutions, designed to achieve a dramatic leap forward in the capacity to manage MPAs in the CTMPAS. Such programs and institutions will be designed to have long-term viability and impacts on broad geographical scales, servicing both government and non-governmental actors, with a primary focus on practical, field-level management needs. One option to be explored will be the need for a <i>Coral Triangle Center for Marine Protected Areas</i>, providing regional capacity services (such as targeted training modules and technical assistance) to a range of institutions and individuals across the region.</li> <li>• <u>MPA Learning Network.</u> Establish a regional MPA learning network (possibly linked to a Coral Triangle Center for Marine Protected Areas) to share tools and practical information covering, for example: models in which MPAs serve as economic engines for local economies; new approaches to co-management; “MPA campaigns” to raise awareness; models for sharing benefits with local communities; sustainable finance mechanisms; and programs designed to scale up sustainable livelihoods around MPAs.</li> </ul>	Ongoing
REGIONAL ACTION #4	
<p><b>Collaborate around mobilizing sustainable financing for the CTMPAS</b></p> <p>Collaborate (within the CTI grouping of governments and with other partners) to achieve sustainable financing for the CTMPAS. This will include, for example:</p> <ul style="list-style-type: none"> <li>• <u>Sustainable finance activities in joint funding proposals.</u> For select, multi-country funding proposals to external donors, jointly develop activities designed to generate sustainable financing for the CTMPAS.</li> <li>• <u>Information sharing.</u> Share information, tools, and experience on sustainable financing mechanisms and related issues (e.g., sustainable financing plans for MPA systems, MPA trust funds, MPA tourism-based fees, payments for ecosystem services, efforts to increase domestic budget allocations for MPAs).</li> <li>• <u>Regional MPA Fund.</u> In collaboration with multiple donors and other partners, complete a feasibility study for a large-scale <i>regional Coral Triangle Partnership Fund (CTPF)</i>.</li> </ul>	Ongoing  2010 (feasibility study for CTPF)
REGIONAL ACTION #5	
<p><b>Establish MPA networks, particularly those involving more than one country</b></p> <p>Collaborate around the establishment and achievement of effectively managed MPAs and networks of MPAs – particularly those involving more than one country.</p>	Ongoing
REGIONAL ACTION #6	
<p><b>Establish a public / private partnership or Working Group for engaging relevant industries in supporting CTMPAS</b></p> <p>Establish a public / private partnership or Working Group involving major companies in relevant industries (building on existing regional organizations). This partnership or Working Group will be designed to (i) help mobilize new private sector financial and in-kind support for MPAs; as well as (ii) promote industry best practices (e.g., minimizing “footprints” of tourism facilities on nearby MPAs, supporting community-based tourism and community benefits from marine-based tourism around MPAs).</p>	2010

## ANNEX 2: EVENTS LEADING TO THE FORMULATION OF CTMPAS FRAMEWORK

Technical Reports: Help to define early prioritized sites, management priorities, activities:

- State of the Coral Triangle Report
- Six National Conservation and Management Gap Analyses
- Comparative review of other regional MPA Networks
- Science studies on integration criteria and sub-national network designs, and scoping studies

Regional exchanges (REX) 1, 2, 3 and 4 on MPA network design and management effectiveness which:

- Defined principles, objectives, criteria and structure
- Defined multiple objectives, first, for achieving specific RPOA ecological and socio-economic objectives, and second, for creating an ecologically coherent MPA system.

REX1 (Phuket, Thailand, June 2010) examined MPA network/system design and operations. It produced the following results: (1) a collective review of the current principles, objectives, models and regional case studies of MPA networks; (2) practical application of common network principles through the parallel designs of national MPA network pilot sites in each country; (3) draft priority objectives for the CTMPAS; and (4) next steps toward collective efforts on MPAs and MPA networks.

REX2 (Batangas, Philippines, May 2011) provided participating countries with concepts, models, lessons and approaches for the development and operation of effective MPAs, networks and systems at both country and regional scales. The main outputs of REX2 were country action plans or roadmaps for the development and adoption of MPA effectiveness systems appropriate for each country.

REX3 (Sanur, Bali, Indonesia, March 2012) initiated the process of developing the framework for the CTMPAS. At this REX the CT6, along with development partners and invited MPA experts, defined the objectives and initial structure of the CTMPAS, and set in motion the process of developing the CTMPAS framework. At REX3, the countries reached initial agreement on matters relating to the operationalization of the CTMPAS, in particular, the role of the CTI-CFF Regional Secretariat, the possibility of engaging another organization (reporting to the Regional Secretariat) that will handle CTMPAS operational coordination, the role of the CTI-CFF MPA-TWG in CTMPAS, the need for and benefits of having an advisory group to advise the TWG, and a data sharing system (CT Atlas) home and support.

REX4 (Honiara, Solomon Islands, March 2013) produced the following outputs:

- Regional standards to support MPA management effectiveness within the CTMPAS framework
- Finalization of CTMPAS framework based on inputs from the CTI National Coordinating Committees
- Nomination and selection criteria for initial flagship sites for inclusion in CTMPAS
- Proposal for 2013-2014 Priority Actions in support of the RPOA MPA Goal and CTMPAS implementation
- 3<sup>rd</sup> MPA-TWG formal meeting

A 5<sup>th</sup> regional workshop (write-shop), held in the Philippines in October 2012, focused on drafting the *CTMPAS Framework* and formulating the *CTMPAS Action Plan* to reflect new CSO decisions and other CTI-CFF developments with implications on the MPA-TWG's CTMPAS work. This was accomplished as a prerequisite for REX4 in March 2013.

## ANNEX 3: TEMPLATES FOR EVALUATION OF NATIONAL NOMINATIONS TO CTMPAS CATEGORIES 3 AND 4

The CTMPAS will include four categories of MPAs and MPA networks, namely, Category 4 – Regional Flagship Sites; Category 3 – Priority Development Sites; Category 2 – Effectively Managed CTMPAS Sites; and Category 1 – Recognized CTMPAS Sites. These categories are not strictly hierarchical, but Categories 3 and 4 are intended to contain sites of special or exceptional regional importance and must be reviewed by a Regional Advisory Committee working with the MPA-TWG. The four categories are defined as:

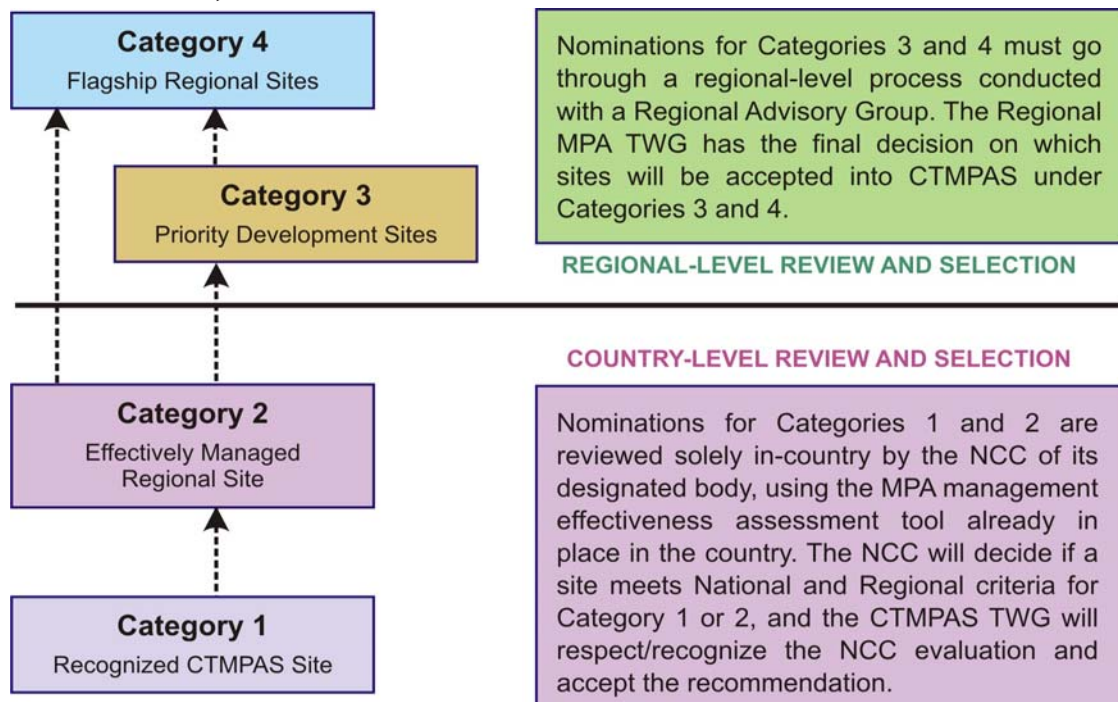
**Category 4 (“Flagship Sites”)** – sites that (1) have attained exceptional regional importance in terms of ecology, socioeconomics and governance; and (2) meet the highest-level criteria for management effectiveness based on the rating system used by the nominating/endorsing country.

**Category 3 (“Priority Development Sites”)** – sites that have (1) regional significance in terms of ecology, socioeconomics and governance but still require further development and assistance to attain their full potential, or (2) new high priority sites determined by the regional advisory committee through a regional gap analysis to make a specific contribution to the regional system and added to the CTMPAS upon endorsement by the concerned country.

**Category 2 (“Effectively Managed Regional Sites”)** – sites recognized as contributing towards CTMPAS objectives at regional scales. For a site to be included under Category 2, it must have achieved a certain level of management effectiveness based on the country’s national management effectiveness system if it exists, and the basic regional criteria set out in the CTMPAS (Table 8).

**Category 1 (“Recognized CTMPAS sites”)** – all MPA sites and networks that meet the minimum data requirements and are included in the CT Atlas ([ctatlas.reefbase.org](http://ctatlas.reefbase.org)).

### Site Nomination, Review and Selection Process





As shown in the above conceptual framework, there are two levels of site review and selection:

- 1) At the country level, a designated body will select sites that meet the regional criteria for each of the four CTMPAS categories. For Category 1 and Category 2, each country will select the sites based on their own rating system and the agreed regional criteria for such category; the required data attributes for selected sites are then submitted to the CT Atlas for inclusion in the CTMPAS database. For Category 3 and Category 4, country nominations should also be submitted to the MPA-TWG for further evaluation. Any site nominated for Category 3 or 4 must already have qualified as Category 1 (and included in the CT Atlas) as a prerequisite.
- 2) At the regional level, the MPA-TWG in consultation with a designated Advisory Committee made up of external, independent experts (to balance country representation) will select sites that have been nominated by the countries based on an agreed set of regional criteria. Also at the regional level, the MPA-TWG may endorse for nomination by the concerned countries sites that have not already been nominated for Category 3 or Category 4 but have been determined by the TWG and Advisory Committee as having regional significance, or the potential to be regionally significant.

For an MPA to be included in the CT Atlas database as a recognized CTMPAS site under **Category 1**, it should pass an in-country selection process and have at least the core (minimum) data attributes (shown in Annex 4 as bolded text marked with asterisk). Sites must remain current in the CT Atlas for the core data attributes, but no additional nomination or reporting requirements for this level are required. Nominations for Categories 2, 3 and 4 will be evaluated by rating the sites against the criteria for Categories 2, 3 and 4.

The selection of sites for **Category 2** will be done in-country. Using their respective national MPA rating systems and management effectiveness assessment tools (when available) and the agreed regional criteria for Category 2, each country will determine which of their MPAs will be included in Category 2.

To be accepted under Category 3 or 4, a site must be formally recognized and endorsed by the country and must pass a regional review. **Category 3** focuses mostly on the relative level of regional importance of an MPA or MPA network as a “Priority Development Site,” but does not require a high level of management effectiveness. On the other hand, **Category 4** requires a high level of management effectiveness as well as regional importance.

Each nomination is rated by assigning points to each criterion listed in the table below. To be accepted as a Category 3 site, an MPA or MPA network must achieve a minimum total score of 50 points (out of 100). To be accepted as a Category 4 site, it must score 80 points or more.

This rating system will be used by the Regional Advisory Committee and MPA-TWG for all nominations. Sites may be downgraded in the CTMPAS if they no longer meet the criteria for their level, or if they fail to update their data in the CT Atlas.

Criteria	Explanatory notes	Allocation of Points
<b>Sites should form a network</b>	Regional objectives achieved through networks, rather than individual MPAs; exceptions might include large fully no-take or zoned MPAs.	<i>Up to 10</i>
<b>Sites should target an identified regional priority area, habitat or species</b>	These may include: key biodiversity areas; world heritage sites; biosphere reserves, global priorities, priority seascapes; critical or threatened habitats; threatened, charismatic or migratory species; national priority/heritage or other identified priorities.	<i>Up to 10</i>
<b>Sites should achieve a threshold level of management effectiveness:</b> Formal or legal basis for establishment Management body established and functioning Management and/or zoning plan approved and implemented, including: <ul style="list-style-type: none"> <li>- clearly stated objectives</li> <li>- standard operating procedures for monitoring &amp; enforcement</li> <li>- sustainable financing strategy/budget</li> </ul> Resource and socioeconomic baseline assessment completed	(examples of verification documentation) <ul style="list-style-type: none"> <li>✓ Legal or formal document establishing MPA</li> <li>✓ Record from regular meetings (or similar)</li> <li>✓ Management body structure</li> <li>✓ Management plan document</li> <li>✓ Assessment reports</li> </ul>	<i>Up to 40</i>
Biophysical and socioeconomic monitoring (designed to address objectives) conducted regularly, results analyzed	✓ Monitoring results / reports	<i>Up to 20</i>
Information, Education, Communication, awareness programs Effective enforcement Community involvement and participation in management	✓ Outputs / materials ✓ Violators apprehended and penalized ✓ Community members participate in resource assessments, and/or on enforcement team, and/or on management body	<i>Up to 10</i>

Criteria	Explanatory notes	Allocation of Points
Multi-stakeholder involvement in management	<ul style="list-style-type: none"> <li>✓ E.g. multi-stakeholder management body</li> <li>✓ Collaborative programs</li> <li>✓ Various levels of stakeholder engagement</li> <li>✓ Stakeholder consultative body</li> </ul>	
Increased livelihood opportunities	<ul style="list-style-type: none"> <li>✓ Alternative livelihoods program linked to MPA</li> <li>✓ Income from MPA tourism</li> <li>✓ Applying science to inform management</li> </ul>	
Research and development	<ul style="list-style-type: none"> <li>✓ Adaptive management cycle</li> </ul>	
<b>Sites should adhere to at least two of the following ecological design criteria:</b> Representation  Replication  Resilience  Connectivity  Critical areas protected	<p>Sites are most likely to be ecologically effective if they adhere to at least two, and preferably more of the ecological design criteria below:</p> <ul style="list-style-type: none"> <li>➤ Sites should represent the full diversity of species and habitats within their region.</li> <li>➤ Habitats and species should be replicated within highly protected areas to safeguard against disturbance events.</li> <li>➤ Critical sites for ensuring the resilience of coral reefs and associated habitats should be identified and protected.</li> <li>➤ The size, spacing and location of MPAs should be informed by the home range, larval dispersal distances, and habitats utilized by focal management species.</li> <li>➤ Spawning aggregations, nesting and nursery areas, critical habitats for key species etc.</li> </ul>	<b>Up to 10</b>

#### Notes for the Advisory and Review Committee:

Points should be allocated in each category as objectively as possible using the evidence available and as provided by the nominating country. If evidence is not sufficient, then the expert opinion of the Advisory Committee should be used to make a determination about how many points are allocated for each category. Under the explanatory notes, examples are provided and suggested evidence noted but since there is a diverse range of MPA types in the CT, every category for evaluation may not always be relevant. To make a final determination, the Advisory Committee should consider the context of the MPA and strive to apply the overall intent of the criteria provided in the CTMPAS Framework.

## ANNEX 4: ATTRIBUTES FOR MPA SITE SUBMISSION TO CT ATLAS FOR CTMPAS CATEGORY I

Data Attributes in the CT Atlas and Core (Minimum) Data Attributes for CTMPAS Category I Sites	
Attributes	Explanatory notes
Country*	Indonesia   Malaysia   Papua New Guinea   Philippines   Solomon Islands   Timor-Leste
Longitude*	Longitudinal coordinates
Latitude*	Latitudinal coordinates
Name*	The official name of the protected area <sup>1</sup>
Designation*	The type of protected area as legally/officially established/recognized (e.g. national park, world heritage site, locally managed marine area)
Legal/Formal Instrument	Legal Code/Number based on country systems <sup>2</sup> (e.g. Protected Areas Act of Solomon Islands, Protected Areas Policy of PNG with gazette number)
Designation Type*	Local   National   International   Provincial
Domain*	Marine   Marine-Terrestrial <sup>3</sup>
Status* <sup>4</sup>	Designated   Proposed   Draft   Voluntary
Date Established*	Date/Year of the MPA established legally/formally
Reported area (ha <sup>5</sup> )*	Total size of protected area in ha <sup>5</sup> based on legal/formal status/declaration
Total marine area (ha <sup>5</sup> )*	Total size of marine area in ha <sup>5</sup> within protected area
Management Plan*	Yes   No   Unknown   Drafted
IUCN Management Category	Classification under IUCN (Ia, Ib, II, III, IV, V or VI)
International Convention <sup>6</sup>	Designation of MPA by an international convention/program (e.g. Ramsar site, World Heritage Site, Unknown)
Administrative unit level-I	Government level that administers or holds jurisdiction over MPA (e.g. in Malaysia, an MPA may be administered by either the federal government or state government; in the Philippines, MPAs are typically administered either by the national government (NIPAS) or the municipal/local government (e.g. Isabel Province or a village level government of body)
Zonation	Yes   No   Unknown
No Take	All   Part   Seasonal   None   Unknown
Reported No Take Area (ha <sup>5</sup> )	Total area of no take zones in hectares <sup>5</sup>

Management Effectiveness Model	Model used (eg. MEAT/ E-MPA) to assess management effectiveness
Management Effectiveness Rating	ME rating based on MPA ME system used in country
Source	Source/provider of the data
Validated	Yes   No   Unknown. If Yes, name of person/organization who validated the MPA and date of validation (DD / MM / YYYY)
Consent to display and share <sup>7</sup>	Yes   No   Point only
Notes	Additional notes/remarks about the MPA
<p>Notes:</p> <p>* Core (minimum) attributes required for an MPA to be included as a recognized CTMPAS site.</p> <ol style="list-style-type: none"> <li>1. The name of the MPA should include its location to avoid confusion over MPAs with similar names (e.g. Apo Island Protected Landscape/Seascape, Dauin, Negros Oriental; Apo Reef Natural Park, Occidental Mindoro).</li> <li>2. This refers to the number or code used to identify the legal/formal instrument that established the MPA. The full title/name of the law or formal declaration may also be provided, and when available, the full text of the document should be provided as an attachment.</li> <li>3. Where the protected area includes both terrestrial and marine components, the marine area should be disaggregated (countries will be responsible for providing data, e.g. size of marine area).</li> <li>4. Terms for Status defined as follows; <ul style="list-style-type: none"> <li>• “Designated” means legally and formally designated under national legal framework.</li> <li>• “Proposed” means formally proposed as an MPA and under review for elevation to Designated status.</li> <li>• “Voluntary” means formally recognized by local community.</li> <li>• “Draft” means accuracy of boundary, location, and attributes are under review before elevation to one of the other three values under Status.</li> </ul> </li> <li>5. The default unit of measure is hectare, but area data expressed in square kilometers/square meters will also be included as parenthetical information.</li> <li>6. Only sites with an international Designation Type will have a value here.</li> <li>7. Consent should be given by governing body or community to display or share the location and information of the area. Values here are defined as follows: <ul style="list-style-type: none"> <li>• “Yes” means that the full record including polygon can be displayed on maps and made available for download</li> <li>• “Point only” means that only the point location can be displayed and downloaded. This includes attribute values</li> <li>• “No” means that all information must remain confidential but that it can be included in statistical summaries and analyses.</li> </ul> </li> </ol> <p><i>Note: Colors may be used to represent the CTMPAS Categories</i></p>	



## ANNEX 5: PROCESS AND TERMS OF REFERENCE FOR CTMPAS ADVISORY COMMITTEE

The MPA-TWG agreed in March 2013 that:

- a. The MPA-TWG will be responsible for organizing and directing the assistance of the CTMPAS Advisory Committee.
- b. The CTMPAS Advisory Committee will be made up of 3-5 “external advisors/experts” (on marine ecology, socioeconomics and governance) with some knowledge about marine protected areas to complement and balance country representation in the TWG.
- c. Funding support for the CTMPAS Advisory Committee should be taken up in the August 2013 Regional Priorities Workshop. An alternative would be to ask the organizational home of the “advisor” to cover the cost of supporting the advisor.
- d. The following organizations will be considered as possible sources of expertise: (1) Secretariat of the Pacific Regional Programme (SPREP); (2) Secretariat of the Pacific Community (SPC); (3) Australian Institute of Marine Science (AIMS); (4) International Coral Reef Initiative (ICRI); (5) GBRMPA (Great Barrier Reef Marine Park Authority); (6) Partnerships in Environmental Management for the Seas of East Asia (PEMSEA); (7) Southeast Asian Fisheries Development Center (SEAFDEC); (8) Asean Centre for Biodiversity (ACB); (9) United Nations Educational, Scientific and Cultural Organization (UNESCO); (10) International Union for Conservation of Nature (IUCN); (11) National Oceanic and Atmospheric Administration (NOAA) and other credible international or national organizations.
- e. The TOR/tasks of the Advisory Committee will include the following: (1) In consultation with the TWG, refine nomination and evaluation forms based on the agreed criteria for CTMPAS Categories 3 and 4; (2) In consultation with the TWG, evaluate MPAs nominated under Categories 3 and 4; and (3) Provide the TWG with external, independent advice on the regional significance of each nominated MPA.
- f. A more detailed TOR of the Advisory Committee includes:
  - i. Meet physically or virtually at least 4 times a year;
  - ii. Review nomination and evaluation forms and process in relation to the agreed criteria set out in the *CTMPAS Framework* for MPA Categories 3 and 4.
  - iii. Review nominations submitted by each country for MPA Categories 3 and 4 using the final evaluation form to determine whether the nominated sites qualify.
  - iv. Prepare response to the country site nominations with options of:
    - o Full acceptance
    - o Acceptance assuming that requirements can be met within a year
    - o Acceptance only after specified requirements are met
    - o Not accepted and can reapply only after 2 years
    - o Site is not appropriate for Categories 3 or 4 in CTMPAS
- g. The MPA Advisors will hold their position for 2 years and, upon completion of their term, make a recommendation to the MPA-TWG for their replacement.

## ANNEX 6: INDICATORS FOR PROGRESS FOR GOAL 3: MPAS ESTABLISHED AND EFFECTIVELY MANAGED

Goal 3. Marine Protected Areas (MPAs) Established and Effectively Managed									
Target	Indicator	Regional Action	Spatial	Who Measures	Who reports	Means to Verify	Frequency	Source of Baseline Regional (2012)	Source of Baseline National
3.1 Region-Wide Coral Triangle MPA System (CTMPAS) in place and fully functional by 2020	3.1.1 CTMPAS Framework developed and adopted by CT6	Action 1	No	CTI MPA-TWG	CTI MPA-TWG	Copy of CTMPAS Framework document; CTI MPA-TWG Minutes of Meeting; SOM Decision Document	Once	Target by November 2012 during SOM	N/A
	3.1.2 Percent/Area of total marine habitat area in CT region in marine protected or managed areas	Action 2	Yes	CT Atlas	CTI MPA-TWG	CT Atlas map; CTMPAS Framework and progress report	Every two years	CTMPAS Framework, CT Atlas, and rSCTR	CT6 SCTR; national gap analysis
	3.1.3 Percent/area of each major marine and coastal habitat type in strictly protected "no-take replenishment zones"	Target outcome	Yes	CT Atlas	CTI MPA-TWG	CT Atlas map, CTMPAS progress reports	Every two years	CTMPAS Framework, CT Atlas, and rSCTR	CT6 SCTR; national gap analysis
	3.1.4 Percent/Area (in sq km) of marine protected areas under "effective" management	Target outcome	Yes	CT Atlas	CTI MPA-TWG	MPA Management Assessment Ratings/ Report	Every two years	CTMPAS Framework, CT Atlas, and rSCTR	SCTR; national gap analysis
	3.1.5 Percent/Area of marine protected/managed areas included in CTMPAS	Actions 3, 4 and 5	Yes	CT Atlas	CTI MPA-TWG	CT Atlas maps/database; CTMPAS progress reports	Every two years	CTMPAS Framework, CT Atlas, and rSCTR	MPA TWG, CT Atlas and SCTR

## ANNEX 7: LEGAL BASIS FOR MPAS IN EACH CORAL TRIANGLE COUNTRY<sup>1</sup>

COUNTRY	Legal Basis for the Establishment of Marine Protected Areas
Indonesia	<p><b>Law 5/ 1990 Conservation of Biological Resources and their Ecosystems.</b><sup>2</sup> Has basic principles and general rules for the management, conservation, and exploitation of biological resources, natural habitats and protected areas.</p> <p><b>Law 31/2004 Fisheries.</b><sup>3</sup> Basic fisheries legislation.</p> <p><b>Law 27/2007 Management of Coastal Areas and Isles.</b><sup>4</sup> Promotes management and planning for the coastal zone and small islands with the Ministry of Marine Affairs and Fisheries appointed as leading agency. Provides for planning, conservation, disaster mitigation, coast reclamation, rehabilitation of coastal damage, rights and access of communities, and settlement of conflict. Strengthens input and participation from local communities. Advocates for an integrated coastal management approach between various levels of administration and lays a strong legal foundation to share conservation authority between national and local government.</p> <p><b>Law No. 26/2008 National Territorial Layout Plan.</b><sup>5</sup> Provides guidelines for policies and strategies related to the use of national territory, which includes the land, sea, and air. Integrates preservation and conservation principles in strategic and spatial planning efforts.</p> <p><b>Law 32/2009 Environmental Protection and Management.</b><sup>6</sup> Promotes sustainable development in the establishment of environmental planning policies. Places the responsibility in the central government to control natural resources, environmental pollution, and damage. The Ministry of Environment is the lead agency.</p> <p><b>Law 30/2010 Guidance for Managing Resources in Maritime Territory.</b><sup>7</sup> Provides for resource management twelve nautical miles from the coastline via spatial regulation as well as strategic, zoning, and action plans.</p> <p><b>Presidential Decree No. 21/2007 on the Indonesian Marine Council.</b><sup>8</sup> Council functions include: promote effective and efficient management of the national sea territory; advise President on general marine policies; monitor and evaluate marine policies, strategies and development.</p>
Malaysia	<p><b>Fisheries Act 1985 (No. 317 of 1985).</b><sup>9</sup> Replaces the Fisheries Act of 1963. “An Act relating to fisheries, including the conservation, management and development of maritime and estuarine fishing and fisheries, in Malaysian fisheries waters, to turtles and riverine fishing in Malaysia and to matters connected therewith or incidental thereto).” Establishes the National Advisory Council for Marine Parks and Marine Reserves as it relates to fishing efforts, coral extraction, destruction of natural breeding grounds, pollution, and structures in or above marine parks and reserves. Provides for the conversion of the previous “Fisheries Prohibited Areas” into Marine Parks to allow for a broad scope of management. It outlines rules for the protection of the marine environment and “paved the way for the establishment of [Marine Protected Areas] ...”<sup>10</sup></p> <p><b>Establishment of Marine Parks Malaysia Order 1994.</b><sup>11</sup> The regulation sets forth schedules of certain islands to be declared as marine parks under the Fisheries Act of</p>

COUNTRY	Legal Basis for the Establishment of Marine Protected Areas
<p><b>Malaysia</b> (continued)</p>	<p>1985. See also <b>Establishment of Marine Parks Malaysia Order, 2008</b><sup>12</sup>; <b>Establishment of Marine Parks Malaysia Order, 1998</b>.<sup>13</sup></p> <p><b>Environmental Protection Enactment 2002</b><sup>14</sup> — A broad legislative framework for future environmental protection regulations that covers land, rivers, lakes, coastal and underground water.</p>
<p><b>Papua New Guinea</b></p>	<p><b>Conservation Areas Act 1978</b>.<sup>15</sup> An Act that provides for “the preservation of the environment and of national cultural inheritance by: (i) the conservation of sites and areas having particular biological, topographical, geological, historic, scientific or social importance; and (ii) the management of those sites and areas.” The National Conservation Council shall establish criteria for conservation area nominations and rules applicable in the conservation areas.</p> <p><b>Environmental Planning Act 1978</b>.<sup>16</sup> An Act to create a unified system of environmental management and planning in “accordance with the fourth goal of the National Goals and Directive Principles” and the “Goals and Principles under Section 25 of the Constitution.”</p> <p><b>Environmental Act 2000</b>.<sup>17</sup> An Act “(a) to provide for protection of the environment in accordance with ... the Constitution; (b) to regulate the environment impacts of development activities to promote sustainable development of the environment and the economic, social and physical well-being of people by safeguarding the life-supporting capacity of air, water, soil and ecosystems for present and future generations...; (c) to prevent environmental harm; (d) to provide for the management of national water resources and the responsibility for their management.”</p>
<p><b>Philippines</b></p>	<p><b>Local Government Code (Republic Act 7160) of 1991</b>. An Act devolving responsibility over the environment and natural resources from the national government to the local government units, and empowering municipal and city legislative bodies to establish MPAs within municipal waters (up to 15 km offshore) through municipal or city ordinances.</p> <p><b>National Integrated Protected Areas System Act of 1992 (Republic Act 7586)</b>. An Act that provides for the establishment of national MPAs through the Protected Area and Wildlife Bureau of the Department of Environment and Natural Resources, and provides for the establishment of a multi-stakeholder Protected Area Management Board for each protected area.</p> <p><b>Fisheries Code (Republic Act 8550) of 1998</b>. An Act that provides the overarching framework for fisheries management throughout the Philippines, and allows for area closures in the form of “fish refuges” or “fish replenishment areas” where no fishing is allowed for specified periods of time or permanently. It promotes integrated approaches to coastal resource and fisheries management in the country.</p> <p><b>Wildlife Resources Conservation and Protection Act (Republic Act 9147) of 2001</b>. An Act providing specific support to the protection of threatened and vulnerable wildlife species as well as critical habitats including mangroves and coral reefs and their associated habitats.</p> <p><b>Senate Bill No. 3208 Marine And Coastal Resources Protection Act of 2009</b>.<sup>18</sup> [Pending in the Committee (5/6/2009)] An Act establishing marine protected areas in</p>

COUNTRY	Legal Basis for the Establishment of Marine Protected Areas
<p><b>Philippines</b> (continued)</p>	<p>all coastal municipalities and cities. Directive to “all coastal municipalities and cities to establish at least one marine protected area within municipal waters, covering a minimum total area of ten (10) hectares, in accordance with an integrated community-based conservation program and coastal resource management plan.” Municipalities with contiguous coastlines may “jointly establish and administer the MPA to reach the optimum size and arrangement of a large zoned” MPA.</p> <p><b>Senate Bill No. 1370 Integrated Coastal Management Act of 2010.</b><sup>19</sup> [Pending] The Act proposing the adoption of “integrated coastal management as a national strategy to ensure the sustainable development of the coastal and marine environment and resources” and to establish supporting mechanisms for its implementation. The Act implements a top-down approach, mandates inter-agency and multi-sectoral coordination in implementing ICM programs.</p>
<p><b>Solomon Islands</b></p>	<p><b>The Environment Act, (No 8 of 1998).</b><sup>20</sup> The Act providing a broad framework for future protection and conservation of the environment. It aims to establish “development control, environmental impact assessment and pollution control.” It creates an Environment and Conservation Division to “protect, restore and enhance the quality of the environment of Solomon Islands, with the need to promote sustainable development,” and, specifically, “assist in developing legislation for systems of environmental planning at national, provincial and local level, and the development of national, provincial and local environmental plans.” The Act is influenced by international treaty obligations and stresses use of the precautionary principle, fairness for future generations, and biodiversity. Its implementation started in 2003.</p> <p><b>Protected Areas Act of 2010.</b><sup>21</sup> [Pending] An Act providing the basis for community management of protected areas. It establishes the Protected Areas Advisory Committee and the Protected Areas Trust Fund. It bolsters customary law and provides a mechanism for customary owners of land to be declared a “protected area.” Notably, the rules in the management plan and the Protected Areas Act will take priority over the customary rights of the landowner. Even without consent from the customary landholders, if the Director recommends an area, the Minister can declare the land as a protected area after “meetings and consultations with the local owners.”<sup>22</sup></p>
<p><b>Timor-Leste</b></p>	<p><b>Regulation No. 19/2000 On Protected Places.</b><sup>23</sup> A regulation declaring 15 protected areas and proposing 16 more protected areas. It provides for the protection of areas such as coral reefs, wetlands, mangrove areas, and historic, cultural, and artistic sites “in order to maintain and enhance their wild and natural character” and “to preserve endemic animals and plants.”</p> <p><b>Decree Law No. 5/2011.</b><sup>24</sup> Premised on the Constitution of East Timor, Article 61, mandate to maintain and protect the environment for future generations, the law established a licensing system to “prevent the negative environmental impacts resulting from complex projects.”</p> <p><b>Draft Biodiversity Decree Law No. __/ 2012.</b><sup>25</sup> In Chapter 4, In-site Conservation and Protection of Ecosystems, Habitats and Species, Article 21, National System of Protected Areas, the draft law proposes the establishment of “a national system of</p>



COUNTRY	Legal Basis for the Establishment of Marine Protected Areas
Timor-Leste (continued)	<p>terrestrial, freshwater, and marine protected areas” which identifies critical habitats and protects “all critical habitats for endemic, migratory and threatened species” using the “ecosystem approach.” The draft law mandates that each protected area “shall have a management committee, a management plan, and a collaborative management agreement to guide the management of each protected area and regulate activities permitted or prohibited in each protected area.”</p> <p><b>Draft Basic Law of Environment Decree Law No. __/ 2012.</b><sup>26</sup> The law sets forth the “bases of environmental policy, the guiding principles for the conservation and protection of the environment and conservation and sustainable use of natural resources to promote quality of life of citizens.” Article 25, Marine Coast, directs the State to “ensure the integrated management of the marine coast as the basis for the conservation, protection, and sustainable use of marine resources, ecosystems and marine species.”</p>

Notes:

1. Prepared by Sarah Parker, Legal Intern, Asia-Pacific Program, The Nature Conservancy
2. <http://faolex.fao.org/docs/pdf/ins3867.pdf>
3. <http://faolex.fao.org/docs/pdf/ins51065.pdf>
4. <http://faolex.fao.org/docs/pdf/ins107226.pdf>
5. <http://faolex.fao.org/docs/pdf/ins87048.pdf>
6. <http://faolex.fao.org/docs/pdf/ins97643.pdf>
7. <http://faolex.fao.org/docs/pdf/ins103157.pdf>
8. <http://faolex.fao.org/docs/pdf/ins51065.pdf>
9. <http://faolex.fao.org/docs/pdf/mal1869.pdf>
10. Kanim, A., Khalil, A., *Malaysian Legislation on the Management of Marine Protected Areas and Marine Parks*, p. 73  
<ftp://ftp.fao.org/docrep/fao/007/ad918e/AD918E02.pdf>. See also, Ramli, N., *Sustainable Financing of Marine Protected Areas and Marine Parks in Peninsular Malaysia, Sara Wak and Labuan*. <ftp://ftp.fao.org/docrep/fao/007/ad918e/AD918E02.pdf>
11. <http://faolex.fao.org/docs/pdf/mal33179.pdf>
12. <http://faolex.fao.org/docs/texts/mal91728.doc>
13. <http://faolex.fao.org/docs/texts/mal33595.doc>
14. <http://faolex.fao.org/docs/pdf/mal38500.pdf>
15. [http://www.paclii.org/pg/legis/consol\\_act/caa1978203/](http://www.paclii.org/pg/legis/consol_act/caa1978203/)
16. <http://faolex.fao.org/docs/texts/png51670.doc>
17. [http://www.paclii.org/pg/legis/consol\\_act/ea2000159/](http://www.paclii.org/pg/legis/consol_act/ea2000159/)
18. <http://www.senate.gov.ph/lisdata/110309779!.pdf>
19. <http://www.senate.gov.ph/lisdata/89037444!.pdf>
20. [http://www.paclii.org/sb/legis/num\\_act/ea1998159/](http://www.paclii.org/sb/legis/num_act/ea1998159/)
21. <http://www.parliament.gov.sb/files/legislation/Acts/2010/Protected%20Areas%20Act%202010.pdf>
22. <http://www.pso.gov.sb/index.php/the-news/95-protected-areas>
23. <http://faolex.fao.org/docs/texts/tim53330.doc>
24. <http://www.unmit.org/legal/RDTL-Law/RDTL-Decree-Laws/Decree%20Law%20%205-2011.pdf>
25. <http://www.laohamutuk.org/Agri/EnvLaw/div/LHSubDNMABiodiversityApr2012En.pdf>; <http://www.laohamutuk.org/Agri/EnvLaw/div/LeiBiodiversidadeMar12En.pdf>
26. <http://www.laohamutuk.org/Agri/EnvLaw/2012/BasicEnvLawCoMApr2012En.pdf>

## ANNEX 8: INTERNATIONAL MPA CONSERVATION COMMITMENTS

The 2<sup>nd</sup> Worlds Parks Congress (1972), the First Marine Parks Conference in Tokyo (1975) and several other events in the 1970s brought attention to MPAs that were sponsored, in part, by the United Nations Environment Programme (UNEP) and International Union for Conservation of Nature (IUCN) and helped catalyze the designation of national MPAs in one form or another during the 1970s and 1980s. More recently, the Convention on Biological Diversity (CBD) has required all Parties to establish protected areas that are planned and managed as a system or network. Specifically, the need for systems of MPAs was recognized in 1988 at the 17<sup>th</sup> IUCN General Assembly and at the 4<sup>th</sup> World Parks Congress in 1992. Conservation commitments for MPA development in the countries party to the agreement (Indonesia, Philippines, Malaysia, and Papua New Guinea) are clearly articulated within two international agreements:

1. The commitments by world leaders at the 2002 World Summit on Sustainable Development (WSSD) emphasized the need to maintain the productivity and biodiversity of important marine and coastal areas, setting a target date of 2012 for the establishment of representative MPA networks based on scientific information and consistent with international law.
2. At the IUCN World Parks Congress in 2003, the Durban Action Plan called upon the international community as a whole to “establish by 2010 a global system of effectively managed, representative networks of marine and coastal protected areas, consistent with international law and based on scientific information”. At the Congress, there was also a recommendation that the network “should be extensive and include strictly protected areas that amount to at least 20–30% of each habitat, and contribute to a global target for healthy and productive oceans” (IUCN 2003).

Finally, at the 7<sup>th</sup> meeting of the Conference of the Parties to the CBD (COP7) in 2004, parties committed to the target in the WSSD Plan of Implementation to establish and maintain by 2012 comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas. COP7 also set a target, endorsed at COP8 in 2006, that there should be effective conservation of at least 10% of each of the world’s ecological regions by 2010.

Now, the CTI-CFF has mandated the design and establishment of the CTMPAS as a target under *Goal 3: Marine protected areas (MPAs) established and effectively managed* of the 10-year Regional Plan of Action signed in 2009 by its six member-countries.





The sheer number and variety of MPAs in the Coral Triangle countries, combined with increasing pressure from the region's rapidly expanding and culturally diverse populations, makes the management of coastal activities for sustainable use extremely challenging.

This document defines a collaborative structure and agreed approaches (Framework) and a roadmap of next steps (Action Plan) for the CT6 and partners to navigate these challenges through 2020.



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