CORAL TRIANGLE INITIATIVE
ON CORAL REEFS, FISHERIES AND FOOD SECURITY

REGIONAL EXCHANGE PROGRAM ACTIVITY REPORT

MONITORING & EVALUATION FOR IMPROVING MPA MANAGEMENT EFFECTIVENESS IN THE CORAL TRIANGLE COUNTRIES

MAY 8-13, 2011 (BATANGAS, PHILIPPINES)

USAID | ASIA
FROM THE AMERICAN PEOPLE

CTSP
Coral Triangle Support Partnership

CORAL TRIANGLE INITIATIVE ON CORAL REEFS, FISHERIES AND FOOD SECURITY

REGIONAL EXCHANGE PROGRAM ACTIVITY REPORT

MONITORING & EVALUATION FOR IMPROVING MPA MANAGEMENT EFFECTIVENESS IN THE CORAL TRIANGLE COUNTRIES

MAY8-13, 2011 (BATANGAS, PHILIPPINES)

Prepared for the US Agency for International Development

By Tetra Tech ARD, Inc. under Contract No. EPP-I-00-06-00008-00

US CTI Support Program Document No. 06-USCTI-11

CONTENTS

ACRONYMS

ARCBC	ASEAN Regional Centre for Biodiversity Conservation
BERT	Batangas Environment Response Team (Philippines)
BMS	Biodiversity Monitoring System
CBD	Convention on Biological Biodiversity
CCA	Climate change adaptation
CCEF	Coastal Conservation and Education Foundation
CCG	Climate Change Group of CTI NCC-Timor-Leste
CFF	Coral reefs, fisheries and food security
CI	Conservation International
CRMB	Coastal Resource Management Board (Batangas, Philippines)
CT	Coral Triangle
CT6	CT Countries (Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Islands, and Timor-Leste)
CTC	Coral Triangle Center
CTI	Coral Triangle Initiative
CTMPAS	Coral Triangle Marine Protected Area System
CTSP	Coral Triangle Support Partnership (USAID/Asia)
DENR	Department of Environment and Natural Resources (Philippines)
DK	Don't know (as used on the Indonesia MPAME Tool)
EAFM	Ecosystem approach to fisheries management
EARW	East Asia Regional Workshop of ICRI
EAS	East Asian Seas
EcoGov2	Philippine Environmental Governance Project-Phase 2
EO	executive order (Philippines)
FGD	focus group discussion
FSPI	Foundation of the Peoples of South Pacific International
GBRMP	Great Barrier Reef Marine Park
GEF	Global Environment Facility
GERUSA	Gella-Russell-Savo natural resource management network
ICM	Integrated coastal management
ICRI	International Coral Reef Initiative
IEC	Information, education, and communication
IUCN	International Union for the Conservation of Nature
km	kilometer
LGU	Local government unit
LIPASECU	Libertad, Pandan, Sebaste, Culasi (an association of municipalities in Antique, Philippines)
LMMA	Locally Managed Marine Area
M&E	Monitoring and evaluation
MEAT	Management Effectiveness Assessment Tool
MEP	management effectiveness planning (Timor-Leste)

METT	Management Effectiveness Tracking Tool
MFARMC	Municipal Fisheries and Aquatic Resources Management Council
MM	Ministerial Meeting
MPA	Marine Protected Area
MPAME	MPA management effectiveness
MR-REC	Marine Reserve-Resource Executive Committee (Batangas, Philippines)
MSN	MPA Support Network
NA	Not applicable (as used on the Indonesia MPAME tool)
NCC	National CTI Coordinating Committee
NGA	National Government Agency
NGO	Non-governmental Organization
NIPAS	National Integrated Protected Areas System (Philippines)
NOAA	National Oceanic and Atmospheric Organization (US)
NPOA	National Plan of Action
OSPAR	Oslo-Paris Convention for the Protection of the Marine Environment of the Northeast Atlantic
PAMB	Protected Area Management Board
PAWB	Protected Areas and Wildlife Bureau (Philippines)
PEMSEA	Partnership in Environment Management for the Seas of East Asia
PENRO	Provincial Environment and Natural Resource Office
PhilReefs	Philippine Coral Reefs Information Network
PI	Program Integrator (for USAID/Asia US CTI Support Program)
PNG	Papua New Guinea
PO	people's organization
RPOA	Regional Plan of Action
SILMMA	Solomon Islands LMMA
SOM	Senior Officials Meeting
SPSTI	Samahang Pangkaunlaran ng San Teodoro, Inc. (Batangas, Philippines)
TNC	The Nature Conservancy
TWG	Technical Working Group
UPMSI	University of the Philippines Marine Science Institute
US CTI	United States Support to the Coral Triangle Initiative
USAID	United States Agency for International Development
USG	United States Government
VA	Vulnerability assessment
VIP	Verde Island Passage (Philippines)
WB	World Bank
WCPA	World Commission on Protected Areas
WFC	World Fish Centre
WWF	World Wildlife Fund for Nature

EXECUTIVE SUMMARY

The *Coral Triangle Initiative (CTI) Regional Exchange and Workshop on Monitoring and Evaluation for Improved Marine Protected Area (MPA) Management Effectiveness in the Coral Triangle (CT) Countries* was held on May 8-13, 2011. It was hosted by the Government of the Philippines through its CTI National Coordinating Committee (NCC) with assistance from the US CTI Support Program and in coordination with the CTI Regional Secretariat. The purpose of the activity was to address Goal 3 (*MPAs established and effectively managed*) of the CTI Regional Plan of Action (RPOA) and, specifically, to build capacity for effective management of the CT MPA System (CTMPAS). The US CTI Support Program Regional Activities for 2011-13 aim to support one regional collective action through developing the regional MPA system, and one parallel activity that focuses primarily on national settings but links through common elements into a regional program by contributing to:

- Action 1 (*Jointly establish overall goals, objectives, principle, and operational design elements for a CT MPA System centered around priority MPA networks*) and
- Action 3 (*Build capacity for effective management of the CTMPAS*).

The Regional Exchange, the second of two CTI regional exchanges so far organized by the USCTI Support Program that focused on MPAs, consisted of five days of workshops and expert and case study presentations, and included a visit to a functional MPA to test tools for assessing management effectiveness. It was attended by 40 participants, including 25 official delegates from the six CTI member countries (CT6), namely, Indonesia, Malaysia, Papua New Guinea (PNG), the Philippines, Solomon Islands and Timor-Leste.

The first MPA regional exchange was held in Phuket, Thailand in June 2010, and tackled MPA network and system design and operations. That activity produced the following results:

1) A collective review of the current principles, objectives, models and regional case studies of MPA networks;
2) The practical application of common network principles through the parallel designs of national MPA network pilot sites in each country;
3) The drafting of priority objectives for a CTI Regional MPA System that could eventually be managed cooperatively by the CT countries; and
4) The identification of next steps toward collective efforts on MPAs and MPA networks.

This 2nd Regional Exchange on MPAs was focused on assisting country teams to plan for the establishment or strengthening of national and regional MPA management effectiveness systems that adhere to international standards. The Philippines was chosen as the venue because the country has a functional management effectiveness system in many of its MPAs that offers an opportunity for sharing and learning. The activity engaged experts from the National Oceanic and Atmospheric Administration (NOAA), The Nature Conservancy (TNC), and partner organizations in Australia, the Philippines and Indonesia, who shared information, experiences and knowledge on the different MPA management effectiveness assessment tools being used in various parts of the world, including:

1) World Bank Scorecard to assess progress in achieving MPA management effectiveness goals
2) World Bank/World Wildlife Fund Alliance Management Effectiveness Tracking Tool (Philippine experience)
3) The Great Barrier Reef Outlook Report
4) Guide to Improving MPA Management Effectiveness in Indonesia
5) NOAA National Marine Sanctuary System-wide Monitoring and Sanctuary Condition Report
6) ICRI East Asia's work on MPA management effectiveness
7) MPA competence standards developed by the ASEAN Regional Center for Biodiversity Conservation

8) Oslo-Paris Convention for the Protection of the Marine Environment Guidance on Management Effectiveness
9) Coastal Conservation and Education Foundation MPA Rating System (Philippines)
10) MPA Management Effectiveness Assessment Tool (Philippines)

The country groups looked at these models in order to each choose one or a combination that would be a good fit for their respective countries. They then developed roadmaps outlining the activities that they would need to take to make the system operational based on the specific needs of their MPA systems at various levels of management. The roadmaps are shown below.

In addition to developing the roadmaps, the participants compared notes and exchanged information on the MPA systems operating in their countries. Among the CT6, Indonesia and the Philippines had the most experience in using management effectiveness assessment tools, but even those that had no formal management effectiveness systems realized from their discussions with the experts and other delegates that they already had some essential elements in their MPA systems that they could build on to develop their own management effectiveness programs.

The following CTI concerns were also discussed during plenary and in other side conversations with some members of the resource team:

1) *How to integrate climate change adaptation (CCA) and ecosystem approach to fisheries management (EAFM) into resilient MPA network design principles* – This discussion was premised on the application of EAFM, CCA and MPA networks as an integrated strategy for the Coral Triangle, a key objective of the USCTI. It was included in the agenda to generate participant feedback on a draft report which aims to define a set of MPA network design principles that integrates fisheries and climate change objectives and is applicable for use by the CT6 in the regional (CTI) context. The report's focus on the biophysical aspects of MPA management and the exclusion of socioeconomic concerns and any link to enforcement or policy generated the most comments from participants, who underscored the importance of these aspects of the MPA system especially at the local government and community level. It was explained that the intention is only to provide some guidance on the biophysical elements based on information at the regional scale that may not be as easy to generate locally as the more country-specific or site-specific policy, enforcement and socioeconomic aspects of management.

2) *CTI MPA Learning Network* – This was a key outcome of the 1st Regional Exchange on the design and operation of the CTI Regional Learning Network Planning Meeting held in March 2011 in the Philippines, which identified MPAs as one area of focus of the CTI learning network process. The discussion started with a presentation that explained the CTI MPA Learning Network, the work done so far and steps that still need to be taken to make it happen. Participants were keen to start up the network and insisted that, while taking the formal route to get the CTI ministers' stamp of approval on the MPA Learning Network proposal paper, the Coral Triangle Center (CTC) can "start coordinating with organizations within the region." It was agreed at the Regional Exchange in March 2011 that the CTC would take the lead in the development of the Network.

COUNTRY ROADMAPS

The following roadmaps (reproduced here with minimal editing) will be presented to the NCC and MPA technical working group (TWG) in the respective CT6 countries, and will be used for the development and adoption of MPA effectiveness systems appropriate for each country.

Indonesia

Network/system: Nation-wide system ME Model: Model 3 (based on programmatic standards)			
Development steps	TIMELINE		**Notes**
Legal basis	Done		Laws and regulations.
Standardization	START END	2008 2011	Guidelines, standard operating procedures, etc.
Adoption by government	2012		MPAME Guide
Capacity and awareness building	2012 2013		Training, technical assistance, dissemination (regional government)
Implementation	2012 2013		Funding, dedicated team, list of MPAs (regional government)
M&E (system improvement)	2012		Adaptive management
Reporting	2013		External (regional/international), internal

Additional notes/comments:

1) Legal basis –In Indonesia, it is difficult to talk about any program without an enabling law, because government funding is required for implementation. Fortunately, the enabling laws for a nation-wide management effectiveness program are already in place. These include various fisheries laws (e.g. 5/1990; 31/2004; 60/2007) and coastal management laws (e.g. 27/2007), which provide for management effectiveness.
2) Standardization –The MPAME Guide contains the guidelines that are currently applied nationally, but other guidelines are also being reviewed and may be integrated into the MPAME tool to make it more comprehensive. The development and field testing of standards have been going on since 2008, and are expected to be completed this year. The tool will need government approval, which is targeted for 2012.
3) Capacity and awareness building - Capacity-building at the regional government/local government will take time because the program still has to be approved by the national government to ensure that funding will be available for its implementation. If approval is secured in 2012, capacity building at the regional/local government level can start in 2013.
4) Implementation – A first step toward implementation is to identify the MPAs where the tool will be implemented. Indonesia has estimated to have 13.5 million hectares of MPAs across 60 states, with 15 MPAs under local government authority, 9 under the national government, and 7 under forestry management authority, not counting community-based MPAs managed at the village level. Also, implementation will require a dedicated national coordination team supported by expert groups. Having the laws and management effectiveness standards does not guarantee that implementation will happen. The national coordination team should have the necessary mandate to make sure that implementation is programmed at all levels of government, funded and subsequently implemented.
5) M&E – The primary reason for doing M&E is to improve the management system.

6) Reporting – In addition to international bodies (e.g. CTI and donors), the target audience of MPA management effectiveness report will include the Indonesian president, ministers and other concerned people with authority on this matter.

Malaysia

Network/system: State-wide system – Sabah Parks ME Model: Model 3 (based on programmatic standards)		
Development steps	INDICATIVE TIMEFRAME	**Notes**
Proposal paper presentation and endorsement by the Board of Directors of Sabah Parks	6 months	
Creation of the management effectiveness team - Set up and improve the organizational structure - Design standard management effectiveness method	6-12 months	Approved by management effectiveness team
Preparation for data gathering (including creation of 3 technical groups: biophysical, socioeconomic and governance)	6-12 months	
Field work, data gathering, meeting/workshop with stakeholders	6-12 months	
Gathering of information, data analysis and report writing	6 months	To be outsourced to consultant/s
Submission of draft report to management effectiveness team (management meeting to review report)	3 months	
Roadshow/seminars/workshops, management meeting and preparation of final draft, submission to Sabah Parks Board of Directors for approval	3 months	

Additional notes/comments:

1) The Board of Directors of Sabah Parks is composed of representatives from various ministries who meet two to three times in a year to discuss matters concerning Sabah Parks. They need to approve the proposal before the management effectiveness process can begin, and for this reason, the roadmap does not set specific dates for the planned activities, only an estimate of the timeframe needed to complete each activity. (The timeframes indicated above may overlap).
2) Provisions for adaptive management will be included in the plan and the management effectiveness report.

PNG

Network/system: Kimbe Bay Managed Marine Area ME Model: Model 3 (based on programmatic standards)		
Development steps	TIMELINE	**Notes**
TNC Marine Program Retreat, NCC Meeting	June 2011	Introduction of management effectiveness to project site and at policy level.
Community consultation; Stakeholder workshop	START December 2011 END December 2011	Completion of community consultation; main aim of the consultation is to introduce conceptual framework (Steps 1-5)
Identify and develop review team	March 2012	
Training for review team	May 2012	Develop a work plan at the training
Review team to implement management effectiveness tool (compile biophysical, socioeconomic and governance data; create data management system; create register of governance tools, e.g.. national and provincial laws, policies, management plans, etc.)	December 2012	The review team will be divided into subcommittees to ensure transparency and efficiency
Review team workshop to do assessment, develop scorecard.	April 2013	Same process will be done at the community level and the results communicated to stakeholders as done at the start
Communicate results through consultation.	June 2013	

Additional notes/comments:

1) Budget is not an issue at the moment because TNC is already doing monitoring and evaluation (M&E) in the area and the provincial authority has also allocated some funds for this purpose. But in the long term there is an intention to expand to a national scale, and there is plan to include the program in the budget process.
2) Kimbe Bay is generally the initial focus of marine programs in PNG because it is considered as the country's demonstration site for such programs, and the lessons that are generated there are always shared with other sites. The management effectiveness program should eventually be replicated in other sites, initially perhaps in Manus Province. The tool will also probably be applied by the LMMA network because the management effectiveness team will also involve people who are working in the network.

Philippines

Network/system: Bay-wide MPA network ME Model: Combination of Model 1 (using management objectives), Model 2 (using competence standards) and Model 3 (based on programmatic standards) Objective: To assess management effectiveness of the MPAs in Pandan Bay, Central Philippines		
Development steps	TIMELINE	**Notes**
Creation of management effectiveness team	Feb 2012	Team members: LGU technical staff, DENR, LIPASECU technical staff, etc.
Orientation of respondents/ stakeholders	March 2012	Council members, NGAs, LGUs, municipal technical staff (9 MPAs, 119 hectares)
Distribution of forms and application	March 2012	DENR and UPMSI to facilitate
Data gathering and analysis	May 2012	
Validation	September 2012	
Submission of reports	December 2012	To be submitted to LGUs, council, DENR, MSN (for benchmarking)

Budget item	**Details**	**Amount**	**Source**
3-day orientation workshop (transportation, supplies, accommodations)	35 participants X 3 days X Php1,500 per day	Php250,000	DENR, Provincial Government, external funding (persons involved: council members, Governor, Sangguniang Panlalawigan (Provincial Boards), DENR Regional Directors)

LGU - local government unit; DENR - Department of Environment and Natural Resources; LIPASECU - Libertad, Pandan, Sebaste, Culase (an association of municipalities in Antique, Philippines); UPMSI – University of the Philippines Marine Science Institute; MSN – MPA Support Network

Additional notes/comments:

1) The roadmap is very specific to Pandan Bay because the MEAT is already being implemented in several sites in the Philippines and this is one site where the tool has not been implemented.
2) Budget specified is only for the first activity (3-day orientation workshop for respondents/stakeholders) outlined in the roadmap.

Solomon Islands

Network/system: Solomon Islands Locally Managed Marine Areas (SILMMA) ME Model: Twin Rocks model (based on management objectives) and Indonesia MPAME scorecard (based on programmatic standards)			
Development steps	T I M E L I N E	**Notes**	**Budget**
Submission of report to NCC			TNC, CTSP
Formalization of MPA TWG (NCC)		To support SILMMA (Core team, MPA Regional Exchange Partners)	
Consultation with SILMMA	June 2011		
Development of management effectiveness model/system for CTSP integration sites		2-day workshop will be conducted, probably facilitated by a consultant, to identify information needs; sustainable financing included in the plan	CTSP?
Presentation of outcome to NCC by MPA TWG of the NCC	October 2011	SILMMA, WWF and FSPI	
Training for data collectors and MPA managers		FSPI, WWF, WFC at integration sites	FSPI?
Collection and evaluation of data; development of database	To be confirmed after development of plan	SILMMA to host information; technical assistance required to setup database	CTSP
Reporting to NCC through SILMMA	2-year reporting cycle	National, provincial, communities (GERUSA and Gizo), NGOs (WWF, FSPI, WFC, etc.), donors.	
M&E	Ongoing	SILMMA	

FSPI – Foundation of the Peoples of the South Pacific International; WFC – World Fish Center; GERUSA – Gella-Russell-Savo natural resource management network

Additional notes/comments:

1) SILMMA is the social network of all MPAs in the Solomon Islands.
2) Some aspects of the models are not applicable to the local setting in the Solomon Islands and will have to be adapted to specific site requirements.
3) The plan has to be approved by the NCC before it can be implemented in the integration sites.
4) M&E results will input into an adaptive management process.

Timor-Leste

Network/system: National Park – Niño Konis Santana ME Model: "Twin Rocks model" (based on management objectives)			
Development steps	TIMELINE		**Notes**
Management effectiveness team meeting	June 2011		NCC, CCG, MPA TWG, stakeholders
Gathering of information	START END	July 2011 August 2011	MPA MEP Team
Formulate workplan	September 2011		
Consultations	START END	October 2011 December 2012	
Review and finalize	START END	January 2012 February 2012	Workshop (stakeholders)
Approval	March 2012		Concerned ministries
Implement	START END	April 2012 April 2013	MPA MEP Team
Monitoring	3 / month		
Evaluation	1 / year		

CCG – Climate Change Group; MEP – management effectiveness planning

Additional notes/comments:
Before it can be tested and implemented and to ensure funding, the plan will need approval from government.

Next Steps

The MPA workshop provided the opportunity for each country to assess the status of MPA management effectiveness systems in each country and to determine critical next steps as shown in the roadmaps to move the process of development forward in 2011 and beyond. The Resource Team also recommended the following "next steps" for the country teams to follow:

1) Build standardization into roadmaps so that the management effectiveness models can be integrated at a national scale (it may be difficult to do the standardization and integration when the management effectiveness plans are already finalized and approved."
2) Field test models as soon as practicable. The sooner the model is field-tested, the sooner it is going to evolve into something useful. It is wise to think ahead and get the management effectiveness process in the budget cycle as early as possible -- ideally for some countries supported by CTSP, the proposals must be ready by the end of May of each year to be considered for funding the following year.
3) Keep respective NCCs informed of what you are doing. This will help you get more national support.

Another Regional Exchange on MPAs (focused on the Coral Triangle MPA System) is planned before the end of 2011 and a follow-up workshop is planned for 2012.

I. INTRODUCTION

The 2nd Coral Triangle Initiative (CTI) Regional Exchange on marine protected areas (MPA) tackled assessment tools that the six CTI countries (CT6) – namely, Indonesia, Malaysia, Papua New Guinea (PNG), the Philippines, Solomon Islands and Timor Leste – can use to evaluate the effectiveness of MPAs in their respective jurisdictions. The activity was held in Mabini, Batangas, Philippines on May 8-13, 2011 and hosted by the Government of the Philippines through its CTI National Coordinating Committee (NCC) with assistance from the US CTI Support Program and in coordination with the CTI Regional Secretariat.

In general, the MPA Regional Exchanges are designed to address the CTI Regional Plan of Action (RPOA) Goal 3 (*MPAs established and effectively managed*) and, specifically, to build capacity for effective management of the CT MPA System (CTMPAS). The US CTI Support Program Regional Activities for 2011-13 aim to support one regional collective action through developing the regional MPA system, and one parallel activity that focuses primarily on national settings but links through common elements into a regional program by contributing to:

- Action 1 (*Jointly establish overall goals, objectives, principle, and operational design elements for a CT MPA System centered around priority MPA networks*) and
- Action 3 (*Build capacity for effective management of the CTMPAS*).

Action 1 was prioritized at the May 2010 *CTI Regional Priority Actions and Coordination Workshop,* with the following action objective defined:

- Conduct workshop(s) to establish the goals and operational design for a CTMPAS (Preparation includes National workshops, Regional workshops, CT6 focal points, Collaboration between regional scientists and CT6).

The first regional exchange responding to this action objective was held in Phuket, Thailand, in June 2010. That activity producedthe following results:

5) A collective review of the current principles, objectives, models and regional case studies of MPA networks;
6) The practical application of common network principles through the parallel designs of national MPA network pilot sites in each country;
7) The drafting of priority objectives for a CTI Regional MPA System that could eventually be managed cooperatively by the CT countries; and
8) The identification of next steps toward collective efforts on MPAs and MPA networks.

Organized by the US CTI Support Program and engaging experts from the National Oceanic and Atmospheric Administration (NOAA), The Nature Conservancy (TNC), and partner organizations in Australia, the Philippines and Indonesia, this 2nd Regional Exchange on MPAs was focused on assisting country teams to plan for the establishment or strengthening of national

Participants at the Regional Exchange on Monitoring & Evaluation for Improving MPA Management Effectiveness in the Coral Triangle Countries, held on May 8-13, 2011, in Batangas, Philippines. (Photo: US CTI PI/A Sia)

and regional MPA management effectiveness systems that adhere to international standards. The Philippines was chosen as the venue because the country has a functional management effectiveness system in many of its MPAs that offers an opportunity for sharing and learning.

The Regional Exchange consisted of five days of workshops and expert and case study presentations, and included a visit to a functional MPA to test tools for assessing management effectiveness. It was attended by 40 people representing the CT6 and CTI development partners. The CT6 were officially represented by25 delegates, most of them government managers and staff involved in MPA work in their respective countries.

OBJECTIVES AND EXPECTED RESULTS

As a follow-through activity of the regional initiative to establish the CTMPAS, this 2nd MPA Regional Exchange was designed to provide input for planning and training that will transfer a consistent set of core tools on improving management effectiveness to on-site managers of MPAs and networks. The specific objectives were:

1) Provide participating teams from the CT6 countries with concepts, models, lessons and approaches for the development and operation of effective MPAs, networks and systems in their countries and at a regional scale.
2) Share experiences and learn from other CTI countries about development and implementation of MPA effectiveness monitoring protocols.
3) Develop and test a MPA monitoring and evaluation (M&E) system in one MPA in the Philippines to inform the development of an effectiveness monitoring tool for each country.
4) Develop an activity design or draft next steps based on the lessons learned that will guide the 3rd Regional MPA Activity on the development of the CTMPAS in follow up to the first Regional Exchange conducted in Phuket, Thailand on June 2010.

There were four target results:

1) Understanding of currently accepted concepts, models, lessons and approaches in MPA management that may be applicable in the development and operation of effective MPAs in each of the CT6 countries as well regionally.
2) A tested MPA M&E system that could help to inform the development of an MPA effectiveness tool for each country.
3) A draft field-tested roadmap or activity design for each country outlining the next steps toward monitoring and improving MPA effectiveness.
4) Draft next steps based on the lessons learned to help guide the 3rd Regional MPA Activity on the development of a CTMPAS.

The roadmaps will be presented to the National CTI Coordinating Committee and MPA technical working group in the respective CT6 countries, and will be used for the development and adoption of MPA effectiveness systems appropriate for each country.

II. SESSION PROCEEDINGS

The overall design and conduct of the workshop was facilitated by **Dr. Alan White**, Lead for MPA Regional Theme for USCTI from TNC, and **Ms. Anne Walton**, Program Director of the International MPA Capacity Building Program at NOAA, with support from the MPA Regional Exchange Planning Team. The workshop sessions were organized so that each session would build on the outputs of the sessions preceding it. Most of the sessions involved breakout group discussions, but expert presentations were also included to help guide the discourse. A trip to Twin Rocks, Mabini, Batangas, Philippines was included in order to field-test some effectiveness M&E tools in a functional MPA.

Day1, 8May 2011

OPENING SESSION

Ms. Lynette Laroya, Senior Ecosystems Management Specialist of the Protected Areas and Wildlife Bureau (PAWB) at the Philippines' Department of Environment and Natural Resources (DENR), who represented **DENR Undersecretary and NCC-Philippines Chair Manuel Gerochi, officially opened** the workshop at 9:00a.m. In a speech she read in behalf of Mr Gerochi, Ms. Laroya noted that the workshop venue was "situated in one of the most important parts of the world, the Verde Island Passage (VIP), which is known as the center of the center of marine shorefish biodiversity." She urged the participants to "continue to be proactive in our pursuit of accomplishing the goals of the CTI," and reminded them that the results of the workshop would be reported in the 7th Senior Officials Meeting (SOM7) and Ministerial Meeting (MM) scheduled for June 2011.

Batangas Environment and Natural Resources Officer Luis Awitan officially welcoming participants at the 2nd CTI MPA Regional Exchange in Batangas, Philippines.(Photo: US CTI PI/A Sia)

Speaking in behalf of USAID/USCTI, **Mr. Maurice Knight**, Chief of Party of the Coral Triangle Support Partnership (CTSP, noted that while there were many MPAs covering millions of hectares in the CT6 countries, less than half are managed effectively. "This Regional Exchange aims to talk about management effectiveness, which is something that the countries are struggling with right now," he said. "We are working here on something that's not only good for the CT region, but also for others outside CT."

Mr. Luis Awitan, Environment and Natural Resources Officer of the Batangas Provincial Government, officially welcomed the participants in behalf of Batangas Governor Vilma Santos-Recto. He outlined the Provincial Government's coastal resource management (CRM) program, which he said is a priority of the province. "Under our habitat restoration and management program, we are focusing on the establishment of MPAs, and under our fishery protection and management program, we are strengthening fisheries law enforcement," he related. "We have at present a total of 35 MPAs with a combined area of around 1,600 hectares in nine municipalities and one city." He acknowledged the support of Conservation International (CI), a member of the CTSP, "and other

partners in the establishment, expansion, re-delineation and management of our MPAs." Stressing that the management of the MPAs still needs to be improved through capacity building and logistical support, he concluded: "We consider this workshop a very important opportunity to learn how to more effectively manage and sustain our MPAs."

Mr. William Jatulan, Technical Specialist from the PI, segued into the workshop proper by presenting the course overview and workshop flow. "You will be exposed to how MPAs are managed across the CT6 in general, share experiences and learn from each other how to develop effectiveness tools that can help you achieve the objectives of your management plan," Mr. Jatulan said. The 5-day course consisted of plenary presentations and breakout discussions, including exercises and a field trip designed "to test MPA effectiveness assessment models and adapt and customize them to fit the needs of your localities." Mr. Jatulan described the workshop flow as follows:

Day 1 Expert presentations and case studies to promote understanding of the concepts, approaches and lessons from the field on MPA effectiveness.

Day 2 Expert presentations and exercises to develop an MPA M&E and adaptive management program.

Day 3 Site visit to Twin Rocks MPA to ground-truth/test assumptions made in building an M&E program.

Day 4 Presentation of the Indonesia MPA Management Effectiveness (MPAME) model, a protocol developed for use in Indonesia for self-assessment at the MPA site level; case studies; and group exercises to develop MPA scoring systems appropriate for use by each of the CT6.

Day 5 Development of an MPAME program for each country based on the results of the field testing of M&E tools and using information from the proceedings in Days 1-4.

SESSION 1. OUTCOMES FROM THE DESIGN AND OPERATIONS OF MPA SYSTEMS/NETWORK WORKSHOP (THAILAND, 2010)

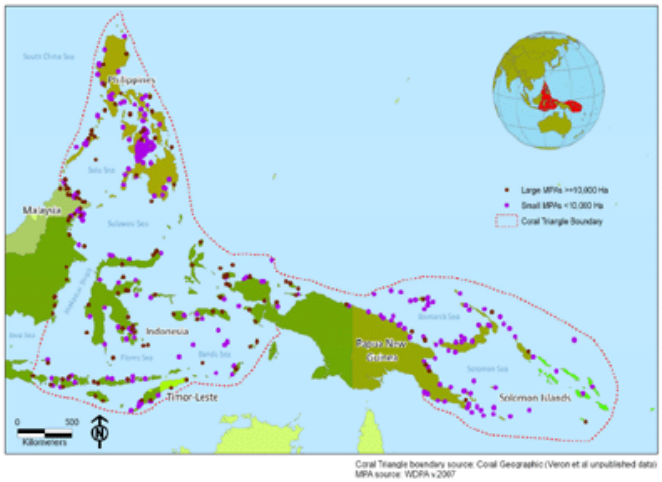
The objective of this session was to lay the groundwork for understanding the importance and added value of working together as a network/system of MPAs, which is a foundational piece in moving forward on the CTI goal of establishing a system-wide management effectiveness program. The session consisted of a plenary presentation by Dr. White on the results of the 1st CTI Regional Exchange on MPAs held in Phuket, Thailand in June 2010, which tackled the design and operations of MPA Systems/Networks. The presentation was followed by a panel discussion focused on the following topics: 1) Status of MPA networks by country; 2) Development of CTMPAS: Description, principles, sites; 3) Lessons learned in the development of MPA networks; and 4) Need for MPA management effectiveness.

In his presentation, **Dr. White** described the **backdrop to the CTI RPOA Goal 3 on MPAs in general, and this 2nd MPA Regional Exchange, in particular**."There are more than 1,500 MPAs throughout in the CT6, and fisheries production is quite high on the list of MPA objectives, which is why, in the Philippines, MPAs are usually called fish sanctuaries. The other objective is to generate income for communities through the development of coral reef tourism," he said. And although biodiversity may not be the highest priority for communities, it is the underlying theme for CTI, Dr. White pointed out. "This is one reason why we are focused on the CT to begin with," he said, noting that the CT Region holds the world's richest coral reef system, including one-third of the world's coral reefs and 75% of known coral species (about 600 species).

Such biodiversity is under threat from severe fishing pressure, Dr. White said. "Catch per unit effort in the region was about 40kg in the 1940s; in 2000, it was 2kg, and this is pretty much the case in most countries," he related.

"Overfishing increases the pressure on reefs because it decreases the number of herbivores in the reef community, and this is happening throughout the region."

The CTI goal is to develop networks of MPAs, "not just lots of small, individual MPAs but MPAs networked together to provide ecological support," Dr. White said. "We're not very far along in developing networks – there's still a long way to go."



MPAs in the Coral Triangle region (Veron et al, unpublished; WDPA v2007)

The benefits of MPAs have been proven throughout the CT region, including increase in relative fish size and abundance and overall greater resiliency in protected and managed reefs. But only 20% of the MPAs in the region are managed effectively, Dr. White noted. "Why is MPA management difficult? Because it involves a lot of dynamics and lots of stakeholders, and therefore it is complicated. We now understand how MPA systems work better than ever, but we need to learn more in order to make them more effective," he added.

One of the CTI RPOA's five goals for 2020 is a region-wide CTMPAS. "This is why we set up the MPA Regional Team, which is tasked with two major activities," Dr. White explained. One activity is focused on defining what the CTI MPA goal means, and the other is focused on implementation, "which is why we are here today," he said.

There are three indicators under the CTI RPOA Goal 3. These are 1) percentage/area of total marine and coastal habitats in some form of protected status by habitat type; 2) percentage/area of each major marine and coastal habitat type in strictly protected "no-take replenishment zones"; and 3) percentage/area of total marine protected areas under effective management within each country.

The first CTI Regional Exchange on MPA held in Phuket, Thailand in June 2010 resulted in the development of a roadmap, which outlined the following objectives for the CTMPAS:

1) Improve management / use of resources
2) Manage and protect a high percentage of all critical habitats required by species.
3) Develop a regional system of MPAs resilient to climate change and other threats.
4) Collaborate on research, capacity development and knowledge management for the design /implementation of MPA networks.
5) Provide decision makers, stakeholders and supporters the necessary knowledge to commit to design, implementation and management of MPAs and networks, and for policy development.
6) Adopt common principles for effective MPAs and networks that can be implemented according to needs of each country.

This second Regional Exchange was another step in the CTI's continuing effort to develop the CTMPAS, focused in particular on Indicator 3)%/area of total marine protected areas under effective management within each country. "We have to define what effective management means for each country and develop consistent standards," said Dr. White. "We will discuss all this in this forum

this week, as well as explore areas where the USCTI can help in advancing the work toward the CTMPAS."

Dr. White outlined USCTI's strategies for 2011-13 to support the development of CTMPAS and resilient MPA networks, highlighting in particular the development of the CT Atlas (http://ctatlas.reefbase.org) to provide information management support, including maps that show the ecological interconnections in the CT region.

Dr. White also underscored the need to integrate MPAs into the overall CT management system. "Here we are going to talk about MPAs, but remember that MPAs are just one approach to management – they must be part of integrated/ecosystem-based management systems with interventions tailored to local conditions," he said.

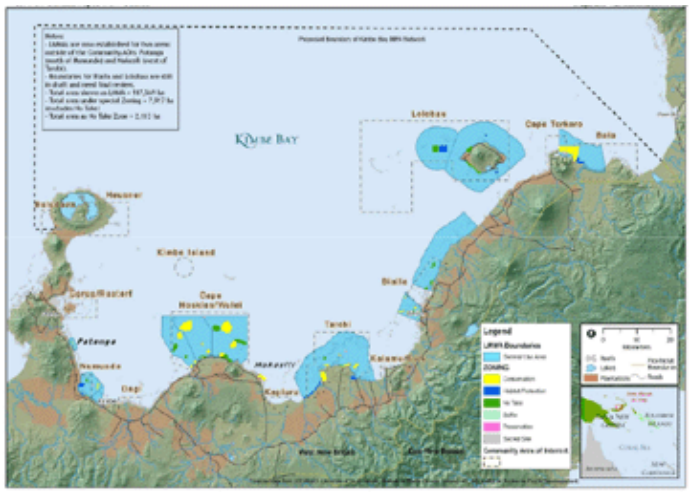
To support the CTMPAS, USCTI is targeting the following outcomes by 2013:

1) Learning and information networks strengthened – MPA learning network active for CTMPAS and MPAME System
2) MPA system framework developed and endorsed – CTMPAS defined through agreement and use of best practices; CTMPAS described and refined through CT info system (CT Atlas); and analytical tools applied to refine designs and track MPA progress
3) MPA management capacity increased -- Personnel capacity improved in design, implementation and MPAME.
4) MPA effectiveness improved in priority geographies – MPAME system shared with MPA networks and operating in one MPA network per country; and MPAME system endorsed and functional in Indonesia and the Philippines, and initiated in Malaysia, Timor Leste, Solomon Islands and PNG.

In the ensuing **panel discussion**, the country delegations shared information that highlighted the many different practices and levels of MPA management in the CT region:

1) The **Solomon Islands** delegation reported that much of the MPA work in their country has been focused on the Solomon Islands Locally Managed Marine Area (SILMMA). "There is a gap between the national level and communities in the management of the SILMMA, and we are bringing in the provincial governments to bridge that gap," they said. "We're establishing a social network that would link national level policy-making and funding and community level management and implementation through the provincial governments. Right now, we're focusing on one province but we plan to share the experience with the other provinces." The national government will serve as the "umbrella organization" to coordinate management or pool resources for the SILMMA, they added in response to Ms. Walton's comment that "functionally, you have two separate networks" and her recommendation to use one standard management effectiveness monitoring program to provide synergy between the two networks. "It's nice to be able to tell the story of the whole country and still retain the two levels," said Ms. Walton.
2) "We are a new country, we're just starting, and so far we have only one national park," a **Timor-Leste** delegate reported. "We would like to establish another MPA, so we hope to learn from this Regional Exchange. We are also hoping that we can help toward the establishment of the Lesser Sunda Eco-region, and be a part of that system with Indonesia."
3) **Malaysian** delegates said there were two management approaches that were in place in the country. "In the east, in peninsular Malaysia, we have more than 40 islands that are considered as marine parks and they each have a management committee," they noted. "But in Sabah, we have five parks managed by one agency – Sabah Parks – under the state of Sabah."
4) Like in the Solomon Islands, MPAs in **PNG** are locally managed marine areas, so current efforts are focused on working with communities toward networking. "We're here because we want to get some ideas on how we should deal with our own issues, and our main challenge is how to go about addressing ownership issues, how to accommodate tribal laws in our national legal system. We have to make sure that the mechanism we develop follows

the prescription of the law," the PNG delegates explained, adding: "We are a department, but it's not possible for us to do everything. We don't have the tools or expertise, so we work with NGOs that can provide us the assistance we need."



Kimbe Bay (PNG) network of marine areas

5) "We now have 13.5 million hectares of MPAs," **Indonesian** delegates reported. "We also want to develop a network of MPAs in Lesser Sunda, where we want to apply standards for management effectives." Indonesia has developed a method for calculating management effectiveness levels that has been tested in some of its existing MPAs.
6) Different management effectiveness assessment tools are also now being implemented in the **Philippines**, including an MPA Rating System developed by the Coastal Conservation and Education Foundation (CCEF), the Management Effectiveness Tracking Tool (METT) designed by World Bank (WB) and World Wildlife Fund (WWF) for Global Environment Facility (GEF) projects for protected areas, and the Management Effectiveness Assessment Tool (MEAT) that was developed by the USAID Environmental Governance Project (EcoGov2) based on CCEF's MPA Rating System. The Philippine delegation noted that the development of MPA networks in the country "actually started with social networks involving clusters of municipalities who worked together to manage their MPAs, but it is now moving toward the establishment of biological networks."

SESSION 2. PURPOSE AND NEED FOR SETTING STANDARDS FOR MANAGEMENT EFFECTIVENESS AT THE NETWORK LEVEL

This session consisted mainly of a plenary presentation and discussion designed to develop a basic understanding of "all the moving parts" of a management effectiveness program. In her presentation, **Ms. Walton** explained the **importance of evaluating the effectiveness of MPAs and what setting up a management effectiveness program might entail**.

Measuring management effectiveness gives an indication of how well management strategies are achieving the stated management objectives of an MPA, said Ms. Walton. "It enhances priority setting, by telling you what's important and what you need to address; improves project planning; and promotes internal and external accountability, and adaptive management," she elaborated.

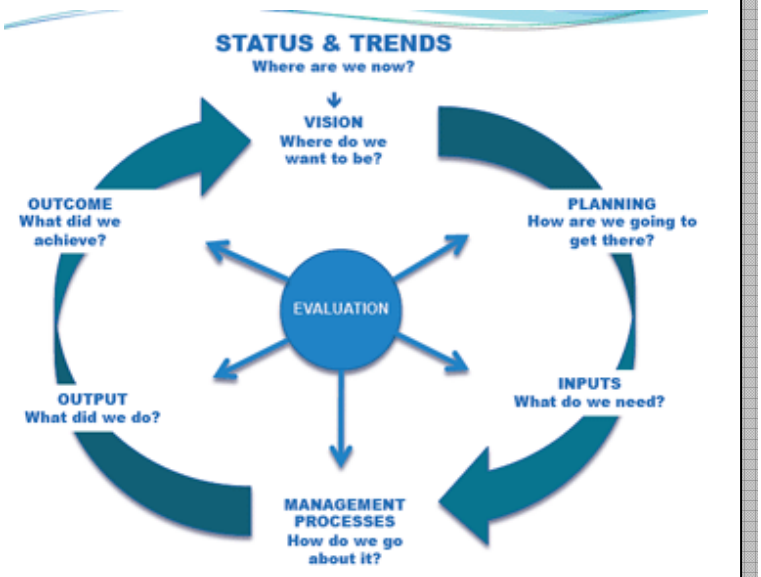
A typical MPA management effectiveness program would evaluate the following:

1) MPA management structure (Is it bottom up or top-down or a combination of structures? Is it working?)
2) Outcomes of management actions (Are the objectives being achieved?)
3) Staff competency (Does the MPA staff have a level of competency to address management issues?)
4) Site capacity (Are the biological objectives being met?)
5) Overall state of conservation of the MPA or network of MPAs.

Ms. Walton noted that staff competency is "a new area that some MPAs are starting to look at, to evaluate whether we have the level of competency within our staff to address our management issues." She added that "sometimes evaluating staff competency seems to be a frightening prospect,

but it shouldn't be. What it is really is making a profession out of MPA management so that the people responsible for the MPA have the management skills needed to make it work."

Relating her experience as MPA management plan coordinator, Ms. Walton underscored the importance of having an effectiveness management plan from the start. "For five years we didn't spend time on management effectiveness and when we went back and said we needed to set up a management effectiveness plan, they literally shut the door on our face," she recalled. "It is not too early to do a management effectiveness plan. Now is the time to do it – your MPA management plan and management effectiveness plan can be integrated together."



Elements of a management effectiveness program *(Hockings, et al 2000)*

Ms. Walton also explained the elements of a management effectiveness program, which includes 1) status and trends (Where are we now?); 2) vision (Where do we want to be?) 3) planning (How are we going to get there?) 4) inputs (What do we need?); 5)) management processes (How do we go about it); 6) output (What did we do?); 7) outcome (What did we achieve?).

"If you're doing objectives, they better be measurable," she said. "And when you go into the planning stages, again, you need to evaluate – are these the priorities you really want address? What kind of inputs do you need, what kind of budget or expertise? Then how do you go about implementing your plan so you meet your objectives? How are you going to measure your outputs? Are you doing what your management plan says you should be doing? If not, go back to your management plan and find out why. You go both directions, if necessary – even go all way back to your vision."

Responding to a participant comment about the need to consider "government competency, political will and policy" in the planning process, Ms. Walton said, "You probably don't have the political will, policy, legal framework or authority, but you may not understand it until you implement, so it's good to anticipate that. We found that many times when you think you have a governance issue, the problem is not that you need to change the policy, but that you need to educate the people who make the policy. Very early on, that education should take place."

Another participant asked, "Who should be doing the evaluation?" and Ms. Walton replied, "That's really important, and not just who is doing it but what is being done and who sets the standards? And then everyone has to buy into the standards."

A presenter from the Philippines commented that with regard to setting the standards, "the hard part was getting everyone together, but once they were there, it was easy." Ms. Walton agreed. "It takes three to five years to create management plans, and the first three years is just getting everyone together and getting them to agree. It's the same for management effectiveness plan," she said. "It's not easy, but it builds the foundation for a long-term relationship."

Another participant also suggested that there should be two sets of standards, one at the institutional level and another at the site level. Ms. Walton agreed, "because we are doing networks, we have to agree on standards at two levels. It's not that they are separate, but there are two levels of management."

Another reason for starting a management effectiveness program early is the cost of evaluation, said Ms. Walton. "We don't want to create a whole separate program for your management effectiveness plan, otherwise there would be management costs after management costs," she explained. Costs include: 1) Additional staff time (existing/contract); 2) Evaluation training; 3) Socioeconomics and governance expertise; 4) Senior management/agency buy-in; 5) Data collection resources; 6) Data collection approval; and 7) Budget planning process.

Ms. Walton enumerated the following benefits of having a management effectiveness program:

1) It provides a system for documenting performance.
2) It helps prioritization.
3) It serves as a mechanism for reporting to leadership and stakeholders.
4) It addresses calls for public accountability.
5) It promotes adaptive management.
6) It generates information to guide management.
7) It makes monitoring meaningful by focusing on answering management questions.

She also listed the following considerations in designing assessments:

1. Who will be setting the standards? – Who will be affected? They should all be considered even if they are not part of the decision-making process
2. Who carries out the assessment? Self-evaluation, stakeholder involvement, external assistance.
3. Where will the funding come from? – It's not cheap to bring stakeholders together, but you can start with a small evaluation program.
4. What indicators are needed?
5. How are the data collected? – A common challenge is how to monitor in a data-poor environment. The CT Atlas may be an opportunity to build on existing data.
6. Will a ranking or scoring system be used?
7. How should the assessment be reported?

These considerations will factor in the actual development of management effectiveness models, which Ms. Walton outlined as follows:

1. Selecting indicators (Keep the indicators broad so the framework will not have to be changed when conditions in the MPA change.)
2. Determining what to measure (Measures can be very specific, such as increase in income.)
3. Developing a monitoring program (The monitoring program must be able to measure all indicators.)
4. Evaluating outcomes (Are the results being achieved? The evaluation program itself must be evaluated to ensure that it still fits the management objectives, "because change is inevitable.")
5. Developing adaptive responses (How is management using the evaluation results to achieve its objectives?)
6. Communicating results

There are three categories of factors that influence MPAs and therefore should be monitored. These are 1) Socioeconomic factors (e.g. food security, economic status, markets); 2) Governance factors (e.g. management planning, rules and regulations, legislation); and 3) Biological (e.g. species, community, habitat) and physical (e.g. fishing effort, characteristics of the MPA) factors.

In addition, Ms. Walton noted, there are cultural factors, which sometimes do not really fit into any of the other categories but are increasingly being considered because community-based MPAs are the fastest growing sector in MPA development.

So far, 10 biophysical indicators, 16 socio-economic indicators and 9 governance indicators have been developed, as follows:

1) *Biophysical indicators* – (1) focal species abundance; (2) focal species population structure; (3) habitat distribution and complexity; (4) composition and structure of the community; (5) recruitment success within the community; (6) food web integrity; (7) type, level and return on fishing effort; (8) water quality; (9) area showing signs of recovery; and (10) area under reduced human use/impacts.
2) *Socio-economic indicators* – (1) local marine resource use patterns;(2) local values and beliefs related to the marine resources;(3) level of understanding of human impacts; (4) perceptions of seafood availability;(5) perceptions of local resource harvest;(6) perceptions of non-market and non-use value;(7) material style of life;(8) quality of human health;(9) household income distribution by source;(10) household occupational structure;(11) community infrastructure and business;(12) number and nature of markets;(13) stakeholder knowledge of natural history;(14) distribution of formal knowledge to community; (15) percentage of stakeholder group in leadership positions; and (16) changes in conditions of ancestral and historical sites, features, and/or monuments. (Socioeconomic indicators must be re-examined over time, said Ms. Walton. "We are looking at socioeconomic indicators differently today than in the past.")
3) *Governance indicators* – (1) level of resource conflict;(2) existence of a decision-making and management body;(3) existence and adoption of a management plan;(4) local understanding of MPA rules and regulations;(5) existence and adequacy of enabling legislation;(6) availability and allocation of MPA administrative resources;(7) existence and application of scientific research and input;(8) existence and activity level of community organizations; and (9) degree of interaction between managers and stakeholders. (Governance may be "where we've been most slow in developing indicators," Ms. Walton noted. "It's not just about the legal and policy considerations, but also behavior.")

These indicators were developed based on experience in monitoring management effectiveness at the site level. The challenge, said Ms. Walton, is in the development of national effectiveness standards. "Can we do this at the national level? We see that it's complicated at the site level, how is it going to look like at the network level?" she asked. One thing is certain, she concluded: "Having a management effectiveness plan makes for much more effective management. Instead of having chaos, we can become more aligned."

SESSION 3.STATUS OF MANAGEMENT EFFECTIVENESS PROGRAMS IN THE CT REGION

The objective of this session was to establish a baseline on where the CT6 countries are with regard to management effectiveness programs. It was designed as a "Gallery Walk," where country delegations set up poster exhibits and presented their programs, and participants moved from exhibit to exhibit to learn about the different country programs.

Indonesia's presentation focused on its MPA program, which covers MPAs managed by the national government as well as MPAs managed at the district level, and includes a management effectiveness system that tracks the biophysical, socio-cultural, economic, and governance aspects of MPA management. This management effectiveness system, commonly referred to as the Indonesia MPAME model, would be discussed in much greater detail on Day 4.

The **Philippines** presented results of a study on the effectiveness of MPAs in the country, which showed that the number of functional MPAs increased from 10-15% in 1995 to 20-30% in 2007. The Philippines uses the MPA MEAT and METT to assess the management effectiveness of MPAs in the country. The application of these tools has so far generated the following lessons:

1) Improving MPA effectiveness requires understanding and implementation of good governance of processes, systems and standards.
2) The functionality of MPAs is crucial to see what works based on complementation of enforcement and level of awareness and commitment of stakeholders.
3) Transparency is needed; timely and accurate information creates opportunities for feedback and response and allows adjustments and adaptation to happen.
4) Accountability can be facilitated through incentives and disincentives and stakeholder participation.

Gallery walk (Photos: A Sia, A. Widayanto)

In addition, also from the Philippines, CCEF reported on its MPA Rating System, which has been in place since 2001 and used to track management effectiveness in at least 50 MPAs in three network clusters in the Central Visayas region. A study based on this rating system, which included over 50% of the more than 1,500 MPAs in the country that are listed in a publicly available database maintained by CCEF, resulted in the following findings:

1) Over 50% of the total number of MPAs in the Philippines are rated Level 3 (Enforced) to Level 4 (Sustained), with most MPAs found in Central Visayas.
2) MPA rating levels significantly correlated positively with MPA age.
3) Priority management concern (52.8% of samples) is shown to be "lack of budget" and/or "lack of sustainable financial mechanism."

The report identified the following successes and challenges in the application of the rating system:

1) An MPA M&E system contributes to the number of well-managed MPAs in the country.
2) Participatory processes are important factors to consider in the design and implementation of the M&E system.
3) The collaboration of various sectors (national government, NGOs, local government) is critical to the adoption of one management effectiveness system using an agreed set of standards.
4) The implementation of an MPA M&E program in the Philippines was timely given the growing awareness of government leaders and communities on the need to protect coral reefs and the expanding local government mandate to deliver CRM as a basic service.

There was also a presentation on the VIP, a USCTI integration site in the Philippines where significant progress has been achieved to develop a network of MPAs based on fish larval distribution, abundance and ontogeny.

The **Solomon Islands**' presentation focused on lessons learned from the development of management effectiveness programs based mainly on community-based approaches. The presentation highlighted a number of positive results from the country's experience, including the development of a management plan in each MPA site, national policy support to community-based resource management, and the development of success indicators for monitoring MPA management. But the presentation also noted major challenges, including, among others, lack of sustainable financing, weak enforcement, geographical disparity, climate change impacts, and issues related to customary land tenure.

PNG presented on Kimbe Bay, where there are eight locally management marine areas (LMMA). The LMMAs are managed by site committees, which report to an advisory committee, which in turn is mandated to report to the local level government as provided by law, and each committee has a management plan as well as a monitoring plan. TNC is presently assisting the committees in building the capacity of local monitors and other people who are tasked with surveillance and enforcement. The project follows a six-step process in working with the community. A major challenge is that marine resources in PNG are owned by the communities and not the state, "and there are customary laws that govern ownership of resources and because of economic reasons, people are breaking their traditional laws." In Kimbe Bay, local level laws are used to establish LMMAs.

Malaysia's presentation highlighted the Sabah's management plan for marine parks, which included the following management effectiveness tools:

1) Scientific research and monitoring programs
2) Annual meetings to review/analyze revenue and submission of project proposals every two years
3) Monthly and annual reports from the Park Management and Operation Division
4) Implementation program through the "5-year Malaysian Plan"

Sabah has five marine parks and there is a proposal to establish a sixth park at the northern tip of Borneo, which will potentially be the biggest marine park in Malaysia. All parks in Sabah are under the jurisdiction of the Sabah Parks, which is officially known as "Board of Trustees of Sabah Parks." The report noted that "there are no successes yet, only challenges." The challenges include 1) need to communicate better to "top management" the operational requirements of the marine parks; 2) improper project planning and development; and 3) lack of understanding of the role of MPA networks in marine conservation.

Besides the CT6 countries, **Palau** was also featured in the Gallery Walk. The report from Palau was about a case study on measuring the management effectiveness of MPAs supported by the Micronesia Challenge, a regional inter-governmental initiative in the western Pacific region that aims to facilitate more effective conservation of marine and forest resources in Micronesia. The monitoring tool used is based on Indonesia's MPAME, which was chosen "for its comprehensiveness and for standardization." Various indicators (biophysical and socioeconomic) have been defined, and the evaluation tool is now being tested in Palau and will later roll out in the rest of Micronesia.

SESSION 4.INVENTORY OF EXISTING MANAGEMENT EFFECTIVENESS PLANS

The objectives of this session were as follows:

1) To develop an inventory of the pieces of management effectiveness programs that may already be in place at the site levels in the CT6 countries.
2) To help participants realize that a management effectiveness program "does not need to be developed out of whole cloth."

The inventory was done by country groups, focusing on the following elements of a management effectiveness program:

1) Existing management objectives (setting standards)
2) On-going monitoring plans (measuring change)
3) Indicators of effectiveness (program standards, conservation objectives, skills and knowledge)
4) Existing evaluation systems (internal or external), and
5) Current reporting systems (donor reports, scorecards, stakeholder meetings, online reporting)

Ms. Anne Walton (NOAA) explaining workshop mechanics for Session 4. (Photo: A. Widayanto)

Ms. Walton encouraged the participants, to still identify the pieces that they had even if they did not have a plan. Even as she emphasized the importance of having clear and measurable management objectives – "these are the drivers for everything else that you do" -- she said the exercise was "a brain dump, no need to labor over it." She assured participants: "We're not here to evaluate what you have in any way, we're simply reporting about it."

The following results were presented to plenary.

Indonesia

Management objectives: 1) Sustainable marine ecosystem (biophysical); 2) sustainable fisheries (socioeconomic); 3) Sustainable marine tourism (socioeconomic)

Management effectiveness plan:

<u>Sustainable marine ecosystem</u>

1) Capacity building (ecological monitoring, MPA training, education and awareness)
2) Ecological, socioeconomic and policy monitoring
3) Collaborative surveillance system
4) Development of policies and regulations to provide legal basis for marine ecosystem protection

<u>Sustainable fisheries</u>

1) Development of policies and regulations on fisheries
2) No-take zone monitoring (compliance monitoring)
3) Identification and monitoring of economically important fish species
4) Alternative livelihood development (e.g. mariculture)

<u>Sustainable marine tourism</u>

1) Development of policies, regulations and guidelines on marine tourism
2) Development of marine tourism code of conduct
3) Monitoring of marine tourism impacts
4) Development of marine ecotourism as alternative livelihood

Reporting system: Internal reporting system exists – reports are used as input to the management effectiveness system

Malaysia
Management objectives: To protect and conserve all gazetted protected areas that have the desired geographical, biological and historical features and determined to have national heritage values, in order to 1) protect biodiversity; 2) promote education and research; 3) sustain and improve livelihoods.

Ongoing monitoring programs:
1) Reef check and water quality monitoring
2) Turtle landing and hatchery conservation program
3) Socioeconomic survey (project-based)

Indicators: Not decided yet.
Existing evaluation system: 1) Annual reports; 2) Management plan
Reporting system: 1) Internal meetings and seminars; 2) Stakeholder committee meetings; 3) Publication in scientific journals

PNG delegates (left) with participants from Indonesia (right). (Photo: A Sia)

PNG (Kimbe Bay)
Management objectives: Local communities taking the lead in managing their marine resources in perpetuity.
Socioeconomic objective: Local communities sustainably using their natural resources for improved livelihood.
Biophysical objective: Local communities reducing or managing the threats to improve and maintain the health of Kimbe Bay.
Reporting objectives: Local communities implementing their monitoring and management plans and using the results to inform decision-making at all levels.

Indicators of effectiveness:
1) Self-reliance
2) Socioeconomic balance between population and resources
3) Food security
4) Improved ecosystems and habitats
5) Livelihood diversification
6) Improved reporting systems

Ongoing monitoring program:
1) Community-based biological monitoring for Tarobi, Lolobau, Kulungi, Hoskins/Wutei, Ewasse, Makasili, Isuna'aua, Bubu
2) Socioeconomic monitoring using *SEM-Pasifika: Socioeconomic Monitoring Guidelines for Coastal Managers in Pacific Island Countries*(e.g. market surveys, household surveys, etc.)

Philippines
Management objectives:
Biophysical:
1) Biodiversity conservation to improve habitat health and maintain and protect threatened species populations, sea turtles, marine mammals and reptiles
2) Increase fisheries production by protecting and enhancing remaining fish stocks

Socioeconomic:

1) Improve human well-being by providing more livelihood opportunities and increasing incomes.

Governance:

1) Improve management capacity of local governments and communities.

Cultural:

1) Protect ancestral rights of indigenous peoples

Ongoing monitoring program:

1) Biodiversity monitoring system (BMS)
2) MEAT
3) METT
4) Coral reef monitoring (Uychiaoco, et al, 2010)

Indicators:

Biophysical: Improved habitat health and species diversity, density and biomass

Socioeconomic: Increased income from user fees for ecotourism and fisheries benefits (catch per unit effort); increased livelihood opportunities (e.g. aquaculture)

Governance: 1) Management body; 2) Legal instruments; 3) Management plan; 4) Financing mechanism; 5) IEC; 6) M&E; 7) Enforcement; 8) Site development; 9) Community involvement in planning and management.

Existing evaluation systems:

1) CCEF MPA Rating System (external and internal)
2) MEAT (external and internal)
3) METT (internal only – PAMB)
4) MPA Support Network (MSN, external – national level)
5) GEF Global Database

Current reporting systems:

1) Data consolidation by UPMSI (academe) and MSN
2) Agreement between DENR and MSN to transfer databases
3) Institutionalization of State of the Coasts Reporting in municipal and provincial governments (an initiative of the Philippine Coral Reefs Information Network [PhilReefs] and Partnerships in Environmental Management for the Seas of East Asia [PEMSEA])

Solomon Islands

Management objectives:

Socioeconomic:

1) Long-term improvement of livelihoods and incomes in the Solomon Islands
2) Food security
3) Sustainable economic development
4) Protection of tuna spawning areas and juvenile growth
5) More sustainable live reef food fish trade

Biophysical:

1) Biodiversity conservation
2) Improved status of species (sharks, sea turtles, sea birds, marine mammals, corals, seagrass, mangroves, and other identified threatened species)

Governance:

1) Adaptation to emerging threats
2) Implementation and harmonization of traditional and recent community management and protected areas under national, provincial and traditional governance/management.

Ongoing monitoring program:

1) National:
    a. Fisheries export reporting -- inshore fisheries (bech-de-mer, trochus, corals) and tuna)
    b. SILMMA monitoring protocols -- online communications, meetings and reports
    c. Inshore stock assessment -- quarterly reports
2) Site-based:
    a. Community monitoring plans -- donor reports, meetings

b. Coral reef monitoring (invertebrates and coral species) – donor reports, meetings
c. Spawning aggregation monitoring (reef fish) – donor reports, meetings
d. Seagrass watch -- meetings

Indicators:

Socioeconomic:1) Income increased; 2) Adequate level of fish in diet maintained; 3) adequate catch per unit effort sustained
Biophysical: Resource status/abundance maintained
Governance: 1) Laws and policies in place; 2) Management committees functioning; 3) Community engaged and participating in decision-making and management

Timor-Leste delegates.(Photo: A Sia)

Timor-Leste

Management objectives:
Biophysical:
1) Marine biodiversity
2) Sustainable fisheries resources

Socioeconomic:
1) Sustainable livelihood (e.g. ecotourism)

Cultural and heritage:
1) Conservation of sacred sites
2) Annual harvest of sea-worms (meci, *Eunice virides*)

Ongoing monitoring program:
1) Biological -- Annual biological monitoring of fish population and size
2) Socioeconomic – Visitors logbook (annual report on number of visitors)
3) Cultural and heritage – monitoring of conservation of sacred sites; monitoring of status of sea-worms and their habitats

Evaluation systems (planning) – Central and local governments
Reporting system: Stakeholder meetings

SESSION 5. A LOOK AT SUCCESSES AND CHALLENGES – LESSONS LEARNED FROM THE FIELD

This session consisted of case study presentations designed primarily to help participants to understand some of the challenges and successes of management effectiveness programs that have been tested at the network or system level. A panel discussion was also scheduled for this session to allow further examination and comparison between management effectiveness approaches but it was cancelled because of time overrun.

Five case studies were presented.

Case Study 1.WB Scorecard to Assess Progress in Achieving MPA Management Effectiveness Goals

Presented by Leanne Fernandes (Australian CTI Alliance)

The WB MPA scorecard system is an adaptation of the WB/WWF METT and other tools designed for MPAs. It is simple to use, relying mostly on data that are already available in literature and informed opinions of site managers or independent evaluators. Also, it need not be expensive, as it can be conducted at staff meetings by the MPA manager, staff and/or local stakeholders themselves and involves little or no additional data collection, although the collation of information may take

some time. It does not go into a great deal of depth, however, so if the intention is to do a highly detailed evaluation, this is not the tool to use; this systemis intended primarily as a broad-brush tool to look into the context of an MPA and its effectiveness.

The scorecard consists of a datasheet designed to gather general information about the protected area (management objectives and management and governance characteristics), and an assessment sheet with a total of 68 questions that cover the six elements of the International Union for the Conservation of Nature-World Commission on Protected Areas (IUCN-WCPA) Framework, namely, 1) context, 2) planning, 3) input, 4) process, 5) output and 6) outcome. Most questions are designed to be answered using a 0-3 response scale, where 0 represents no progress or poor situation and 3 is an ideal situation. There is also a comments column that can be used to justify rating, include additional information, describe good practices, or share successes.

Scores are added for each of the six elements of evaluation, and a final score can also be calculated.Questions that are not relevant should not be scored, and are omitted in the calculation of the final score.

Case Study 2.Management Effectiveness Tracking Tool (METT)
Presented by Lynette T. Laroya (DENR-PAWB)

The WB/WWF METT was developed to help track and monitor progress in the achievement of the WB/WWF Alliance worldwide protected area management effectiveness target and has been used by the GEF for its protected areas projects. It was adapted in 2008 by the Philippine Government for its own use as the primary instrument for measuring management effectiveness of protected areas in the country. Although it includes a scoring system, it is used primarily to track progress on protected area effectiveness over time, identify weaknesses and areas for improvement, and identify and agree on adaptive strategies or activities to improve management effectiveness.

In the Philippines, METT respondents typically include members of Protected Area Management Boards (PAMB), protected area staff and other persons familiar with or have a working knowledge of the protected area being evaluated. Except for protected areas that need to be monitored yearly, assessments are done every three years, usually during an en banc meeting of the PAMB (or depending on the requirements of the protected area) so there is minimal or no additional cost. When done during a PAMB meeting, a quorum (50% + 1) is required, and the PAMB chair and the protected area superintendent take charge of the administration of the METT questionnaire.

Assessment involves the following steps:

1) Create a common understanding among facilitators and respondents of the objectives and methodology of the assessment.
2) Discuss online every line or item on the METT questionnaire to ensure that it is clearly understood.
3) Provide access to reports and maps, including the results of the biodiversity monitoring system; these documents are used as references during the discussion to guide the selection of adaptive management strategies.
4) Administer METT questionnaire.

As used in the Philippines, the METT questionnaire includes three data sheets:

1) Data Sheet 1 is used to gather general information regarding the protected area in order to report progress.
2) Data Sheet 2 is designed to elicit information on existing threats to the protected area; a threat may be ranked low, medium or high, or marked "no data" or NA (not applicable) as the case may be.
3) Data Sheet 3 is the assessment form; it contains 31questions.

The analysis is a three-step process:

1) Group issues and concerns according to the six elements of IUCN-WCPA management effectiveness framework (context, planning, input, process, output, outcome).
2) Calculate total maximum score (TMS); items that are not relevant to the protected area are not counted. For example, if there are 11 respondents and all 31 questions were answered (i.e., there were no "irrelevant" questions) with 3 as the highest rating, TMS = 11 x 31 x 3 = 1056.
3) Calculate percentage rating for every item/criteria and every element by dividing the total score of all respondents for that item/criteria or element by the TMS and multiplying by 100. For example, if 610 is the total score of all PAMB members for one criteria (for example, "sustainability of management process"), then the percentage rating for that criteria = (610 ÷ 1056)x 100 = 57.76%

The assessment is usually done immediately followed by action planning, where stakeholders, guided by the results of the assessment identify relevant activities, objectives, strategic tasks, budgets and the persons responsible for each activity. The action plan is generally very detailed and specific.

The METT has so far been implemented in eight protected areas in 2010 (out of the target 23 protected areas) and 11 protected areas (out of the target 22 PAs) in 2011. The METT adaption process leading up to implementation involved the following activities:

1) Orientation (at various levels)
2) Testing the tool
3) Refining the tool
4) Implementation
    a. Training and orientation for facilitators.
    b. Orientation for respondents (conducted by facilitators), including analysis (action planning).

Some lessons learned from the Philippine experience with METT include the following:

1) Questionnaires should be translated to the dialect of the respondents
2) Facilitators should be very familiar with the tool.
3) The assessment need not be expensive (it can be done during PAMB meetings).

Case Study 3. Assessing Management Effectiveness in the Great Barrier Reef Marine Park (GBRMP)

Presented by Leanne Fernandes (Earth to Ocean Consulting) for John Tanzer (TNC)

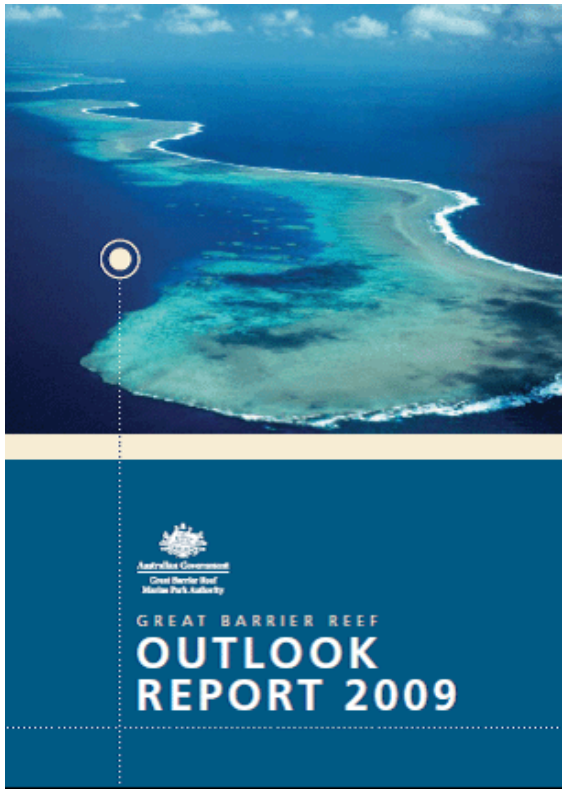
The Great Barrier Reef Outlook Report is prepared every five years as required by Australian law (Great Barrier Marine Park Act of 1975 as amended in 2007). The report, which first came out in 2009, is structured around eight assessments required by the Act, with each assessment forming a chapter of the report. It was very expensive and took a lot of time to produce, but the method is actually simple and can be implemented with community input alone.

The report does not contain recommendations but does indicate where action may be needed. It evaluates three ecosystem values (biodiversity, ecosystem health, and commercial and non-commercial use) using a four-level rating scale (good state, fair state, poor state, very poor state.) The values that would qualify for each of these ratings are contained in the report, which is very specific for GBRMP.

The evaluation process was highly participatory, involving community groups, industry groups, and scientists who made up expert advisory and community advisory panels. The assessment, which was based on surveys of these groups as well as existing data and literature, identified 41 main threats grouped into four categories: 1) climate change, 2) coastal development, 3) catchment run-off, and 4) direct uses. The impacts of these threats upon environmental, social and economic values were then

determined by rating the likelihood of the threat (rare, unlikely, possible, likely, almost certain) and its potential consequences (insignificant, minor, moderate, major, catastrophic).

A wide range of activities (not only fisheries) were assessed based on the six elements of the IUCN-WCPA management effectiveness framework (context, planning, input, process, output, and outcome). The results showed that in terms of context management was very good.



GBRMP Outlook Report

The approach has its shortcomings. For one, the method does not assess decline of ecological baselines. Also, it does not require management action in response to its findings and may not facilitate response to problems arising between reporting cycles. Production of the 2009 Outlook Report, in particular, was resource-intensive, involving a large amount of staff time and money. Being extremely detailed, it required good long-term research information and management ability to interpret the information.

However, the method also offers a number of benefits:

1) It provides a holistic view of the ecosystem.
2) Because it is a requirement of law, it offers a long-term and consistent framework.
3) It promotes transparent assessment and reporting.
4) It uses a systematic approach that enables identification of management priorities, including information needs
5) The approach is flexible to available level of resources and data.

Case Study 4.Developing the Indonesia MPAME Guide

Presented by Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)

The development of the Indonesia MPAME Guide was started in 2008 to provide communities with a self-assessment tool for their MPAs. The tool has been tested in three pilot sites under different management regimes (Wakatobi National Park, Berau Marine Conservation Area, and West Bali National Park) and refined through two workshops.

The following rating scale was used to measure management effectiveness:

Level 1 – MPA is initiated
Level 2 – MPA is established
Level 3 – MPA is enforced
Level 4 – MPA is sustainable
Level 5 – MPA is institutionalized (Fully functional)

Based on this rating system, the Wakatobi National Park was found to be at Level 4, while the Berau Marine Conservation Area and West Bali National Park were at Level 1.

Some challenges encountered in the development of Guide included:

1) Translating management effectiveness concept into a simple and easy to use Guide.
2) Human resources' issues (e.g. personnel turn over) and 'routine activity trap.'

3) Funding management effectiveness-related activities (i.e. governance; biophysical monitoring; socioeconomic interventions).
4) Inserting assessment results into the annual budget and programmatic cycle of the respective MPAs

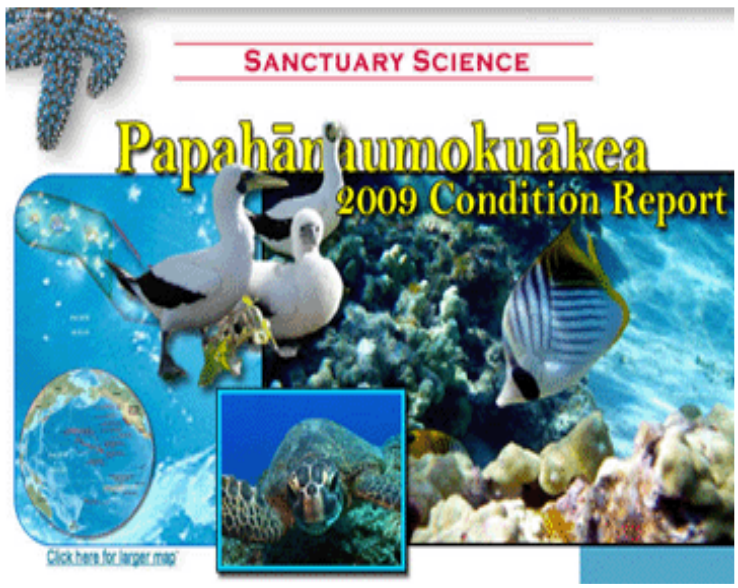
In general, the Guide was found to be applicable in all three sites, even as it was adapted, altered and updated after each field trial based on the lessons learned. An early complaint was that the Guide was difficult to understand but it has since been simplified and provided with clearer instructions to improve ease of use. The TNC-Indonesia Marine Program is now developing a training course for facilitators in response to requests for technical assistance in the use of the Guide.

The intention is to do the assessment every two or three years. Despite the observation that the process of assessment "takes a long time" (3-7 days), the Guide is generally regarded as a worthwhile investment because it is able to support nation-wide analysis, evaluation and reporting. Furthermore, facilitators involved in the field testing believe that using the Guide will be easier the second time around, despite their early difficulties in following it.

Case Study 5.System-wide Monitoring (SWiM) and Sanctuary Condition Reports
Presented by Anne Walton (NOAA)

System-Wide Monitoring (SWiM) of the marine areas under the management of NOAA's Office of National Marine Sanctuaries has been in place since 2001. SWiM is a coordinated monitoring framework that facilitates the development of effective, ecosystem-based monitoring programs that address management information needs using a design process that can be applied in a consistent way at multiple spatial scales and to multiple resource types. It identifies four primary components common among marine ecosystems: water, habitats, living resources and maritime archaeological resources. Collectively these four broad components or indicators tell MPA managers about the status and trends of the US National Marine Sanctuary System. The System covers MPAs in both near shore and open ocean waters that range in size from one to almost 140,000 square miles.

By assuming that a common marine ecosystem framework can be applied to all sites, the National Marine Sanctuary System developed a series of questions that are posed to every sanctuary and used as evaluation criteria to assess resource condition and trends. There are 17 questions across the four indicators. Because the indicators are very broad, site-specific monitoring programs can be used to measure changes in conditions in the MPAs, which are rated on a scale from good to poor. Evaluation is done over different timeframes but is generally based on observed changes over five-year timelines, using both qualitative and quantitative assessments by scientists and managers.



US National Marine Sanctuary System Condition Report

A reporting system, called condition report, was also developed to standardize the results. A condition report summarizing resource status and trends is prepared for each MPA approximately every five years and updated as new information allows. The report helps sanctuary staff to identify monitoring, characterization and research priorities and adapt management to address gaps, day-to-day information needs and new threats. Because of the remoteness of some of the sites, monitoring can be very expensive.

Case Study 6.ICRI East Asia's Work on MPA Management Effectiveness

Presented by O Shinichiro Kakuma (Okinawa Prefecture Government) in behalf of Kohei Hibino (Japan Wildlife Research Center), Alan White (TNC) and the ICRI East Asia MPA Network Working Group

The International Coral Reef Initiative (ICRI) is an informal partnership of governments, international organizations, scientific entities and NGOs that aims to reverse the degradation of coral reefs and related ecosystems (e.g., mangroves and seagrass). There are six current ICRI member countries in East Asia, namely, Indonesia, Korea, Japan, Philippines, Thailand and Vietnam. ICRI activities and policies have been limited, with only three regional workshops in the six years following its inception in 1995, but there are efforts to revitalize the organization that started in 2008. Three regional workshops were held between November 2008 and June 2010; ICRI East Asia's provisional plan for 2009-2010 was adopted during the November 2008 workshop (the 4th East Asia Regional Workshop, or EARW). The plan identified eight priority actions, including MPA management effectiveness (Action # 2-2).

There were two suggestions on MPAME from the 2008 EARW, as follows:

1) Identify an appropriate standard of MPA management effectiveness at regional/national/site level in East Asia on coral reefs and related ecosystems.
2) Provide countries in the region a suggested standard for their consideration and/or adoption as their national standard.

Only the first suggestion was taken up by the countries because the second suggestion was deemed too complex. An ICRI East Asia MPA Network Working Group, an online discussion group with more than 70 members, was formed in 2008 to discuss and coordinate the implementation of action items in the Provisional Plan. The group has gone inactive but not before completing its review of existing MPAMEs, discussed and identified the suggested MPAME tool and indicators in East Asia, identified potential indicators for MPAME assessment for coral reefs and related ecosystems in the region, and developed a simple MS Excel macro model using the selected indicators.

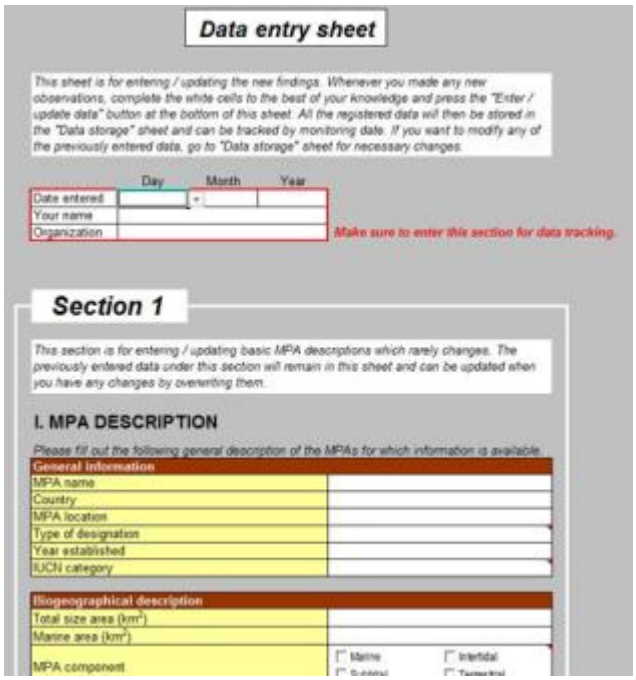
The following MPAME tools have been determined to be appropriate for use at three levels of implementation in East Asia:

1) Site level – a set of indicators that are well-adapted to local conditions and corresponding monitoring system that can assist learning and improvement of management.
2) National level – an information sharing system that systematically integrates or links together site level management effectiveness assessments for better understanding of status, coordination and policy development at the national level to assist site level management.
3) Regional level – a framework to track and share core information on national level MPAME implementation, such as existence of management effectiveness system and whether it is applied through a monitoring process, etc.

In addition, member-countries agreed that the proposed MPAME system and indicators for the region should be:

1) Reflective of the biophysical and socioeconomic conditions in East Asia (e.g. high demand of fisheries/tourism).
2) Developed specifically for each country/MPA and adapted to the type of MPA and local conditions.
3) Developed from the standpoint of local managers to provide incentives to use the system (e.g. avoid creating among managers and stakeholders that they are being scored or evaluated).
4) Developed for learning and improvement of management at site level.

5) Applied and evolved locally (various stakeholders should be involved in the development process).



ICRI MPAME MS Excel model

These principles were applied in the development of the MS Excel model, a self-tracking and self-evaluation tool designed to allow subjective rating (i.e., to avoid creating a sense of being scored; scientific data are not required). The model includes a full list of potential indicators to increase the awareness of MPA managers and stakeholders of the wide range of issues and measures that may be considered in an MPAME. It is intended to be used only as a sample model that can be adapted and modified according to the specific needs of each country.

ICRI now plans to compile a report on the work of the working group. The report will emphasize the importance and benefits of having an MPAME, highlight that the MPAME could be in any form depending on the country's or MPA's status and needs and that it is not difficult to implement, and encourage countries to start developing their own MPAME (if they haven't already done so). The plan is to disseminate the report to participating countries at the 7th ICR EARW in Cambodia this year, and make it available on the ICRI website.

WRAP-UP

Mr. Jatulan summarized the day's proceedings, and advised participants to "focus on those lessons that are useful to you in your own context." He also outlined the activities for Day 2 and reminded participants that there would be an evening session to end this first day's activities

Participants adjourned at 5:30p.m. for dinner.

SESSION 6: INTEGRATING CLIMATE CHANGE AND FISHERIES OBJECTIVES INTO RESILIENT MPA NETWORK DESIGN PRINCIPLES

Participants reconvened at 7:30p.m. for the evening session to listen to a presentation by Ms. Fernandes on a proposed outline of a draft report on "Integrating climate change and fisheries objectives into resilient MPA network design principles." The session was intended to generate participant feedback on the report, which will contain a literature review and results of consultations on applying ecosystem approach to fisheries management (EAFM), climate change adaptation (CCA) and MPA networks as an integrated strategy for the CT, a key objective of the USCTI.
The focus of the report is on the biophysical aspects of management, although "socioeconomic and political aspects of management are also essential," Ms. Fernandes stressed. The objective is to define a set of MPA network design principles that integrates fisheries and climate change objectives and "makes sense and is useful to you," she explained, "so we're presenting this to you to inform you that this work is being done and to invite your inputs."

The ensuing discussion highlighted the general concern among participants that the report should also consider the socioeconomic and political aspects of MPA management and that if resiliency is

the objective, then the report should cover everything – all the stressors should be dealt with, not just climate change. The following points were also discussed:

1) The document has multiple target audiences. The primary target are the countries, but the document is also intended for use by the USCTI PI and CTSP to inform them on how to allocate funds to help the countries move forward with their national and regional planning.
2) The report will look more into the regional context, rather than the country context, of integration.
3) Fisheries will be covered under Section 3, biophysical objectives under Section 4 and climate change under Section 5 (resilient MPAs); other factors or stressors will "come into play" under the section on locating MPAs.
4) The intention of the report is "to give just some guidance on decision-making, some information to people who perhaps may not have access to such information." It is not going to be a very definitive material on designing MPA networks in that it will not cover the socioeconomic aspects of management, nor will it link the biophysical objectives to enforcement and policy, although these are also important considerations.
5) The report will take "some months to be finalized" but a draft will be released "in the next few weeks to various forums for discussion."

It was agreed that Ms. Fernandes would meet with some participants who might have additional inputs or concerns, "to make sure that the document will be as practical as possible."

Day 1 activities ended at 8:15p.m.

Day2, 10 May 2011

REVIEW OF DAY 1

Day 2 opened at 8:30a.m. with a review of Day 1. Mr. Jatulan facilitated this session using the following guide questions:

1) What struck you most about yesterday's discussions?
2) What have you learned?
3) What else do you think should be discussed?

Participant comments included the following:

1) The development of indicators is important to show success of MPAs.
2) Monitoring is important.
3) It is not easy to develop standard monitoring tools.
4) There are different types of M&E models and many experiences from many places – "we learned about what's available as well as the gaps.
5) A good question that needs to be address is who does the monitoring and where should the monitoring program be placed? Is it the role of the community, NGO, university or government? Whose role is it going to be?
6) The case studies offered many lessons that "we can apply in our work."
7) The team members and their roles must be very clear, the timetable should be very clear, and there must be a response to issues identified in the monitoring so it becomes apparent to all stakeholders that the monitoring is not being done for its sake but to improve management.
8) Social networks help to improve management, and a regional social network can serve as a starting point for countries to learn from each other.

Responding to Comment #5 above, Ms. Walton said, "The reality is that monitoring is implemented as a collaborative effort involving many groups. It's almost always a partnership. Most organizations don't have all the resources to do what needs to be done, so they parcel out the monitoring. What would be appropriate for the community to do? What should the NGOs, universities or government do? That's something that you need to reflect on."

SESSION 7.DEVELOPING THE MANAGEMENT EFFECTIVENESS FRAMEWORK

This session consisted of plenary presentations, a panel discussion, and breakout workshops focused on developing program frameworks based on three basic models that use different sets of standards or indicators to evaluate management effectiveness. At the start of the session, Ms. Walton told participants that they would be spending most of this second day in breakout groups to work on the frameworks using what they had learned so far in this workshop. Three additional presentations were made during this session to further inform the preparation of the frameworks. The first presentation by Ms. Walton reviewed the three basic management effectiveness models. The second presentation by Mr. Pacifico Beldia (CI) was a case study on the development of a management effectiveness plan at the VIP and Mabini Marine Reserve in the Philippines, which was also intended to provide some basic background information on the MPA that would be used during this Regional Exchange as a study site to field-test the management effectiveness frameworks. The third presentation by Atty. Rose-Liza Eisma-Osorio focused on the Marine Reserve where the study site is located.

The presentations were followed by a panel discussion, which provided more information particularly about the Mabini Marine Reserve, after which the participants broke out into three groups; each group was assigned one management effectiveness model to develop and apply to the field study site.

Presentation: Understanding the Different Management Effectiveness Approaches – 3 basic models

Presented by Anne Walton (NOAA)

Not all management programs are focused on outcomes. Some are increasingly focused on staff competence, or programmatic standards. There are many approaches, sometimes they are taken singularly but they can also be combined. Different approaches look at different aspects of management, such as:

1. MPA management structure – Is there a program management in place?
2. Outcomes of management action.
3. Staff competency – The idea is to create some standards of performance to professionalize protected area jobs.
4. Site capacity
5. Overall state of conservation of the MPA or network of MPAs – This includes measuring at the individual MPA level to provide information about the network or region as a whole.

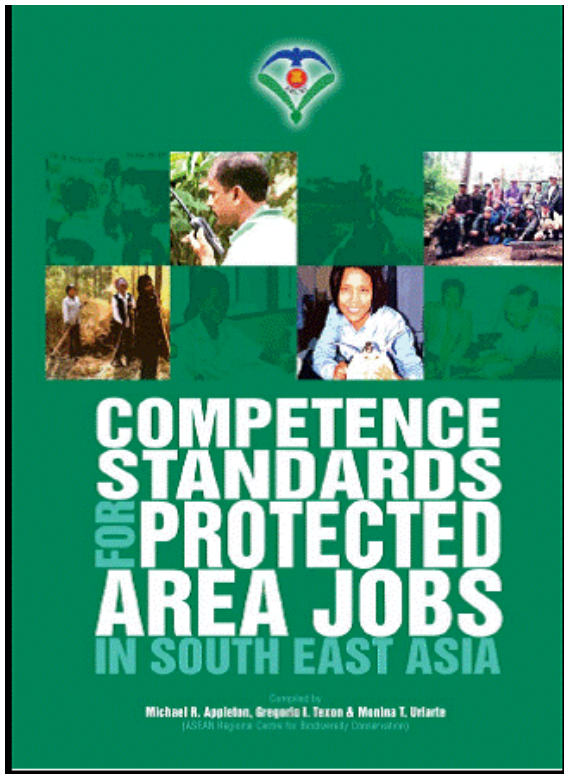
Management effectiveness may be evaluated either by measuring change to determine if management objectives are being met or by comparing program or staff performance against agreed standards (programmatic or competence standards).

Model 1 is outcome-based, i.e. they are applied to determine whether **management objectives** are being met or not, and to link outcomes to vision, goals and objectives (Are we achieving the results we had hoped to?)

Model 2 uses competence standards to measure management effectiveness. In general, **competence standards** may be used to establish benchmarks for professional standards; open up possibility of comparing job standards between countries, allow for more effective staff exchanges and sharing of expertise, and improve management and protection of MPA.

Model 3 uses **programmatic standards** and is generally applied when the intention is to establish consistency with the implementation of management plan strategies, and to measure output (products and services), i.e. determine if implementation is being done as intended in the plan.

One model that uses competence standards(Model 2) was developed by the ASEAN Regional Centre for Biodiversity (ARCBC) for member-countries of the Association of Southeast Asian Countries (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam). The model was developed through a one-year consultative process that reviewed more than 100 publications and involved inputs from all 10 ASEAN countries and the participation of over 200 people. The standards consist of recommendations for 250 skills and knowledge ideally required for 24 key protected area jobs, divided into 17 technical categories and five levels of skill (with 5 as the highest). They are a



ARCBC's *Competence Standards for Protected Area Jobs in Southeast Asia*.

non-prescriptive tool intended to be adapted and used according to specific national requirements and training and development contexts. Field testing among protected area managers and staff showed that more skills were needed in communications than in biological knowledge, and that more skills were needed at the intermediate management level than at the top. Also, it was shown that there were many capacity needs, far more than standards could resolve. This model is very broad in scope and difficult to implement without proper support. It works best in a government setting. Other considerations when using this model include: 1) Competency levels must be realistic and have direct connection to management priorities; 2) If used in a government system, the standards should align with career track, steps and pay schedule; 3) The system must provide a means and opportunities to meet requirements; and 4) It must recognize the reality of understaffed multi-tasking needs of sites. In general, this model entails no additional cost if done internally, but will require funding if implemented as an external evaluation program.

The Oslo-Paris Convention (OSPAR) for the Protection of the Marine Environment of the Northeast Atlantic uses programmatic standards (Model 3) for assessing management effectiveness. The standards were identified over four years of discussion and deliberation among member-countries (Belgium, Denmark [including Faroe Islands], Finland, France, Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom of Great Britain and Northern Ireland), which resulted in the OSPAR Convention Guidance on Management Effectiveness. Much of the discussion focused on developing the program objective, and this was reflective of the members' recognition of the importance of setting the right tone for implementation. Two tools, the IUCN's "How is your MPA doing?" guidebook and WB Scorecard for MPAs, were considered. In the end, the WB Scorecard was chosen over the IUCN tool, which could not get buy-in from the countries for being too detailed, too complex and too expensive. The Scorecard has three levels of evaluation and is focused on management structure (Do you have the information, staffing and infrastructure in place to effectively manage?) and management outputs (Are you doing what you said you would be doing in your management plan?). The model has so far been tested in the United Kingdom, and has been modified based on the results of the tests. Testing will last about five years and will look at how well the tool will work in other countries, and whether other tools might be needed as well.

An example of a program that uses management objectives (Model 1) to evaluate management effectiveness is the National Marine Sanctuary System, which includes 14 MPAs around the coasts of continental U.S., Great Lakes and Pacific Islands Region (see also Session 5). By law, the program is required to produce (generally according to five-year timelines) a Sanctuary Condition Report, which contains a summary of assessments (using 17 standardized indicators) on pressures on resources, current condition and trends and management responses to pressures. The Condition Report serves as an important communication tool for funders, stakeholders, supporters and key constituents of the program.

Presentation: MPA and Enforcement Network in VIP Marine Biodiversity Conservation Corridor

Presented by Pacifico Beldia (CI)

The VIP Marine Biodiversity Conservation Corridor is a special management area covering approximately 1.14 million hectares. It is shaped like a funnel about 100 km long and only about 20 km across at its narrowest point, with maximum depth of about 1000 meters along the northwest coast of Mindoro. The South China Sea and Pacific Ocean waters converge in this passage, bringing in nutrients, which probably explains the high concentration of diversity in the area as reported by Carpenter and Springer in 2005 – 60% of all the species in this corridor were shown in the study to be concentrated in a 10 sq km area.

The VIP is under the jurisdiction of five provinces, including Batangas which is the southernmost province in Luzon. CI-Philippines and its local partners started working in Batangas in 1994, complementing the programs that the local government had been doing there 4-6 years earlier. The

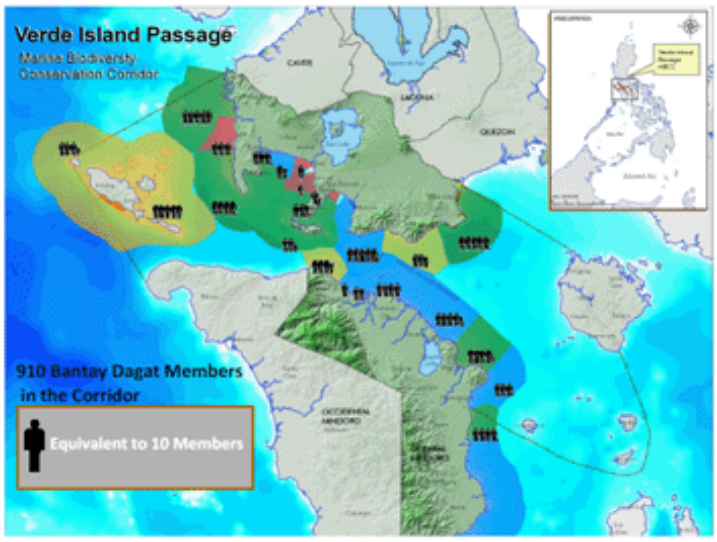
program is now in its third cycle of implementation, which started in 2005. In recent years, climate change impacts have become more visible, drawing funding for CCA work in the area. Another important focus is the creation of a network of MPAs in the VIP, the protection of which is mandated by an executive order (EO 578) issued by former Philippine President Gloria Macapagal-Arroyo in 2006. This MPA network is supported by the MSN, a multi-sectoral group from government, NGOs, people's organizations (POs) and academic institutions that aims to support MPA actions through complementary and collaborative efforts at the local, regional and national levels. There are 69, mostly small, MPAs in the VIP covering a combined area of approximately 17,000 hectares.

In 2010, there were 1,557 hectares of MPA in VIP waters under the jurisdiction of Batangas, more than double the total area of 761 hectares in 2008; 714 hectares of these were "no-take" zones, 548 hectares were designated as marine reserves and 295 hectares were mangrove forests. In 2008, the baseline year, only about 75 hectares of the MPAs were implemented; management appeared to have improved by 2010, when CI and the province did an informal evaluation (based on a man-on-the-street [MOS] survey) using the following five questions:

1) Do you know about the MPA (state the name of the sanctuary and place)? – 91.7% of respondents answered "Yes," indicating sustained IEC on the presence of the MPA.
2) Do you think there is an improvement in the area because of the MPA? ("Yes" is taken to mean "increase in abundance, fish catch and diversity"; "No" means there is a need to maintain policies and maintain markers) – 66.7% answered "Yes."
3) Do you think the MPA efforts can be sustained? – 75.0% said "Yes," indicating continuing need for enforcement.
4) Do you think the MPA management group is functional? – Only 33.3% answered "Yes," largely because most respondents were not aware that such a management group existed.
5) Do you support the continued management of the MPA – All respondents said "Yes."

At the site level, management was evaluated using the more detailed MEAT system, which affirmed, to some extent, the MOS survey findings. Results indicated that fishing was still happening within or near the boundaries of most MPAs, that most MPAs were unable to properly maintain MPA markers, and that in a majority of cases, the management body was not active. However, the results also showed that illegal fishing, while not totally stopped, has been mostly reduced within as well as outside the MPAs. Based on these findings, local governments and MPA managers were urged to take the following steps:

1) Enforce policies.
2) Maintain MPA markers.
3) Organize management body.
4) Sustain information, education and communication (IEC, at least three activities per year).
5) Conduct biophysical monitoring.
6) Acknowledge issues.



Distribution of deputy fish wardens (BantayDagat) in the VIP.

The VIP MPA Network has two components. The first is the social component: There are 13 municipalities and 910 *Bantay Dagat* (law enforcement team) members that make up the network; they hold meetings once a month and they have trained together in MPA planning, vulnerability assessment (VA), and planning for climate change with NOAA, USAID and other partners. The second component is biological: Current and larval studies were done that indicated where the sources and sinks are located within

the VIP and guided the selection of priority MPA sites. In addition, VA results were also used to incorporate climate change considerations in site selection, especially to determine where the no-take zones should be located.

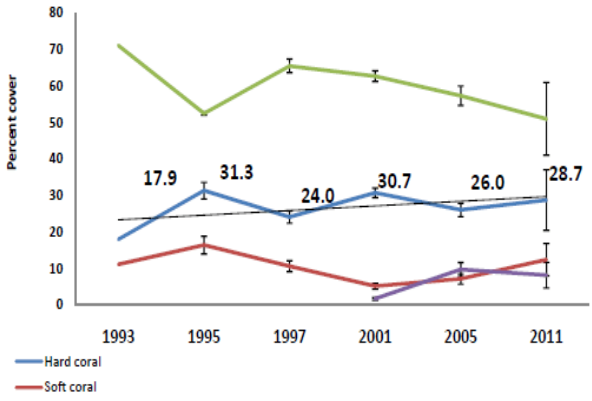
On the whole, the following best practices are now in place in the VIP Network: 1) Use of available information; 2) Stakeholder participation; 3) Clearly defined objectives; 4) Integrated management framework; and 5) Adaptive management.

In addition, the VIP Network experience showed that it is important to: 1) Improve awareness among key local government leaders; 2) Sustain the network of managers and enforcers; 3) Involve national government agencies in the network; and 4) Strike a balance between community-based management and local government support in MPA management.

Moving forward, the VIP Network is looking to enhance their management of small MPAs and enforce fisheries law, establish large fisheries management areas, formulate network plan, and undertake climate-change related activities.

Presentation: Mabini Marine Reserve
Presented by Rose-Liza Eisma-Osorio (CCEF)

The Mabini Marine Reserve was established in 1991 by the local government, with three no-take zones: the Cathedral Rock Sanctuary, Twin Rocks Sanctuary (the study site for this Regional Exchange) and Arthur's Rock Sanctuary. The area was first monitored by Earthwatch in 1993 and has since been monitored by the group every four years. Data collection is generally focused on substrate cover (% cover of living hard and soft coral,% cover of non-living substrate,% cover of other living substrates, number of indicator species,% of large marine life, and causes of reef damage), fish estimates (fish abundance and diversity), and presence of human impacts.



Changes in coral cover in Twin Rocks Sanctuary, 1993-2011

Preliminary data from a recent survey (2011) show that:

1) Living hard and soft coral cover in Cathedral Rock Sanctuary and Twin Rocks Sanctuary was largely unchanged, but declined in Arthur's Rock Sanctuary, indicating high fishing pressure near – and perhaps also inside – the no-take zone.
2) Fish abundance and diversity in Twin Rocks Sanctuary increased fairly consistently in the last decade, indicating good enforcement. This MPA is managed by the community of San Teodoro, but enforcement is enhanced as well by the MPA's location in front of Dive Planet, a dive resort.

The latest available ratings based on the CCEF MPA Rating System for the three MPAs done in 2007 were at least Level 4, an improvement from their Level 3 rating in 2005. The MPAs have apparently benefited from enhanced protection by the Executive Marine Council of Mabini, which enforces the MPAs.

Panel discussion

The panel included Dr. White, who also served as facilitator, Ms. Loreta Sollestre (Batangas Provincial Government), Atty. Eisma-Osorio and Mr. Beldia. Dr. White opened the discussion by reminding the participants about the context of the presentations on the VIP, i.e., that they were meant primarily to provide data about the study site for further analysis by the participants. "It's now your job to make a more critical evaluation," he said. "There are problems here – it's up to you to discover what those problems are."

Ms. Sollestre then gave a brief talk on the Batangas Provincial Government's ICM program. "The MPAs are a component of our ICM program, which is included in the strategic management plan of our province," she said. "We are lucky that we have support from international organizations like CI, but we always tell them to follow our strategic plan, even if they have their own plan and targets."

The NGOs' work is generally focused on two components of the provincial plan: Habitat restoration and management, and fisheries management, Ms. Sollestre related. Having a plan is important, as well as establishing a strong legal framework for ICM, she stressed, adding: "But I cannot say it is all success. There are a lot of obstacles and a lot of conflicts. It is our job as project managers to find ways to hurdle the obstacles and resolve the conflicts."

The provincial government maintains a reporting and feedback mechanism for M&E purposes."We validate the reports of the MPA managers, and we compare the results. If they are different, we do another monitoring," Ms. Sollestre explained. "We are using a simplified version of the monitoring sheet of the MEAT, and it's been very useful."

Other points that were taken up during the panel discussion included:

1) The Batangas Provincial Government recently formed the Batangas Environment Response Team (BERT) composed of law enforcement agencies, provincial officials and representatives of the 13 municipalities that form part of the VIP MPA Network. The province is now in the process of developing an MPA network plan. In Mabini, the management of the MPAs and other ICM activities are coordinated by a CRM Board (CRMB), which was created in 2002in order to support the implementation of marine sanctuary policies, enforcement of sanctuary regulations, and waste management programs. The CRMB is composed of eleven representatives from the local government, NGOs, the Municipal Fisheries and Aquatic Resources Council (MFARMC), and dive resort owners. Chaired by the municipal mayor, the Board is also responsible for ensuring that funds collected from the user fee go toward conservation of the municipal waters. In 2006 the CRMB created the Marine Reserve Resource Executive Committee (MR-REC) composed of the resorts, boatmen, landowners, community, and fisherfolk. The MR-REC is tasked to directly manage the MPAs.
2) In the Philippines, the municipalities are primarily responsible for allocating budget for integrated coastal management (ICM) at the municipal level, and the province has a mandate to provide them with both financial and technical support. In Batangas, the provincial government takes a proactive role to encourage municipalities to appropriate the required budget. Every three years (after an election), the Provincial Environment and Natural Resources Office (PENRO) visits each of the province's coastal municipalities and meets with all municipal officials involved in ICM (including the budget officers and members of the municipal legislative councils) to orient them about the provincial government's ICM plan and "let them know how important the ICM program is, so the mayor and the municipal councilors would approve the budget." There has been a steady increase in the municipal budgets for ICM since the MPA Network was established.
3) Mabini has a conservation fee system that earns for the municipality about Php2 million pesos every year. The municipal government issues dive passes to dive shops, which they sell to divers. There are enforcers in the dive sites to make sure that divers have dive passes; if a diver cannot show a dive pass, the enforcers will confiscate his gear, which he can reclaim by

paying a fine that is also set by law. The funds that are generated from this fee system go into a trust fund, which is used for resource management, particularly law enforcement.

4) Spillover varies from site to site, and from species to species. In some areas in southern Philippines, spillover has been reported 3-5 years from the establishment of well-protected MPAs. But at Twin Rocks, jacks in particular do not seem to go out of the MPA boundaries frequently, so when they do go out, the fishers skirmish to catch them. In one study in Negros Island (Philippines) that used tagging to monitor the movement of fish within and from the sanctuary, some tagged fish were tracked quite far from the protected areas. Another study in Kimbe Bay (PNG), however, indicated that almost 60% of fish that reach maturity eventually go back to their home reefs. Still, as Mr. Beldia pointed out, while spillover may not be evident at the species level, "when you talk of 1,500 species, at the community level, for the fisher, spillover does happen." Ms. Fernandes added, "There are two kinds of spillover – there's spillover of adults, and there's spillover of the larvae. What you want is for a lot of the adults to come back where they were born, so that the population can be sustained. The time that spillover happens will depend on the status of the stock when you start the protected area. It can take longer or shorter depending on the health of the stock."

Breakout Workshops

The breakout workshops included the following exercises:

1) *Developing indicators as measures of success for the study area* – Each of the three teams examined site-specific goals and objectives to determine how they were going to develop indicators of successful management. Each team then developed indicators for their management effectiveness approach.
2) *Determining what to measure* – Each team identified the measures they would use for each indicator based on the type of evaluation model they were working on, their choice of indicators (biophysical, socioeconomic, governance), and a review of existing monitoring programs.
3) *Developing a monitoring framework*– Here, the teams worked on a basic framework for their respective monitoring programs.
4) *Developing an adaptive management plan* –Each team looked at some options for adaptation if the management effectiveness standards were not met.

At the end of the last exercise, each team was given a template on which to consolidate their outputs into a management effectiveness framework that included the following elements:

1) Indicators
2) What will be measured and what will that tell us
3) Monitoring framework
4) Adaptive management options

The three frameworks (see Annex 6.1) were presented to plenary for peer-to-peer review.

WRAP-UP AND HOMEWORK ASSIGNMENT

After a brief wrap-up on the day's proceedings, Dr. White instructed the participants to develop, as their "homework," survey questions based on the management effectiveness frameworks that they developed. The survey questions would be used to field-test the frameworks at the Mabini Marine Reserve, where Twin Rocks Sanctuary, the study site, is located.

Participants adjourned at 5:30p.m.

Day3, 11May 2011

FIELD TRIP

After finalizing their survey questions and listening to a briefing on the field trip, the participants set out at around 9:30a.m. for the Twin Rocks Sanctuary at the Mabini Marine Reserve. The field trip was designed to ground-truth and validate the frameworks built on Day 2 and make sure that they were relevant based on a firsthand assessment of the site, and to show that the situation in the field can look very different from what one might see from a classroom perspective. During the field trip, each team engaged in two 2-hour rotations and doing the following:

Validating management effectiveness frameworks at Twin Rocks Sanctuary, Mabini Marine Reserve, Batangas, Philippines.

1) MPA staff interviews on skill and knowledge based and overall capacity and ability to address resource management issues.
2) Interviews with MPA staff and community members and stakeholders on target resources for protection, priority resource management issues and overall management objectives for the MPA.
3) Snorkeling assessments of condition of resources and indicators of management (e.g. signs, buoys, activities in the area, etc.)

SESSION 8. DATA COLLATION AND PREPARATION OF FIELD TRIP REPORTS

After the field trip, the participants reconvened at 3:45p.m. in the workshop venue, where they received instructions from the facilitators to stay in their breakout groups, collate their findings from the field trip, review the frameworks they developed on Day 2 against the results of their field assessments, and decide if they needed to change their model. They then spent the rest of the afternoon in breakout group discussions and the preparation of their reports. The outputs of this session would be presented following day(Day 4).

Participants adjourned at 6:00p.m.

Day4, 12May 2011

SESSION 9. PRESENTATION OF FIELD TRIP REPORTS

Participants reported back to the workshop at 8:15a.m. with the results of their field assessments, highlighting how new information changed the models they developed on Day 2. The revised frameworks are shown in Annex 6.2.

Group 1

Biophysical: Coral condition is found to be worse than what the group expected to see based on the survey report that was presented on Day 2. The group noted:

1) Sedimentation near the resort and farther out.
2) Presence of rubbles.
3) Trash.
4) Anchor damage.
5) Absence of mooring buoys.

Socioeconomic:

1) The community does not recognize direct or indirect benefits from the sanctuary (respondents said the benefits came from their children being employed at the resort).
2) There is still community support for the sanctuary (despite the perceived lack of community benefits).
3) Balance between fishing and non-fishing employment has remained the same before and after the sanctuary (60%/40%).
4) Community is benefiting from being employed by the municipality for the purpose of enforcement (Bantay Dagat).
5) Quality of life improved for some members of the community by resort providing additional income.

Governance:

1) An average of only two fisheries violations is reported outside the sanctuary; most violations within the sanctuary are believed to be diving without permit.
2) Fines are not collected by the community but by the municipality
3) At the community level, there is no management plan or structure for Twin Rocks Sanctuary – there is an association (SPSTI-- Samahang Pangkaunlaran ng San Teodoro, Inc., a PO) that is responsible for its management, but it does not appear to be fully functional.
4) There is no observable or reported networking between Mabini sanctuaries.
5) There are no barangay (community) waters, so the barangays cannot collect diving fees, fines, etc.

Based on these findings, the group made a few changes on their framework.

Group 1 also noted that "the structuring of questions needs to be done with more consideration of how best we can get information out of the people that we interview." They related that they interviewed one lady who appeared suspicious and "had questions in her mind. She asked, 'Why are you asking such questions and who are the other people that you are asking?'"

In the ensuing discussion, one participant noted that his group's assessment differed from what had just been presented. In response, Group 1 pointed out that different informants may have different perceptions and give different responses and that the findings of different evaluators asking the same question in different ways will not always be the same. For example, contrary to what had been said about the community not benefiting even indirectly from the sanctuary, one of the informants said

that while the fines are collected by the municipality, the community "gets some kind of services from the municipal government, although it wasn't very clear what kind of services."

In addition, Ms. Sollestre, who works with the Batangas PENRO, clarified the observation made by Group 1 that there is no networking between sanctuaries. "The MR-REC participates in the network," she explained."The informant is a community-level councilor and not a member of the MR-REC, and was probably not aware of MPA network activities in the province."

Ms. Sollestre also said that her office will advise the municipal government of Mabini to amend their ordinance on the conservation fee system to give the community a share of the fees collected.

It was also noted that the lack of community recognition of any benefits from the sanctuary was a perception issue and that to ensure continued community support, the municipality would do well "to address perception issues related to the value of the sanctuary."

Group 2

Biophysical:

1) Overall, coral condition has improved, with significant coral regeneration noted, which was also confirmed by informant interviews.
2) Fish abundance has increased, and this was evident from visual observations and confirmed by some fisher informants, who said that the amount of fish they catch in a few hours today is the same amount that they used to catch by fishing 8-10 hours two decades ago.
3) There is sedimentation in front of the resort and farther out to sea.
4) Sea urchins appear to proliferate in the area, which could be an indication that there is a considerable amount of nutrients in the water.

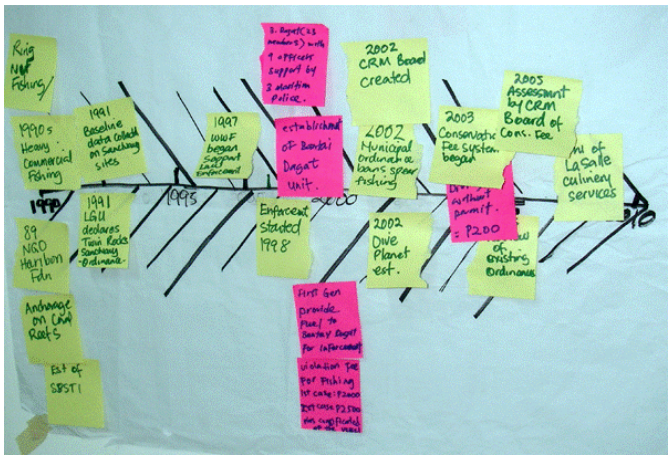
Socioeconomic:

1) Fishing income appears to have improved.
2) Non-fishing livelihood opportunities have been generated related to the sanctuary, such as, employment by Dive Planet Resort, some agriculture, spin-offs from tourism activities at Dive Planet Resort (e.g. boat hires, selling of fish to the resort).
3) Improved educational support for community.

Governance: The group noted the following indicators of governance that, according to their informants, were absent two decades ago:

1) Community consultation and collaboration.
2) Community-based management.
3) Structure in place for management.
4) Regular meetings.
5) Enforcement in place.
6) Monitoring every four years.
7) Conservation fee implemented to support enforcement.

Group 2 also presented their findings in a diagram that shows the trends and milestones in CRM in the area. The group then explained how they factored in these findings to modify their objectives so they more precisely reflect current conditions in the sanctuary and what is realistically achievable in a five-year timeframe.



"Trends and milestones" in CRM, Twin Rocks, Mabini Marine Reserve, Batangas, Philippines (as reported by Group 2)

In the ensuing discussion, one participant noted that while the trend graph presented by the group showed that live coral cover and fish abundance in the sanctuary have indeed improved in 2011 compared to 1991, it also showed that biophysical conditions actually deteriorated during the last 10-year and 5-year periods, and so it was probably not accurate to conclude that biophysical conditions have improved. The group explained that they made their conclusion based on a long-term outlook, and Dr. White noted that, in fact, the condition of the reef has not changed much since 1995, not necessarily because of poor management but because of various external factors, such as the coral bleaching that happened in 1998 as a result of a severe El Niño event.

Group 3

Biophysical:

1) Coral cover was earlier reported to have increased to 85% compared to the 60% in 1999, but on-site validation showed that living hard coral cover is at 60%.
2) Fish population appears to be on an upward trend, based on informant estimates that fish catch increased from 2 kg per fisher per day, with net fishers operating both inside and outside what is now designated as a no-take zone, to 10 kg per fisher per day, with net fishing happening only outside the sanctuary.

Informants noted that destructive net fishing, which used to cause major coral damage, is no longer practiced in the area. An NGO did the baseline survey in 1999; today there are several NGOs that are monitoring the sanctuary, but there is no information on how frequently monitoring is done. The group said they needed data to compare the biophysical changes inside and outside the sanctuary, in order to show the benefits of protection.

Threats associated with destructive fishing have largely been addressed, but the proposed establishment of a flour mill poses a new threat to the marine environment. Also, although other forms of fishing (especially destructive fishing) inside the sanctuary have been controlled, informants noted that they still occasionally see hook-and-line fishing inside the sanctuary.

Socioeconomic:

1) There's an increase in the number of resorts in the area.
2) Tourism-associated and other job opportunities have opened up for the community.
3) The local community is indirectly benefiting from the conservation fees collected through the allocation of development funds by the local government.
4) For the most part, the community understands the importance of the MPA, but there is a need to build awareness of sanctuary rules and regulations among new tourists.
5) Catch in areas outside the sanctuary has improved; informants said they began observing changes in fish abundance within 3-4 years from the establishment of the sanctuary. Most fishers fish outside sanctuary boundaries using sustainable fishing methods (usually hook and line).
6) The municipal garbage collection service is inadequate, so the community uses other garbage disposal options: some residents burn their trash or do composting, and sell bottles, tin cans, etc. to people who earn their livelihood from recyclable trash.

Governance:

1) The CRMB and the MR-REC disseminate informational materials on the MPA, but its effort does not seem be effective; a PO (SPSTI) is also involved in awareness promotion.
2) The MR-REC, a multi-sectoral organization, is tasked to manage the sanctuary; SPSTI is a member of the MR-REC and participates in the management of the MPA, but needs funding support. The MR-REC meets every month.
3) The Bantay Dagat is tasked to enforce the sanctuary and fisheries laws, but needs capacity building, additional personnel and funding. A decrease in the number of apprehensions was noted; informants said existing laws have a 60% compliance rate and need to be more effective.

4) Sanctuary management is highly dependent on the LGU for funding and needs an alternative, or at least supplemental, funding mechanism.

Group 3 put forward the following general recommendations for the CRMB and other responsible agencies/organizations to consider:

1) Provide technical and financial support sourced from concerned organizations.
2) Expand the MPA area (some informants said the MPA is too small for the purpose it is supposed to serve and needs to expand).
3) Review plans to establish industries near the MPA and assess possible impacts on the MPA and marine environment.

After the presentations, Mr. Jatulan reminded participants of the primary purpose of the field trip, i.e., to determine if the information they used to build their frameworks reflected what they actually saw happening on the ground or if there was a need to adjust their frameworks based on their findings from the field. Ms. Walton noted that "one of the most striking similarities in the three groups' findings is that the governance system is not as bottom-up as we thought it would be," and Mr. Jatulan suggested that it would be good to include in future Regional Exchanges "a study of the local governance structure to give participants a better understanding of how the MPA management system works before they go to the community."

SESSION 10. THE INDONESIA MPAME MODEL AND PROTOCOL DATABASE

In this session, Mr. Soemodinoto made two presentations that provided more details about the Indonesia MPAME model. The session also included a role-playing exercise aimed at giving participants an experiential engagement with the M&E protocol used in this model.

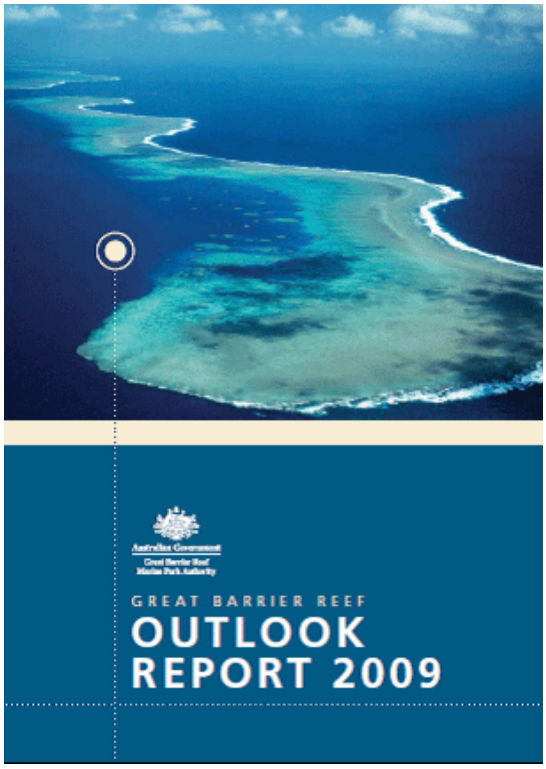
Presentation: Guide for Improving Marine Protected Area Management Effectiveness in Indonesia

Presented by: Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)

The *Guide for Improving Marine Protected Area Management Effectiveness in Indonesia* is a tool that MPA managers and practitioners can use to assess how an MPA is doing in its management and how well it is achieving its conservation goals or objectives. There are two language versions (English and Bahasa Indonesia).

The MPA management cycle used in Indonesia is a simplified process that involves:

1) MPA design and planning (including analysis of context or situation).
2) Implementation and management activities.
3) MPA management effectiveness periodic reviews/M&E.
4) Feedback for planning and to improve implementation.



Guide for Improving Marine Protected Area Management Effectiveness in Indonesia(English and Bahasa editions)

Management effectiveness is evaluated based on a conceptual framework that involves the following five-step process:

1. Identify and gather the review team to do self-evaluation(no more than 10 members) – Steps 2, 3, and 4 should be done by MPA management agency; Step 5 is done by review team.
2. Consolidate all background information on the MPA
    a. Collate background information and overview on the MPA, i.e. boundary coordinates, habitat features, sources of financing, etc.
    b. Ensure that the information is easily accessible.
3. Collate monitoring data – There are three critical data sets: biophysical, socioeconomic and governance. Some people do not regard governance data as important, but in Indonesia, it is very important because the government is an integral part of the MPA management process.
4. Develop and maintain an MPA database that can easily be used and accessed.
5. Complete the MPAME review worksheet – There are two worksheets: 1) The first sheet requires background information on the MPA (it is useful to fill this up as completely as possible so there is no need to go back to it later); 2) The MPAME scorecard.

The following types of background information are required: 1) MPA description and status; 2) Members of the management effectiveness evaluation review team; 3) MPA financial management; and 4) MPA enforcement information. Other (optional) information may be included if relevant.

The management scorecard consists of five tables (Tables A-E, corresponding to Levels 1-5 of management) with 14 questions each, a column for explaining or qualifying answers and an additional section for data collation and indicators. It is a simple scoring system, with four answers to choose from – Yes, No, DK (Don't know), and NA (Not applicable). It is useful to qualify each answer, however, particularly if the answer is "NA," to allow interpolation between MPAs. The NA answers are not included in the calculation of the score, however.

The (optional) section on indicators and data collation is included to help the review team or any user to make notes of where information is stored, expand upon answers to help the next review team, and document answers thoroughly to support evaluation.

Once the scores are tallied, a five-level rating system is applied:

Level 1 – MPA is initiated.
Level 2 – MPA is established.
Level 3 -- MPA is enforced.
Level 4 -- MPA is sustained
Level 5 -- MPA is institutionalized (fully functional).

The evaluation of the level of management entails answering questions about activities (e.g. Are stakeholder meetings conducted for MPA planning?) as well as outputs (e.g. Does your MPA have a management plan?) and outcomes (e.g. Are alternative fishing gear made available to fishers as stated in the management plan?). In addition there are also questions related to "conservation effect" (e.g. questions related to the biophysical condition of resources in the MPA); there are 11 questions on conservation effect in the scorecard. Conservation effect is measured using a 1-4 (low-high) scoring scale.

After the review, the MPA management agency can identify areas for adaptive management. There is no rule on the frequency of review; for internal purposes, the review can be done as often as possible, but if the intention is to inform stakeholders, the recommendation is to do it every two years for Level 1 and Level 2 MPAs, and every three years for Level 3, Level 4 and Level 5 MPAs.

The *Guide* is a learning and adaptive management tool developed primarily to support the commitments of the Government of Indonesia (nationally and internationally) as well as to provide guidelines for MPA managers using the Indonesian MPAME system. It took two years to develop this system, which is designed mainly for the Indonesian context (i.e. for large MPAs).

Presentation: Using the *Guide for Improving Marine Protected Area Management Effectiveness in Indonesia* – Experience from Field Trials
Presented by: Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)

The *Guide for Improving Marine Protected Area Management Effectiveness in Indonesia* was field tested in three sites to refine it. The sites were the Wakatobi National Park, Berau Marine Conservation Area, and West Bali National Park. Field testing was done on the initial draft using consultations, protocol trials employing FGD and data analysis.
Ten FGD participants were involved in the Wakatobi trial using version V0.6 of the *Guide* dated May 7, 2009, which rated the Wakatobi National Park at Management Level 4 (MPA is sustainable). This trial showed that:

1) The version of the *Guide* used measured "process" rather than "conservation effect."
2) It was difficult to understand.
3) Some of the questions were leading.
4) The resulting ratings did not appropriately reflect the real situation (the rating system resulted in unrealistically high scores).

These findings served as inputs to the development of Version V0.7 of the *Guide* dated May 29, 2009, which was field tested at the Berau MPA. Bringing together the different members of the Berau management body proved to be difficult, so no real field testing happened, only consultations with one staff member of the Berau National Resource Conservation Center, who rated the MPA at Level 1 (MPA is initiated). The field trial underscored the following points:

1) MPA evaluation can only take place where a clear management body exists.
2) It is important to have a clear and committed review team that includes and represents key stakeholders.

The third field trial, using version V0.95 dated February 5, 2010, was conducted in the West Bali National Park and applied for the first time the Conservation Effect rating system. The trial involved FGDs participated in by Park officials and staff members of the office that deals with the management of the coastal/marine area of the Park, who gave the Park an overall MPA management rating of Level 1 and a Conservation Effect rating of 1 (Low, with only 25% of the management activities directed toward conservation). Some lessons from this field trial included:

Participant	List A		List B		List C		List D		List E	
	Y/T	%	Y/T	%	Y/T	%	Y/T	%	Y/T	%
#1	5/14	36	13/14	93	10/14	71	4/14	29	4/14	29
#2	9/14	64	8/14	57	4/14	29	0/14	0	6/14	43
#3	8/14	57	10/14	71	4/14	29	5/14	36	6/14	43
#4	8/14	57	10/14	71	4/14	29	5/14	36	6/14	43
#5	4/14	29	11/13	85	6/14	43	2/13	15	6/14	43
#6	5/14	36	10/14	71	4/12	33	3/14	21	0/12	0
#7	3/12	25	5/14	36	6/13	46	4/10	40	1/14	7
#8	4/14	29	5/14	36	8/13	62	6/14	43	1/14	7
#9	6/14	43	3/14	21	5/13	38	2/14	14	0/14	0
#10	5/14	36	9/12	75	11/14	79	8/14	57	6/12	50
#11	7/13	54	13/14	93	12/14	86	6/9	67	0/14	0
#12	6/14	43	3/14	21	5/14	36	2/14	14	0/14	0
#13	2/14	14	4/12	33	4/14	29	5/14	36	5/13	38
#14	0/14	0	6/14	43	0/14	0	0/14	0	0/14	0
Average Score (%)		37		58		43		29		22

Results of field trial in West Bali National Park.

1) Evaluation is difficult to manage when the review team has more than 10 members. Also, the presence of the Park chief during the exercise might have influenced the review teams' responses, so the results may be biased.
2) It is important to accomplish Steps 2-4 (data collection, collation, etc.) of the MPAME process before conducting an evaluation. The West Bali National Park office has no system for collecting data, so it was difficult for its staff to answer the background information sheet.
3) Preparation time is important; the review team needs time to learn how to use the *Guide*, especially if it is their first time to do the evaluation.

4) Enough time must be given to complete the process. In the case of the West Bali National Park, the assessment took five days to complete.

In general, the field trial showed that the *Guide*:

1) Is applicable in the three sites, which have different management regimes.
2) Assists management teams to identify areas or issues to address.
3) May be able to support nation-wide analysis, evaluation and reporting.

The Guide was adapted, altered and updated along the way based on lessons learned from the field trial. For example, the instructions were simplified to make the *Guide* easier to understand. In addition, a training course is currently being developed by TNC's Indonesia Marine Program.

Workshops

The participants went back to their three breakout groups, where they engaged in a **role-playing exercise** in which they applied the Indonesia MPAME model in a hypothetical MPA. The members of each group were each assigned one of the following roles: head of the (imaginary) MPA management unit, communications officer, enforcer, socioeconomic researcher, marine biologist, stakeholders (leader of the local fishers group; two turtle eggs traders; tourism representative). Each participant received information about their role, and was the only member of their group to be given such information. Each group had a facilitator, who acted as the independent chair of the group. Using the Indonesia MPAME Management Scorecard, they then collectively evaluated the imaginary MPA by answering the questions under each of the 5 management levels (Table A-E).

After completing the role-playing exercise, the participants went back to plenary for a presentation by Mr. Soemodinoto, who explained how the MPA management ratings are calculated (see Annex 7). Based on this, Group 1 rated their hypothetical MPA Level 1, and Groups 2 and 3 gave their imaginary MPAs a Level 4 rating.

Mr. Soemodinoto also briefly explained the MPAME database protocol for storing MPA-related information (background information from Step 2 of the MPAME conceptual framework, and monitoring data from Step 3). He stressed that "database" as used in the MPAME model could simply be a collection of MS Excel worksheets or a compiled report; the important thing, he said, is that all reports are labeled and filed appropriate so that the data are easily recognizable and retrievable. Finally, he reminded the participants of the three management effectiveness criteria sets (biophysical criteria, socioeconomic criteria, and governance criteria).

SESSION 11. THE CTI REGIONAL MPA LEARNING NETWORK

During this session, participants discussed the development of a regional MPA learning network, one of the proposed action items identified during the CTI Regional Learning Network Planning Meeting held in Manila last March 2011. To inform the discussion, the session started with a presentation that explained the CTI Regional Learning Network and the steps that need to be taken to bring it about.

Presentation: CTI Regional Learning Network for MPA Managers
Presented by: Marthen Welly (CTC)

To achieve its goals and targets, the CTI RPOA encourages the sharing of information and use of learning mechanisms among the six member-countries and partners. One avenue that has been explored to make the learning exchange happen is through the development of a regional learning network. This was the focus of a regional planning meeting held in Manila in March 2011. The meeting was convened to develop a shared understanding among the CT6 of the nature of learning networks, consensus from stakeholders on the initial scope of the learning network, draft network framework or design to be presented to the SOM7, and initial 1-2 year work plan for the

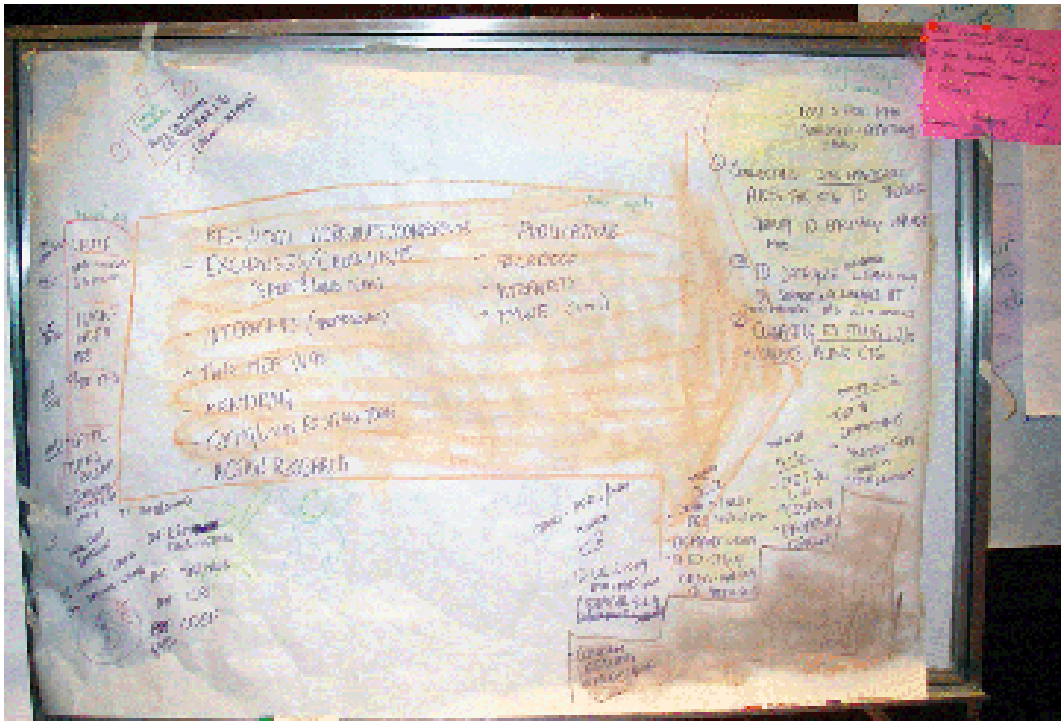
development of the network (or networks, as the case may be). The meeting also provided an occasion for seeking the commitment of key stakeholders to bring about the learning network.

Consensus was reached on the following definition: "A learning network is a group of individuals working across organizations and/or boundaries to collectively create, apply, test, document and share solutions to common challenges." And, specifically for the purpose of creating the MPA Learning Network, the following objective and purpose statements were defined:

1) *Primary objective:* To promote sharing of MPA knowledge and best practices between CT6 countries, communities and MPA practitioners.
2) *Purpose:* MPA established and effectively managed within as well as outside the CT region.
3) *Specific objectives:* a) To connect site managers across the CT6 in order to improve their capacity to manage MPAs; b) To connect existing MPA networks and leaders across CT6; and c) to catalyze/accelerate learning by supporting linkages between site managers, leaders and other networks.

Another key output was a roadmap that outlined the following steps that need to be taken in order to develop the proposed network within the next 12 months.

1) (Months 1-2) Confirm the leading organizations for the networks; identify funding, write proposal. The Indonesia-based Coral Triangle Center (CTC) has received a grant from the USCTI to assist in the preparation of the proposal.
2) (Months 3-4) Coordinate with the MPA working group, NCCs, and Regional Secretariat; survey, identify institutions that will participate in the network.
3) (Months 5-6) Design network, determine development cost.
4) (Months 7-12) Get funding, present to the SOM; once recognized or approved by the SOM, implement project.



Roadmap for proposed CT MPA learning network

It was agreed that CTC would take the lead in the development of the MPA Learning Network. Founded in 2000 as the hub for the TNC marine conservation program to support the establishment and strengthening of MPA networks in Indonesia and the CT region. CTC develops local and

regional capacity for marine conservation through training and education, field testing and leveraging management practices, promoting learning networks and collective action, and developing public and private partnerships to address marine conservation issues.

CTC was seeking the inputs of participants in this MPA Regional Exchange on how to formulate a work plan for operationalizing the MPA Learning. The Center has developed an initial plan outline that includes the following activities:

1) Select target practitioners.
    a. Build core team of committed members.
    b. Identify the "leaders" in the core team.
    c. Strengthen members' commitment by promoting the Learning Network as the primary source of MPA information and knowledge within the CTI.
    d. Identify a shared challenge that members can work on together as the Learning Network's first concrete activity.
2) Clarify goal.
    a. Work with the core team to establish clear goals for the network.
3) Define structure and coordination mechanism.
    a. Identify most appropriate structure based on geography and number of peers.
    b. Identify existing learning exchange and mechanisms at regional and country levels.
    c. Identify role of Learning Network manager: Mentor or coordinator?
4) Program strategies
    a. Develop enabling conditions to advance the development of the Learning Network.
    b. Support and follow up sharing and application of knowledge and skills among members.
    c. Develop the ability to influence MPA work plans and designs across the region based lessons learned and improved management effectiveness.
    d. Establish effective communication links at the regional level using the Internet (network-dedicated website, Webinars, Skype, etc.) and other telecommunication technologies (phone, etc.).
    e. Establish a centralized coordination mechanism for field visits, workshops and network meetings.
    f. Promote local ownership by shifting responsibility to members.
    g. Establish effective monitoring of outputs and outcomes to measure success of the program.

Discussion

Dr. White started the participant discussion by pointing out that CTC's grant from USCTI "will end in two years and we don't know what will happen after that." He added, "If you want this to continue, you will need to network among yourselves. They (CTC) need your feedback." The following points were taken up in the ensuing discussion:

1) During the knowledge management workshop in Manila (March 2011), it was agreed that any initiative to develop a network among the CT6 will build on existing LMMA networks. CTC should first look at existing local coordination mechanisms and provide training, capacity building and coordination support to existing LMMA networks; each country has to figure out internally what network is best for them before looking at linking with other networks more broadly. For example, learning exchange is already happening among the LMMAs in the Pacific countries. In PNG, the government is working on a policy to legalize the LMMA; CTC can take this opportunity to help develop and promote policies that will improve the LMMA system. Also in PNG, at the October 2010 knowledge management workshop in Port Moresby, participants identified practitioners that are ready to work in the network and developed a plan with seven action items, but this still needs to be formalized and, in fact, nothing much has happened since the knowledge management workshop in October 2010. So, in the meantime, existing mechanisms should be applied.

2) CTC is envisioned to serve as a "bridge" that will connect the CTI themes with each other, and information sources to information users. Having established a niche in the CTI as an independent regional training and learning center for marine conservation, CTC would like to play a role in the development of the MPA Regional Learning Network, for which it is seeking SOM approval. But it does not have to wait for government action to set up the Learning Network. While still taking the formal route, it can start coordinating with organizations within the region, use Facebook or the CTSP project-sharing website and start up the Network immediately with emails "using the contacts from this meeting," and integrate the SOM in the process when they come on board. TNC is already taking the lead on this that CTC can build on.
3) The Learning Network, through the CTC, can provide support to the CTI TWG and provide ways to help them get connected. At the same time, each country can and should begin identifying the activities that they want to link to the Learning Network through the CTC.

Dr. White also took the occasion to remind participants about three items in the agenda that still needed to be discussed more thoroughly, namely:

1) How climate change and fisheries can be integrated into the design of resilient MPA networks.
2) How USCTI can support the CT6 in terms of the technical assistance they will require to develop a resilient MPA network design for the CT.
3) How the CT Atlas can contribute to the development of a resilient MPA network design for CTI. The CT Atlas tracks a number of regional-to-local conservation strategies and modeling initiatives that can be tapped to support the CTMPAS, including the development of large-scale models by James Cook University and the University of Queensland; MPA network design involving local governments in the Philippines, analysis of national conservation objectives through MPAs; research on how spillover from MPAs benefits fisheries (University of Hawaii); and the integration of fisheries, climate change and MPAs in CTSP integration sites.

The Coral Triangle Atlas (http://ctatlas.reefbase.org)

Mr. John Tanzer (TNC-Pacific) then raised the following points:

1) In terms of linking fisheries to MPAs, there is a need to identify those aspects of the MPA network that can help meet the requirements of food security. The project can help bridge the man-made divide between fisheries and MPAs.
2) Those that are tasked to help the countries in developing the MPA network design need a good understanding of the needs of each country: How should they assist the countries as these countries go forward with the MPA design? How can the MPA be made relevant in the fisheries context? How can it engage the fisheries sector? Initially, the NCCs were identified as the most appropriate focal point for integrating fisheries and MPAs, but in some cases, this is not the case.

3) The University of Hawaii study on spillover produced some very exciting results that may be measurable and useful to fisheries.

Mr. Tanzer said he needed feedback on these points and would talk to participants individually during remainder of the Regional Exchange,

This last session of Day 2 ended at 5:30 p.m. with a suggestion to participants to prepare for the last day of the workshop by thinking about "how your countries can benefit from what you have learned here."

Day5, 13May 2011

SESSION 12. COMPLETING THE MANAGEMENT EFFECTIVENESS REVIEW CYCLE

The first session of Day 5 started at 8:15a.m. To prepare the participants for the exercises of this final day of the Regional Exchange, Ms. Walton briefly outlined the outputs of the past four days of discussions and workshops. Today's main agenda was to build a management effectiveness plan that could be applied in each of the six participating countries, she said. She then made a presentation that shifted attention from the M&E aspect of the management effectiveness program to the decision-making process that uses the M&E outputs to adapt management responses as needed to improve MPA effectiveness.

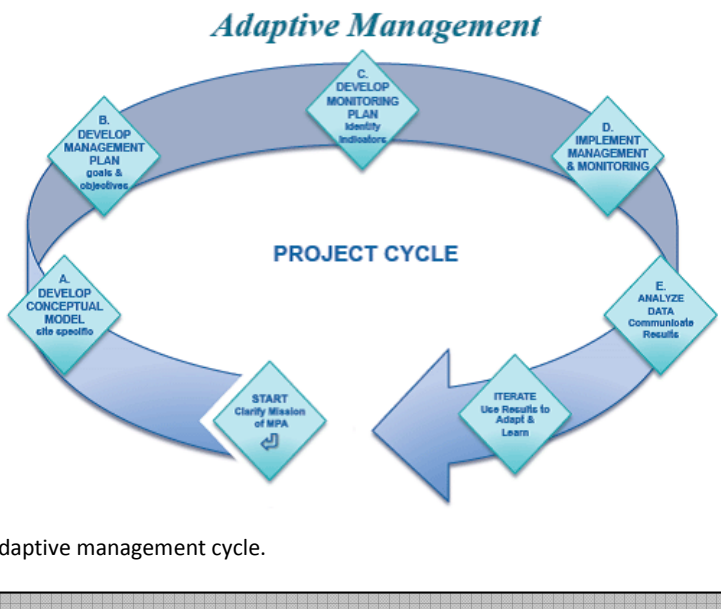
Ms. Walton's presentation was one of three expert presentations scheduled for Day 5. The rest of the day was spent in breakout discussions by country groups, country presentations and the closing session that briefly tackled possible next steps that participants could take toward implementing their MPAME programs.

Presentation: Adaptive Management – What do we do with the results of the management effectiveness program

Presented by Anne Walton (NOAA)

The adaptive management process is the integration of the design of an effective management plan and a monitoring program to systematically test the assumptions of that plan in order to learn and adapt to the results.MPA managers want to learn through the evaluation whether what they are doing is effective or not, and if not, what should be done to improve performance. The process involves the following activities:

1) Establishing a clear and common purpose;
2) Designing an explicit model of the system;
3) Developing a management plan that maximizes results and learning;
4) Implementing management and monitoring plans;
5) Analyzing data and communicating results; and
6) Using the evaluation results to adapt and learn.



Adaptive management cycle.

The adaptive management project cycle never stops; implementation is always at some stage of the cycle. The process may become more efficient, and may get better, but it continues all the time, and it is all about meeting project objectives.

Throughout this workshop, the exercises were loose and flexible, but in real practice, adaptive management is not supposed to be a trial-and-error process – rather, it is a set of management strategies based on:

1) Identifying priority resources for protection (targets);
2) The threats associated with these targets;

3) Understanding the root cause of the threats;
4) Identifying human behavior associated with the threats; and
5) Selecting management actions that address the root cause and associated human behavior.

It is not about addressing the threat (for example, sedimentation), but identifying the root cause of the threat (for example, deforestation, cutting of mangroves) and addressing that cause, which becomes the focus of the management response. Often it is human behavior that needs to be addressed.

When the evaluation results seem to indicate that the implementation of the chosen management strategies is not leading to the achievement of the MPA objectives or standards of management or staff competence, the evaluator should not immediately assume that there is something wrong with the program or strategy. Poor evaluation results may be caused by any number of things:

1. There is a problem with the monitoring program: Check collection methods and data.
2. The indicators may not be suitable for measuring the desired results: Make sure the indicators reflect the objectives.
3. The assumptions were wrong: Revisit the assumptions.
4. The management strategies may have been poorly executed: Review the implementation of strategies.
5. The conditions in the MPA may have changed: Understand what the changes are and what is causing them – it may be an issue that the MPA managers can address, but it may also very well be an event that is happening outside the system that they have no control over.
6. A combination of the above: Evaluate the management plan.

Adaptive management responses should take place before the impact "threshold" is reached, so it is useful to know along the way if there are internal or external conditions that hinder achieving the objectives and to take appropriate actions or make necessary adjustments as early as possible. Adaptive management responses require:

1) An open and transparent management decision-making process.
2) Institutional support and governance framework that allows for change in management strategies.
3) Periodic review and adjustment of management priorities.
4) Technical support and expertise to identify alternative management responses.

Whether the management actions have been effective or not, it is important to communicate the results to the MPA manager and staff, key constituents, stakeholders, government agencies and funders. Communicating results in a critical component of an adaptive management framework.

After her presentation, Ms. Walton took some questions from the floor:

Q – Does adaptation mean that laws need to be flexible?
A – In the U.S., some MPA laws have an emergency clause that allows MPA managers to respond to management issues as appropriate.

Q – The municipal governments in the Philippines have an annual planning cycle. How can they apply adaptive management and still follow the prescribed planning cycle? For example, where does budgeting come in the adaptive management process? Where do they find the money to cover the additional costs of adaptive management measures that they are not included in their programmed budget?
A -- Adaptive management involves making adjustments, tweaking your plan, not overhauling it. Typically when you put together your management plan, you also set a timeline for implementation and you plan for a sustainable financing process. The issue of funding becomes more of a problem if you have not explained to the politicians and stakeholders why the MPA is there and what are the benefits. If you are transparent about what the issues are and how you address the issues, and you are able to establish

a track record of success, they should see it as part of the management process. Adaptive management is not about doing good or bad or wrong – it is the way MPAs should be managed. We are managing change, not a static condition.

Presentation: Measuring MPA Effectiveness – Relevance and integration at the national scale

Presented by Alan White (TNC)

One factor that has driven a lot of the activities in management effectiveness is that there are many MPAs but few that are effectively managed. In the Philippines, various models were first developed to evaluate in an adaptive management cycle the effectiveness of MPA efforts at the site level. The move to develop a harmonized, national management effectiveness system in the country started about 10 years ago in response to the following driving forces:

1) Over 1000 MPAs under a variety of national and local fisheries programs.
2) Interest of local governments to promote MPAs and marine conservation within ICM programs.
3) Urgent need to protect habitats and fisheries.
4) Lack of consistent and effective management.
5) Lack of database and means to compare one MPA to another.
6) Desire to evaluate and track national progress in MPA management.

An early effort to establish a national MPA rating system was the development of a national database of MPAs. This database is simple, containing basic site information, evaluation of management efforts (governance), information on ecological change (biophysical), and level of community awareness and support (socioeconomic) – the kinds of dataset that have been discussed throughout this workshop. The national database served as the foundation for the development by CCEF of the MPA Management Rating and Database System. This System generates a report containing information on each MPA in the database, i.e. site description, perception survey results, ecological changes and, most importantly level of management , which is determined using a simple five-scale rating system. The MPA reports are then collated to provide a national picture of the effectiveness of MPAs in the country. For example, a 2006 analysis of the MPA database records showed that most (nearly half) of the 362 MPAs contained in the database were at Level 2-3 (established-enforced). It also showed that of the 1.5 million hectares of coral reef MPAs in the Philippines, about 25% (60,000 hectares) had achieved Management Levels 3-5.

Locations where collaborators are helping implement MPA Rating and Database System

The MPA database includes records from as far back as the 1980s that can be used to show changes in live hard coral cover over three decades of MPA management in the Philippines.

The development of the MPA Rating and Database System has produced the following outcomes:

1) Collaboration among local and national government agencies, academic institutions, NGOs, POs, and other projects -- there are numerous collaborators that are helping implement the MPA Database and Rating System

across the country.
2) Streamlined standard system for monitoring.
3) Development of a social network among MPA implementers and managers.
4) Formation of national MPA technical support group.

The following are some lessons from the Philippine experience in developing this MPAME model:
1) MPAs in the context of integrated coastal management programs are more successful
2) MPA management bodies (local and national) respond favorably to monitoring and management effectiveness evaluation
3) Database and evaluation system provides common framework for planning and measuring progress.
4) Social and ecological MPA networks are being catalyzed through the MPA database process.
5) National and local government working with NGOs important.

Presentation: Review of Management Effectiveness Tools and Development of the MPA Management Effectiveness Assessment Tool (MEAT)
Presented by Vera Horigue (ARC COE for Coral Reef Studies-JCU)

There are at least three reasons for the Philippine government to review MPA management effectiveness. These are:
1) To track targets with respect to international agreements. For example, the CTI RPOA and NPOA-Philippines both have "improving MPA management effectiveness" as a goal.
2) To benchmark MPA effectiveness in the country.
3) To provide context on how to build assessment capacity building gap analyses for the Convention on Biological Diversity (CBD), East Asian Seas (EAS) Congress, ICRI, etc.

Various groups are providing technical assistance to teach local governments in the Philippines not only to do MPA monitoring, but also to report their monitoring results. Based on the reports covering the period 1981-2008 that have been reviewed by UPMSI, most coral reef areas throughout the country were in poor to fair state, although it improved in the last four years (2004-08) of the review period, indicating that at least some ecological benefits of the 1,600 or so MPAs in the country were becoming evident.

The importance of restoring the reefs to good health and productivity cannot be overemphasized: poor reefs translate to poor fisheries and increased poverty in the coastal zone. Fishers are now considered as the poorest of all sectors in the Philippines, and they represent a big segment of the total population. There are 65 million people living on the coasts in the Philippines, and majority of them are dependent on fisheries for livelihood and as an important source of protein, But nearly all fishing grounds in the country are overfished. Already, the annual per capita consumption of fish in the country decreased from 40kg in 1987 to 35kg in 1996, and it was projected to decrease further to 10kg in 2010.

In 2005, Carpenter and Springer reported that the Philippines is the center of the center of marine shorefish biodiversity, based on a study of "museum information." However, perhaps because of overfishing, more recent data indicate that the area in the Visayas that was identified as part of the this high biodiversity spot no longer exhibits a notably high concentration of species; instead, the so-called "center of the center" appears to have shifted toward the side.

Protection is improving, and MPAs in the Philippines are increasing in both number and size, but not nearly fast enough. In 2000, of the 311 MPAs with known area, 93% were less than 10 hectares in size; in 2007, of the 852 MPAs with known area, the proportion of MPAs 10 hectares or smaller fell to 35%, with the bigger MPAs (11-100 hectares) making up 48% of the total number of MPAs. At this rate, protecting 10% of Philippine reefs would take 100 years. The country's work on MPAs must be accelerated, not only to increase its area of coverage, but also to improve management effectiveness.

It must be also noted that, even with easier access to and better availability of MPA data, it is still not easy to get an accurate national picture of MPA effectiveness in the Philippines because of shifting baselines and the use of different evaluation tools. There is a need to harmonize the tools and set effectiveness benchmarks to motivate people to achieve such benchmarks through adaptive management. This is the primary driving force for the development of the MEAT.

The MPA MEAT project has the following objectives:

- Pilot the benchmarking process in priority marine key biodiversity areas.
- Review status, validation and improve management effectiveness tools to provide a baseline condition for CTI-NPOA.
- Identify gaps and derive lessons to help improve the evaluation tools and achieve the goals of the CTI – NPOA MPA targets.

Several management effectiveness tools were reviewed during the development of the MEAT to determine what system would work best for the Philippines. The criteria used for review included the following:

1) The objectives – effectiveness, weighting.
2) The process --- self-assessment, validation and independent, less subjective measures.
3) What resources are available to make the study?
4) Evaluating outputs and outcomes

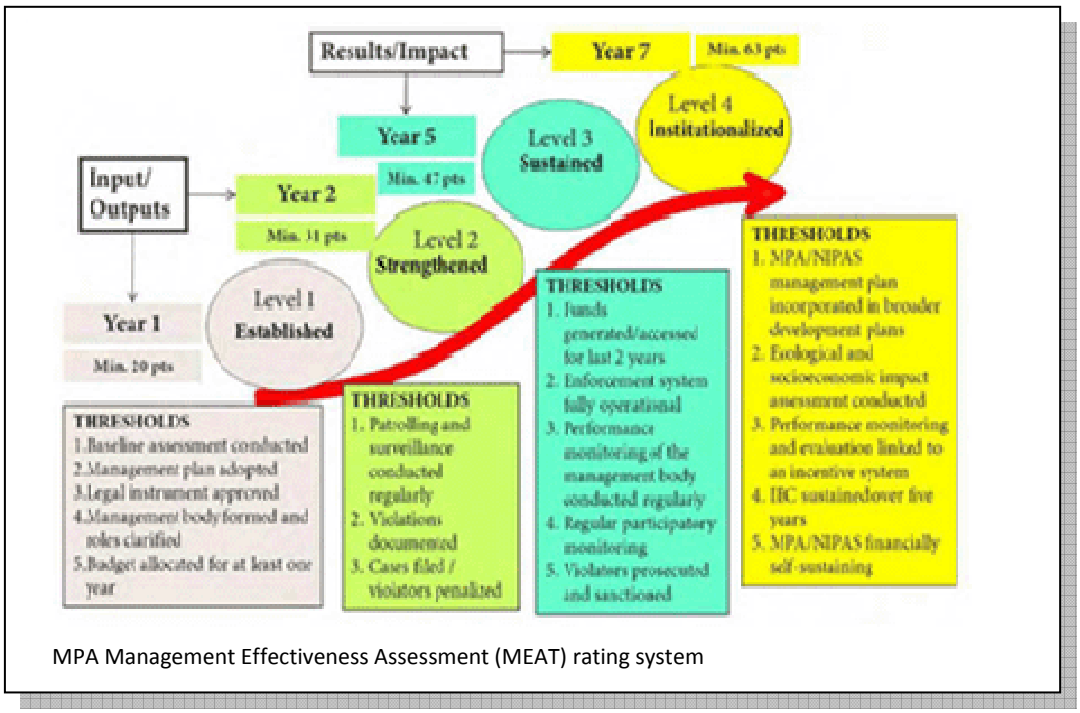
At least five tools were reviewed: The WB Scorecard, IUCN/WCPA elements of management effectiveness, CCEF MPA Rating System and Database, Philippine Environmental Governance Project 2 (Ecogov2) MPA MEAT protocol, and the MSN-PAMS evaluation tool. In the end, the work focused on the EcoGov2 MPA MEAT, because this tool is widely applicable and easy to use, and covers many indicators. The MEAT was actually based on and retains many of the elements of the CCEF MPA Rating System, but it measures management effectiveness using a four-scale (instead of a five-scale) rating system (Management Levels 1 and 2 in the CCEF Rating System was collapsed into Management Level 1):

MPA Rating System	MPA MEAT
Level I – MPA is initiated; 1 year established	Level 1 - MPA established
Level II – MPA is established; 1-2 years established	
Level III – MPA is enforced; 2 years or older	Level 2 – MPA strengthened (improved management)
Level IV – MPA is sustained; 3 years or older	Level 3 – MPA sustained
Level V – MPA is institutionalized, 4 years or older	Level 4 – MPA institutionalized

In addition, other indicators and weighted importance values based on the WB Scorecard and threshold governance processes were incorporated in the MEAT to help measure some outputs/outcomes and define effectiveness.

As it has developed, the MEAT's primary objective is to evaluate and highlight important threshold indicators and processes that help promote and achieve MPA management effectiveness outputs and outcomes. Based on function, the MEAT is defined as a tool to help measure MPA management effectiveness using simplified criteria to allow for an objective evaluation of MPAs, and to assess governance in terms of MPA enforcement, implementation and maintenance. It can be applied to locally managed MPAs and marine areas declared under the Philippine National Integrated Protected Areas System (NIPAS) Act (Republic Act 7586) or implemented through an assisted self-evaluation or key informant interviews to document and provide proof of completion of targets.

The MEAT sets a number criteria and activities for each management level. To qualify for a management level, the MPA must achieve the minimum score and all prescribed "thresholds" for that level and for Level 3 and 4, also meet the minimum number of years (5 years) of enforcement. "Thresholds" are significantly important activities that MPA management bodies must undertake to promote effective governance of an MPA (see diagram below).



MPA Management Effectiveness Assessment (MEAT) rating system

The results are interpreted as follows:

1) Overall score
    a. Measures the level of effort devoted to MPA management.
    b. Higher scores mean greater effort put into MPA management and can potentially increase management effectiveness.
2) Management effectiveness level
    a. Incorporates "thresholds."
    b. The following criteria must be met to achieve a given management effectiveness level:
        i. Minimum number of years from establishment.
        ii. Minimum overall score.
        iii. All "thresholds" for that Level and all lower levels.
3) Management focus
    a. MPA management activities are divided into key categories which help in improving MPA effectiveness. These are: management plan, management body, legal instrument, community participation, financing, IEC activities, enforcement, monitoring, and development.
    b. By grouping these questions into these categories, the MPA management body can assess where its strengths and weaknesses lie and objectively identify areas for improvement.

The MPA MEAT has so far been applied to 10 protected areas under NIPAS with marine areas and about80 local MPAs.

The following activities to further develop the MEAT are underway:

1) Conduct 3rd MPA Awards and Recognition Event using MEAT.

2) Develop database and support institutionalization of MEAT (MSN and DENR).
3) Develop guide/targets for improving MPA management in some municipalities (e.g. VIP municipalities)
4) Complement MEAT with the IUCN/WCPA METT for use in NIPAS marine areas.

The following additional information about the Philippine management effectiveness model came out in the ensuing discussion: There are two management effectiveness tools being used in the NIPAS areas: the MEAT and the METT. For local MPAs, the MEAT is used, but for MPAs under the NIPAS, both the MEAT and the METT are used. When the METT is used, it is the PAMB that makes the evaluation and summarizes the results; they are also responsible for formulating the MPA management action plan based on the issues that they identified during the evaluation. For the MEAT, an external evaluator is brought in to facilitate the implementation of the survey and give feedback to the management team about the survey results. The results are also used by the PAMB or MPA management team to identify the priority issues that they need to address in their action plan.

SESSION 13. EXAMINING THE PROS AND CONS OF EACH MANAGEMENT EFFECTIVENESS APPROACH

This session involved facilitated breakout discussions by country groups aimed at helping participants to better understand the investments in and practicality of setting up a management effectiveness model based on one of the models presented and discussed throughout this Regional Exchange. Each country group conducted a relative analysis of the models and, using *Handout 5.1: National level integration considerations,* discussed and agreed on a model that would be a good fit for their country. The following questions were also used to guide the analysis:

1) What are the preparatory steps for introducing this kind of model?
2) Who is setting the standards?
3) How is management effectiveness being measured?
4) What are being used as indicators?
5) How is the evaluation conducted?
6) How are the results communicated to stakeholders?
7) How do stakeholders respond to the results of the evaluation?
8) What are the pros and cons of each approach?
9) Who is the main audience of the results?

The following results were presented to plenary:

Timor-Leste said the model that would best fit their requirements was "based on the lessons we learned from the model that we used in the Twin Rocks MPA, which we think will apply in our country." They referred to this model as the "Twin Rocks model" or TRM, which is essentially based on NOAA's National Marine Sanctuary System, which uses management objectives to evaluate management effectiveness (Model 1).

PNG reported that they decided to use "Model 3, which was presented by (Mr. Soedimonoto) yesterday" (Indonesia MPAME model).

Malaysia said they would use "Model 3, meeting programmatic standards" and "probably one aspect from model 2."They noted that in Malaysia, MPAs are managed by different agencies, although in Sabah, five MPAs are managed by only one agency (Sabah Parks). (Ms. Walton advised them to use "just one model." She explained that the use of different models would be applicable to the Philippines, where there are MPAs being managed at different levels and it is difficult to use just one tool because the different levels have different systems of management.)

Indonesia said they would also adopt Model 3.

The **Philippines** said that if they had to pick one model to start with, it would be Model 3, but "ideally we should use a combination of the three models" in order to assess the different levels of MPAs that exist in the country.

The **Solomon Islands** said they would focus on management objectives (Model 1) "because we have locally managed marine areas, which are more or less community-based although they are administered by NGOs."

SESSION 14. DEVELOPING COUNTRY ROADMAPS FOR BUILDING THE MPA MANAGEMENT EFFECTIVENESS MODEL

At the start of this session, Ms. Walton announced that "we're scrapping the agenda." She explained, "Rather than having you develop the specific objectives and specific steps of your management effectiveness plan, we think it would be better for you to use the time to develop a roadmap and think about how to put your management effectiveness model together. What are the steps that you are going to take and what is the progression that you are going to take? You can structure your model in any way you want. Think broader and think more about the country approach and about multiple MPAs (rather than site-specific approaches). And think about this as a take-away, something you can take home with you that you can present to your NCC or government for adoption."

Discussions were done by country groups and guided by the following considerations:

1) Stakeholder identification
2) Lead agency/coordinator
3) Cost/funding (You have to think about funding now because you need to think about scale.)
4) Methods/steps (This is the centerpiece of the program.)
5) Audience (Who are you going to present your findings to? How are you going to present them?)
6) Data/database/data management (What data will you need? Where are they coming from?)
7) Approval processes (These occur at different levels. Up front, start to build capacity with those who will approve the plan, include them or at least communicate with them. Do not wait until the plan is done to promote it to those who influence or are responsible for its approval.)
8) Consensus development (How are you going to come to an agreement? What's the decision-making process going to look like? In particular, decide ahead of time how you are going to decide. By consensus? By majority?)
9) Who to report to? (e.g. NCC, SOM)
10) Technical assistance required.

The country roadmaps that resulted from the discussions and were presented to plenary are shown below with little editing in the order that they were presented:

PNG

Network/system: Kimbe Bay Managed Marine Area ME Model: Model 3 (based on programmatic standards)		
Development steps	TIMELINE	**Notes**
TNC Marine Program Retreat, NCC Meeting	June 2011	Introduction of management effectiveness to project site and at policy level.
Community consultation; Stakeholder workshop	START December 2011 END December 2011	Completion of community consultation; main aim of the consultation is to introduce conceptual framework (Steps 1-5)
Identify and develop review team	March 2012	
Training for review team	May 2012	Develop a work plan at the training
Review team to implement management effectiveness tool (compile biophysical, socioeconomic and governance data; create data management system; create register of governance tools, e.g.. national and provincial laws, policies, management plans, etc.)	December 2012	The review team will be divided into subcommittees to ensure transparency and efficiency
Review team workshop to do assessment, develop scorecard.	April 2013	Same process will be done at the community level and the results communicated to stakeholders as done at the start
Communicate results through consultation.	June 2013	

Additional notes/comments:

3) Budget is not an issue at the moment because TNC is already doing M&E in the area, and the provincial authority has also allocated some funds for this purpose. But looking at the long term there is an intention to expand to a national scale, and there is plan to include the program in the budget process.
4) Kimbe Bay is generally the initial focus of marine programs in PNG because it is considered as the country's demonstration site for such programs, and the lessons that are generated there are always shared with other sites. The management effectiveness program should eventually be replicated in other sites, initially perhaps in Manus Province. The tool will also probably be applied by the LMMA network because the management effectiveness team will also involve people who are working in the network.

Timor-Leste

Network/system: National Park – Niño Koni Santana ME Model: "Twin Rocks model" (based on management objectives)			
Development steps	TIMELINE		**Notes**
Management effectiveness team meeting	June 2011		NCC, CCG, MPA TWG, stakeholders
Gathering of information	START END	July 2011 August 2011	MPA MEP Team
Formulate workplan	September 2011		
Consultations	START END	October 2011 December 2012	
Review and finalize	START END	January 2012 February 2012	Workshop (stakeholders)
Approval	March 2012		Concerned ministries
Implement	START END	April 2012 April 2013	MPA MEP Team
Monitoring	3 / month		
Evaluation	1 / year		

Additional notes/comments:
Before it can be tested and implemented and to ensure funding, the plan will need approval from government.

Indonesia

Network/system: Nation-wide system ME Model: Model 3 (based on programmatic standards)			
Development steps	TIMELINE		**Notes**
Legal basis	Done		Laws and regulations.
Standardization	START END	2008 2011	Guidelines, standard operating procedures, etc.
Adoption by government	2012		MPAME Guide
Capacity and awareness building	2012 2013		Training, technical assistance, dissemination (regional government)
Implementation	2012 2013		Funding, dedicated team, list of MPAs (regional government)
M&E (system improvement)	2012		Adaptive management
Reporting	2013		External (regional/international), internal

Additional notes/comments:

7) Legal basis –In Indonesia, it is difficult to talk about any program without an enabling law, because government funding is required for implementation. Fortunately, the enabling laws for a nation-wide management effectiveness program are already in place. These include various fisheries laws (e.g. 5/1990; 31/2004; 60/2007) and coastal management laws (e.g. 27/2007),which provide for management effectiveness.
8) Standardization –The MPAME Guide contains the guidelines that are currently applied nationally, but other guidelines are also being reviewed and may be integrated into the MPAME tool to make it more comprehensive. The development and field testing of standards have been going on since 2008, and are expected to be completed this year. The tool will need government approval, which is targeted for 2012.
9) Capacity and awareness building -- Capacity-building at the regional government/local government will take time because the program still has to be approved by the national government to ensure that funding will be available for its implementation. If approval is secured in 2012, capacity building at the regional/local government level can start in 2013.
10) Implementation – A first step toward implementation is to identify the MPAs where the tool will be implemented. Indonesia has estimated to have 13.5 million hectares of MPAs across 60 states, with 15 MPAs under local government authority, 9 under the national government, and 7 under forestry management authority, not counting community-based MPAs managed at the village level. Also, implementation will require a dedicated national coordination team supported by expert groups. Having the laws and management effectiveness standards does not guarantee that implementation will happen. The national coordination team should have the necessary mandate to make sure that implementation is programmed at all levels of government, funded and subsequently implemented.
11) M&E – The primary reason for doing M&E is to improve the management system.
12) Reporting – In addition to international bodies (e.g. CTI and donors), the target audience of MPA management effectiveness report will include the Indonesian president, ministers and other concerned people with authority on this matter.

Philippines

Network/system: Bay-wide MPA network ME Model: Combination of Model 1 (using management objectives), Model 2 (using competence standards) and Model 3 (based on programmatic standards) Objective: To assess management effectiveness of the MPAs in Pandan Bay, Central Philippines			
Development steps	TIMELINE		**Notes**
Creation of management effectiveness team	Feb 2012		Team members: LGU technical staff, DENR, LIPASECU technical staff, etc.
Orientation of respondents/ stakeholders	March 2012		Council members, NGAs, LGUs, municipal technical staff (9 MPAs, 119 hectares)
Distribution of forms and application	March 2012		DENR and UPMSI to facilitate
Data gathering and analysis	May 2012		
Validation	September 2012		
Submission of reports	December 2012		To be submitted to LGUs, council, DENR, MSN (for benchmarking)
Budget item	**Details**	**Amount**	**Source**
3-day orientation workshop (transportation, supplies, accommodations)	35 participants X 3 days X Php1,500 per day	Php250,000	DENR, Provincial Government, external funding (persons involved: council members, Governor, Sangguniang Panlalawigan (Provincial Boards), DENR Regional Directors)

Additional notes/comments:

3) The roadmap is very specific to Pandan Bay because the MEAT is already being implemented in several sites in the Philippines and this is one site where the tool has not been implemented.
4) Budget specified is only for the first activity (3-day orientation workshop for respondents/stakeholders) outlined in the roadmap.

Malaysia

Network/system: State-widesystem – Sabah Parks ME Model: Model 3 (based on programmatic standards)		
Development steps	INDICATIVE TIMEFRAME	**Notes**
Proposal paper presentation and endorsement by the Board of Directors of Sabah Parks	6 months	
Creation of the management effectiveness team - Set up and improve the organizational structure - Design standard management effectiveness method	6-12 months	Approved by management effectiveness team
Preparation for data gathering (including creation of 3 technical groups: biophysical, socioeconomic and governance)	6-12 months	
Field work, data gathering, meeting/workshop with stakeholders	6-12 months	
Gathering of information, data analysis and report writing	6 months	To be outsourced to consultant/s
Submission of draft report to management effectiveness team (management meeting to review report)	3 months	
Roadshow/seminars/workshops, management meeting and preparation of final draft, submission to Sabah Parks Board of Directors for approval	3 months	

Additional notes/comments:

3) The Board of Directors of Sabah Parks is composed of representatives from various ministries who meet two to three times in a year to discuss matters concerning Sabah Parks. They need to approve the proposal before the management effectiveness process can begin, and for this reason, the roadmap does not set specific dates for the planned activities, only an estimate of the timeframe needed to complete each activity. (The timeframes indicated above may overlap).
4) Provisions for adaptive management will be included in the plan and the management effectiveness report.

Solomon Islands

Network/system: Solomon Islands Locally Managed Marine Areas (SILMMA) ME Model: Twin Rocks model (based on management objectives) and Indonesia MPAME scorecard (based on programmatic standards)			
Development steps	T I M E L I N E	**Notes**	**Budget**
Submission of report to NCC			TNC, CTSP
Formalization of MPA TWG (NCC)		To support SILMMA (Core team, MPA Regional Exchange Partners)	
Consultation with SILMMA	June 2011		
Development of management effectiveness model/system for CTSP integration sites		2-day workshop will be conducted, probably facilitated by a consultant, to identify information needs; sustainable financing included in the plan	CTSP?
Presentation of outcome to NCC by MPA TWG of the NCC	October 2011	SILMMA, WWF and FSPI	
Training for data collectors and MPA managers		FSPI, WWF, WFC at integration sites	FSPI?
Collection and evaluation of data; development of database	To be confirmed after development of plan	SILMMA to host information; technical assistance required to setup database	CTSP
Reporting to NCC through SILMMA	2-year reporting cycle	National, provincial, communities (GERUSA and Gizo), NGOs (WWF, FSPI, WFC, etc.), donors.	
M&E	Ongoing	SILMMA	

Additional notes/comments:

5) SILMMA is the social network of all MPAs in the Solomon Islands.
6) Some aspects of the models are not applicable to the local setting in the Solomon Islands and will have to be adapted to specific site requirements.
7) The plan has to be approved by the NCC before it can be implemented in the integration sites.
8) M&E results will input into an adaptive management process.

Expert inputs

1) Standardization should be built into the roadmaps now, so the management effectiveness models can be integrated at a national scale. It may prove be difficult to do the standardization and integration when the management effectiveness plans are already finalized and approved.
2) The development of a management effectiveness model is an iterative process involving testing, refining and testing again and refining. The sooner the model is field-tested, the sooner it is going to evolve into something useful. If the model is field-tested only when it is in its final form, changing and refining it would probably be more difficult. It is also wise to think ahead and get the management effectiveness process in the budget cycle as early as

possible. Ideally, for some countries supported by CTSP, the proposals must be ready by the end of May of each year to be considered for funding the following year.

WRAP-UP AND CLOSING

Before the closing session of the Regional Exchange, Ms. Walton encouraged participants "to start moving forward." She said, "At the network level, you already have objectives, management plans, and some kind of management effectiveness framework. You ought to recognize that you were building the pieces here and you now have some of the pieces, so you don't have to start from scratch. In time, those pieces will become integrated, and the system will become seamless. We hope that you will actually take your roadmaps home and implement it. In a future workshop, we're going to check in and see what progress you've made."

Dr. White agreed, congratulating the participants for their "tremendous participation -- you have a lot of things already going on, a foundation, on which you can build. If we can do this, we will be way ahead of any region in the world. What we have already accomplished is really impressive, but we have some more work to do." He urged the participants to "keep the NCCs informed of what you're doing, which will help get you more resources" and informed them about the next MPA Regional Exchange (set for September or October this year), which will focus on the CTMPAS," and a follow-up workshop "sometime in 2012."

Ms. Kumaras Kay Kalim (PNG), speaking in behalf of the participants, thanked the resource team, saying, "The planning process really took us to where we needed to go." She added, "We came here with a lot of why's. Now, we all realize why, that this is all relevant to us, and this is something that we can and must do in our countries."

Mr. Edgardo Galeon (DENR), who formally closed the Regional Exchange in behalf of NCC-Philippines as a host organization, spoke in awe of the work being done by those involved in marine conservation. He told participants in his closing statement, "I have been doing management effectiveness tracking in our terrestrial parks for much of my 42 years in the service and started scuba diving in 2009. This is what I can tell you: We are blessed to be living where we are. But as much as the Coral Triangle is ours to enjoy, it is also, more importantly, ours to sustain and protect."

The Regional Exchange officially ended at 5:30p.m.

ANNEXES

A1. AGENDA

Day 1: 9May 2011, Eagle Point Resort		Mabini, Batangas, Philippines
9:30-10:00	**Opening** • Opening statement – Ms. Lynette Laroya in behalf of DENR Undersecretary and NCC-Philippines Chair Manuel Gerochi • Solidarity message – Mr. Maurice Knight (CTSP) • Welcome remarks – Mr. Luis Awitan (Batangas Provincial Government) • Course overview and expectations – Mr. William Jatulan (PI)	*Facilitator:* Mr. William Jatulan (PI)
10:00-10:30	**Session 1: Outcomes from the Design and Operations of MPA Systems/Network Workshop (Thailand, 2010)** • Presentation – Dr. Alan White (TNC) • Panel discussion	*Facilitator:* Ms. Anne Walton (NOAA) and Dr. Alan White (TNC)
10:30-10:45	Break	
10:45-11:15	**Session 2: Purpose and Need for Setting Standards for Management Effectiveness at the Network Level** • Presentation – Ms. Anne Walton (NOAA) • Plenary discussion	*Facilitator:* Ms. Anne Walton (NOAA)
11:15-12:30	**Session 3: Status of Management Effectiveness Programs in the CT Region** • Gallery Walk featuring poster presentations by country groups and partner organizations	*Facilitators:* Ms. Anne Walton (NOAA), Dr. Alan White (TNC), Mr. William Jatulan (PI)
12:30-13:30	Lunch	
13:30-15:00	**Session 4: Inventory of Existing Management Effectiveness Plans** • Facilitated country group discussions • Plenary presentations by country groups	*Facilitators:* Dr. Alan White (TNC), Ms. Anne Walton (NOAA), Ms. Leanne Fernandes (Australian CTI Alliance), Atty. Rose-Liza Eisma-Osorio (Philippines), Mr. William Jatulan (PI)
15:00-15:30	Break	
15:30-17:15	**Session 5: A Look at Successes and Challenges – Lessons Learned from the Field** Case study presentations: • World Bank scorecard to assess progress in achieving MPA management effectiveness	*Facilitator:* Mr. William Jatulan (PI)

Day 1: 9May 2011, Eagle Point Resort		Mabini, Batangas, Philippines
	goals – Ms. Leanne Fernandes (Australian CTI Alliance) • Management Effectiveness Tracking Tool (METT) – Ms. Lynette Laroya (DENR-PAWB) • Assessing Management Effectiveness in the Great Barrier Reef Marine Park – Ms. Leanne Fernandes (Australian CTI Alliance) • Using the MPAME Guide to Improve MPA Management Effectiveness in Indonesia: Experience from Field Trials – Mr. Arisetiarso Soemodinoto (TNC-Indonesia Marine Program) • System-wide Monitoring and Sanctuary Condition Reports – Ms. Anne Walton (NOAA) • ICRI East Asia's Work on MPA Management Effectiveness – O Shinichiro Kakuma (Okinawa Prefecture Government)	
17:15-17:30	**Wrap-up and bridge to evening session**	*Facilitator:* Mr. William Jatulan
18:00-19:00	Dinner	
19:30-20:15	**Session 6: Integrating Climate Change and Fisheries Objectives into Resilient MPA Network Design Principles** • Presentation – Ms. Leanne Fernandez (Australian CTI Alliance) • Plenary discussion	*Facilitator:* Ms.Leanne Fernandes (Australian CTI Alliance), Mr. Maurice Knight (CTSP)

Day 2: 10 May2011, Eagle Point Resort		Mabini, Batangas, Philippines
8:30-8:45	**Review of Day 1** • Facilitated plenary discussion	*Facilitator:* Mr. William Jatulan (PI)
8:45-10:40	**Session 7: Developing the Management Effectiveness Framework** • Presentation: Understanding the different management effectiveness approaches – 3 basic models – Ms. Anne Walton (NOAA) • Presentation: MPA and enforcement network in Verde Island Passage Marine Biodiversity Conservation Corridor – Mr. Pacifico Beldia (CI-Philippines) • Presentation: Mabini Marine Reserve – Atty. Rose-Liza Eisma-Osorio (CCEF) • Panel discussion – Dr. Alan White (TNC), Ms. Loreta Sollestre (Batangas Provincial Government), Atty. Rose-Liza Eisma-Osorio (CCEF), Mr. Pacifico Beldia (CI-Philippines)	*Facilitator:* Dr. Alan White (TNC)
10:40-11:00	Break	

Day 2: 10 May2011, Eagle Point Resort		Mabini, Batangas, Philippines
11:00-12:30	**Continue Session 7: Developing the Management Effectiveness Framework** • Breakout workshops: ○ Developing indicators as measures of success for the study area	*Facilitators:* Dr. Alan White (TNC), Ms. Anne Walton (NOAA), Ms. Leanne Fernandes (Australian CTI Alliance), Mr. William Jatulan (PI)
12:30-13:30	Lunch	

13:30-15:00	**Continue Session 7: Developing the Management Effectiveness Framework**
	• Breakout workshops:
	  ○ Determining what to measure
	  ○ Developing a monitoring framework
		Facilitators: Dr. Alan White (TNC), Ms. Anne Walton (NOAA), Ms. Leanne Fernandes (Australian CTI Alliance), Mr. William Jatulan (PI)

15:00-15:30	Break	

15:30-17:30	**Continue Session 7: Developing the Management Effectiveness Framework**
	• Breakout workshops:
	  ○ Continue developing a monitoring framework
	  ○ Developing an adaptive management plan
		Facilitators: Dr. Alan White (TNC), Ms. Anne Walton (NOAA), Ms. Leanne Fernandes (Australian CTI Alliance), Mr. William Jatulan (PI)

17:30-17:45	**Wrap-up and bridge to Day 3** **Homework assignment** • Develop survey questions for field trip	*Facilitator:* Ms. Anne Walton (NOAA)

Day 3: 11May 2011, Eagle Point Resort; Twin Rocks Sanctuary		Mabini, Batangas, Philippines
8:30-9:30	**Exercise: Finalize survey questions for field trip**	*Facilitator:*Ms. Anne Walton (NOAA)
9:30-10:15	**Field trip orientation**	*Facilitator:* Mr. William Jatulan, Dr. Alan White, Ms. Anne Walton
10:15-15:30	**Field trip: Assessment rotations** (Twin Rocks Sanctuary, Mabini Marine Reserve) • MPA staff interviews • Community and staff interviews • Underwater assessments	*Facilitaros:* Resource persons, Dr. Alan White, Ms. Anne Walton, Mr. William Jatulan
15:30-15:45	Break	
15:45-17:30	**Session 8. Data collation and preparation of presentations on management effectiveness frameworks and field trip reports for Day 4**	*Facilitators:* Dr. Alan White (TNC), Ms. Anne Walton (NOAA), Ms. Leanne Fernandes (Australian CTI Alliance), Mr. William Jatulan (PI)

Day 4: 12May 2011, Eagle Point Resort		Mabini, Batangas, Philippines
8:30-10:00	**Session 9: Presentation of management effectiveness frameworks and field reports** • Presentation – Field group teams • Plenary discussion	*Facilitator:* Mr. William Jatulan (PI)
10:00-10:30	**Session 10: The Indonesia MPAME Model and Protocol Database** • Presentation: Using the Guide for Improving Marine Protected Area Management Effectiveness in Indonesia – Mr. Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)	*Facilitator:* Dr. Alan White (TNC)
10:30-11:00	Break	
11:00-12:30	**Continue Session 10: The Indonesia MPAME Model and Protocol Database** • Presentation: Using the Guide for Improving Marine Protected Area Management Effectiveness in Indonesia (Experience from Field Trials) – Mr. Arisetiarso Soemodinoto (TNC-Indonesia Marine Program) • Workshops: Role-playing exercise using the Indonesia MPAME model	*Facilitator:* Dr. Alan White (TNC), Ms. Leanne Fernandes (Australian CTI Alliance), Dr. Anne Walton (NOAA)
12:30-13:30	Lunch	
13:30-15:30	**Continue Session 10: The Indonesia MPAME Model and Protocol Database** • Presentation: Using the Guide for Improving Marine Protected Area Management Effectiveness in Indonesia (Calculating management effectiveness ratings based on results of interviews/questionnaire) – Mr. Arisetiarso Soemodinoto (TNC-Indonesia Marine Program) • Continue workshops: Calculate management effectiveness ratings • Presentation of results	*Facilitator:* Ms. Anne Walton (NOAA)
15:30-16:00	Break	
16:00-16:30	• Presentation: Indonesia MPAME datasets – Mr. Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)	*Facilitator:* Ms. Anne Walton (NOAA)
16:30-17:15	**Session 11: The CTI Regional MPA Learning Network** • Presentation: CTI Regional Learning Network for MPA Managers – Mr. Marthen Welly (CTC) • Plenary discussion	*Facilitator:* Dr. Alan White (TNC)
17:15-17:30	**Wrap-up and bridge to Day 5**	*Facilitator:* Mr. William Jatulan (PI)

Day 5: 13 May 2011, Eagle Point Resort		Mabini, Batangas, Philippines
8:15-8:30	**Overview of Day 5** – Mr. William Jatulan (PI) **Review of past days' outputs** – Ms. Anne Walton (NOAA)	*Facilitator:* Mr. William Jatulan (PI)
8:30-10:30	**Session 12: Completing the Management Effectiveness Cycle** • Presentation:Adaptive Management – What do we do with the results of the management effectiveness program – Ms. Anne Walton • Plenary discussion • Presentation: Measuring MPA effectiveness (Relevance and integration at the national scale) – Dr. Alan White (TNC) • Presentation: Review of management effectiveness tools and development of the MPA management effectiveness assessment tool (MEAT) – Ms. Vera Horigue (ARC COE for Coral Reef Studies, JCU) • Plenary discussion	*Facilitator:* Ms. Anne Walton
10:30-11:00	Break	
11:00-12:30	**Session 13: Examining the Pros and Cons of Each Management Effectiveness Approach** • Breakout discussions – country groups	*Facilitators:* Dr. Alan White (TNC), Ms. Leanne Fernandes (Australian CTI Alliance), Ms. Anne Walton (NOAA), Mr. William Jatulan (PI)
12:30-13:30	Lunch	
13:30-14:00	**Continue Session 13: Examining the Pros and Cons of Each Management Effectiveness Approach** • Plenary presentations and discussion – country groups	*Facilitator:* Ms. Anne Walton (NOAA)
14:30-16:00	**Session 14: Developing Country Roadmaps for Building the MPA Management Effectiveness Model** • Breakout discussions – country groups	*Facilitators:* Dr. Alan White (TNC), Ms. Leanne Fernandes (Australian CTI Alliance), Ms. Anne Walton (NOAA), Mr. William Jatulan (PI)
16:00-16:15	Break	
16:15-17:00	**Session 14: Developing Country Roadmaps for Building the MPA Management Effectiveness Model** • Plenary presentations and discussion – country groups and resource team	*Facilitator:* Ms. Anne Walton (NOAA)
17:00-17:30	**Wrap-up and closing** • Wrap-up and next steps – Ms. Anne Walton (NOAA), Dr. Alan White (TNC) • Acknowledgment remarks – Ms. Kumaras Kay Kalim (PNG) • Closing remarks – Mr. Edgardo Galleon (DENR)	*Facilitator:* Mr. William Jatulan (PI)

A2: LIST OF PARTICIPANTS AND RESOURCE PERSONS

DELEGATIONS

INDONESIA

Herlina, Dedah
Head Office, Marine and Fisheries Agency of Sukabumi Regency
Jl Raya Cisolok Km 11 Palabuhan Ratu, Sukabumi, Jawa Barat, Indonesia
Ph. : (62) 815601902
Email : dedahherlina@yahoo.com

Mukmin, Amiril
Head of Regent Office, Marine and Fisheries Agency of East Lombok Regency
Jl. Lestari Gang Sempati No. 13 Lingkungan Pejarakan, Ampenan NTB, Indonesia
Ph. : (62) 8123723777
Email : amiril_mpd@yahoo.co.id

Rahayu, Sri
Staff of Directorate Marine and Aquatic Resource Conservation, Ministry of Marine Affairs and Fisheries
Jl. Swadaya Murni III/Kav. AL no. 71 Rt 03/04 Jati Ranggon, Jatisampurna Bekasi, Indonesia
Ph. : (62) 81264731071
Email : rahayu91@yahoo.com

Soemodinoto, Arisetiarso
Measures, M&E Manager, The Nature Conservation – Indonesia Marine Program
Jalan Pengembak No. 2, Sanur 80288, Bali, Indonesia
Ph. : (62) 361287272
Email : asoemodinoto@tnc.org

Widayanto, Agus
Head of Local Office National MPA, Ministry of Marine Affairs and Fisheries
Diponegoro Street Number 44 A, Pekanbaru, Riau, Indonesia
Ph. : (62) 76120605; (62) 8128723158
Email : widayanto9@yahoo.co.id

MALAYSIA

Abdul Razak, Fazrullah Rizally
Park Manager, Board of Trustees, Sabah Parks
P.O. Box 10626, 88806 Kota Kinabalu, Sabah, Malaysia
Ph. : (6088) 486430
Email : friza@hotmail.com

Juli, Abdul Muntalib Bin
Marine Park Officer, Dep. Marine Park of Malaysia
NRE, 11 Floor, WISMA Sumber Asli
25, Persiaran Perdana Prasint 4, 625-4 Putrajaya, Malaysia
Ph. : (6038) 8861763
Email : muntalib@nre.gov.my

Syed Hussein, Muhamad Ali
Lecturer, Borneo Marine Research Institute, Universiti Malaysia Sabah
Jalan UMS, 88400 Kota Kinabalu, Sabah,Malaysia
Ph. : (6016) 239 8111
Email : muhad_ali@ums.edu.my

PAPUA NEW GUINEA

Kalim, Kumaras Kay
Deputy Secretary, Department of Environment and Conservation
P.O. Box 6601, Boroko, National Capital District, Papua New Guinea
Ph. : (675) 301 4500 ; (675) 301 4507
Email : kkalim@dec.gov.pg

Masike-Liri, Barbara
Project Manager, Kimbe Bay MPA, The Nature Conservancy
P.O. Box 267, Kimbe, West New Britain Province, Papua New Guinea
Ph. : (675) 983 5808
Email : bmasike@tnc.org

Sine, Robert
Senior Program Officer, Department of Environment and Conservation
P.O. Box 6601, Boroko, National Capital District, Papua New Guinea
Ph. : (675) 301 4500
Email : rsine@dec.gov.pg

PHILIPPINES

Angor, Lorna Huelgas
Executive Director, LIPASECU Baywide Management Council
Culasi, Antique, Philippines
Ph. : (63) 9398252954
Email : lornaangor@yahoo.com

Beldia, Pacifico Dillera
MPA Specialist, Conservation International Philippines
#6 Maalalahanin St., Teacher's Village, Quezon City, Philippines
Ph. : (63) 9209328320
Email : pbeldia@conservation.org

Galleon, Edgardo
Department of Environment & Natural Resources, Philippines

Duquil, Robert Palit-ang
Ecosystem Management Specialist 1, Department of Environment and Natural Resources, Apo Reef Natural Park (ARNP) Protected Area Office (PAO)
DENR-CENRO, 5104 Sablayan, Occidental Mindoro, Philippines
Ph. : (63) 9127862700; (63) 9262190408
Email : aporeef_denr@yahoo.com; robertduquil@yahoo.com

Laroya, Lynette Trofeo
Senior Ecosystems Management Specialist, Biodiversity Management Division, Protected Areas and Wildlife Bureau-Department of Environment and Natural Resources
Quezon City, Philippines
Email: lynette_laroya@yahoo.com

Nunez, Enrique
Conservation International Philippines
#6 Maalalahanin St., Teacher's Village, Quezon City

Sollestre, Loreta
Environmental Management Specialist, Provincial Government-Environment and Natural Resources Office
Email: enr_planning@yahoo.com

SOLOMON ISLANDS

Leqata, John Luxton
Chief Fisheries Officer – Research, Ministry of Fisheries and Marine Resources (MFMR)
P.O. Box G13, Honiara, Solomon Islands
Ph. : (677) 39143 (office), (677) 75-58395 (mobile)
Email: jleqata@fisheries.gov.sb

Pita, Joanne
Foundations of the Peoples of the South Pacific International (FSPI), Coastal Program, FSPI/SIDT
P.O. Box 147, Honiara, Solomon Islands
Ph. : (677) 25389
Email: joannepita47@gmail.com

Topo, Salome Pitatina
Sustainable Livelihood Officer, WWF-SI Program
P.O. Box 97, Gizo, Western Province, Solomon Islands
Ph. : (677) 60191 (Gizo office), (677) 28023 (Honiara), (677) 754-1554 (mobile)
Email: stopo@solomon.com.sb ; salo772998@gmail.com

Wini, Lysa
CTI National Liaison Officer, WWF/MECDM C/ Ministry of Environment, Climate Change, Disaster Management and Meteorology
P.O. Box 213, Honiara, Solomon Islands
Ph. : (677) 23031, (677) 747-3384 (Email: lysa.wini@solomon.com.sb

TIMOR-LESTE

Amaral, Aleixo Leonito
CTI National Focal Point, National Directorate of Fisheries and Aquaculture
Ministry of Agriculture and Fisheries
Rua Presidente Nicolau Lobato
Dili, Timor-Leste
Ph: 670 7375655, 670 7312310
Email: aleixo_la@yahoo.com

Amaral, Anselmo Lopes
Conservation and MPA Responsible, Ministry of Agriculture and Fisheries
Rua Presidente Nicolao Lobato Comoro,
Dili – Timor Leste
Ph: 670 729 3852
Email: alopamaral@yahoo.com

De Limas, Antonino
Head of Research and Advocacy Department, Haburas Foundation
Rua Celestino da Silva Farol, Dili, Timor Leste
Ph: 670 7233105
Email: antondelimas@yahoo.com

RESOURCE PERSONS

Horigue, Vera
ARC COE for Coral Reef Studies, James Cook University (Student)
Townsville Queensland, Australia
Ph: 61-47814829
Email: vera.horigue@my.jcu.edu.au

Osorio, Rose-Liza Eisma
Executive Director, Coastal Conservation & Education Foundation Inc.
301 PDI Condominium, Archbishop Reyes Avenue, Banilad, Cebu City, Philippines
Ph: (6332)-2336947; (6332)-2336909; (6332)-2336891 (fax)
Email: liza_eismaosorio@yahoo.com; ccef.ed@gmail.com

Tanzer, John
Senior Policy Officer – CTI, TNC-Pacific
51 Edmondstone St, South Brisbane, QLD 4101, Australia
Ph: +61 7 3214 6906 ; +61 7 3214 6999 (fax); +61 488 995 871
Email: jtanzer@tnc.org

Walton, Anne
Program Director, International MPA Capacity Building Program, NOAA
2436 NW Westover Road, Portland
OR 97210, USA
Ph: 1-240 249 4864
E-mail: anne.walton@noaa.gov

White, Alan
Lead for MPA Regional Theme for USCTI, The Nature Conservancy
923 Nu-uanu Avenue
Honolulu HI 96817, USA
Ph: 1-808 687 6218
E-mail: alan_white@tnc.org

AUSTRALIAN CTI ALLIANCE

Fernandes, Leanne
Director
Earth to Ocean Consulting
PO Box 643, Townsville, Queensland, Australia
Ph: 61 7 4725 1824, 61 434524051
Email: leannef@earth2ocean.com

CORAL TRIANGLE CENTER

Welly, Marthen
Learning Sites Manager
Coral Triangle Center (CTC)
Jl. Danau Tamblingan no. 78, Sanur
Bali 80228, Indonesia
Ph: 62 361 289 338
Email: mwelly@coraltrianglecenter.org

CORAL TRIANGLE SUPPORT PARTNERSHIP (CTSP)

Deeks, Payton
M&E Officer, Coral Triangle Support Partnership-RPO
One Wolter Place Building Mezzanine Floor
Jl.Wolter Monginsidi No.63B, Kebayoran Baru
South Jakarta, 12180 Indonesia
Ph: +62-21 7394 457 Ext. 111; +1-202 495 4511
Email : Payton.Deeks@wwfus.org

Knight, Maurice
Chief of Party, Coral Triangle Support Partnership - Regional Coordination Team
One Wolter Place Building Mezzanine Floor
Jl.Wolter Monginsidi No.63B, Kebayoran Baru
South Jakarta, 12180 Indonesia
Ph: 62-21-739-4457
Email: Maurice.Knight@wwfus.org

Plume, Catherine
Director, World Wildlife Fund
1250 24th St., NW, Washington, DC 20037, USA
Ph:+12024685695
Email: Catherine.plume@wwfus.org

OKINAWA PREFECTURE GOVERNMENT

Kakuma, Shinichiro
Fisheries Extension Center
Okinawa Prefecture Government
1-3-2 Nishizaki Itoman Okinawa Japan 901-0305
Ph. : (81) 90-3792-2603
Email : kakumshi@pref.okinawa.lg.jp

THE NATURE CONSERVANCY

Victor, Steven
Micronesia Conservation Planner
The Nature Conservancy – Micronesia
P.O. Box 1738
Koror, Palau 96940
Ph. : (680) 488-2017 (office); 587-3953 (home)
Email : svictor@tnc.org

US CTI SUPPORT PROGRAM INTEGRATOR

Floren, Jessie
US CTI Support Program Integrator
Suite 307 Geson Bldg., D. Jakosalem St.
Cebu City, Philippines
Ph: +63 32 255 7766
Email: jfloren@uscti.org; jofloren@gmail.com

Jatulan, William
US CTI Support Program Integrator
Suite 307 Geson Bldg., D. Jakosalem St.
Cebu City, Philippines
Ph: 63 32 255 7766
Email: wjatulan@uscti.org

Sia, Asuncion Evangelista
US CTI Support Program Integrator
Email: overseas@oneocean.org

A3. MPA REGIONAL EXCHANGE PARTNERS

Coral Triangle Support Partnership (CTSP)

The Coral Triangle Support Partnership (CTSP) is a five-year project of the US CTI Support Program executed through a cooperative agreement with USAID to the World Wildlife Fund (WWF). This includes a consortium of WWF, Conservation International (CI), and TNC. The CTSP works with government, private sector, and local partners to catalyze transformational change by assisting governments with enabling policy support, strengthening capacity building and institutions, building constituencies, and building decision support capacity.

CTI Interim Regional Secretariat

The CTI Interim Regional Secretariat is hosted by the Government of Indonesia and resides in Jakarta. The Secretariat provides long-term, wide ranging support to the CTI governments and partners for implementation of the CTI Regional Plan of Action, particularly through direct support for the various coordination mechanisms. The CTI Regional Secretariat provides coordination, technical, and communications support for CTI-related activities such as the ministerial and senior official meetings, the technical working groups, partners, and the national coordination committees.

NCC-Philippines

NCC-Philippines, headed by officials from the DENR and DA, oversees and coordinates the integration and implementation of the Philippine CTI NPOA including the CTI RPOA. It acts as the national coordination body for the Philippines regarding CTI regional processes and represents the Philippine government in meetings, conferences, fora, and workshops pertaining to the CTI. It is also tasked to review and endorse policy and project proposals related to NPOA implementation.

US CTI Support Program Integrator (PI)

The US CTI Support Program Integrator (PI) provides overarching coordination support to the USG for the implementation of US CTI Support Program. The PI is responsible for coordinating inputs from various US Government (USG) agencies and partners, and for facilitating a unified USG response to the CTI. Activities include the following: facilitate networking and cooperation; promote information exchange; provide administrative support to USAID's Regional Development Mission for Asia (RDMA); support communications and alliance building among USAID, USG, and other donors to harmonize assistance to the CTI; and provide technical support to the CTI mechanisms to facilitate implementation of the CTI Regional and National Plans of Action.

US National Oceanic and Atmospheric Administration (NOAA) is a federal scientific agency within the Department of Commerce focused on the conditions of the oceans and the atmosphere. It is an important partner in the CTI, providing technical support and capacity building for fisheries management, environmental law enforcement, CCA, and MPA networks.

A4:PARTICIPANTS' BREAKDOWN BY GENDER AND ORGANIZATION

A.4.1. Gender

Country Delegates		
Male	15	60%
Female	10	40%
TOTAL	25	100%
Partners/Resource Persons		
Male	8	53%
Female	7	47%
TOTAL	15	100%
OVERALL TOTAL		
Male	23	58%
Female	17	43%
TOTAL	40	100%

A4.2.Country Delegates' Institutions

Government	15	60%
Academe, NGOs and CBOs	10	40%
TOTAL	25	100%

A5: SECOND MPA REGIONAL EXCHANGE COURSE EVALUATION

1. Which sessions are useful and not quite useful (not sure) to you? Please check appropriate.

Sessions/Exercises	Useful (N = 23)	Not sure
Day 1		
• PLENARY SESSION: Outcomes From the Design and Operations of MPA Systems/ Network Workshop (Thailand, 2010)	96%	4%
• PRESENTATION: Purpose and Need for Setting Standards for Management Effectiveness at the Network Level	96%	4%
• POSTER PRESENTATIONS: Gallery Walk of Posters Presented by CTI-6 Countries	96%	4%
• FACILITATEDBREAKOUT GROUPS: Identifying the Key Pieces of a Management Effectiveness Plan That May Already Be in Place in Your MPA	100%	
• CASE STUDIES: A Look at What Works and What Doesn't – Lessons Learned From the Field	100%	
• PANEL DISCUSSION: Comparing and Contrasting Management Effectiveness Approaches	100%	
• EVENING SESSION: Moving Forward with MPA Network/System Design and Integration of fisheries	83%	17%
Day 2		
• PRESENTATION: Understanding The 3 Management Effectiveness Models	91%	9%
• PRESENTATION: Overview of Verde Passage as Study Area for Developing a Management Effectiveness Plan	100%	
• EXERCISE 2.1: Developing Indicators as Measures of Success for the Study Area	100%	
• EXERCISE 2.2: Determining What to Measure	100%	
• EXERCISE2.3: Developing a Monitoring Plan	100%	
• EXERCISE2.4: Developing an Adaptive Management Plan	100%	
• GROUP PRESENTATIONS: Management Effectiveness Framework	96%	4%
• GROUP ASSIGNMENT: Developing Survey Questions	100%	
Day 3		
• FIELD TRIP: Assessment Rotations	96%	4%
• PREPARATION: Collate Data and Design Presentation	100%	
Day 4		
• FINDINGS FROM FIELD TRIP	100%	
• PRESENTATION: Indonesia's MPAME Model	100%	
• CASE STUDIES: Experience From the Field Trials	96%	4%
• PRESENTATION: Indonesia MPAME Protocol Database	96%	4%
• EXERCISE: Indonesia MPAME Protocol Using Role-Play	96%	4%

• EXERCISE: Customizing the Database	100%	
• PRESENTATION: The Indonesia MPAME Method for Calculating Management Effectiveness Levels	100%	
• EXERCISE: Applying the Method for Calculating Management Effectiveness Levels	96%	
• GROUP PRESENTATIONS: Integrating/Applying the Scorecard - Evaluation and Assessment Models	100%	
• PRESENTATION: Regional MPA Learning Network and Discussion on Next Steps for MPA TWG/Theme	91%	9%
Day 5		
• PRESENTATION: Completing the Management Effectiveness Review Cycle	96%	4%
• PRESENTATION: Integration at the National Level	96%	4%
• PRESENTATION: Looking at various Models for Regional Approach to Management Effectiveness as contrasted to Management Effectiveness Assessment Tool (MEAT) in the Philippines	96%	4%
• FACILITATED BREAKOUT GROUPS (BY COUNTRIES): Examining the Pros and Cons of Each Management Effectiveness Approach	100%	
• FACILITATED COUNTRY DISCUSSIONS: Selecting the Appropriate ME Plan for each MPA Network	100%	
• EXERCISE: Building a Management Effectiveness Framework for Each Country	100%	
• TEAM PRESENTATIONS OF POSTER: Peer to Peer Review	96%	4%

2. Were your expectations from this MPA regional exchange met?
   96% - Yes, 4% - No

3. What were the key learnings (concepts, approaches, tools) you gained from this regional exchange applicable to your work in your country?
   - applicable for implementation in my MPA
   - concepts, approaches, tools (4)
   - METT, MEAT, MPAME
   - identify indicators and measures to ensure mgt effectiveness; adaptive management concept
   - community-based
   - mgt effectiveness tool for MPA
   - implementation in local government
   - different models, different experiences and learnings from other countries
   - other system/process/mechanism of evaluating
   - all are applicable (3)
   - the 3 models and other CT6 countries experiences
   - management effectiveness tool for MPA
   - tools are useful as basis for developing an assessment of MPAs
   - MPA management effectiveness tools and approaches were relevant and informative
   - field trip, exercises, breakout groups
   - 3 ME model, staff consistency and programmatic, all applicable to my work
   - management effectiveness tools/models standards, scorecards

4. Which sessions, exercises and methodologies of the MPA regional exchange helped you absorb the concepts, approaches and tools introduced?
   - All (2)
   - Mgt effectiveness model and MPAME (2)

- Indonesia MPAME methods for calculating mgt effectiveness level
- Mix team conducting the field visit survey and follow-up the next day
- Various management effectiveness models
- Exercises 2.1, 2.2, 2.3, 2.4 (2)
- 3 management effectiveness model
- NOAA model, MEAT, Road Map Preparation
- Workshops and Plenary
- Posters: Mgt Effectiveness Model; Monitoring (field trip), Score Card
- ratings and classifying the different levels on how effective each MPAs have been rated in CT6 countries
- MPAME model used in Twin Rocks (2)
- MPAME tool - 5 steps process was useful to my country situation. Also, the excel method presented by ICRI was a useful tool for documenting MPAs
- Improved understanding of management plan, monitoring and evaluation
- Group exercises, field trip (4)
- Example of MPAME method use by Indonesia

5. What changes in the design/agenda would you recommend in the current program?
    - Other aspect of MPA
    - Participants do scuba during the MPA in the area
    - More time to develop ME plan and model
    - Design and agenda are okay
    - How to develop adaptive management approaches before the inception of the MPAs
    - Provide background information but need more hands on exercises and design and planning
    - Provide clear understanding of host country, so that participants are aware to the situation before field trips and that relevant questions can be asked
    - Very good design
    - Based on country needs
    - Agenda is appropriate
    - Illustration of other models of management effectiveness and evaluation e.g. only Indonesia MPAME was illustrated

6. What are your specific recommendations to the resource team (resource persons, facilitators and support staff) to improve the regional exchange?

    - Speak slowly in presentation
    - Invite existing MPA network leader as resource person
    - Speak slowly in presentation
    - Workshop location move from each CT6
    - Ensure the process does not lag
    - Pictorials/book about the MPAs
    - Great Team
    - The team is competent
    - Everybody very good
    - CT6 countries needs and aspirations has to be addressed with community driven needs
    - Examples used should be trialed in this area of CT6 where social setting is different and certain tools do not work here

- The workshop was good and attractive but regarding consumption need chili to be completed
- Communication was a barrier for one presenter, however, I was very interested in the presentation and talked to him later and got more information
- So far so good
- Need to present the effectiveness of MPA in CT6 and support in planning
- Include energiser time
- Use lessons learned in the context of developing countries

7. What other changes (venue, logistics, others) would you recommend in the current program?

- Indonesia as venue
- Workshop location be moved to other CT6 countries
- Venue should be at the MPA area
- Give enough time to recuperate after long flight/trip
- A sample of the analysis of the assessment using the database
- No changes must be accessible to existing MPAs
- Choose other countries of CT6 to deliver this workshops too and enough of Asia all the time; using cost as an excuse
- A venue closer to town to allow participants to take some time off in the evening. Travel routes could be shortened for a shorter flight
- Everything Ok
- Venue should be easily accessible
- next in Sabah marine park
- Good
- Have the meeting in PNG, maybe expensive but there is a lot of value
- Venue should be easily accessible
- Logistic is perfect
- Go to other countries e.g. Indonesia and Malaysia

8. What topics you think should be included to the follow up MPA regional exchange?

- Another model to improved MPA
- Know the progress of action plan
- Workshop to know the progress of action plan
- Coral assessment
- How to develop MPA mgt effectiveness plan
- Discussions on the cultural aspect of mgt effectiveness evaluation
- Sharing of experience particularly on legal mechanism
- Quantitative data collection, analysis, interpretation and presentation
- National policy and law making bodies of the host countries
- Reporting back on the progress, maybe in 2012
- More exercise in monitoring and evaluation
- Legal and policies for MPA
- Visit MPA site and mett directly local community; MPA management team and authority

- Share lesson learned; field trips
- Copy of the case study and example of the report
- The three model that we have learned
- MPA integrated into climate change, dynamic change context

9. What are your recommendations in organizing and conducting the future regional exchanges?

- CTC-CTI Indonesia
- More participants if budget is available
- Conduct in hotels or other place that near to city
- More participants if budget is available
- Great job for the team
- Include MPA managers
- Meeting in the city
- Site managers should be involved also in regional exchanges
- Need to have confirmed pre-paid accomodations while transitting and on return
- Maybe hook-up n the facebook etc so we can see the advantage of the tool
- Next MPA training should build on this program
- Tourism department
- Next should be in Indonesia especially in Raja Ampat
- Involve community people
- Provide more notes (soft and hard copy)
- Conduct regional exchange in a remote place to keep all participants in one place
- Include the country representatives in future PA regional exchanges so that it is consistent with country-specific roadmaps; integrate this MPA Rex into learning network

A6: LIST OF PRESENTATIONS

Presentations from the 2nd MPA Regional Exchangecan be viewed electronically at the US CTI Support Program Integration Portal at **www.uscti.org** under the Workspaces Section. Photos from the Exchange

can also be viewed at the Document Library Section under the Photo Gallery folder and Events sub-folder. To access the portal log in through username: **coral** and password: **triangle** (non-case sensitive).

1) Progress towards an effective Coral Triangle Marine Protected Area System
   Dr. Alan White, Lead for MPA Regional Theme for USCTI, TNC

2) Purpose and need for setting standards for management effectiveness at the network level
   Ms Anne Walton, Program Director, International MPA Capacity Building Program, NOAA

3) World Bank Scorecard to assess progress in achieving MPA management effectiveness goals
   Ms. Leanne Fernandes, Director, Earth to Ocean Consulting (Australian CTI Alliance)

4) Management Effectiveness Tracking Tool (METT)
   Ms. Lynette Laroya, Senior Ecosystems Management Specialist, Biodiversity Management Division, DENR-PAWB

5) Assessing management effectiveness in the Great Barrier Reef Marine Park
   Ms. Leanne Fernandes, Director, Earth to Ocean Consulting (Australian CTI Alliance)

6) Developing MPAME Guide in Indonesia: Lessons Learned
   Mr. Arisetiarso Soemodinoto, Measures, M&E Manager, TNC-Indonesia Marine Program

7) System-wide Monitoring (SWiM) and Sanctuary Condition Reports
   Ms Anne Walton, Program Director, International MPA Capacity Building Program, NOAA

8) ICRI East Asia's work on MPA management effectiveness
   O Shinichiro Kakuma, Okinawa Prefecture Government (in behalf of Kohei Hibino, Japan Wildlife Research Center; Alan White, TNC; and the ICRI East Asia MPA Network Working Group)

9) Understanding the different management effectiveness approaches – 3 models
   Ms Anne Walton, Program Director, International MPA Capacity Building Program, NOAA

10) MPA and enforcement networks in Verde Island Passage Marine Biodiversity Conservation Corridor
    Mr. Pacific Beldia, MPA Specialist, CI-Philippines

11) Mabini Marine Reserve
    Atty. Rose-Liza Eisma-Osorio, Executive Director, CCEF

12) Guide for Improving Marine Protected Area Management Effectiveness in Indonesia
    Mr. Arisetiarso Soemodinoto, Measures, M&E Manager, TNC-Indonesia Marine Program

13) Using the Guide for Improving Marine Protected Area Management Effectiveness in Indonesia – Experience from field trials
    Mr. Arisetiarso Soemodinoto, Measures, M&E Manager, TNC-Indonesia Marine Program

14) CTI Regional Learning Network for MPA managers
    Mr. Marthen Welly, Learning Sites Manager, CTC

15) Adaptive management: What do we do with the results of the management effectiveness program
    Ms Anne Walton, Program Director, International MPA Capacity Building Program, NOAA

16) Measuring MPA effectiveness – Relevance and integration at the national scale
Dr. Alan White, Lead for MPA Regional Theme for USCTI, TNC

17) Review of management effectiveness tools and development of the MPA Management Effectiveness Assessment Tool (MEAT)
Ms. Vera Horigue, Student, ARC COE for Coral Reef Studies, JCU

A6: FIELD TEAM OUTPUTS: MANAGEMENT EFFECTIVESS FRAMEWORKS

A6.1. Day 2, Session 7 (Before field validation)

TEAM 1, Table 1 of 1

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
By 2015, maintain and improve coral coverage compared to 2011 baseline	No-take zones Enforcement of illegal fishing practices Socialization between managers and communities	Coral cover	Maintain or improve coral cover	Transect	Sedimentation cover (worst case)	Address land-based sources of impacts
					Experiencing coral bleaching (medium)	Expand no-take zone to create buffer
10% of household income for next 5 years derived from non-fishery activity	Community gets some user fee Community trained in alternative livelihood employed by MPA	Source of income	Shifting source of income	Perception monitoring/survey	Increase in dependence on fisheries	Expand livelihood training (existing program)
					Status quo	Change perception survey to capture understanding about alternative livelihoods
By 2016, reduce number of violation by 5% based on 2011 data	Trained enforcement team Include community Land-based police involved	Number of violations	Enforcement team's logbook and police reports	Audit of logbook and police reports	Increase in violations	More enforcement coverage, more resources
					Status quo	Staff overhaul and improved enforcement techniques

GROUP 2, Table 1 of 1

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Maintain ecological balance of Twin Rocks	Coral reef monitoring Legal framework Enforcement Surveillance	Healthy coral cover	Coral cover	Reef check Transects	Sedimentation	Coral rehabilitation, terrestrial management planning, awareness, improved enforcement
		Fish abundance and biomass	Number/size of target species	Fish identification, visual census	Destructive fishing practices	
Sustainable fisheries and ecotourism to improve economic benefits	Fisheries management guidelines included in management plan	Increased income for fishermen from fisheries	Monthly income earned per household from fisheries	Fish catch surveys Socioeconomic surveys SocMon Fish landing centers in municipalities	Overfishing Reinforcement of community support Self-reliance	Livelihood diversification Engage stakeholders in planning process Awards
	Tourism (marine) business plan	Job opportunities for community members	Number of jobs resulting from ecotourism activities			
Sustainable and effective co-management of Twin Rocks	Establish co-management committee	Enforcement and surveillance Co-management concepts agreed to and being implemented	Number of violations Number of activities completed in management plan	Sea watch patrol reams Number of meetings held MOUs/TORs	Reduced violation	
					Increased violations	Continue enforcement, improve/increase enforcement efforts
					No change in number of violations	Revise management plan to improve

TEAM 3,Table 1 of 3,Biodiversity

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Maintain/increase biodiversity in next five years	Implementation of biodiversity monitoring system Implementation and enforcement of management plan	Increased coral cover (by 25%) Increased fish biomass (by 25%)	% increase in coral cover % increase in fish diversity, abundance and biomass	Point intercept transect/ Reefcheck method Underwater visual census	LHC increased in shallow area Slightly decreased in deeper area Human impacts largely contributing to LHC change Fish biomass higher in MPAs than in non-MPAs Good management and enforcement of MPAs Poaching inside some sanctuaries	Continue biodiversity protection program Increase awareness of the community and users in non-MPAs
					High fishing pressure in adjacent fishing ground	Regulate fishing method and gear

TEAM 3, Table 2 of 3, Governance

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Promote wide participation of community/ stakeholders in management	Develop and implement an IEC plan	Increased awareness and availability of IEC materials	No. of IEC materials available	Site visits and interviews	IEC material not distributed or installed	Involve local volunteers (e.g. schools), roadshows
		Increased participation by stakeholders in management bodies	No. of participants and frequency f participation by stakeholders in management bodies		Stakeholders not participating in meetings of management bodies	Incentives for participation (LGUs or NGOs)
Competent, responsive effective governance in place	Formulation of policies, programs to support biophysical and socioeconomic conditions of the coastal areas of Mabini	Presence of effective management bodies	No. of meetings held No. of participants in meetings No. of policies and laws on CRM	Interviews, review of minutes and reports of management meetings Review of composition of stakeholder participation	Management bodies not meeting regularly Key stakeholders not participating	Provide feedback to LGU Incentives for participation
		Presence of effective enforcement body	Trend of apprehension % compliance No. of violations	Review apprehension reports Interview enforcement teams and LGU Review of council record	No regular enforcement Insufficient funding for enforcement No adequate laws in place	Capacity building Operational planning LGU funding Incentives Local policy and advocacy
	Identification and establishment of an effective sustainable financing mechanism	Increased budgetary allocation for CRM Increased sustainable financing mechanism	Amount allocated	Review annual reports and budgets	No sustainable financing mechanism No budgetary allocation from LGU	Seek alternative funding Encourage LGU funding

TEAM 3, Table 3 of 3, Socioeconomic

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Support sustainable economic development/ independence	Promote ecotourism diving	Increased marine tourism; improved accreditation (rating) in green conduct	Number of visitors	Increase in number of fee-paying visitors to MPA; increase in number of resorts achieving eco-accreditation	High number of tourists	Limiting numbers/ increasing the cost to visitors
					Maintain level of tourists	Promoting area as a unique nature based tourism destination
					Reduced level /no. of tourists	
Support sustainable fisheries	Zoning for fisheries management	Increased catch; reduced fishing effort	Weight-no. of fish catch; fishing time	Interview –face-to-face	Increase catch/low fishing effort Maintain catch	Limiting bycatch through enforcement
					Reducton of catch/ increased fishing effort	Alternative method of fishing Alternative livelihood
Support continues multiple use (including maintaining ecosystem service, enjoyment of well-being of community	As above	Absence of garbage in water; presence of dump trucks for waste collection, materials recovery facility in each barangay	Amount of garbage No. of trucks	Visual assessment Assessment of adequate facilities	No garbage and sufficient facilities (trucks)	Regulate disposal of rubbish
					Partially working (not fully functional) facilities Poor waste management system	Improve waste management system

A6.2. Day 5, Session 9 (After field validation)

TEAM 1, Table 1 of 1

(Added entries are underscored; deleted entries are ~~crossed-out~~,)

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
By 2015, ~~maintain and~~ improve coral coverage compared to 2011 ~~baseline~~	No-take zones Enforcement of illegal fishing practices ~~Socialization between managers and communities~~	Coral cover	~~Maintain or~~ improve coral cover	Transect	Sedimentation cover (worst case)	Address land-based sources of impacts andwater-based impacts
					Experiencing coral bleaching (medium)	Expand no-take zone to create buffer
					Anchor damage	Mooring buoys deployed
10% increase in~~of~~ household income for next 5 years derived from non-~~fishery~~fishing activities based on 2011	~~Community gets some user fee~~ Community trained in alternative livelihood employed by MPA	Source of income	Shifting source of income	Perception monitoring/survey	Increase in dependence on fisheries	Expand livelihood training (existing program)
					Status quo	Change perception survey to capture understanding about alternative livelihoods
By 2016, reduce number of violation by 5% based on 2011 data	Trained enforcement team Include community Land-based police involved	Number of violations	Enforcement team's logbook and police reports	Audit of logbook and police reports	Increase in violations	More enforcement coverage, more resources
					Status quo	Staff overhaul and improved enforcement techniques

TEAM2, Table 1 of 1

(Added entries are underscored; deleted entries are ~~crossed-out~~,)

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
~~Maintain ecological balance of~~By 2015 coral reef health and fish biomass are maintained at Twin Rocks Sanctuary	Coral reef monitoring Legal framework Enforcement Surveillance	Healthy coral cover	Coral cover	Reef check Transects	Sedimentation	Coral rehabilitation, terrestrial management planning, awareness, improved enforcement
		Fish abundance and biomass	Number/size of target species	Fish identification, visual census	Destructive fishing practices stopped	
~~Sustainable fisheries and ecotourism to improve economic benefits~~By 2015, Twin Rocks contributes to improved livelihoods of community members	Fisheries management guidelines included in management plan	Increased income for fishermen from fisheries	Monthly income earned per household from fisheries	Fish catch surveys Socioeconomic surveys SocMon Fish landing centers in municipalities	Reduced overfishing Reinforcement of community support Self-reliance	Livelihood diversification Engage stakeholders in planning process Awards
	Tourism (marine) business plan	Job opportunities for community members	Number of jobs resulting from ecotourism activities			
By 2015, sustainable and effective co-management of Twin Rocks MPA	Establish co-management committee	Enforcement and surveillance Co-management concepts agreed to and being implemented	Number of violations Number of activities completed in management plan	Sea watch patrol reams Number of meetings held MOUs/TORs	Reduced violation	
					Increased violations	Continue enforcement, improve/increase enforcement efforts
					No change in number of violations	Revise management plan to improve

TEAM 3, Table 1 of 3: Biodiversity objectives

(Added entries are underscored; deleted entries are ~~crossed-out~~,)

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Maintain/increase biodiversity in next five years	Implementation of biodiversity monitoring system Implementation and enforcement of management plan	Increased coral cover (by 25%) Increased fish biomass (by 25%)	% increase in coral cover % increase in fish diversity, abundance and biomassinside and outside MPAs	Ensure consistent method to compare results between monitoring periods Point intercept transect/ Reefcheck method Underwater visual census	LHC increased in shallow area Slightly decreased in deeper area Human impacts largely contributing to LHC change Fish biomass higher in MPAs than in non-MPAs Good management and enforcement of MPAs Poaching inside some sanctuaries	Continue biodiversity protection programand enforcement Increase awareness of the community and users in non-MPAs
					High fishing pressure in adjacent fishing ground	Regulate fishing method and gear

TEAM 3, Table 2 of 3, Governance objectives

(Added entries are underscored; deleted entries are ~~crossed-out~~,)

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Promote wide participation of community/ stakeholders in MPA management	Develop and implement an IEC plan	~~Increased awareness and availability of IEC materials~~	No. of IEC materials available to users and communities	Site visits and interviews	IEC material not distributed or installed	Involve local volunteers (e.g. schools), roadshows
		~~Increased participation by stakeholders in management bodies~~ High level of awareness and participation by communities in management bodies and monitoring	No. of participants and frequency f participation by stakeholders in management bodies		Stakeholders not participating in meetings of management bodies	Incentives for participation (LGUs or NGOs)
Competent, responsive effective governance in place	Formulation of policies, programs to support biophysical and socioeconomic conditions of the coastal areas of Mabini	Presence of effective management bodies	No. of meetings held No. of participants in meetings No. of policies and laws on CRM	Interviews, review of minutes and reports of management meetings Review of composition of stakeholder participation	Management bodies not meeting regularly Key stakeholders not participating	Provide feedback to LGU Incentives for participation
		Presence of effective enforcement body	Trend of apprehension % compliance No. of violations	Review apprehension reports Interview enforcement teams and LGU Review of council record	No regular enforcement Insufficient funding for enforcement No adequate laws in place	Capacity building Operational planning LGU funding Incentives Local policy and advocacy
	Identification and establishment of an effective sustainable financing mechanism	Increased budgetary allocation for CRM Increased sustainable financing mechanism	Amount allocated	Review annual reports and budgets	No sustainable financing mechanism No budgetary allocation from LGU	Seek alternative funding Encourage LGU funding

TEAM 3, Table 3 pf 3,Socioeconomic objectives

(No revisions made.)

Objective	Strategies	Indicator	Measure	Monitoring	Result Scenario	Adaptive Management
Support sustainable economic development/ independence	Promote ecotourism diving	Increased marine tourism; improved accreditation (rating) in green conduct	Number of visitors	Increase in number of fee-paying visitors to MPA; increase in number of resorts achieving eco-accreditation	High number of tourists	Limiting numbers/ increasing the cost to visitors
					Maintain level of tourists	Promoting area as a unique nature based tourism destination
					Reduced level /no. of tourists	
Support sustainable fisheries	Zoning for fisheries management	Increased catch; reduced fishing effort	Weight-no. of fish catch; fishing time	Interview –face-to-face	Increase catch/low fishing effort Maintain catch	Limiting bycatch through enforcement
					Reducton of catch/ increased fishing effort	Alternative method of fishing Alternative livelihood
Support continues multiple use (including maintaining ecosystem service, enjoyment of well-being of community	As above	Absence of garbage in water; presence of dump trucks for waste collection, materials recovery facility in each barangay	Amount of garbage No. of trucks	Visual assessment Assessment of adequate facilities	No garbage and sufficient facilities (trucks)	Regulate disposal of rubbish
					Partially working (not fully functional) facilities Poor waste management system	Improve waste management system

A7: CALCULATING PERCENTAGE TO DETERMINE MANAGEMENT LEVEL

Based on: Guide for Improving Marine Protected Area Management Effectiveness in Indonesia; presentation by Arisetiarso Soemodinoto (TNC-Indonesia Marine Program)

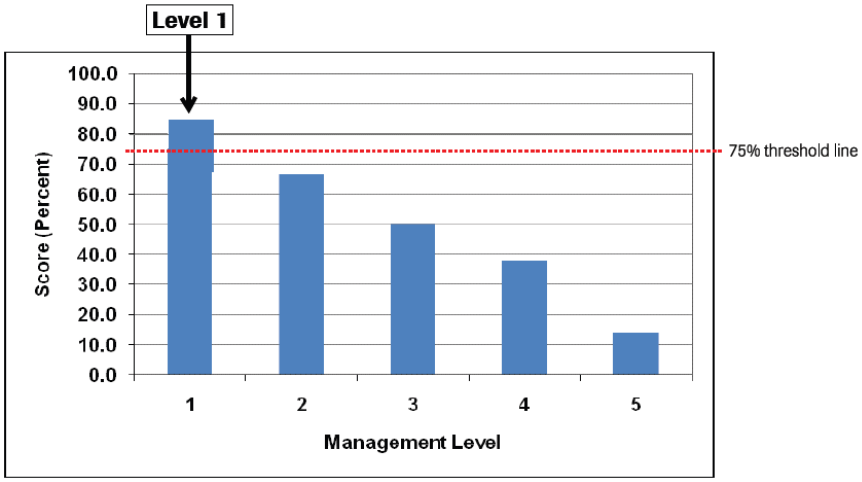
Step 1. Calculate each of the five tables in the scorecard as shown below, giving an overall score for each table. Be sure that throughout the scorecard process, every question is given an answer, whether it be 'Yes', 'No', 'Don't Know' or 'Not Applicable'. No question should be left unanswered, as this will affect the validity of the calculations.

1) Tally the number of each response, for example: 'Yes' - 1, 'No' - 1, 'Don't Know' - 1, 'Not Applicable' - 1
   1 Not Applicable
2) Recalculate the score as a proportion of the total score expected or – if there is at least one NA response – the adjusted score. In the example given above, the 'Yes' result would be 11 out of 13 responses rather than 11 out of the total score expected (14). This is because one of the responses is 'Not Applicable', which means only 13 out of the 14 questions are relevant. Thus, in the example should here, 11 as a%age of 13 would be 84.6%.

Step 2. Summarize the results as shown below:

Table	Total 'Yes' Recorded:	Total 'No' Recorded:	Total 'Don't Know' Recorded:	Total 'Not Applicable' Recorded:	Proportional 'Yes' Results = Total 'Yes' recorded / Total Score Expected – 'NA' Results x 100
TABLE A (Level 1)	11	1	1	1	84.6%
TABLE B (Level 2)	8	2	2	2	66.7%
TABLE C (Level 3)	7	5	1	0	59.0%
TABLE D (Level 4)	5	7	1	1	38.0%
TABLE E (Level 5)	2	8	2	0	14.0%

Step 3. Plot the 'Proportional Yes Results' onto the graph provided. For example:



The rule of thumb for deciding the management level is as follows:

- If the scores obtained are all less than 75%, the management level is defaulted to 1.
- The MPA management level is determined by the highest level with score equal to, or more than, 75%. Thus in the example given above, where Level 1 = 84.6% and all other levels are less than 75%, the management level is 1. To further illustrate, if Level 1=90%, Level 2=83.5%; Level 3=77.5%, and Levels 4 and 5 are below 75%, then the management level would be 3.

Note: There is an electronic version of the worksheets that automatically calculates the scores and plots the results.