



NOAA-GCFI Caribbean MPA Capacity Building Partnership MPA Management Capacity Assessment User's Guide

Purpose

This user's guide was developed as a reference to be used with the NOAA-GCFI Caribbean MPA Management Capacity Assessment tool to provide further clarification on the assessment areas and to assist assessment participants in the selection of a specific tier for each assessment area. The guide includes instructions on how to conduct assessment interviews and how to complete the assessment document. The user's guide also provides a detailed description of the intention behind each of the assessment areas to help the facilitator clearly differentiate between each tier in an individual assessment area. This helps to ensure that the correct tier is selected so that management capacity can be accurately assessed and all gaps and needs can be appropriately identified. Many of the assessment area descriptions also include a section entitled "helpful resources" that refers to additional information related to that assessment area that is either made available in the appendix to the user's guide or as a web link.

The Assessment Approach

Evaluating the current status of marine protected area (MPA) implementation and management can lead to improved MPA effectiveness and performance. Strengthening MPA management to conserve coral reef resources is the basis of the partnership between U.S. National Oceanic and Atmospheric Administration's (NOAA's) Coral Reef Conservation Program (CRCP) and the Gulf and Caribbean Fisheries Institute (GCFI). With its focus on conservation of coral reefs and the human communities that depend upon them, a priority goal of the NOAA CRCP is to support effective implementation and management of MPAs and ecological networks of MPAs that protect key coral reef ecosystem components and functions. GCFI's mission is to promote the exchange of information on the sustainable use and management of marine resources in the Gulf and Caribbean region. This includes connecting MPA managers and practitioners with each other and with experts in the GCFI network in order to share best practices and build capacity for effective marine resource management. This MPA Management Assessment instrument was developed as a simple tool to inform efforts aimed at addressing capacity needs of MPA managers in the wider Caribbean region and is based upon the NOAA CRCP's MPA Management Checklist that is used in domestic U.S. MPAs in both the Pacific and Caribbean basins. Assessment findings allow resource management agencies, GCFI, NOAA and other organizations at work in the region to better understand the



needs of the MPA management community and help managers build and/or maintain the management capacity necessary for successful implementation of their MPA management goals and objectives.

The information gathered for the MPAs, collected through interviews with site managers and other key staff, provide insight into management strengths and needs. With this information, informed decisions can be made about where to strategically invest limited resources to address priority MPA management capacity gaps. Additionally, this provides a transparent process to the resource managers responsible for MPA management. Upon completing the assessment, managers have the information needed to request funding, technical support, and other forms of assistance through targeted proposals to potential funders, thereby increasing the capacity in the management community to effectively conserve coral reef resources.

This tool will also be used to track the performance of the NOAA-GCFI MPA Capacity Building Partnership at addressing the management needs identified using the checklist. Through initial assessments and periodic re-evaluations with participating MPA managers, NOAA and GCFI will track incremental progress made at MPA sites and identify new or emerging issues that may impede management success.

It should also be noted and explained that this approach is NOT designed to evaluate MPA effectiveness or to assess whether an MPA is functioning effectively to achieve the specific goals and objectives around which the site was designed. There are several different existing tools that can be used to evaluate site effectiveness (www.mpa.gov/nationalsystem/effectiveness/). In contrast, this tool is designed to support a guided self-assessment that examines to what extent the core components of an MPA management program exist. Addressing programmatic gaps that are identified through this assessment process will increase the likelihood of effective site implementation.

Additionally, the results of this assessment will not be analyzed to grade or score sites (e.g. excellent, good, bad) based on a set of standards. While results from each site assessment can be collated to explore common capacity gaps within a jurisdiction, country or region, this approach is not designed to provide quantitative results to compare management effectiveness between multiple sites. It is intended to be applied at the individual MPA site level to reveal management capacity strengths and gaps, and to inform in-depth discussion on possible needs and planning to build capacity within the assessed site.



In summary, the NOAA-GCFI Caribbean MPA Management Capacity Assessment process was designed to gather information to guide NOAA-GCFI partnership activities and investments to better meet identified capacity gaps and needs of specific priority MPAs.

Eligibility Requirements for Assessment by NOAA-GCFI

In order to be eligible to participate with the NOAA-GCFI Caribbean MPA Capacity Building Partnership in the assessment, an MPA site needs to meet the following six criteria:

- **Be located in one of the priority geographic areas as identified by NOAA-GCFI**
The following ten countries were selected as the initial focus of the NOAA-GCFI Caribbean MPA Capacity Building Partnership: The Bahamas, Belize, British Virgin Islands, Netherlands Caribbean (Saba & Sint Eustatius specifically), Honduras, Grenada, Mexico, St. Lucia, St. Vincent & the Grenadines, and the Turks and Caicos Islands. These countries and territories were chosen based upon established criteria including the ecological significance of their coral reef resources; commitments to international or regional MPA initiatives such as the Caribbean Challenge, SPAW Protocol, and/or MAR Fund; ecological connectivity to U.S. jurisdiction reefs; and investment of the country or territory in MPAs as a tool for conservation.
- **Be a legally established MPA**
In order to be assessed, the site must be recognized by appropriate government authority or under equivalent customary tenure or other form of community-based protection status.
- **Have some ongoing management activity**
In order to be assessed and to be eligible for future NOAA-GCFI support, the site must be actively managed at some level. Before NOAA and GCFI will invest time and resources into a site, support for the implementation of that site, through management activity, must be demonstrated by the governing authority that is responsible for the MPA. No “paper parks” will be assessed.
- **Have high biological value**
- **Have high conservation viability**



- **Have a relatively medium to low level of threat impacting the resources of the MPA**

Assessment Areas

The MPA Management Capacity Assessment was developed to provide a simple approach to measuring management capacity of a site against a specific set of core MPA management program components. The checklist includes 20 assessment areas that are key components of a successful MPA management program:

1. Site management,
2. Management planning,
3. Legal framework,
4. Partnerships/ coordination,
5. Stakeholder engagement,
6. Enforcement,
7. Boundaries,
8. Biophysical monitoring,
9. Socioeconomic monitoring,
10. MPA effectiveness evaluation and adaptive management,
11. Financing,
12. Communicating economic value,
13. Outreach and education,
14. Planning for resilience to climate change,
15. Sustainable livelihood options,
16. Fisheries management,
17. Pollution,
18. Sustainable tourism,
19. Response to disturbance events, and
20. Organizational management.

These specific assessment areas reflect capacities that NOAA and GCFI, as well as other governmental and non-governmental organizations that provide resources for MPA initiatives, could support through grants, technical assistance, and trainings. Three tiers of management activity are defined and presented under each assessment area. NOAA and GCFI seek to apply this assessment tool to eligible MPA sites in priority geographic areas and to improve management capacity by providing funding and technical assistance to help MPA managers progress from tier one activity towards tier two and tier three management activity in each of these



assessment areas. It may neither be realistic nor appropriate to achieve tier 3 level status in all assessment areas. Individual sites and programs that choose to use this tool should identify those targets for their site or sites.

Approach

Assessment Interviews

The assessment is designed to be administered through an interview process and to collect both specific rankings under each of the 20 assessment areas as well as qualitative information for each area explaining the specific issues and situation that led to the selection of a tier. Assessment facilitators should conduct the consultation directly with the site manager. If a site manager has not been assigned to the MPA the interview can be conducted with a knowledgeable representative from the government agency, community or non-governmental organization that has been authorized to oversee the management of the site.

If appropriate, including other site staff or local partners in the interview process, whether in a group discussion or as separate individual interviews, can enhance the quality of the assessment and provide further detail on specific issues and efforts for the site that the site manager may not be able to provide. This additional insight from staff or key site management partners can facilitate the selection of specific strategies to address a capacity gap. Although these additional discussions with staff and local partners can prove useful, the main interviewee should be someone who has a comprehensive understanding of the MPA and its management program.

If multiple agencies/organizations are involved in different aspects of managing the site, it would be important to conduct either a group interview with all of them or individual discussions with appropriate representatives from each. **No matter how many discussions and meetings are conducted to gather information on a specific site, only one checklist should be completed for each site.** If there are multiple participants in the discussion and there is a difference of opinion regarding which tier to select for an assessment area, the facilitator should try and facilitate a consensus decision around one tier. If this is not feasible, the site manager or lead agency representative for the site should make the tier selection. Depending on the number of people involved in the discussion and the level of ongoing activity within the MPA, each interview discussion can take anywhere between two to four hours to collect the desired information. This process can take several days for sites that require multiple meetings with managers, staff and partners.



In many places one agency or manager has oversight responsibility over a system of sites or multiple sites. It is very important to note, that in order to be able to understand and address capacity at the individual site level, **a separate checklist should be completed for each individual MPA.** Although the information for several sites may be gathered through a single meeting with a site manager or agency representative, it is essential that an individual assessment is completed for each site.

Tiered Ranking

The checklist was designed using a tiered approach with the first tier reflecting little to no capacity in an individual assessment area and the third tier reflecting high capacity in the assessment area. While not absolute, it's likely that MPAs that are recently established or are just beginning to implement management activities will normally rank at tier one or two for most assessment areas. Additionally, MPAs that are more mature and that have been carrying out management programs for some time can often rank at tier two or three for many assessment areas.

During the assessment the facilitator should clearly define the three different tiers for each assessment area and answer any questions that the interview participant(s) may have about the significance of each tier before a selection is made. After a tier is selected, the facilitator should encourage discussion to gather in-depth understanding about why the interview participant(s) has chosen a particular tier for each assessment area and ensure that it is the most appropriate selection. The follow up questions after each tier selection should be “Why did you select this tier?” and, “What are your challenges or needs to increase management capacity and move to a higher tier? If funding is the main challenge, then what would you use the funds for?”. The facilitator should promote open dialogue about the site capacity and the issues and efforts that influenced the ranking decision. This is especially true for sites that are in tier one or two for a particular assessment area. For these areas it is important to document the specific challenges and needs within the site management regime and to present ideas on what may be required to reach higher tiers in that assessment area. Understanding the root causes for challenges and capacity gaps along with the identification of specific needs to address them can help resource organizations provide more strategic support to increase MPA management capacity. This data should be recorded in sections b. and c. under each assessment area.

For sites that have been previously assessed and are currently being reassessed, the question “Has capacity changed for this topic in past 5 years?” should be answered in section d. (in some cases this is located in section e. or f. instead). If a positive



response is provided, the assessment facilitator should document the specifics of that change in capacity in the space provided.

A further section of the tool seeks to guide the GCFI and NOAA partnership in understanding the most effective approaches to capacity building implemented since the first capacity assessment. Then thinking ahead to the next five years, it asks for the MPA managers’ input on priority assessment areas and desired approaches for capacity building, networking and technical assistance.

After completing the assessment interview, the site manager and any other staff or partners that participated in the discussions should be provided with a copy of the assessment. The site management can then work with key MPA funders and supporters such as government agencies at the national, state or local level; or MPA practitioners and resource partners in the NGO and academic communities to develop a management capacity building plan for their site. This plan should identify which assessment areas the site management would like to address and which tier for each of these assessment areas that they wish to reach. Once the capacity building goals are clearly defined, specific management capacity building strategies can be identified based on the specific issues and needs of the site. This plan can then be used to inform funding decisions and proposal for funding, training or technical support.

Assessment Area Descriptions

This section provides a detailed description of the intention behind each of the 20 assessment areas to help the facilitator clearly explain the significance of and differentiate between each tier in an individual assessment area. This helps to ensure that the correct tier is selected so that management capacity can be accurately assessed and all gaps and needs can be appropriately identified.

1. Site Management

Tier 1	No management personnel assigned to site and/or little or no formalized community oversight
Tier 2	Some management personnel assigned to site or some formalized community oversight
Tier 3	Full-time site manager and programmatic personnel assigned to site or local community based management leader in place that has been



	formally designated and accepted and is able to dedicate sufficient time to the management of the site
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This assessment area evaluates the physical absence or presence of staff at the MPA site.

In tier one sites there are no specific staff or designated community members responsible for the oversight of the MPA.

In tier two sites there may be staff that work out of a central office and visit the site occasionally to carry out activities, but there are no “on-site staff” physically stationed at or in the vicinity of the site. Sites that have a manager who is responsible for multiple sites, and is physically located at a central office or at one of the other sites would qualify as tier two sites.

In tier three sites there is a full-time site manager who is physically stationed in the vicinity of the site or local community members living at a co-managed site who are able to formally carry out management activities (outreach, surveillance, monitoring, etc.)

2. Management Planning

Tier 1	Some management activity being implemented, but no management plan in place
Tier 2	Some management activity being implemented and management plan developed
Tier 3	Approved management plan that is being implemented

The management plan is often considered to be the foundation of an MPA management program as it states the mission, goals, and objectives of an MPA and identifies the specific actions that should be carried out in order to achieve these goals and objectives and therefore effectively manage the site. Having a management plan is considered one of the key components of a successful MPA management program as it can serve to guide activities in a strategic direction to achieve site goals.



The three tiers presented in this assessment area are to be used to understand the overall level of management activity in the MPA and what is guiding those activities.

In tier one, although some activities (e.g. enforcement, outreach, monitoring, etc.) may be occurring, they are being identified and implemented in an opportunistic manner and are not being driven by a strategic plan.

In tier two, activities are occurring and a plan has been developed, but those activities are not necessarily driven by the plan. Sites which fall under tier two in this assessment area often have had a management plan developed for them, but the plan is not actively referred to or applied. The management activities that are being implemented may have been ongoing before the plan was developed. If the site has a management plan but it is considered a draft plan and has not been formally approved where local mechanisms for such approval exist, then tier two would apply.

In tier three, a management plan exists and is being implemented. The site managers and/ or site staff or responsible community members are referring to the plan and making strategic decisions about the implementation of management activities in the site.

An additional question under this assessment area asks if the objectives in the MPA management plan reflect the original purpose of the site or why it was designated. A disconnect between the intended purpose of an MPA and its management plan can lead to the ineffective management of the area and a failure to achieve desired outcomes.

HELPFUL RESOURCES:

See **Appendix 1** of this user guide for “Site Planning Guidelines” for MPA management plans from R.V. Salm, John Clark, and Erkki Siirila (2000). *Marine and Coastal Protected Areas: A guide for planners and managers*. IUCN. Washington DC. Xxi. p.41

Appendix 2 provides information on the recommended structure, content and characteristics of a management plan.



3. Legal Framework

Tier 1	Few or no official rules and/or regulations in place governing the MPA
Tier 2	Some laws or official rules and/or regulations governing some managed activities within the MPA
Tier 3	Clearly defined laws, rules and regulations governing all managed activities included in the objectives of the site management plan

This assessment area aims to evaluate the legal and regulatory framework for the site. As provided in the eligibility requirements on p.3 of this user guide, the NOAA-GCFI MPA Capacity Building Partnership is aimed at legally designated sites. Therefore, tier one status entails that the site is legally established but DOES NOT HAVE any specific rules and regulations to support the MPA goals and objectives.

In tier two the site is legally established and there are some rules and regulations governing only SOME of the specific uses and activities targeted in the MPAs management objectives. For example, while it may be a goal to manage the multiple uses of a site such as boating, diving, and fishing; rules might only exist to regulate fishing activity.

In tier three there are rules and regulations to govern ALL major uses and activities addressed in the management objectives of the site. In this case, the activities in the management plan are legally backed by enforceable policies.

It is important to remember that in some cases, new rules and regulations are developed through the management planning process but might not have proper legislative backing. In this instance a legal review and revisions to relevant laws or approval of new legislation may be needed to fully support the site rules. The interviewee should discuss this with site managers to understand the enforceability of the rules and regulations of the site.



4. Partnerships and Coordination

Tier 1	One agency managing the site with little or no coordination with other pertinent agencies or organizations
Tier 2	Informal partnerships with agencies or organizations who support MPA management activities (e.g. outreach, monitoring, enforcement, livelihoods)
Tier 3	Formal coordination with the relevant agencies and organizations

Strong partnerships and effective coordination with partners are critical in MPAs where the management authority has insufficient resources and personnel to dedicate towards the implementation of management strategies. These may be partnerships or coordinated efforts with fellow resource management agencies in various levels of government (national, local, etc.), law enforcement agencies or with non-governmental entities and community organizations.

MPAs at tier one capacity for this assessment area have a single management authority governing the site that is not coordinating efforts with pertinent governmental and/or non-governmental partners that could and should assist with management efforts.

In tier two you may have informal partnerships with entities who are assisting with one or few select activities related to MPA management objectives such as community outreach programs or volunteer enforcement/ reporting efforts, but these relationships are opportunistic, may be tenuous and are not formally institutionalized into the MPA management program to ensure long term commitment and sustainability.

MPAs at tier three level capacity in this area have established formal agreements with other agencies and organizations which clearly define the nature of the management partnership and how coordination on management efforts occurs, or the management roles for these partner entities have been defined in key MPA



management documents such as the designating legislation and/or the management plan.

5. Stakeholder Engagement

Tier 1	No community or stakeholder engagement
Tier 2	Some community and stakeholder engagement in some but not all relevant aspects of MPA management
Tier 3	Community and stakeholder engagement in implementation of site management efforts

It is widely recognized that stakeholder engagement in MPA management processes and efforts is critical for success. As such, this question is aimed at understanding how involved local stakeholders are in the management of the MPA including both the development of MPA management plans and the implementation of management strategies and activities. This could include activities such as community watch programs to complement enforcement efforts or community lead outreach and education activities. This question can be used to gauge the interest of managers in building stakeholder engagement programs and processes.

In the first tier there is little to no stakeholder involvement in any aspect of the management of the MPA.

In tier two there is some level of stakeholder participation in either management planning or management plan implementation. This assessment area assumes that a management plan exists for the site or that a planning process is underway, as this is a starting point for stakeholder engagement and one of the critical steps in which stakeholders should be involved (i.e. through developing the site vision, targets, threats, objectives, actions, etc.). However, there may be cases where a plan is not in place or in development, but stakeholder engagement activities are still occurring (e.g. outreach, monitoring, etc). In this case, the facilitator should discuss the option of indicating that the site is at tier two in this assessment area, but include details



about existing stakeholder activities in the comments. This could identify the need again for capacity support to develop a management plan for the site as a first step, and to include stakeholders in the development of that plan.

In tier three stakeholders are also well integrated into the management program and their role in implementing relevant and appropriate management activities is well defined.

6. Enforcement

Tier 1	Little or no enforcement of existing rules and regulations
Tier 2	Inconsistent enforcement of rules and regulations
Tier 3	Active and consistent enforcement of rules and regulations

The intent of this assessment area is to understand the degree of enforcement of the site rules and regulations.

In tier one sites there is an overall lack of enforcement. This may be because there are no rules and regulations governing specific activities within the MPA, or due to a lack of enforcement staff and/or resources to monitor compliance with existing rules and regulations.

The second and third tiers explore varying degrees of enforcement of the site with the only difference being that tier two has inconsistent enforcement activity (lack of regularly scheduled patrols, lack of a regular presence at the site, etc.) and tier three has deliberate and regular enforcement activity.

HELPFUL RESOURCES:

See www.mpaenforcement.com for sample enforcement needs assessments and strategic enforcement planning resources from the Caribbean region.

7. Boundaries

Tier 1	No clearly defined boundaries delineating the MPA nor clearly defined zones within the MPA
Tier 2	Clearly defined boundaries and/or zones but they are not readily visible nor explicitly communicated to the public and/or MPA stakeholders
Tier 3	Clearly defined boundaries and/or zones and information on boundary/zone locations is readily visible and explicitly communicated to the public and MPA stakeholders

The intention of this assessment area is to understand if the geographical boundaries (e.g. through GPS points or specific land markers) have been defined and if they have been made available to public. Additionally, the tiers make reference to “zones”. If the site includes various zones with different allowable activities in different areas within the bigger MPA, the location and boundaries of the zones should also be clearly defined and marked for the public.

Sites in tier one do not have specific boundaries and/or zones that have been defined in any way.

Sites in tier two have defined boundaries and/or zones either in the legislation that established the area or in the site management plan, but they may not be easily understood by the public (i.e. there are no maps which clearly show where the boundaries are and have been made readily available to the public and there are no markers and/or signage that clearly demarcate the site).

In tier three sites the boundaries are well defined and the information is readily available to the public (i.e. there are maps which clearly show where the boundaries are and these maps have been made readily available to the public; and/or there are visible markers and/or signage that clearly demarcate the site).

8. *Biophysical Assessment and Monitoring*

Tier 1	Little or no existing biophysical monitoring activity
Tier 2	Existing biophysical monitoring program but data not being used to inform management
Tier 3	Data produced from biophysical monitoring program being evaluated and used to inform management decisions



This assessment area seeks to evaluate the degree of bio-physical monitoring occurring at the site and how the information that results from that monitoring effort is being used.

In the first tier, the site may have had a baseline assessment of habitat, species or other biophysical resources at some point, but there are no **repeated observations** of the status of these resources and therefore there is no on-going monitoring occurring.

In the second tier the site has an on-going monitoring program. This could include opportunistic monitoring or a defined monitoring plan that has been developed and regular monitoring of the status and condition of the resources within the MPA. Tier two would also include sites where a monitoring plan has been developed (or has been suggested in the MPA management plan) but is not being implemented.

The third tier is achieved when the results of the monitoring effort are being applied to inform management activities through adaptive management.

As part of the discussion with managers and site staff, facilitators should try to understand what specific biological information is being collected and why; and whether or not the information being collected is based on the goals and objectives of the site. This can lead to a better understanding of the capacity of the site to reach tier three status.

9. Socioeconomic Assessment and Monitoring

Tier 1	Little or no existing socioeconomic monitoring activity
Tier 2	Existing socioeconomic monitoring program but data not begin used to inform management
Tier 3	Data produced from socioeconomic monitoring program being evaluated and used to inform management decisions

Similar to the previous assessment area on biophysical monitoring, the aim of this area is to understand the degree of socio-economic monitoring occurring at the site and how the resulting information is being used.

In the first tier, the site may have had some kind of socioeconomic assessment such as an economic valuation study or social survey at some point; but there are no



repeated observations of socioeconomic conditions or indicators and therefore there is no monitoring occurring.

In the second tier the site has a socioeconomic monitoring program. This entails repeated observations of identified social indicators and could be based on a socioeconomic monitoring plan that has been developed for the site.

The third tier is achieved when the results of the monitoring effort are being applied to inform management activities through adaptive management.

As part of the discussion with managers and site staff, facilitators should try to understand what specific socioeconomic information is being collected, why and whether or not the information being collected is based on the goals and objectives of the site. This can lead to a better understanding of the capacity of the site to reach tier three status.

HELPFUL RESOURCES:

“SocMon” (The Global Socioeconomic Monitoring Initiative for Coastal Management) is an initiative being implemented at the global and regional levels aimed at helping coastal, marine and MPA managers better understand and incorporate the socioeconomic context into their management programs (www.socmon.org). SocMon works through regional and local partners to facilitate community-based socioeconomic monitoring. Several regionally specific publications providing guidelines on socioeconomic monitoring for coastal managers are available at <http://www.socmon.org/publications.aspx>

10. Effectiveness Evaluation and Adaptive Management

Tier 1	No evaluation of MPA effectiveness
Tier 2	MPA effectiveness evaluated but no ongoing effectiveness monitoring and evaluation program in place
Tier 3	MPA effectiveness monitoring and evaluation program in place with findings being applied to adapt management strategies



This assessment area explores if and how the site evaluates whether or not the MPA goals and objectives are being achieved and whether or not any specific effectiveness evaluation tools are being used (eg. “How is Your MPA Doing?”).

In tier one sites there is no effort to evaluate whether or not the MPA goals and objectives are being met.

In tier two sites there is some effort to evaluate whether or not the MPA goals and objectives are being met, but this information is not being applied to inform changes in management strategies.

In tier three sites there is some effort to evaluate whether or not the MPA goals and objectives are being met, and this information is being used to inform changes in management strategies.

This assessment area is linked to assessment areas 8 and 9. If the site is at tier three in both of the previous questions, meaning the information being collected is directly correlated to their management plan objectives, and the data is being used to inform adaptive management strategies; then MPA effectiveness is indeed being evaluated. However, some sites may not have on-going biophysical or socioeconomic monitoring programs but are making effort to evaluate the site at given time periods and are using a specific tool to look at various indicators of effectiveness. It is good for the facilitator to explore how the site evaluates whether or not the MPA goals and objectives are being achieved and whether or not any specific effectiveness evaluation tools are being used.

HELPFUL RESOURCES:

For a list of some of the existing tools that can be used to assess MPA effectiveness see Appendix 3.

11. Financing

Tier 1	Few or no reliable source of funding identified to support MPA management activities
Tier 2	Some sources of funding to support MPA management activities
Tier 3	A sustainable financing plan that is being implemented to provide long term MPA financing mechanisms



This assessment area is aimed at understanding the sources of funding provided for MPA management. The key word in tier one is “reliable” which means some kind of on-going financial commitment. For example, if a site has only received funds for individual projects through short term grants, then they would likely be in tier one because the funding sources are not on-going or reliable.

The second tier states that the site does have access to on-going funding, although it might not be nearly enough to fully manage the site. Tier two would also include sites where a sustainable finance plan has been developed but is not being implemented to ensure long term support for the MPA.

Finally, the third tier describes a case where there is a deliberate effort to provide sustainable financing for site management activities. These sources could include user fees, conservation tax funds or a conservation trust fund that supports MPA management.

HELPFUL RESOURCES:

“Sustainable Financing of Protected Areas: A global review of challenges and options” available at <http://data.iucn.org/dbtw-wpd/edocs/PAG-013.pdf>.

A list of various publications on conservation finance is provided by The Nature Conservancy at <http://www.parksinperil.org/resources/art18405.html#consfinance>.

12. Communicating Economic Value

Tier 1	Economic value of the MPA’s natural resources has not been assessed
Tier 2	Economic value of the MPA’s natural resources has been assessed but not used in targeted communications with decision makers
Tier 3	Economic value of the MPA’s natural resources has been assessed and is used in targeted communications with decision makers to build support for the MPA

The valuation of natural resources in terms of economic benefit is a useful and persuasive tool when communicating with elected officials and government leaders



and other decision makers regarding the actual value of the marine ecosystems that MPAs have been established to conserve and in justifying the need to support the effective management of these MPAs. It can also be used by management and enforcement programs to inform natural resource damage assessments where reference values are needed for application in the calculation of damage to the reef such as from vessel groundings.

In tier one sites there have been no values generated for the MPAs resources, ecosystems nor the services they provide that can be used in such communications.

In tier two, economic studies have been completed providing these values, but the outputs and reports are not being applied or shared with decision makers to garner support for the MPA.

In tier three, values have been generated and they are being incorporated in messaging to relevant leaders in an effort to sustain or increase resourcing and support for MPA management, including collection of fines for damages to coral reefs.

13. Outreach and Education

Tier 1	Few or no ongoing outreach and education activities
Tier 2	Some ongoing outreach and education activities in support of the MPA
Tier 3	An outreach and education program with various activities and strategies focused on the MPA that helps achieve the MPA’s goals and objectives

This assessment area is intended to draw out information on the amount and type of outreach and education activities that occur at the site. Meaningful and targeted communications in support of the MPA are central to effective MPA management, underpinning stakeholder engagement and helping to build compliance with MPA regulations.

The first tier explains that no (or little) ongoing outreach and education activities occur. This may mean that there have been some outreach events that have occurred but that these were one-time events and no ongoing activities exist, or that the site is used by the management agency for public events related to their mission



and programs but that these events are not targeted at achieving specific goals and objectives for that site.

The second and third tiers describe a situation where there are continual outreach and education activities that directly support the MPA. This means that the outreach and education occurring at the site or for the site is not a general outreach activity carried out by the management agency but is specific to supporting the MPA goals. The difference between tiers two and three is that tier two level sites may have ongoing activities but they are not necessarily designed as a program. Tier three level sites have outreach and education programs with defined target audiences, messages and strategies. For example, a tier three MPA might include an outreach or communications strategy that targets users in order to build compliance both in the immediate term (targeting fishermen with ecological information that helps them understand the purpose of the site, or outreach to boaters on mooring protocols) or in the long term (through youth education programs to build a sense of stewardship in future generations).

14. Planning for resilience to climate change

Tier 1	Little or no consideration of climate change in the management of the MPA.
Tier 2	Climate change considerations incorporated into management planning and/or monitoring
Tier 3	Climate change adaptation plans or response plans implemented

Climate change as a key threat to our marine ecosystems, especially coral reefs, has unfortunately become an undeniable reality for which marine resource managers must prepare. As managers become familiar with the concepts of ecosystem resilience and climate change response and adaptation, it is desired that new MPAs will be designed and/or existing sites will be managed to promote ecosystem resilience, allow for climate change adaptation and prepare for climate change response. Management strategies could include zoning or specific protections for reef areas that have shown resilience to past bleaching events, protections of representative habitats within the MPA (e.g. reef, seagrass, mangrove), coordination with relevant management authorities to reduce or eliminate other stressors to coral reefs during bleaching or disease events and the protection of additional coastal and marine areas to allow for migration of species and habitats such as mangroves with sea level rise.



Tier one sites under this assessment area have little to no consideration for these principles in their management plans or programs. These may be older sites that were established before the concept of resilience to climate change was introduced to the MPA and coral reef management communities and for which no effort has been made to update management plans or activities in preparation for or response to the threat of climate change.

In tier two sites there might be some effort to plan for climate change adaptation, opportunistically monitor the effects of climate change or educate the public about resource impacts related to climate change; but there are no active efforts to build ecosystem resilience, nor is there capacity to conduct an organized response to climate change related events and impacts.

The management plans and programs for tier three sites include actions that are intended to support resilient reef resources and there has been intentional effort to update management plans or activities with the explicit purpose of preparing for or responding to climate change impacts or site specific response and/or adaptation plans have been developed and there is capacity to implement them.

HELPFUL RESOURCES:

Appendix 4 provides a list of principles for incorporating resilience to climate change in the design and management of marine protected areas.

More information on reef resilience as well as a toolkit that provides coral reef managers with guidance on building resilience to climate change into the design of MPAs and daily management activities is available at <http://www.reefresilience.org/>

15. Sustainable livelihood options

Tier 1	No livelihood opportunities have been developed with stakeholders
Tier 2	Some livelihood opportunities have been developed with stakeholders
Tier 3	The social and economic impacts of the MPA on resource users have been assessed and livelihood opportunities have been developed with stakeholders



In some cases, the implementation of an MPA can negatively impact the livelihoods of specific user groups with a prime example being commercial fishers who have historically extracted marine species from the area and are no longer permitted to do so. In such cases, programs and efforts to help encourage the development of additional opportunities for these user groups either within or outside of the MPA can build public and local community support for the area and reduce user conflicts and enforcement demands. This assessment area may not be relevant in all MPA sites and should only be completed for sites where user groups have been displaced by the implementation of the MPA.

In tier one, MPA resource users have been displaced but there has been no effort on the part of the managing authority to develop alternative or supplemental livelihood opportunities for those users.

In tier two while there may not be a complete understanding of the social and economic impacts of the MPA on local communities, some activities have been implemented that help encourage alternative or supplemental livelihood opportunities for affected users.

Management at tier three sites have been able to assess socioeconomic impacts of the MPA on local communities or specific user groups, have worked with these stakeholders to encourage the development of new livelihood opportunities or facilitate their transition into existing alternative livelihoods.

16. Fisheries management

Tier 1	No site-specific fisheries assessment has been conducted
Tier 2	Site-specific fisheries assessment has been conducted but no fisheries management actions are being implemented in the MPA
Tier 3	A site-specific fisheries management program is being implemented

This assessment area may not be relevant in all MPA sites and should only be completed for sites where the management of targeted fisheries is an explicit goal of the MPA.

In tier one sites, although the MPA seeks to manage fishing activity (including commercial, ornamental, recreational, cultural and/or subsistence fishing), there has



been no effort to assess targeted fish populations within the MPA to enable the development of measurable objectives and the evaluation of MPA effectiveness.

For tier two status, site-specific fisheries assessments for targeted species have been conducted and specific fisheries management objectives may have been developed and incorporated into a management plan; but no fisheries management actions are being implemented in the MPA to support those objectives.

In tier three, specific fisheries regulations and/or management actions for the MPA have been developed based on fisheries assessment and are being implemented to achieve specific and measurable objectives.

17. Pollution

Tier 1	Assessments of pollution affecting the MPA have not been conducted
Tier 2	Major sources of pollution have been identified but are not being addressed
Tier 3	Targeted actions for pollution control are being implemented

Pollution is a significant threat to coral reef ecosystems. MPAs that are adjacent to populated coastal areas are often impacted by land based sources of pollution such as sediment, nutrients and toxins. Pollution that is either generated in the marine environment such as waste from boats or is carried via the marine environment to the MPA from afar such as marine debris and microplastics can also negatively affect natural resources targeted for protection by MPAs. In such sites, management efforts to reduce or eliminate these pollutants are essential in order to achieve desired environmental outcomes. This assessment area may not be relevant in all MPA sites and should only be completed for sites where pollution may be impacting targeted resources.

For tier one sites, while managers may be aware of specific pollutants or sources of pollution affecting the marine resources under their care, there have been to



targeted assessments to understand the main sources of pollution and their relative contribution.

In tier two sites, assessments have been conducted which identify major sources of land and/or marine based pollution affecting MPA resources, but there has been little to no effort or investment in addressing these sources.

In the third tier, MPAs have targeted action plans for addressing major sources of pollution, such as watershed management plans or targeted outreach, and they are being implemented at some level to reduce the impacts of pollution on MPA resources.

18. Sustainable tourism

Tier 1	Tourism activities are not managed in the MPA
Tier 2	A sustainable tourism assessment and/or plan has been developed but is not being implemented
Tier 3	Tourism activities in the MPA are managed and conducted according to a sustainable tourism plan or the MPA management plan

MPAs can be a magnet for tourism activity. Some MPAs have been established for the explicit purpose of managing tourism use or for tourism development. In MPAs where tourism activity may impact resources that have been targeted for conservation or where tourism is in conflict with other managed uses, the development of sustainable tourism plans and the promotion of sustainable tourism activities can reduce these impacts and conflicts while fostering tourism development. This assessment area may not be relevant in all MPA sites and should only be completed for sites where there is significant tourism activity.

In tier one sites, ongoing tourism activities which may be impacting resources and/ or creating conflict with other legal uses are largely unmanaged and unregulated.



In tier two sites assessments have been conducted which identify tourism activities that are compatible with MPA goals objectives and how they could be supported or developed in the area, but proposed approaches are not being implemented.

In tier three sites, these assessment and plans have been conducted and the outcomes are begin implemented to foster sustainable tourism opportunities associated with the MPA.

19. Response to disturbance events

Tier 1	Little or no consideration of response to disturbance events in the management of the MPA
Tier 2	Response plan(s) developed for the MPA
Tier 3	Response plan(s) being implemented with resources, technical capacity and infrastructure available to respond

Both natural and human-induced disturbance events such as hurricanes, algal blooms, sargassum events, invasive species introductions, coral disease outbreaks, fish kills, oil spills and ship groundings can cause dramatic impacts to marine ecosystems in a very short period of time. While preventing these events is most often outside of the control of MPA managers, the capacity to conduct a swift and coordinated response to such events in an effort to minimize impacts and investigate or document the event can be developed.

Tier one sites have been unable to prepare for potential disturbance events in any way and do not have a planned response.

Tier two sites have developed response plans for one or more potential disturbance events but there is limited capacity to execute those plans because of a lack of coordination capacity or available disturbance response participants.

Tier three sites have developed these response plans and have either successfully implemented them or are fully prepared and equipped to implement them should the need arise such as through a coordinated network of volunteers and/or from partnering agencies and organizations.

20. Organizational management



Tier 1	The MPA staff complement is very limited and/or staff has inadequate skills and knowledge to effectively carry out management
Tier 2	The MPA staff complement is inconsistent in numbers, skills and/or knowledge to effectively carry out management
Tier 3	The MPA staff complement is adequate and has proper skills and knowledge to effectively carry out management

Having sufficient and capable staff is critical to the successful management of any MPA and in many cases it may be the greatest determiner of MPA success. In tier one MPAs there is an inadequate number of staff assigned to achieve primary site objectives and/ or existing staff do not have the skills and knowledge that are necessary to effectively execute their positions. In tier two sites these capacities are inconsistent meaning that due to high staff turnover or unreliable funding, management is unable to retain a consistent complement of enough capable staff to achieve primary site objectives. Tier three sites are characterized by a sustained complement of staff that is adequate in number with no major gaps that influence ability to carry out key program elements. Sites at the highest tier of capacity in this area also have well trained and knowledgeable staff that are able to successfully execute their scopes of work.

APPENDICES

APPENDIX 1 : Site Planning Guidelines

R.V. Salm, John Clark, and Erkki Siirila (2000). *Marine and Coastal Protected Areas: A guide for planners and managers*. IUCN. Washington DC. Xxi. p.41

1. The strategy document identifies steps to establish a protected area and forms the foundation for the Management Plan. It is the preliminary document by which approvals are gained and designation of an MPA site is formalized. The strategy document is thus an important part of the management process.
2. The Management Plan for the site is the operational guide for the MPA and identifies actions to resolve specific management issues. It is thus a guiding tool for management.
3. The principal goal of the Management Plan is generally to maintain the natural resource values (seascapes, species habitats, ecological processes) of an area, and to ensure that all uses are compatible with that aim.

4. The Management Plan should aim to conserve natural values, optimize economic uses, and integrate traditional uses. Through zoning, it should attempt to separate incompatible activities, ensuring that particular uses are permitted only in suitable areas and sustainable levels of use are specified.
5. The Management Plan derives directly from management issues and their related objectives and activities. It needs to encompass legal and administrative concerns and educational and social objectives along with ecological and physical ones.
6. The Management Plan should function to achieve interagency coordination and cooperation among stakeholders (management authority, concerned departments of government, neighboring communities and other user groups) and to facilitate communication between MPA administration and management.
7. Initiation of site management need not be delayed until a MPA plan is completed. In countries where lengthy bureaucratic procedures or other factors delay the completion of the plan, an interim management document (operational plan) can be formulated and implemented.
8. Management plans may be required to function as interpretive documents, being designed for the public as well as for management. Planning workshops should be conducted to garner interest from the nearby community as well as certain sectors of the public.
9. Planning should examine the effects that MPAs have on local people and find ways to avoid negative effects or compensate for these. Public consultation is important both to identify current uses and to avoid conflict with local traditions and to encourage participation in planning.

APPENDIX 2 : RECOMMENDED CONTENTS OF AN MPA MANAGEMENT PLAN

Developed by NOAA CRCP and the Pacific Islands MPA Management Community (PIMPAC)

- 1. TITLE PAGE – name of site; names of lead group(s); date; version**
- 2. EXECUTIVE SUMMARY – key issues and decisions; summary aims, approach, and actions**
- 3. TABLE OF CONTENTS**
- 4. INTRODUCTION – Define purpose and scope of the plan; explain legislative basis and authority for the plan’s development; summary timeline of plan development;**
- 5. SITE DESCRIPTION:**

(a.) Location and Governance:

- Location and size of the area
- What is the purpose of the area? (why was it created)
- What is the legal status of the area?
- Who has the legal authority to manage the area?
- What is the current management system?

(b.) Biophysical Setting:

- What are the key Physical features of the area (climate, geology, geomorphology, hydrology, soil characteristics)
- What are its key biological features of the area? (communities, flora and fauna, including any outstanding natural resource features) What are the Historical features of the area?
- What are the natural resource targets for conservation (the ecosystems, habitats, populations and species that are the target of MPA conservation efforts) for the area?

(c.) Socioeconomic and Cultural Setting;

- What are its cultural features? (traditional communities, cultural features and practices)
- What are the Socio-economic features of the area? (occupancy, access, income, tenure, other basic data and trends among local communities and their dependence on protected areas).
- What are the stakeholder groups with an interest in the area?
- What are the socioeconomic and cultural targets for the area?

(d.) Conservation Status;

- What are the current uses of the area?
- What are the threats to the area?
- What are the obstacles to effective management
- What are the management successes in the area?
- What are the current management challenges to the area?
- What is the history of management planning in the area?
- Why has a decision been made to complete this Management Plan?

6. THE MANAGEMENT APPROACH



- (a.) Description of the Management Planning Process that was Used to Develop the Document
- (b.) Vision and Mission Statement
- (c.) Analysis of Strengths, Weaknesses, Opportunities and Threats
- (d.) Goal and Objectives
- (e.) Management Activities
- (f.) Zoning and Regulations

7. OPTIONAL SECTIONS

- (g.) Enforcement Approach
- (h.) Biological and Socioeconomic Monitoring Approach
- (i.) Roles and Responsibilities of Partners
- (j.) Administration
- (k.) Financing
- (l.) Sustainability

8. APPENDICES (Suggested)

- Boundaries
- Maps (see list below)
- Habitat classifications
- Plant species (flora)
- Animal species (fauna)
- Special features at the site
- Legal language/regulation (actual)
- Map 1 - Location
- Map 2 - Land/water tenure and jurisdiction
- Map 3 - Land topography and seabed bathymetry
- Map 4 - Geology
- Map 5/6 - Dominant plant and animal communities
- Map 7/8 - Major commercial and non-commercial uses
- Map 9 - Major use conflicts and threatened resources
- Map 10 - Zoning



In general a Good Management Plan has the following characteristics:

1. **Clear:** easy to read, jargon free and well presented.
2. **Concise and comprehensive:** no longer than is absolutely necessary, but with enough information to fulfill its functions.
3. **Accurate:** without major errors or statements likely to date? and with the reasons for all judgments clearly explained.
4. **Logical:** With management policies derived from an assessment of the site and with a clear rationale given for all proposals (e.g. based on best scientific information available).
5. **Acceptable:** to all those with interests in and emotional attachment to the site.
6. **Practical:** with clear objectives, realistic methods for achieving them, resulting in desired outcomes which can be monitored.
7. **Focused:** fulfilling its purpose as a tool for site management, meeting the needs of its users and satisfying any legal or other obligations.

APPENDIX 3 : MPA Effectiveness Evaluation Tools

“How Is Your MPA Doing?” a guidebook of natural and social indicators for evaluating MPA management effectiveness (IUCN, NOAA, WWF).

<http://www.mpa.gov/pdf/national-system/mpadoing.pdf>

WWF’s Rapid Assessment and prioritization of protected area management (RAPPAM)

<http://assets.panda.org/downloads/rappam.pdf>

Score Card to Assess Progress in Achieving Management Effectiveness Goals for Marine Protected Areas (WWF and World Bank)

http://siteresources.worldbank.org/EXTBIODIVERSITY/Resources/MPA_tool.pdf

World Commission on Protected Areas has provided a list of “Protected Areas Management Effectiveness Methodologies” at <http://www.wdpa.org/ME/tools.aspx>

APPENDIX 4: Resilience Principles

The Nature Conservancy

http://reefresilience.org/Toolkit_Coral/C1co_Principles.html



Ecosystem resilience refers to the ability of an ecosystem to maintain key functions and processes in the face of stresses, or pressures, by either resisting or adapting to change.

Principle 1: Representation and Replication (and risk-spreading) can help increase likelihood of reef survival. By ensuring that resilient species and habitats are well represented and replicated throughout an MPA network, coral reef managers can decrease risk of catastrophic events, like bleaching, from destroying entire reef ecosystems.

Principle 2: Critical Areas are vital to survival and sustainability of marine habitats. These areas may provide secure and essential sources of larvae to enhance replenishment and recovery of reefs damaged by bleaching, hurricanes or other events. They also include high-priority conservation targets, such as fish spawning aggregations and nursery habitats.

Principle 3: Connectivity influences the design of marine protected area networks. Preserving connectivity among reefs and their associated habitats ensures replenishment of coral communities and fish stocks from nearby healthy reefs, and may enhance recovery.

Principle 4: Effective Management is essential to meeting goals and objectives of an MPA, and ultimately keeping reefs vibrant and healthy. Reducing threats is the foundation for successful conservation and the core of our resilience-based strategies. Measuring effective management provides the foundation for adaptive

management. Investments in human capacity and long-term financing are also crucial to sustaining effective management for the future.

Parker, B.A., J.M. West, A.T. Hamilton, C.A. Courtney, P. MacGowan, K.H. Koltes, D.A. Gibbs, and P. Bradley. 2017. Adaptation Design Tool: Corals and Climate Adaptation Planning. Silver Spring, MD: NOAA Coral Reef Conservation Program. NOAA Technical Memorandum CRCP 27, 58 pp. DOI: 10.7289/V51N7Z5F
https://docs.lib.noaa.gov/noaa_documents/NOS/CRCP/TM_CRCP/TM_CRCP_27.pdf

TNC Reef Resilience Training Module Release - July 2017

Assessing and Monitoring Reef Resilience



<http://www.reefresilience.org/coral-reefs/monitoring-and-assessment/assessing-and-monitoring-reef-resilience/>

Resilient MPA Design

<http://www.reefresilience.org/coral-reefs/resilient-mpa-design/>

West, J.M., Courtney, C.A., Hamilton, A.T. et al. Environmental Management (2017) 59: 102. doi:10.1007/s00267-016-0774-3

<https://link.springer.com/article/10.1007%2Fs00267-016-0774-3>

See supplemental materials

(<https://link.springer.com/article/10.1007%2Fs00267-016-0774-3#SupplementaryMaterial>)

for the Corals and Climate Adpatation Planning Project Compendium of General Adpatation Strategies, Adaptation Options and Climate-smart Design Considerations for Coral Reef Ecosystems.