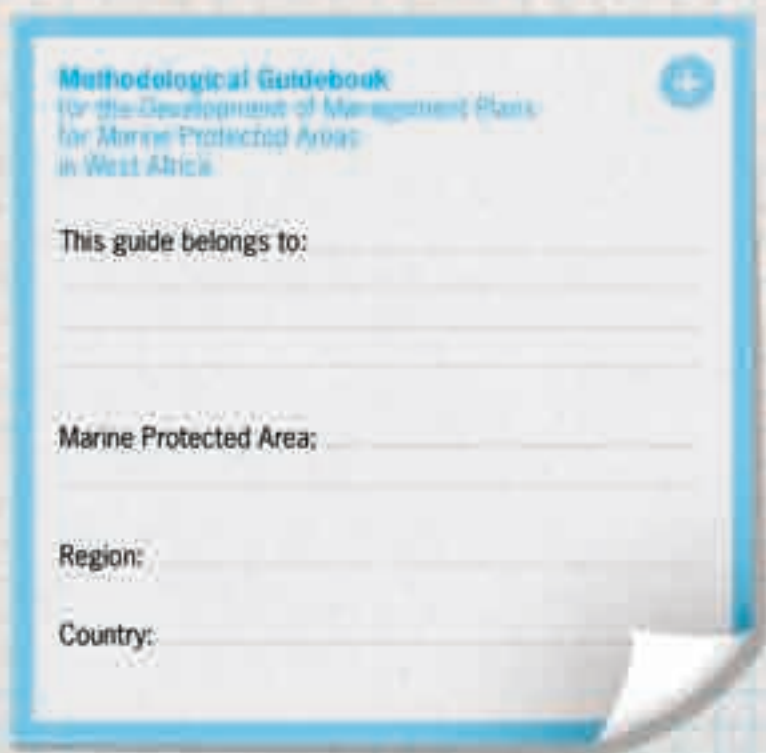


# Methodological Guidebook

for the Development  
of **Management Plans**  
for **Marine Protected Areas**  
in West Africa

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CHARLOTTE KARIBUHOYE





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# Glossary

## Activities

Activities are processes implemented by the manager of a protected area to achieve the objectives set in the management plan.

## Annual Action Plan

The annual action plan stems from the multi-year program of work and should allow to plan technically and financially the achievement of activities during the whole year.

## Baseline status

Carrying out a baseline consists in developing knowledge track records on several areas, in order to establish a starting point, a baseline for the monitoring of management indicators. In general, baselines are of three types: ecological, socio-economic and cultural.

## Business Plan

See definition on page 46.

## Demarcation

The demarcation of a protected area consists in the physical marking on the ground of its boundaries or its areas by the positioning of apparent marks, recognized by all: signs, bollards, poles or sea buoys.

## Capacity Building

Capacity building includes all the training or technical support activities aiming to develop skills useful to improve the management of a site.

## Communication

Communication here includes all the activities designed to convey information to the stakeholders in all possible forms: debates, radio programs, film screenings and discussions, theatre, meetings in villages, etc.

## Community Based Marine Protected Area (CBMPA)

The term 'community-based' specifies that the governance of this space are entrusted to local communities care, in collaboration with the other stakeholders.

## Community Conserved Area (CCA)

This term refers to areas, occupied and used traditionally by one or some given communities, which are voluntarily dedicated and managed, to ensure long-term conservation of natural resources and cultural heritage.

## Consultation

In this guidebook, consultation includes the activities conducted or initiated by the writing team in order to involve the stakeholders in the various drafting stages of the management plan drafting process.

## Financial Sustainability

Financial sustainability of a protected area is achieved when long-lasting financial contributions are provided to allow the site to operate properly.

## Global Objectives

Objectives of the protected area in the long term. They aim at an ideal state to which the management of the protected area should lead, through the conservation of biodiversity and natural resources, or even through the improvement of populations living conditions.

## Governance

The governance of a protected area refers to the functioning of the authority responsible for management, particularly in decision making processes. Defining the governance of a protected area implies identifying the authority responsible for management decisions and describing how it works.

## Indicators

An indicator permits any change or phenomenon under study to be measured objectively. It is therefore, within the frame of this guidebook, a tool for decision-making that allows the management effectiveness of the protected area to be measured.

## Logical Framework

Planning tool with a matrix form that allows setting goals consistent with each other and with the activities implemented, and to measure the results achieved through the identification of indicators.

## Management

The management of a protected area includes all the activities which are implemented by the manager to reach the goals set for the site.

## Management Effectiveness Assessment

Continuous process during which the manager has to analyse the degree of achievement of the protected area objectives and the impacts of the management activities implemented on the site.

## Management Plan

See definition on page 7.

## Marine Protected Area (MPA)

See definition on page 5.

## Monitoring

Ecological or socio-economic monitoring is a process of knowledge acquisition repeated over time. Monitoring applies to indicators identified at the beginning of the baseline characterization, and allowing the assessment of the impacts of management measures and the observed changes.

## Multi-Year Program of Work

The multi-year program of work is a key component of the management plan because it allows activities to be organized together and in time. The program for the activities implementation is determined in terms of time, frequency, responsibility and costs.

## Options

Options are the different alternatives used by the manager of a protected area to achieve a goal. In the field, each option is characterized by an activity or a group of activities that the manager must consider in terms of feasibility, impact, relevance or complementary nature to guide his choice.

## Participatory Management

Involvement of local communities, users, administration, and other stakeholders of a protected area in the activities implemented by the manager of the protected area.

## Shared Governance

Sharing of authority, decision-making and responsibility between the various stakeholders involved in the management of a protected area.

## Specific Objectives

They are based on the length of the management plan, to achieve the overall objectives. They have an operational character.

## Stake

A management stake is identified by the manager and the stakeholders. It justifies the implementation of conservation measures to protect or restore unique features of the site (a value).

## Stakeholders

Stakeholders are all the entities (organizations or individuals) involved in the management of a protected area. They may have different interests and influences on the management process.

## Strategies

Management strategies guide the managers in implementing the activities. They are thought to allow making a choice among the different options identified, in order to achieve the objectives.

## Values

The values of a protected area are the unique features of the site that its management seeks to preserve. They can be of international, national or local nature. Values are, along with stakes, at the basis of the creation of protected areas.

## Vision

Vision summarizes the overall purpose of the management of a site in one sentence.

## Zoning

Delineation of spaces within the area in which different management measures are implemented.



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# Preface

The purpose of this document is to provide managers of Marine Protected Areas (MPAs) in West Africa with guidelines to develop their management plans. It was developed following a workshop on MPA management plans in West Africa, held in Senegal from 27 April to 2 May 2008, with the technical and financial support of the International Foundation for the Banc d'Arguin (FIBA) as part of the Regional Program for the Conservation of Marine and Coastal zone in West Africa (PRCM). Participants from different countries in West Africa exchanged ideas and were trained in the process of writing a management plan. Each step was analysed and discussed, and participants had the opportunity to share their comments, views and experiences.

In contrast to more general guides, this guide has been written to meet two requirements:

- ▶ **A guide adapted to Marine Protected Areas, where marine and coastal environment characteristics are clearly addressed;**
- ▶ **A guide adapted to the specificities of West Africa, where community-based and participatory approaches predominate, and where socio-economic issues related to fishing are very important.**

Thus, for participants of the workshop the idea of a guide met two objectives: to provide methodological support to managers, and to enable the harmonization of management plans in the sub-region, particularly in the context of the MPA network in West Africa (RAMPAO), in order to facilitate exchange between managers and partners.

## 1 How to use this document?

This guide is to help readers to construct their management plan step by step. Writing a management plan is set out in chronological order, divided here into six key steps. Each step explains to the reader the key activities to be carried out. The reader will also find recommendations and concrete examples of work done by the MPA in the sub-region. A methodological part, 'A writing framework' at the end of the document, will help the reader write his/her own document and fill out the relevant sections. For example, in Step 3 'Evaluation of the site', the document presents activities to be conducted to collect information (studies, and surveys, etc.) and directs the reader towards the type of information needed. The 'writing framework' will guide the reader through the writing. It provides chapters that can be used in writing the management plan (chapters on climate, and geology, etc.).

Before starting any activity, it is recommended to read all six steps to have a clear idea of the whole process. The reader should then work section by section chronologically, in order to follow the logic of creating a management plan. The different sections proposed in the 'writing framework' are only indicative; the writer can skip chapters or choose to go into more depth in others, depending on the specificities of the site and the data available to him/her. It is important, however, to follow the logical progression of the process which is as follows: knowledge of the site - conservation issues - management objectives - implementation of activities

## 2 The context of MPAs in West Africa

Well-managed, MPAs are increasingly regarded as robust tools contributing to the conservation of biodiversity and sustainable management of fisheries resources.

However, the effective management of MPAs is still hampered by a number of constraints related to the nature of the marine environment.

MPAs are generally associated with open ecosystems, sometimes large, moving and dynamic, which support the migration of resources and users. The creation and management of MPAs being more recent than terrestrial protection areas, frameworks and management systems (technical and financial resources, and institutional frameworks, etc.) are often inadequate in various countries in the region and have yet to adjust to these new tools.

The level of marine resources scientific knowledge is generally less advanced than that of terrestrial ecosystems, due in large to the relatively new and high cost of marine research. In addition, the richness of the marine environment is less accessible than that of land, making it more difficult to quantify the



benefits. Finally, among the constraints related to MPA management, the problem of demarcation and monitoring should be mentioned. MPA access is not always indicated by a physical barrier, particularly the marine coast, these sites being often considered 'open areas' with the possibility of access at any time.

While most of the MPAs established in the last four decades in West Africa were primarily in response to the needs of biodiversity conservation and the promotion of economic and social development, the objectives for their establishment have become increasingly diversified. They now also include the renewal of fisheries resources and the preservation and enhancement of cultural and historical heritage.

Today, the main challenges for the efficient and equitable management of MPAs in West Africa are numerous and shared. They include, in particular, the urgent need for capacity-building for managers, illustrated by weaknesses in the description of baselines (ecological and socio-economic), knowledge of the conservation status of key species and habitats, the development/ updating of management plans and organizational and communication skills, the implementation of sustainable action to support local development, and ecological and socio-economic monitoring. For example, in April 2008 only 25% of the 24 officially recognized MPAs in the sub-region had a management plan; almost 40% of MPA's management plans were under-development and

### Def.: What is an MPA?

The IUCN's definition is as follows:

Since 2008, the International Union for Conservation of Nature (IUCN) has provided a definition for all types of protected areas:

"A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".

The specificity of an MPA lies in the fact that it is composed - in whole or in part - of marine-influenced areas (intertidal and sub-tidal).

## Natural Resources Management in Senegal

Aboubakry Kane, Project Manager,  
IUCN Senegal.

*In the sub-region, an almost complete absence of natural resource management based on management plan implementation can be seen. This can be explained by a tradition of centralized policing of these resources by the government. Indeed, After its independence in 1960, Senegal, like all other formerly colonized countries, managed its natural resources through formal legislation enforced by strong government institutions. The classic pattern found everywhere is a government sector department whose technical services manage resources based on a code consisting of an Act and a decree inspired or largely based on regulations of the former Federation of French West Africa. These regulations define the power of the agent responsible for its implementation, those acts considered as crimes, and related penalties. The extent of the police mission is illustrated in the case of Senegal by the significant power of government to control, for example, all forests and plantations, including trees planted by people who are subject to the same laws of restriction in terms of exploitation.*

almost 35% of MPAs did not yet have one. It should be noted, however, that in the space of two years, the number of MPAs with a management plan doubled: in 2011, 17 MPAs had an updated management plan.

Just as for terrestrial protected areas, there are several types of MPAs, from 'closed' areas, [often called integral (marine) reserves] where all resources exploitation is prohibited, to multiple use areas. MPAs are a tool for integrated management of the coastal area and complement the panel of technical and sector tools such as in fishing, e.g. biological recovery, moratoria, regulation of fishing tools, and even quotas.

In West Africa, the integration of MPAs as tools for land management in the management process of marine and coastal areas need to be strengthened including greater sector integration and the active promotion of inter-institutional dialogue. MPA management should also rely more on research, notably in the definition of values and impact of MPAs on resources, the development of baselines,

the evaluation of management effectiveness and the construction of a robust argument for advocacy and support decision systems.

Another major challenge for effective management of MPAs in West Africa is the promotion of innovative management models such as community MPAs, community heritage areas and cross-boundary shared resources management. Finally, the on-going and general problem of sub-financing, which requires the identification and implementation of viable alternatives in terms of MPA sustainable financing should be highlighted.

Due to the relatively recent nature of this tool, there is a need for suitable national legal frameworks in the different countries in order to take better account of the particularities of MPAs. In addition, the harmonization of legislation is required as a condition for sub-regional consultation and collaboration to confront the problems shared by countries. This cooperative management at sub-regional level involves consolidating the recently formed Marine Protected Areas in West Africa Network (RAMPAO); more specifically to strengthen its institutional functioning, coherence and functionality by improving in particular the representativeness of the various critical habitats and the connectivity between MPAs.

## 3

## What is a Management Plan?

There are many definitions of a management plan. Here are some of the most widely accepted and quoted:

*"A management plan is a written, circulated and approved document which describes the site or area and the problems and opportunities of management to protect its natural environment, geomorphology or landscape, enabling objectives based on this information to be met through relevant work over a stated period of time."*

› (Eurosite, 2001)

*"[A management plan] contains the management objectives and the means and strategies for achieving them. The plan is not an end in itself; rather it constitutes a framework within which subsequent management, implementation and planning will take place."*

› (Parks Canada, 1978)

*"It is a document that guides and controls the management of a protected area. It details the resources, uses, facilities and personnel needed to manage the area in the future. It is a working document that presents a program for the coming 5-10 years."*

› (Ndosi, 1992)

*"It is a document that sets forth the basic and development philosophy of the park and provides strategies for solving problems and achieving identified management objectives over a ten-year period. Based on these strategies, programs, actions and support facilities necessary for efficient park operations, visitor use and human benefit are identified. Throughout the planning effort, the park is considered in a regional context that influences and is influenced by it."*

› (Young and Young, 1993)

*"A management plan is a tool that allows defining, scheduling and controlling management in an objective and transparent manner. Its writing allows it to fully benefit from all the positive and negative experiences, in a process of gradual adaptation as evaluation is made."*

› (Chiffaut, 2006)

In conclusion, a management plan:

- ▶ is a guide that takes into account the objectives of the establishment of an MPA;
- ▶ results from consultation;
- ▶ is based on knowledge available of the site, and on the issues and objectives of management;
- ▶ a program of activities and resources over a given period.

### 3.1 Why prepare Management Plans?

As mentioned in the previous definitions, a management plan is a tool and not an end in itself. However, there is a strong tendency in some sites when preparing a management plan for efforts to focus on the production of a management plan instead of the efficient management of these sites. A plan written in this context, without a real commitment from the manager, is rarely used and relegated to a shelf once its writing is complete. Writing a management plan should meet the expectations, not only of the manager but also of its partners and stakeholders. While a comprehensive management plan is not needed by all MPAs to start operations, one becomes essential if it is to guide the objectives and long-term development of the area (Salm et al., 2000).

#### **An interest both in the process and in the final document**

The first interest of a management plan is precisely during its writing. It is an important moment in the life of an MPA, whether it occurs during its creation or long after. It is a unique opportunity to bring together all the stakeholders to identify issues and formulate goals. Thus, this step is an excellent occasion to work on consultation and a participatory approach to management.

#### **Sometimes a regulatory requirement**

In some MPAs, especially protected areas managed by the government, the production of a management plan is mentioned in legislation. The plan must be approved and made official. If its production is by nature 'mandatory', the motivation must be the same as for all other categories of protected areas; namely, the establishment of effective management.





### Set a baseline...

Writing a management plan is a unique opportunity to enrich ecological, socio-economic or cultural knowledge around the MPA. The 'diagnostic' work (see step 3: evaluation) can enable not just better understanding of the site, but also the wider system in which it is located. This phase of knowledge development allows links to be created with other sites in the sub-region that face the same issues of management.

### ...to develop tools for assessing management effectiveness

These baselines combined with objectives that are formulated in the management plan, are used as basis to assess the effectiveness of management. The management plan should provide some or all of the elements on which the assessment tools will be based (baselines, objectives, and monitoring indicators, etc.).

This guide complements the IUCN guide *How is your MPA doing?* by Pomeroy et al. 2006, designed specifically for MPAs.

#### THE MEDWETCOAST EXPERIENCE

By Sylvie Goyet: *Le plan de gestion avec modération* (The management plan in moderation) (Journal 'Espaces Naturels' no 22, April 2008)

The MedWetCoast project supported development of management plans in about fifteen pilot sites in the Mediterranean between 1999 and 2006. During the last year of the project, an assessment of the process was conducted by the project team, and the results were uneven.

First, diagnostic reviews were often incomplete, leaving aside some aspects related to aquatic environments, as well as some weakness in the socio-economic and cultural aspects.

Another shortcoming was highlighted in the non-inclusion of ecosystems adjacent to protected areas and the inter-relationship between species; studies being confined to the strict boundaries of protected areas, which sometimes were based more on administrative aspects rather than ecosystems.

Identification of the value of sites has also often focused too much on the aspects related purely to the conservation of biodiversity at international level, neglecting the value given by the population at local level (such as the abundance of fish resources, for example).

Finally, a major weakness was in the absence of the creation of a business plan in parallel with the process, leading to the writing of unrealistic management plans.

Writing a management plan must be begun with caution, because failure can be expensive, not only in terms of human and financial resources, but also because it can cause community participation to run out of steam. The approach must be as pragmatic and context-specific as possible, and should lead to the production of a management plan which is simple, readable and encrypted. Finally, and above all, to be understood and improved, the process must be cyclical.

### Planning activities

Management plans are primarily planning tools essential to the good management of a site, at several levels. First of all, it allows the manager to assess the effort required (financial and human) to carry out the objectives fixed. The planning per se linked to the management plan is conducted in parallel to drafting a business plan. Such planning will prevent managers from 'navigating by sight', by setting targets to achieve over the duration of the plan. At another level, this planning is also intended for partners, including donors, who will be able to find activities to support, and synergies and new projects to develop in line with local expectations.

### And communicating to stakeholders

As a result, the management plan is also an important communication tool. It should give a clear idea of the MPA's objectives and expected results, in order to show the activities that were carried out. The diversity of the public that reads a management plan sometimes leads the writing team to producing two documents: a comprehensive document bringing together all the information, but sometimes too technical and too long for an uninitiated audience, and a summary intended for the general public and policy makers.

## 10 good reasons to plan management of a protected area



Adapted from Wetland Management Planning: A Guide for Site Managers (Chatterjee et al., 2008).

1. *To identify the objectives of site management.*
2. *To identify what factors affect or may affect your site's key features.*
3. *To resolve conflict.*
4. *To identify and describe the action required to achieve management objectives.*
5. *To define monitoring requirements*
6. *To maintain continuity of effective management.*
7. *To help obtain financial resources.*
8. *To enable communication within and between sites, organizations and stakeholders.*
9. *To demonstrate that management is effective and efficient.*
10. *To ensure compliance with local, national and international policies.*

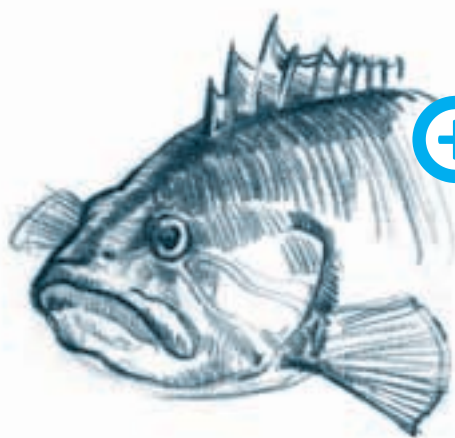
## 3.2 When to prepare a management plan and for how long?

Ideally the management plan should be written when a site is recognized as a protected area. The number of years covered by the plan will depend on:

- ▶ experience gained by the management team in terms of planning;
- ▶ the nature of the ecosystem (forests are ecosystems that are relatively static compared to wetlands);
- ▶ laws imposed by national authorities if they determine a specific number of years;
- ▶ Capacity available for implementation.

Normally for very dynamic ecosystems, a management plan is prepared for a period ranging from five to ten years. A shorter period (three years) may be preferable if, for example, it is the first management plan or if managers lack experience.

The time required to prepare a management plan depends mainly on the duration of negotiations with stakeholders and the availability of information. In general, the writing of a plan requires about 12 months. If the planning process has to last longer, it is desirable to produce shorter plans for areas or issues that have already been the subject of agreements.



It is strongly recommended to create an action plan for the writing team at the beginning of the process.

## 4

## Drafting the management plan step-by-step

Creating a management plan needs to be tackled in stages. The guide proposes six key steps (see section 4.2), but it is important to note that consultation, participation and communication should be central to the process and thus, an integral part of each step.

During the FIBA workshop organized in 2008, and as specified in the majority of guides, documents and publications, all the participants identified consultation and communication as core to the successful development and implementation of the management plan, as well as the overall management of the protected area.

### 4.1 Consultation, participation and communication at the heart of the process

#### Creating the management plan is a participatory process

The first objective of consultation is to provide comprehensive information to stakeholders. It facilitates the acceptance, even ownership, of objectives and activities by those involved, which is essential for their collaboration in implementing the plan.

Managing a protected area is not only managing biodiversity; it is above all, taking into account the population and its activities. As a result, the management of protected areas and in particular the preparation of management plans has evolved from an approach driven solely by experts to a fully participatory approach; from a 'top down' approach to a 'bottom-up' approach. Stakeholders should be directly involved in management and management decisions, and should contribute their vision of the value and operation of the site.

The objectives of an MPA can be of local, national or global scope. There is a real need to align these different approaches. The objectives covered by an MPA sometimes go beyond the sole responsibility of local users.

It is certain that the 'expert only' approach has shown its limits and that involvement of local communities in MPA management in West Africa and elsewhere is a necessary condition to guarantee their running. However, it is for the manager to define the limits fixed, based on the constraints and objectives sought.





## The example of the National Park of Banc d'Arguin (PNBA) in Mauritania

Cheibany Ould Senhoury, Head of the Technical Support Department  
Antonio Araujo, Coordinator of FIBA's PNBA Program.

*The National Park of Banc d'Arguin (PNBA), the first Marine Protected Area in West Africa, has played a pioneering role in the sub-region. The PNBA was established in 1976 because of its ecological features and exceptional scientific and cultural values.*

It was only about 20 years after its creation in 1995, that the PNBA had its management plan, covering the period 1994-2003, approved. This plan was developed in a linear fashion with no real public participation. Stakeholders contributed more to the development and implementation of the 2005-2009 Development and Management Plan (DMP). However, public participation was again minimal.

It was only for the 2010-2014 DMP that an analysis of stakeholders was conducted at the start of the process and that public participation became a priority. Despite this, progress is yet to be realized in terms of participation of local populations and other stakeholders involved in the management of the PNBA. The current development and management plan is a guide and a tool for everyday PNBA operations, based on a strategy of openness and cooperation. In particular, this involves its integration into national sectorial policies and strengthening the role of communities and civil society in implementing local development action.

The PNBA's 2010-2014 DMP is structured around five issues that focus on the PNBA's work and identify priorities:

- › Monitoring and enforcement of conservation measures;
- › Sustainable territorial development,
- › Promotion and enhancement of the MPA (ecotourism, environmental education and communication),
- › Coordination of scientific research and an environmental observatory,
- › Shared governance and sustainable management of the PNBA institution.

The DMP is organized each year into annual action plans. Quarterly assessment and review meetings are held. In addition, the PNBA set up both a modernization and business plan that are currently being updated. Capitalization for a trust fund is underway to ensure the sustainability of management approaches reflected in the DMP. The Mauritanian government has already mobilized capital to add to the PNBA Trust Fund, thus demonstrating unprecedented political commitment, and setting an example to be followed elsewhere.



### Key points to keep in mind:

- 1▶ Stakeholders will participate in the process if they believe they will benefit from their participation;
- 2▶ Confidence in the process and particularly in the facilitator (see Step 2, p.25) is of major importance to ensure success. Transparency is essential to the process.
- 3▶ Participatory processes are most often delayed due to a lack of awareness by stakeholders. Communication and providing information are key factors in facilitating decision-making.
- 4▶ The contribution of stakeholders and in particular of local residents is essential to understanding the site and appreciating its value.

### Communication as an information tool for stakeholders

Communication is an essential tool at all levels and stages of management plan implementation:

- ▶ Communication is crucial especially at the beginning of the process. The local community, if properly informed of the issues involved in management, is more ready to negotiate. It is recommended that this process starts as soon as possible.
- ▶ During the various stages of plan preparation, information on current activities, such as surveys or studies improves ownership of the process by stakeholders, and increases confidence and exchange.
- ▶ During implementation of the plan, communication can highlight the extent to which decisions have been incorporated into the plan.
- ▶ Communication should target all stakeholders and no one should be left out.

This guide does not go into detail on the participatory approach and consultation methods. The key principles of consultation are listed on the next page. There are a large number of publications on this subject that the reader is encouraged to consult, for example, the Ramsar Convention *Handbook* Vol. 16, which deals with communication, education and public information (Ramsar Convention Secretariat, 2007), and contains interesting details on communication. The guide, *En gouvernance partagée !* (Borrini-Feyerabend et al., 2010) addresses the specific features of MPAs in West Africa.

## Some key principles for the consultation process

(Adapted from Phillips, 2002)

*It is essential that the consultation process generates discussion between all stakeholders. This means that the team:*

- ▶ *identifies all stakeholders;*
- ▶ *approaches each stakeholder in a fair and transparent manner;*
- ▶ *produces clear and useful information tools;*
- ▶ *uses appropriate and varied cultural approaches;*
- ▶ *harmonizes the proposals;*
- ▶ *is prepared to review any proposal;*
- ▶ *keeps fully documented copies of all input, and a note of all contacts;*
- ▶ *ensures that all requests for meetings and tools are discussed promptly;*
- ▶ *ensures that all views are considered, whether adopted or not;*
- ▶ *takes the time required so that no one feels hurried, but not too much in order not to lose interest;*
- ▶ *begins consultation if changes in the plan are considered, which could affect other stakeholders;*
- ▶ *reports the results of consultation to all those who contribute to the process; and*
- ▶ *as a fundamental principle treats stakeholders as essential partners in the conservation of Marine Protected Areas, not as obstacles.*



**For more detail on the participatory approach** see the IUCN guide on participation and participatory diagnostic tools:

- ▶ « *Sharing Power* » (Borrini-Feyerabend et al., 2004).

## 4.2 A process in six key steps

Each process of drafting a management plan is different and depends on the specificities of each MPA. However, three major phases characterize this process: **assessing the site, determining objectives and activities, and evaluating the plan.**

This guide proposes a methodology in six key steps (see Fig.1). It is important to note that writing a management plan is complementary to writing a business plan and assessing management effectiveness. Writing a management plan, during the programming phase of activities, depends largely on the business plan. The evaluation at the end of the plan is part of the management effectiveness evaluation which is a more complete and continuous process. Well-documented guides are available for these two other processes and this manual will refer to them throughout the stages described.

### Management plan and business plan...



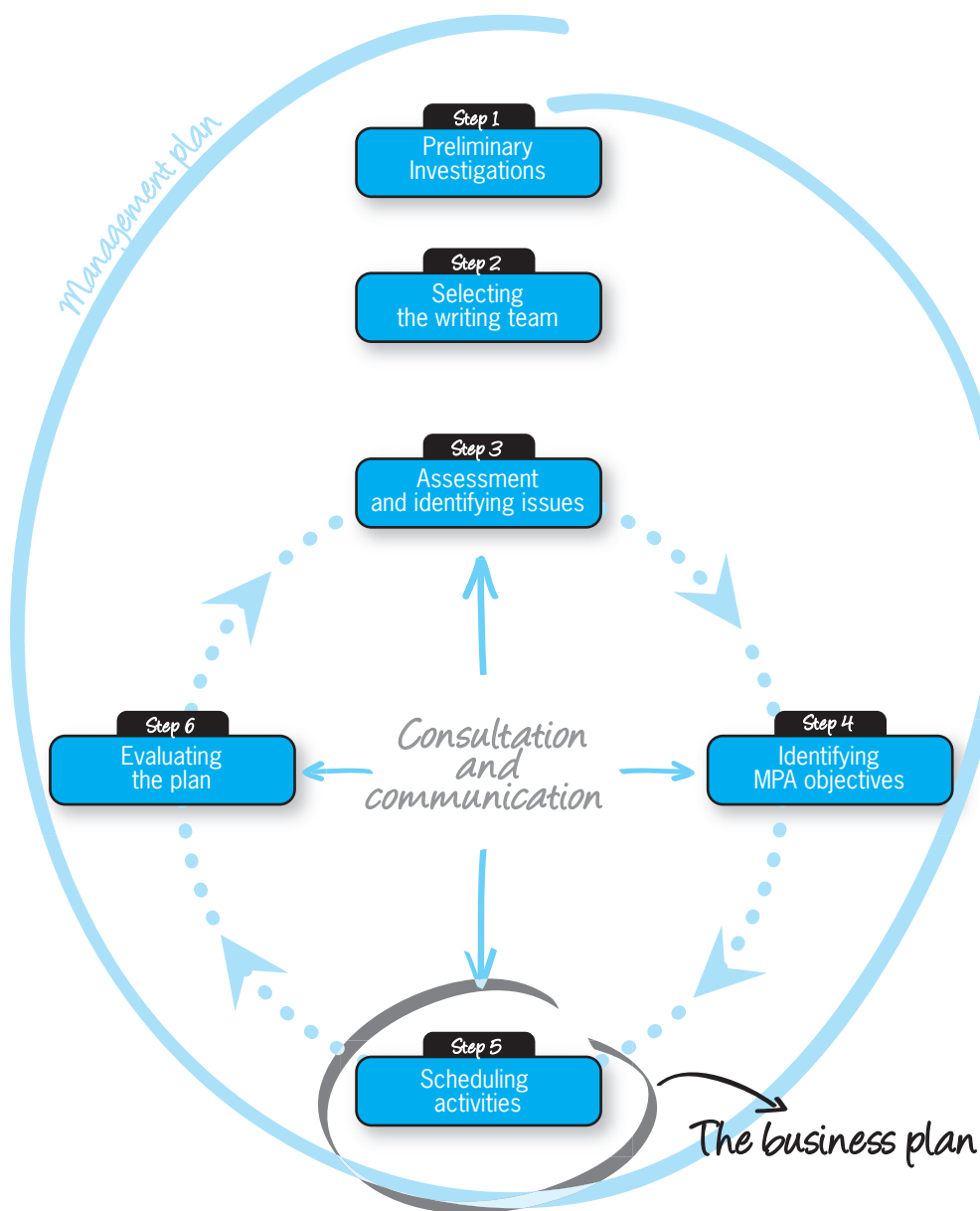
*Writing a management plan is a participatory process in which the objectives are determined. The manager will be able to develop activities based on these goals. However, for management plans not to be a 'wish list' impossible to implement, this phase of determining activities must be constructed based on a concrete assessment of available resources and the costs related to their implementation.*

*This evaluation of costs and available (or potential) resources results from the completed business plan. Ideally, these two processes should be conducted in parallel. If the business plan is based on the activities fixed in the management plan, the latter relies on the business plan to assess the feasibility of activities planned and thus prioritize them.*

*(NB: training on MPA business plans was organized by FIBA and WWF WAMER in June 2010, and a guide on developing MPA business plans in the sub-region is currently under development).*







**Figure 1: Key steps for writing a management plan**

The guide will describe each step and help the reader write the corresponding chapters of the management plan.

The first two steps (preliminary investigations and selecting the writing team) take place before the process begins. They are intended as preparation and should not be overlooked. Developing and writing the management plan really begin at step 3: assessment and identifying issues (p.29). Communication and consultation are central to the process.

The final step of evaluating management results completes the cycle. Each step in developing a management plan must be evaluated, in order to ensure consistency between the steps. The evaluation at the end of the plan provides the recommendations required to draft the next management plan.

A plan defines objectives at a given time, but good practice requires monitoring and continuous assessment to measure the effectiveness of management. Regular reviews allow the effectiveness of action carried out to be assessed and to readjust the plan, or make a fundamental revision, if necessary.

With this approach, MPA managers can:

- ▶ learn from experience ('learning by doing');
- ▶ consider, and respond, to the changes that affect the particularities of the site;
- ▶ continually develop and strengthen management, and
- ▶ demonstrate that management is appropriate and effective.

The cycle is usually repeated at regular and predetermined intervals or at any time when urgent or unexpected threats appear, or if significant changes occur in the governance of the managing body.

### Recommendations for successful management planning

(from *Guidelines for Management Planning of Protected Areas*  
Thomas et al., 2003)

*Successful management planning is characterized by the following aspects:*

- › It is a **process**, not an **event**, i.e. it does not end with the production of a plan, but continues throughout its implementation, and beyond.
- › It is concerned with the **future**: it identifies concerns and future alternative courses of action, and examines the evolving chain of cause and effect likely to result from current decisions.
- › It provides a **mechanism** for considering threats and opportunities and other complex issues, resolving problems and promoting discussion between involved parties.
- › It is **systematic**: most planning exercises work through a pre-determined sequence of steps that structure the process and encourage a logical approach. A systematic approach helps to ensure that decisions are based on knowledge and analysis of the subject and its context, and helps others to understand the rationale for proposed actions.

- › It also involves **value judgments**. Management planning can be thought of as a “process which embraces the identification of what a [protected area] is and what it should become, and how to maintain or attain that desired condition in the face of changing internal and external conditions” (Lipscombe 1987). The use of the word ‘should’ implies that value judgments help determine what ‘should be’, as well as ‘what is’. Thus, planning for protected areas is not only based on analysis of the objective condition of the natural resource, but also on people and their opinions.
- › It takes a **‘holistic’** view. The planning process can, if carried out openly and inclusively, consider a very wide range of issues, views and opinions. When applied to a particular protected area, it should be able to include all processes and issues arising both within, and outside its boundaries. How integrated or ‘holistic’ the process is, however, will depend on how the process is carried out, those involved and how the final decisions are made.
- › It is a **continuous** process; it is never static; it should adjust to changing conditions and goals.

### 4.3 Proposal for the management plan structure

In most help manuals and guides on drafting management plans, the document follows the expected logic: a description of the site, followed by a definition of management objectives and activities, ending with the description of the plan evaluation method.

This structure is the most natural and this guide is divided into three main parts or sections:

SECTION A **Assessment and MPA issues**

SECTION B **Objectives and Activities**

SECTION C **Management and planning evaluation system**

These sections are then broken down into different parts that can be found in the management plans and manuals mentioned in this document. Specific parts on the context of MPAs in West Africa have also been added.

The suggested chapters are indicative. The writer may choose to ignore some or add others depending on the specificities of his/her site, and the knowledge available. The table which follows proposes a list of contents for the management plan, repeated in the writing framework of this guide.

## 4.4 Last recommendations before starting

The site description should be clear and brief. It should be limited to facts that have an impact on management of the site. Detailed or additional information should be placed in an appendix and referenced in the text.

The site should be placed in a broader context so as to assess both the positive and negative effects of influences within and outside the site.

The reference documents attached can be completed when new information becomes available.

The potential of the site, both in ecological terms and in terms of use, could also be described.

If information required for the management plan is not available, this should be highlighted and its inclusion in the management plan planned.

### Guidelines for a good Management Plan

(Derived from *Guidelines for Management Planning of Protected Areas* (Thomas et al., 2003))

A management plan should be:

- ▶ **Clear and accessible:**  
easy to read, jargon free and well presented.
- ▶ **Concise and comprehensive:**  
no longer than absolutely necessary, but with enough information to fulfill its function.
- ▶ **Accurate and objective:**  
without major errors or statements likely to date with clear explanation.
- ▶ **Systematic and logical:**  
with management policies derived from an assessment of the site and with a clear rationale given for all proposals.
- ▶ **Acceptable and motivating:**  
to all those with an interest in and emotional attachment to the site.
- ▶ **Precise and practical:**  
with clear objectives, realistic methods for achieving them, resulting in desired outcomes which can be monitored.
- ▶ **Focused and effective:**  
fulfilling its purpose as a tool for site management, meeting the needs of its users and satisfying any legal or other obligations.



### 4.5 Steps of the process

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

## Preliminary investigations

Before mobilizing stakeholders, it is important to have a good vision of the site, its constraints and issues, and particularly of its stakeholders. This is especially important for teams that have just been newly assigned to a site. A preliminary analysis of stakeholders is necessary to avoid further difficulty, as was the case, for example, for the Bamboung MPA in Senegal.

### The importance of stakeholder analysis

Ibrahima Diamé, Chairman of the Management Committee of the Bamboung MPA in Senegal

*"At the time of establishing the Bamboung MPA, the start-up team focused on raising awareness among fishermen, given their importance as stakeholders. However, once in operation, officials from the Ministry of Fishery, feeling marginalized in favour of the Ministry of Environment officials, encouraged fishermen to continue their activities in the MPA and thus, created a conflict between these stakeholders and MPA managers."*

It is very important before starting site activities to have an idea of the identity of ALL stakeholders, and to know their role, interests, importance and influence. Excluding groups could help create opposition to the process. An example of a simple analysis of stakeholders is proposed here (see Table 1 on page 22) to help managers understand the implications of each one in the process.

It is also very important to keep in mind that the relationship of partners with the site and the role they play is not static. It changes with time and the evolution of activities within the MPA and according to external constraints. The analysis should be repeated frequently.



TABLE 1

### Example of a list of the most influential stakeholders included in the project of establishing an MPA at Yawri Bay in Sierra-Leone (Sierra Leone Forestry Department, 2010)

*Local partner groups that influence the decisions made in the management of marine and coastal areas are divided into two broad categories: members of local government and civil society groups.*

#### **Members of local government**

- Village Chief and elders of the village;
- Section Head and senior person in charge of the Chiefdom
- President and district committees

#### **Civil society**

- Muslim and Christian religious leaders;
- Youth groups, and school teachers where there are schools;
- Heads of secret societies (men's Poro society and women's Bondo society)
- The Sierra Leone Artisanal Fishermen's Union (SLAFU/ UPASL) which represents the interests of:
  - fishermen;
  - owners of canoes;
  - fish processors;
  - wholesale fish merchants ;
  - basket makers;
  - loggers and wood sellers;
  - mechanics for outboard motors;
  - manufacturers of canoes
- The new Sierra Leone Amalgamated Artisanal Fishermen's Union (SLAAFU/NUPAS, resulting from a merger).

Here is a list of potential stakeholders that are commonly found in MPAs in West Africa:

- 1▶ Local institutions and their representatives;
- 2▶ Government officials (Ministry officials responsible for fisheries or environment, and representatives of the Prefecture, etc.).
- 3▶ Users of this site and its resources (within and outside MPAs), including subsistence fishers, artisanal fishermen, migrant fishermen, farmers, women collecting shellfish, fish processors, tour operators, logging and mining companies, traders, hunters, ecologists, and tourists etc.
- 4▶ Traditional and religious authorities.
- 5▶ Local, national, and international NGOs.
- 6▶ Universities, training and research institutes.

## First steps of stakeholder analysis

- ▷ **1.** List all potential stakeholders.
- ▷ **2.** For each stakeholder, identify his/her interest (by allocating a score between 1 and 5), his/her impact (positive or negative), and influence (also allocating a score between 1 and 5) on the site.
- ▷ **3.** When using the information above, rank the stakeholders according to Table 2 below. Those in the lower right of the table are the most important and influential; close relationships must be maintained with them and they should be fully involved in the process. Thus, a tailored involvement strategy will be implemented for each category.

### Matrix showing the importance of the site for stakeholders and their influence on the site

TABLE 2

Level of interest of stakeholders for the site	Degree of influence of stakeholders on the site					
	Unknown	1	2	3	4	5
		Little or no influence	Little influence	Moderate influence	Significant influence	Strong influence
Unknown	<b>Minimal effort</b> Place stakeholders here according to the degree of influence and importance			<b>Educate and involve/train</b> Place stakeholders here according to the degree of influence and importance		
1. Little or no interest						
2. Little interest						
3. Moderate interest	<b>Keep informed and involved</b> Place stakeholders here according to the degree of influence and importance			<b>Crucial actors (close support)</b> Place stakeholders here according to the degree of influence and importance		
4. Significant interest						
5. Crucial role						

Once stakeholders are identified, it may be worthwhile to create a matrix (see Table 2), classifying stakeholders according to their degree of influence and interest in the site. This will make it easy to identify target groups that need support, and the effort required to include them in the various processes.

It should be kept in mind that this tool does not show stakeholder relationships with the site and its components. These relationships are better understood as the planning progresses and evolves.

Understanding the **pressures, issues and problems** of the site allows the management plan writing team to prepare for the process of negotiation. It also has an impact on the composition of the writing team: For example, expertise in the fisheries management might be required to support the facilitator in the process of stakeholder involvement.

Understanding the level of **awareness, knowledge and capacity of stakeholders** is essential in defining participation: the less the level of knowledge, then the longer the process of negotiations and vice versa. The writing team should have a clear idea of how and where stakeholders get information, and preferably should use existing channels.

In addition, an understanding by the person in charge of the site of **capacity and** (financial and human) **resources available** to prepare and implement the management plan will ensure that expectations are treated on a suitable scale / level, and that any problems and subsequent conflict will be avoided.

As stated several times in the Eurosite guidebook (Eurosite, 2001):

► *“Fail to prepare, prepare to fail”*

**The key to success in the planning process and subsequent implementation of the management plan lies in a good relationship with stakeholders and mutual understanding.** Once adequate understanding is established, it will be the management/planning team’s responsibility to build and present its mandate and organization to stakeholders. It is at that moment that communication efforts begin. **The key principle is to proceed cautiously to avoid raising expectations that might not be met.**



## Selecting the writing team

A **planning and management plan team** usually comprises:



- ▶ **a project manager** who is not necessarily the individual who writes the entire plan, but who has the responsibility to deliver the product;
- ▶ **a facilitator**, the key person who deals with stakeholders, especially with local communities;
- ▶ **experts** who join the team for short periods if necessary. They help to collect information and provide technical assistance to the facilitator, especially during meetings. The team of experts should be multidisciplinary;
- ▶ **a planning committee** composed of stakeholder representatives involved in managing the site. These include institutions, local communities, and local individuals,
- ▶ **an expert in communication** that ensures constant consultation with stakeholders to keep them informed, raise awareness and strengthen capacity;

The writing team should also include **some interested and motivated stakeholders**. They are very good sources of information and they facilitate relationships with the organizations or communities they represent.

The number of people in the planning team should be kept **to a minimum**. It should only have people who are essential to the project to avoid increasing costs and reducing efficiency.

As in any organization, **team spirit** is very important. It is necessary to ensure that consistency exists between team members and that they can work with ease and communicate together.

Finally, it is important to have a multidisciplinary team, incorporating local communities, experts in marine conservation, socio-economists, experts on fishing, and other MPA officials., etc.

The writing team can take many forms, depending on the designation of the project manager. Thus, the following configurations are possible, from the most 'internal' to the most 'external':

- **The project manager is a designated member of the management team already in place.** This allows for greater participation and ownership of the final product but its drawback is that it relegates management plan development to last place in the list of priorities since the manager is faced with everyday problems that require his/her time and full attention. Also, this additional burden may have a negative impact on management since some of the staff assigned to writing have no more time to devote to management activities.
- **The project manager is recruited by the management team specifically (and only) to write the management plan.** This is the best solution given that it does not overload the site staff with additional responsibilities, but allows them to be involved in the process.
- **The task of writing the management plan is entrusted to an expert, working closely with the management team.** This is sometimes a good solution, especially when the management team is unable to mobilize the necessary resources (time, and technical skills etc.). This solution allows the team to be involved and could be an opportunity for strengthening its capacity.
- **The planning task is entrusted to an expert without any involvement of the management team.** This is the worst solution. In general, experts know the site relatively less well than the management team. Therefore, the management team should be involved in developing the management plan for its implementation to be effective.

**The key person in the writing team is the facilitator.** S/he must earn stakeholders' trust and respect, especially of those coming from local communities, and s/he must have good communication and social skills.

### How to choose a good facilitator?

from *Guidelines for Marine Protected Areas* (Kelleher, 1999)

#### Role of the facilitator:

- S/he is responsible for the logistics of meetings;
- S/he helps the start-up team and stakeholders define the rules for meetings;
- S/he ensures that the process takes place in accordance with the agreed rules and that everyone has a fair chance to participate;
- S/he makes sure that stakeholder representatives are truly representative and are not merely self-appointed;
- S/he promotes the best possible communication among the institutions involved, e.g. by rephrasing points, asking questions, and suggesting new ideas to be explored;
- S/he helps a group to broaden its range of options;
- S/he points out the positive aspects of the process;
- S/he does not state personal opinions and makes no decisions;
- S/he lets everyone know when a potentially viable agreement has been found.

#### A good facilitator is:

- Recognized as independent;
- Generally respected by all those involved;
- Able to relate to everyone;
- A good listener;
- Able to pose relevant questions, for example, on the root causes of various problems and the feasibility of the options put forward;
- Capable of getting the best out of participants and helping them see a better future for themselves.







## Assessment and identifying issues

*“A good plan can be developed from relatively simple descriptions of the physical, biological and socio-economic characteristics of an area. More sophisticated data add to the confidence of the manager or planner, but they rarely justify a dramatic change of plan. The absence of site-specific information is not normally a good reason for postponing management in favour of more research (Kelleher, 1999). Managers (and planners) rarely consider they have enough information and generally have to accept this situation: possible lack of information should not become an excuse for delaying the production of the plan”. (Thomas, L. & Middleton, J. 2003).*

Once the first investigations and the selection of the team are done, writing a management plan for a Marine Protected Area begins by consolidating site information so that managers and stakeholders have better understanding of it. Thus, the data collected is very varied: climate, regulations, wildlife, culture, and socio-economic aspects, etc. Further information will also be required: the pressures faced, constraints, available resources, use by local communities, and sectoral policies and local development plans.

This information gathering and processing represent ‘the assessment of the site’. Although the term ‘assessment’ suggests a comprehensive and detailed information gathering, it is hardly necessary, and rarely possible, if one considers the resources available in MPAs, particularly in West Africa. Therefore, it is essential to start with what is available and appropriate. It is wrong to say that a management plan can be written without collecting information but it is true to say that it can be done without a comprehensive collection of information or the input of experts.

Finally, in many cases, the writing team spends a lot of (too much) energy in assessing the site, to the detriment of other steps. In the draft, it is not necessary to present all the MPA data available (this can also either be put in an annexe or recorded as a reference), but only the information important for managing the site. The assessment part should not exceed half of the final document (excluding annexes).



### **An important point to keep in mind:**

- ▶ the absence of information should not stop decision-making and management, although the lack of information is generally a crucial problem in the management of MPAs in West Africa.



## **1. The collection of information**

Here are some recommendations on the information gathering phase. First, a minimum of information is required, although it never needs to be exhaustive. The collection of information should form an integral part of site management. A management plan is not a single event. Information is also needed to monitor the effectiveness and impact of the site management.

The experience of MedWetCoast (MedWetCoast, 2005) shows that it is necessary to go beyond site boundaries. All external influences on the site must be taken into account. In addition, for management purposes, it is more important to know and understand the processes and their evolution than to receive a long and exhaustive list of species.

### **Where to find information?**

Information may originate from different sources and not just from experts or data available. Whenever possible, local communities and stakeholders (e.g. fishermen, and women collecting shells, etc.) should be included in collecting information (see 'The importance of local knowledge' on the following page). However, advice from an expert is needed to determine feasibility, level of interest and prioritization of the studies or surveys planned.

Information is also available through research and previous analyses of the area, student reports or scientific publications. Similarly, when a site has been declared a protected area, the legislation and classification proposals contain descriptions of the key features (usually ecological) in the area.

### **Working with experts**

Experts are professionals in their respective fields and are an excellent source of information, although some of them tend to be too 'scientific' for the management needs of a Marine Protected Area and are sometimes far removed

### The importance of local knowledge

Alkaly Doumbouya, Researcher at the Centre National de Recherches Halieutiques of Boussoura (CNSHB), Guinea

*In the evolution of establishing protected areas generally, conservation of biological diversity, in the strictest sense of the word, has held precedence for a long time. Entire local populations have been 'sacrificed' and sometimes displaced from their land and located elsewhere. Gradually, the rights of Aboriginal communities have been recognized, particularly following action by international conservation NGOs. This recognition has been facilitated and supported by the importance of local knowledge available to these communities. In Tristao in Guinea, for example, old fishermen have guided CNSHB researchers to geo-reference the coastal nurseries around the islands, and also helped identify the species that breed in the area. These areas of nurseries were identified as areas to be fully protected in the Tristao / Alcatraz MPA. Elsewhere in the Bay of Sangareyah in Dubreka, a more detailed questionnaire clarified the timing of migration for spawning, the elements of stomach contents of each species, and periods and areas of abundance to fish for different species. Extensive oceanographic studies of these environments (salinity, turbidity, and dissolved oxygen, etc.) allowed these characteristics identified by local communities to be completed.*



from its issues. A good level of science in management should be involved in the process of information gathering.

The management of Marine Protected Areas requires a vision of the components and their interaction and interdependence. The global approach of an ecologist will help to integrate the results obtained in the different specializations fields. Managers have a tendency not to include sociologists, anthropologists, economists and communication experts in their teams. These disciplines are sometimes more important for the plan's success and its subsequent implementation than the scientific disciplines.

We can infer the following recommendations from the above:

#### Recommendations on the content of information collected

- ▶ *For fauna and flora, it is important to determine the number, distribution, ecological processes, trends, and interaction, and not be limited to a list of species.*
- ▶ *Trends, distribution and interactions are very important for understanding the past and especially the future status of a protected area.*
- ▶ *It is important to consider the system as a whole and to use an ecosystem approach. All information is inter-related and it is important to analyze this interdependence, especially between man and nature.*
- ▶ *Each piece of information should determine the ecological, socio-economic and cultural values as well as the issues at local, national or international level. Science in itself is of little interest here; it is important to identify the interest of this information to the process and to the public.*

#### Anticipating the implementation of monitoring

The information collection phase allows a baseline to be established, which is the basis for ecological and socio-economic monitoring that will eventually be implemented. The MPA manager should identify indicators which s/he will seek to monitor. Luis Tito de Morais, a researcher and ecologist at IRD, stated that ideally, setting up an evaluation by indicators should always be done based on 'BAC' (Before-After and Control). This means that studies must begin before and continue after setting up the reserve, both in the reserve itself and on control sites outside the MPA.



## Description and strategy of choosing ecological indicators

Luis Tito de Morais, Researcher and Ecologist at IRD

Three major aspects can be identified: (1) internal effects on the MPA, (2) spill-over effects, and (3) impact on operations. These effects are neither exhaustive, exclusive, or contradictory, but according to the effects one hopes to measure first, the choice of indicators will not be the same. Depending on objectives, indicators should enable verification of:

### (1) Internal effects on the MPA

- ▶ the specific abundance of target species (especially fish) increases linearly over time after exclosure, within the MPA;
- ▶ the role and share of potential changes in the habitat within the MPA in the increase of abundance (related to the direct role of protection)
- ▶ the trophic structures within the MPA become more balanced, and that communities are no longer dominated by a small number of species (usually with a lower trophic level).

### (2) Spillover effects

- ▶ the specific abundance of target species (especially fish) increases linearly over time well after exclosure, both within and outside the MPA (the distance of beneficial impact is often very low);
- ▶ the role and share of potential changes in the habitat within the MPA in the increase of abundance (related to the direct role of protection);
- ▶ the effects observed outside decrease with the remoteness of the reserve;
- ▶ large predators become bigger and much more abundant in the reserve and in close proximity to it;
- ▶ ecological communities in the immediate vicinity of the reserve tend to approach those inside the MPA (long phenomenon to be observed).

### (3) Impact on operations

- ▶ after an initial decline following exclosure (effect of sanctuary or an MPA demand), target species catches (especially fish), outside the MPA grow linearly over time;
- ▶ the correct application of fishing regulations in the vicinity of the MPA (if the situation near the MPA is that of complete 'laissez faire', it will be very difficult to demonstrate any impact);
- ▶ the share of large predators in catches outside the MPA grows linearly over time well after exclosure;
- ▶ the well-being and income of the populations concerned have increased after exclosure (the effect could take time to be observed, but ideally after an initial decline, it should continue to grow linearly over time).

## A strategy of choice and description of socio-economic indicators

Delphine Malleret-King, Socmon



To manage an MPA is to influence the behaviour of marine resources users to improve or to maintain its condition. This is why MPA management is inseparable from the socio-economic sphere. To influence stakeholders and work with them, the manager must understand their attitudes and behaviour, and the social, economic, political and cultural context in which they have evolved.

Thus, socio-economic monitoring is a tool that forms an integral part of MPA management. It is by following the development of specific indicators that the manager will assess the impact of MPA activities. In addition, by involving stakeholders as informants, monitoring allows them to give their opinion (in a systematic manner); to appropriate MPA results, and to contribute to finding solutions to emerging issues. Socio-economic monitoring will therefore strengthen cooperation between managers and stakeholders, and will ensure transparency in management.

However, to carry out a monitoring socio-economic plan requires good preparation. The process is based on monitoring objectives (related to the MPA's objectives of the) and involves:

Measuring indicators in a systematic, rigorous and regular manner (usually through interviews):

- ▶ data analysis to detect changes;
- ▶ integration of information interpreted in decision-making;
- ▶ dissemination of this information to stakeholders.

The choice of indicators is crucial for the monitoring to be adapted to the needs of managers. The main categories of indicators are: demography (e.g. education, population and occupation), well-being, wealth, governance, perception, attitude, and use of resources. The selection will include the MPA's objectives and activities and team capacity. A baseline will provide good local knowledge and help to better target indicators.

Data quality and thus, its usefulness will depend on the methods chosen and the exactness with which data is collected. Methodological difficulties, however, are easily avoided using some common sense, rigour and careful choice of facilitators / interviewers (preferably local).

The Soc Mon Manual for MPAs of West Africa was designed to guide the manager in discussion during the planning and application of a socio-economic monitoring plan.

## 2. Analysis and information processing

Gathering information cannot provide all the information desired. Thus, it is important to also include an assessment of the quality of this information (reliability), and its availability. Some information will not have been collected, and it will necessary to explain the reasons for this (technical difficulties, retention of information, lack of resources, and information finally considered non-essential) and present future prospects.

The work of processing data must be done as much as possible in the form of map interpretation. In fact, visualization, through maps, often allows the MPA to be placed in its geographical context. In addition, cartographic analysis, thanks to the juxtaposing and organization of information enhances the analysis. Finally, it should be noted that the 'diagnostic' work should be presented to the public, and reading the map facilitates the work of communication and presentation.

It should not be forgotten that the assessment of the site should ultimately provide all the elements required to determine the management issues. The information collected should highlight the 'symbolic' aspect of the site and the interest of implementing management measures. This assessment phase should also allow the MPA status, its conservation status, inter-relationship with the territory in which it is located, and changing trends to be reviewed.

### Updating the assessment



*It is important to note that knowledge of a site should be constantly improved. If the first year of implementation of a management plan should allow the minimum information to be collected to identify issues and objectives, the achievement of the following plans will be an opportunity to improve and update this information.*

*In addition, the value and issues of a site fluctuate in time and space. If at a given moment, the issues concern an area or the preservation of a species, they can evolve (improvement of the conservation status, and changes in pressures etc.) and new issues may arise. This update is therefore necessary to adapt the management plan in a fluctuating environment.*



### 3. The value of the site

To determine the value of a site, it is easier to first list various agreements existing at international level, by identifying what species, habitats, or activities (including cultural) benefit from a status giving them a certain value. These include, for example, species and habitats included in international agreements (CITES, and Abidjan Convention etc.), species on the IUCN Red List ([www.iucnredlist.org](http://www.iucnredlist.org)) and species under protection at national level.

#### Recommendations for outstandingly remarkable values criteria

(from *Guidelines for management planning of protected areas*  
(Thomas et al., 2003))

*In assessing the significance of a protected area, the manager should ask if the area contains:*

- ▶ *Outstanding examples of natural, scenic, geological, scientific, ecological, floral, faunal and recreational values (and if so, why);*
- ▶ *Unique biological attributes, vegetation types and landscapes (and if so, why);*
- ▶ *Areas essential for protecting the ecological integrity of the protected area as a whole, (including areas critical for maintaining water flow and quality, and the reasons why);*
- ▶ *Areas and resources that are vital (economically, culturally or in other ways) to local communities;*
- ▶ *Areas and resources which provide essential services to people outside the park, especially where these have significant economic or political value;*
- ▶ *Rare and endemic plants and animals;*
- ▶ *Sensitive, threatened or endangered plants and animals and habitats;*
- ▶ *Resources which are unusually sensitive to human use;*
- ▶ *Outstanding examples of modified landscapes and evidence of sustainable use of natural resources;*
- ▶ *Major archaeological or historical sites;*
- ▶ *Major cultural sites;*
- ▶ *Features with world-wide recognition (e.g. UNESCO World Heritage sites).*

Determining value should also be done according to the features of the site identified during the assessment, by placing it in its regional and international context. This analysis can be based on the Conference on Biological Diversity (CBD) criteria for the identification of ecologically or biologically significant marine areas that require protection (CBD, 2008). The criteria of rarity of represented ecosystems, vulnerability, biological productivity, or the importance of some areas in the life cycle of species, for example, could be cited.

Finally, economic assessment techniques can be used to assign a monetary value to a site. These values are determined by economists using different techniques such as market prices, avoided costs, the willingness to pay, and the cost of travel, etc. For more detail, the executive summary by TEEB (The Economics of Ecosystems and Biodiversity) presents the various aspects to be taken into account in assessing the economic value of various natural areas (TEEB, 2010).

#### **4. Management Issues**

The knowledge accumulated in the previous steps will be used to determine the importance of the site and its assets, and to inform stakeholders. Subsequently, the pressures and problems affecting the site and the objectives of its creation will be discussed with stakeholders using various tools such as the problem tree method. This latter tool will help visualize the pressures on the system and their potential impact.

This stage of consultation is crucial, because it is from the problems identified that conservation issues will emerge. For example, studies may show that the site hosts a large population of manatees, a species internationally recognised as threatened. Once people recognise that hunting or circulation of motor vehicles pose a danger for the manatee, its conservation can emerge as an important issue for the MPA. It is on the basis of these issues that MPA overall and specific objectives will be created.

Generally, the issues are either to reduce or manage the pressures that affect a site, or to enhance the existing assets. In the West African region especially, these issues revolve mainly around the sustainable use of resources (fish, shells, and wood, etc.), the preservation of remarkable species (manatees, water birds, and turtles, etc.), or the improvement of living conditions of local populations (income-generating activities, and ecotourism, etc.).



### The problem tree analysis method



*This is a participatory approach to identify problems encountered on the site (trunk), and to assign causes (roots) and effects (the branches). Each problem is the subject of a different problem tree. This method allows the conservation issues to be clearly identified, and to identify issues specific to each site.*

*Experts are brought into the process to respond to specific issues. This is to ensure that the process will help community members to better understand the causes, identify possible solutions and decide on action to be taken.*

*For further information, see *Promoting Institutional and Organizational Development: A Source Book of Tools and Techniques*. (DFID, 2003).*



### Writing the management plan begins here.

- ▶ To start writing SECTION A –  
Assessment and MPA issues, go to page 53  
of the **Writing framework** and follow  
the instructions given to write the  
management plan step by step.



## Identifying the objectives

### 1. Overall objectives

Prior to determining overall objectives, some guides recommend drafting a vision that sums up in one sentence the overall objective of the MPA. This vision is then broken down into overall objectives (sometimes called long-term goals) that allow a state considered ideal for MPA to be achieved or maintained (all ecological, socio-economic and cultural values are maintained and preserved).

*"They should be designed based on the assessment and in particular, on the issues at stake. They are intended to be quasi-permanent in successive plans (except if there are errors in the first plan or in the case of a significant improvement in knowledge), even when evaluation shows that they have been achieved."* (Chiffaut, 2006).

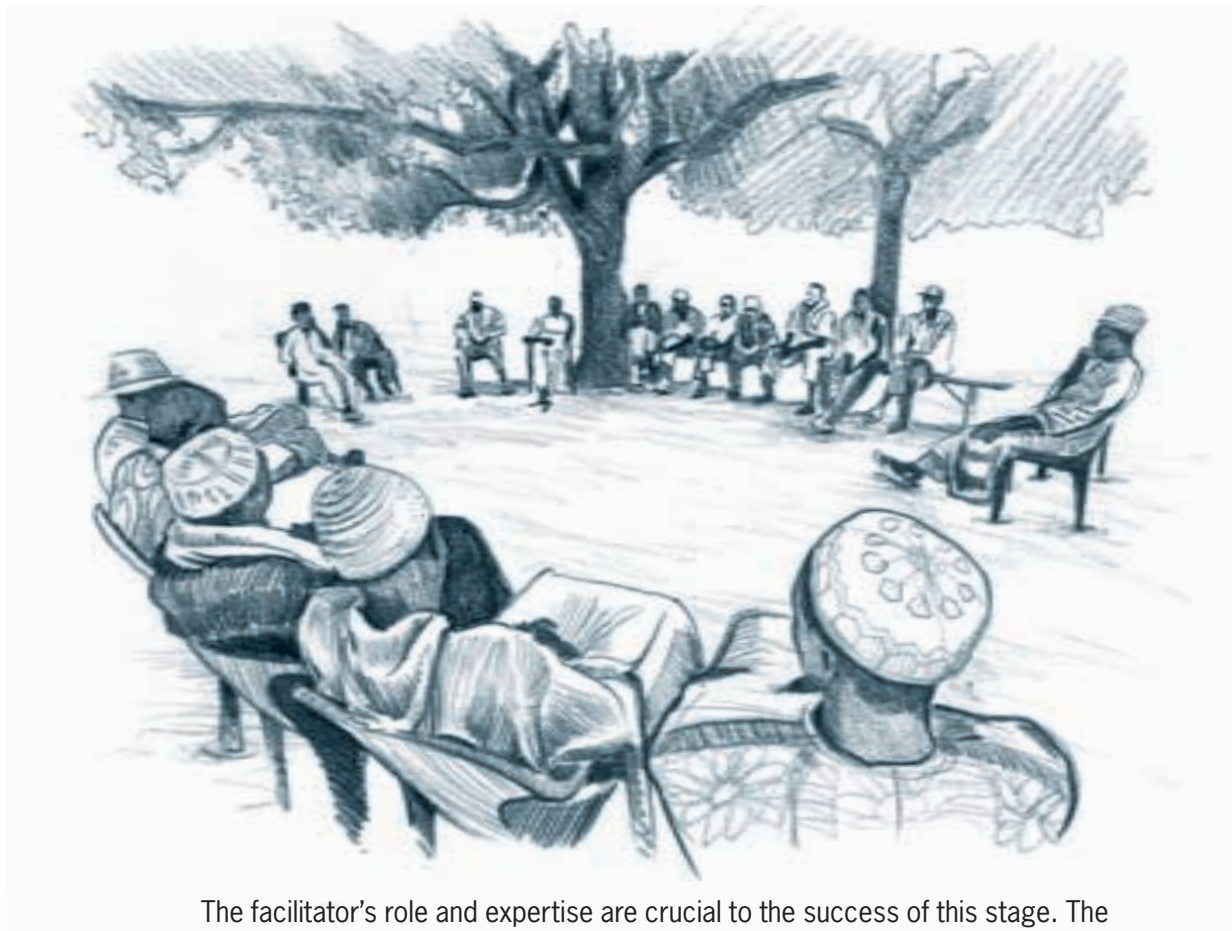
The construction of this part should be somewhat mechanical, in order to avoid all subjectivity, and should be based on the issues identified earlier, to address all sources of degradation, but also all the MPA's potential. However, given the diversity of situations, some manoeuvrability is possible; the key being to retain the logic of reasoning i.e. identification of objectives then activities (step 5).

#### Objectives of protection but also of development...



*It is important to maximize the potential of the site and not just to be concerned about eliminating pressure. Ecotourism can be a good example, as shown in Bamboing where revenue from eco-touristic 'gîtes' (lodges) made it possible to finance funds for monitoring (a watchtower and, canoe) to prevent illegal fishing in the 'bolong' (small creek). Ecotourism can also go beyond problem solving and help generate funds for the community while educating its members about the importance of the site. However, each manager should be fully aware of the tourism opportunities offered by his/her site, because if the Bamboing is the most successful example in West Africa, not all MPAs in the region have the same potential for ecotourism.*

The use of participatory methods (such as the objectives tree) brings together all stakeholders responsible for agreeing on site objectives. Each party brings its own set of objectives through dialogue led by an experienced facilitator, and tries to reach agreement on the overall objectives of the site. Most handbooks and those working on the ground advise starting with autonomous individual groups (fishermen, women, young people, and partners, etc.) and then to move towards joint meetings.



The facilitator's role and expertise are crucial to the success of this stage. The stages before and after this one are easier and straightforward but it is here that the site's future is at stake. This stage, if not conducted properly, will delay the process of the management plan.

Stakeholders will be asked to formulate overall objectives. ATEN's recommendations (Chiffaut, 2006) below provide guidance on how they should be identified.

### Recommendations to identify overall objectives

(Adapted from Chiffaut, 2006)

- ▶ 1. Repeat all the issues, while retaining their hierarchy.
- ▶ 2. First, assign an overall objective to each issue. Write the overall objectives in clear and precise terms, describing them in a relatively short, single sentence (e.g. 'preserving the breeding populations of seabirds' or 'improving living conditions of local people').
- ▶ 3. Group together overall objectives if they are too numerous.
- ▶ 4. Check the consistency of these objectives, especially conservation objectives with development objectives, and overall objectives with other plans or records of objectives.

*Each objective should be accompanied by a short rationale to provide additional information.*

## 2. Specific objectives

Specific objectives (also called the plan objectives) are operational; their life span is that of the plan, even though they may be renewed. They mirror the overall objectives by aiming to achieve one or several tangible results in the medium term. In particular, they seek to preserve the values of the site and / or reduce the impact of the factors that negatively influence the conservation status.

The specific objectives are generally written in the form of a verb of change of state, together with a complementary object, such as 'restore Eurasian spoonbills' nesting sites.' Care should be taken to ensure the information given enables evaluation to be made to determine if the objective has been achieved. Most guides suggest using the SMART acronym to formulate specific objectives: they must be Specific, Measurable, Attainable, Realistic and Time-related.

### ► Specific

Effective management is not only about achieving objectives in general, but also about achieving each objective individually. Without precise and measurable objectives, it is difficult to determine just what is to be done or how to do it.

### ► Achievable and Realistic

It should be possible to achieve the plan objectives for the protected area by recognizing the constraints faced by managers. For this reason, the ideas expressed in the vision (or in the overall objectives) will need to be translated in more practical terms and address the prevailing realities. Once again: 'no wish lists'.

### ► Measurable

Managers should be able to tell whether management activities are achieving the desired results as this is an important measure of success. It will only be possible to identify this if objectives are quantified, or referred to as outcomes that can in some way be measured.

### ► Time-related

As far as possible, objectives should be time-related. Managers' accountability to stakeholders should be measured by the timeliness of the action undertaken to implement the plan.

### The difficulty of measuring 'Nature'...



*Identifying measurable goals is not easy and often there is not enough knowledge of ecological features to do this. However, these first steps towards a measurable approach are fundamental and can be used to identify information that is lacking.*

*The 'Common Standards Monitoring' approach which has been used for many designated nature conservation areas in the United Kingdom has been developed to help standardize monitoring of important sites:*

*'With this approach, only the features for which the site was designated are monitored. These are then classified as being either in a favourable or unfavourable condition. In this way, it is possible to categorize any feature as either meeting its conservation objectives (favourable condition) or not (unfavourable condition)'. (Alexander and Rowell 1999).*

*This approach may work well for features that can be easily quantified such as abundance of species, number of species, habitat area recovered, but does not adapt easily to more intangible notions, such as natural beauty or visitor experience.*

Besides these basics, other important aspects should be taken into account in the formulation of specific objectives.

First, they must express the goals to be achieved, but not the means used to achieve them. This is a common error, probably because identifying a targeted 'objective' is more difficult than indicating how to achieve it. Thus, if an objective is to protect a sensitive habitat, it should refer to what threatens it (fire, and pests) and not to the means to resolve this threat. For example, an objective should not be written as the following: 'Maritime surveillance of the MPA', but 'Preserve marine resources from illegal fishing'. Resource conservation is the objective; maritime surveillance is the means.

**Objectives** should also **be prioritized**, in order to highlight those that must be met. This prioritization is necessary, especially for the following stages when the means to be implemented and resources available must be determined.

*To write this part*



**go to page 70 of the writing framework**



## Scheduling the activities

Activities are the termination of the logical tree structure: Vision / Overall Goals / Specific Goals / Activities. Their implementation should allow the outcomes identified in the previous step to be achieved.

The definition of activities should be the subject of strategic thinking that conditions their temporal sequence, thus initiating the planning work that follows. Activities must be compatible and consistent with strategic goals, as well as with MPA regulations.

### 1. Options and management strategies

The writing team should be aware of the constraints and assess each option to see if it is realistic. Inspiration, intuition, transversal vision, imaginative thinking and originality are essential here.



Technical and financial constraints are naturally of prime importance in the selection criteria, but more strategic criteria should also be considered. For example, the degree of interventionism considered: non-intervention, active involvement (such as reforestation), or the degree of involvement of communities in management operations. Finally, the priorities identified in the challenges and objectives will also weigh in the selection of options.

It is important to note that the various options and strategies may change over time. Environmental conditions may change, as well as the financial resources of the manager, or more generally, the specific goals and levels of priority. Based on these changes, the selection and implementation of some activities may be revised.

According to the recommendations from the IUCN guide (Thomas et al., 2003), the writing team should ask itself **the following questions**:

- ▶ Which options represent the best cost-benefit ratio?
- ▶ What is the 'best' set of options?
- ▶ Which options meet pre-agreed criteria?

**In answering** such questions, the team may wish to consider:

- ▶ Which alternative meets the objective best;
- ▶ Whether the alternative will work;
- ▶ Whether each option is financially feasible;
- ▶ How acceptable the options are to politicians and the wider public; and
- ▶ Who wins and who loses i.e. which groups of society will benefit from the scheme and which will incur disadvantages

Thus, the choices made would make it possible to define the precise activities, which will be described in the activity log in the Appendix.

## 2. Zoning, an essential strategy for MPAs

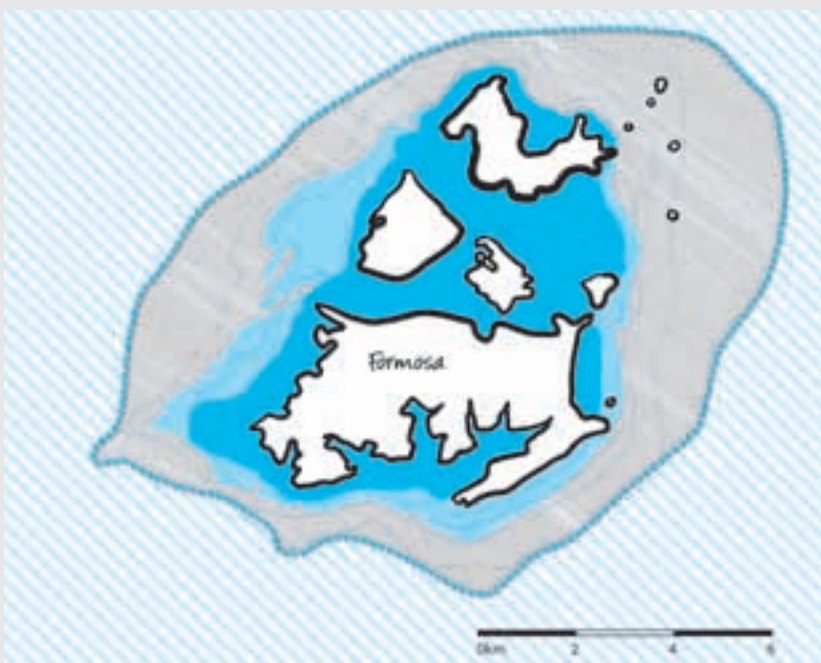
This guide has tried to focus on zoning, a management strategy specifically implemented in MPAs. It divides a site into different areas that are usually: the conservation core zone, buffer zones and areas of sustainable use (hunting, tourism, and fishing etc.). Regulations determine the use permitted or not in these different areas and the manager has to implement activities for their enforcement (monitoring, marking, awareness-raising, etc.).

The recommendations by IUCN (Kelleher, 1999) and EUROSITE advocate maintaining a zoning system that is simple and clear. Whenever possible, physically identifiable boundaries (coast, and buoys, etc.) should be used, in particular to distinguish fishing and non-fishing zones. This is very important at sea, where the demarcation of zones is difficult.



## Example of zoning of the Urok MPA in Guinea-Bissau

(source: Biai et al, 2003)



The consultation process linked to the creation of the Urok MPA in Guinea-Bissau has established consensual zoning of the coastal area divided into three zones:

- ▶ **Conservation area (dark blue):** access to this area and its resources is only available to residents for food or ceremonial purposes. The degree of protection of this area aims to preserve an environmentally sensitive area, to ensure food, cultural and environmental security on the Urok Islands.
- ▶ **Development zone (light blue):** access to resources is reserved exclusively for residents for food, ceremonial and commercial purposes. The principle of exclusive rights access for residents allows their economic security to be guaranteed. As for the central zone, these exclusive access rights result in, accountability for land management among recipients to their advantage, making it the best guarantee of sustainability.
- ▶ **Transition zone (light grey):** access is granted to non-resident fishermen and to sport fishermen and is subject to compliance with the rules in effect on Urok territory. Access for non-fishermen residents is part of the overall logic of the management plan, given that management efforts are intended to benefit not only resident communities but also the entire country. In the same way that the Urok Islands are supplied externally (in fish breeding, for example), it is vital that in exchange they supply outside their territory.

### 3. The logical framework

The logical framework will help to clarify and measure the breaking down of objectives and activities. It begins with the overall objectives which are available in specific objectives and then in activities (an example of a logical framework is available on page 73 of the *writing framework*).

The specific objectives should allow results to be achieved, for which progress monitoring indicators are established. Risks and assumptions of success are identified early in the program, which enables stakeholders to measure the risks at the time of decision-making, and the project team to try to eliminate or minimize them before they occur.

### 4. Planning and cost of activities

Planning is a key component of the management plan. It must be built on two levels. Planning over the duration of the plan, which will be a support for annual planning. This planning should indicate both the dates and duration of activities,

#### The business plan

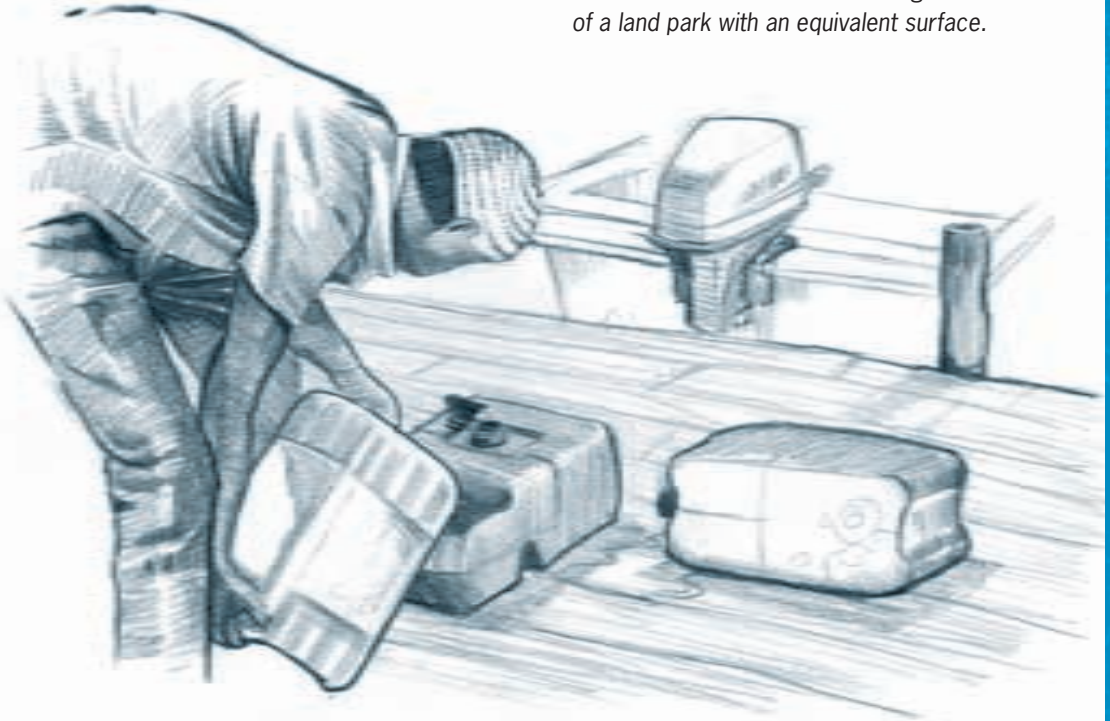
*The management plan and business plan are closely linked and complementary. A management plan helps to clarify management objectives and schedule a work plan to achieve them; a business plan will assess the costs that this program represents, and analyse the available or mobilized resources.*

*Thus, a business plan should be based on a management plan to be achieved, but a management plan, for it to be realized, should incorporate the findings of the business plan to build realistic programming.*

*When writing the business plan, the manager is required to analyse all the MPA costs (operations, activities, and investments, etc.). The ideal is for these to be placed within a specific time frame corresponding to the management plan. These costs are then confronted with the available resources (government grants, cash flow, etc.). Often, expenses and revenues are not balanced, and a more or less important gap is revealed. For this reason, as a first step, it is interesting to create a minimum scenario, below which the MPA cannot play its part, and an ideal scenario, where all activities can be realized. Then the manager should give thought to assessing options open to him/her for obtaining enough resources and thus ensure the activities planned.*

*The process of calculating MPA costs can thus be considered the same in the case of both management and business plans. However, the business plan goes further by proposing a strategy to obtain the necessary resources.*

*Nautical surveillance is a costly activity for MPA managers. Overall, it is estimated that management of an MPA costs 60% more than management of a land park with an equivalent surface.*



but also (and especially) the human and financial costs to achieve them. At this level, there is strong interaction with the business plan (see box above).

The cost of each activity must be measured in terms of human and financial costs. Generally, protected area managers distinguish between two types of costs: operating costs and capital costs.

The operating costs correspond to recurrent costs (salaries, rents, and fuel, etc.). Capital costs are known as 'exceptional' charges (acquisition of boats, and construction of offices, etc.).

Operating expenses can be divided into four (4) categories:

- ▶ Personnel expenses: these include all personnel costs (salaries, social security, etc.)
- ▶ Structural expenses: these are all the costs related to equipment maintenance, purchase of supplies, rents, fuel, etc.
- ▶ Work and study expenses: this is expenditure for scientific studies, consulting, or development of site structures (trails, and maintenance of buoys, etc.).
- ▶ Depreciation expenses: these are expenses incurred each year to amortize the equipment purchased and to anticipate the replacement of MPA equipment (computers, and boats, etc.).



Each activity is assessed in terms of human needs and expenses. For example, the maritime surveillance of an MPA creates significant expenses related to staff (qualified and numerous staff), high overhead costs (maintenance of boats and equipment, and fuel, etc.), significant depreciation charges but relatively low research and study expenses.

Thus, the total budget is calculated on an annual basis, for the whole duration of the plan. It is also necessary to identify the sources of known and potential income such as self-financing, support from partner organizations, and national budgets, etc. Potential revenue and expenditure must be balanced each year. As part of writing the management plan, it is not required to go beyond this evaluation work. The parallel stage will be the development of a business plan, which will include a strategy for obtaining the required funding.



*To write this part*

**go to page 71 of the writing framework.**

## Evaluating the plan

Les premiers plans de gestion étaient des documents statiques, souvent écrits par des consultants extérieurs à l'équipe de gestion, couvrant une période comprise entre cinq et dix ans, révisés à mi-parcours et avant la fin du plan.



The first management plans were static documents, often written by external consultants for the management team, covering a period five to ten years, and revised mid-term and before the end of the plan.

If evaluating the plan remains key, the iterative nature of the planning process allows more frequent reviews of planning and its impact on the site to be implemented. Thus, the management plan can be evaluated and updated annually. These evaluations review activities already completed, and the budgets spent annually and thus, revise the objectives. The analysis of successes and failures is essential to the implementation of responsive management, in order to consider the results and recommendations arising from evaluation and management effectiveness monitoring exercises.

Revised management plans are not a balance between activities not carried out in previous versions and new planned activities. Similarly, a new version does not call into question the entire previous version. Revision of the plan should involve considering the previous plan, and identifying why some activities were not carried out and analysing the causes.

Based on the drafting of the management plan, this last stage aims to provide what methods and means will be put in place to evaluate implementation and its impact on management as well as the achievement of objectives created, on an annual basis and for the duration of the plan. The goal is not to assess

the effectiveness of MPA management which is the subject of a particular methodology.

Evaluation of the end of the plan is made by all the MPA stakeholders, and if possible by involving an external person to raise any issues of subjectivity. This is, initially, to take stock of operation implementation; then identify developments in terms of knowledge and results; and finally to assess the effectiveness, coherence and relevance of operations and objectives. These elements will be used as the basis for drafting a new management plan. In addition, an evaluation of financial, material and human resources should be made to provide, where appropriate, the mobilization of new resources in terms of staff or funding. This exercise is a real evaluation of the effectiveness of MPA management, for which specific tools are available (see below).

### Evaluation of the plan and assessment of management effectiveness



*These two evaluation exercises are distinct, although very closely connected. The evaluation plan is confined to activities that were conducted and based on assessment indicators to measure and explain why certain activities have or have not worked. The evaluation of management effectiveness is a completely separate process aimed at determining the extent to which MPA objectives were met or not, which is the subject of detailed guides (e.g. Comment va votre AMP ? by Pomeroy et al., 2006).*

To write this part

go to page 72 of the writing framework.





# Writing Framework

Methodological  
Guidebook  
for the Development  
of Management Plans for Marine Protected Areas  
in West Africa







Before submitting the management plan, it is necessary to specify the stages of its writing, its validation, and who the authors and reviewers are.

## SECTION A Assessment and challenges for the MPA

### A1. GENERAL INFORMATION

#### 1. Creation of the MPA

► History of the establishment of the MPA

Give a summary of when and who drew attention to the importance of the site. Mention feasibility studies, first requests for classification, the main stages of negotiations and objectives of its creation. Present, if applicable, changes in site governance. The main steps can be listed in a table (see Table 3).

**Summary of steps in the establishment of the Bamboung CMPA in Senegal** (Biotope Ecologues Volontaires, 2009)

TABLE 3

2000	Determination of the area to be protected.
10 october 2002	A deliberation of the Toubacouta CR established the Bamboung MPA and established its management structure.
April 2003	Determination of the Bamboung MPA management regulation and start-up of monitoring.
4 november 2004	Presidential Decree to establish the Bamboung CMPA.

► Act of creation of the MPA

Please clarify the official status, the date of signing and possible modifications.

► Outline of MPA regulations

It is not about giving details of the regulations, but about providing the reader with key elements to understand what kind of MPA it is (IUCN categories).

**Suggestions:**

Do not insert copies of official documents here, but put them in an annexe and refer to it.

#### 2. Localization and boundaries of the MPA

► Localization

This section contains only one or more maps. At this point, the MPA needs to be placed in relation to the sub-region, national territory, administrative region and local authorities (see an example of a map in Figure 1 on the following page).

Information mentioned in the maps should be known by the general public so the MPA can be easily located (village names, and places, etc.).

► Boundaries and Area

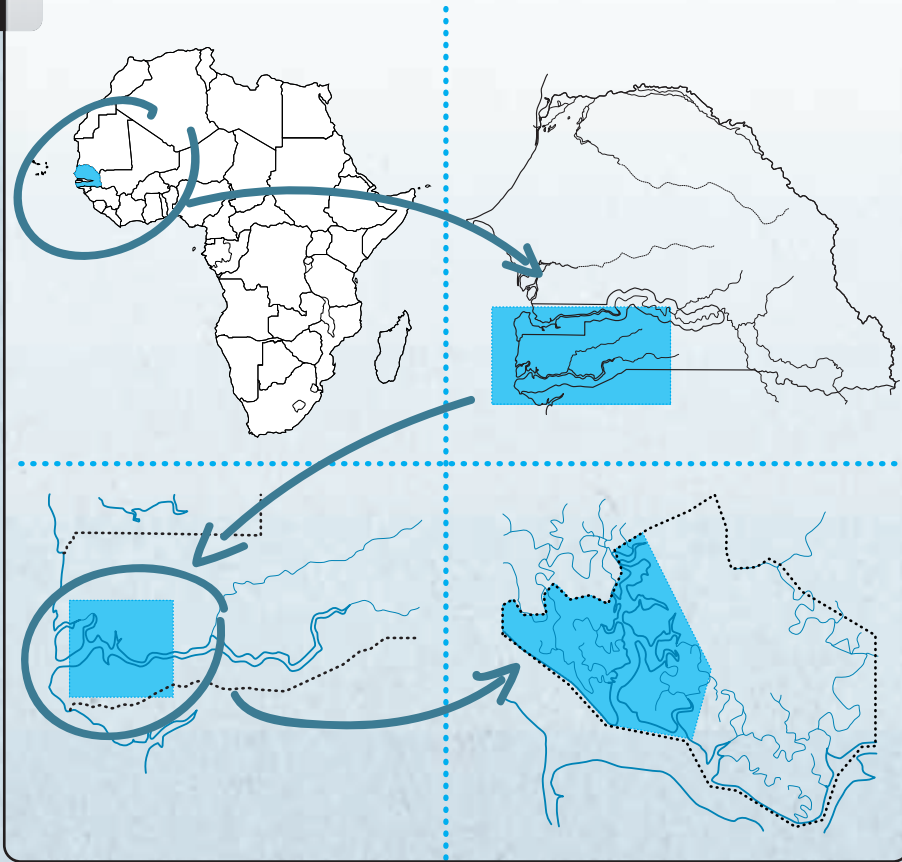
Indicate the area of the MPA and provide all explanations needed to understand its limits (presence of streams, administrative boundaries, borders, and boundaries between two villages, etc.). Also indicate the limits of buffer or transition zones (see Figure 2 on the next page for an example of a boundary map).

► Regional context and access

Describe the land and maritime territories surrounding the area as well as access roads.

FIGURE 1

**Localization Map of the Kawawana MPA in Casamance (Senegal)** (Laffargue C., 2010)



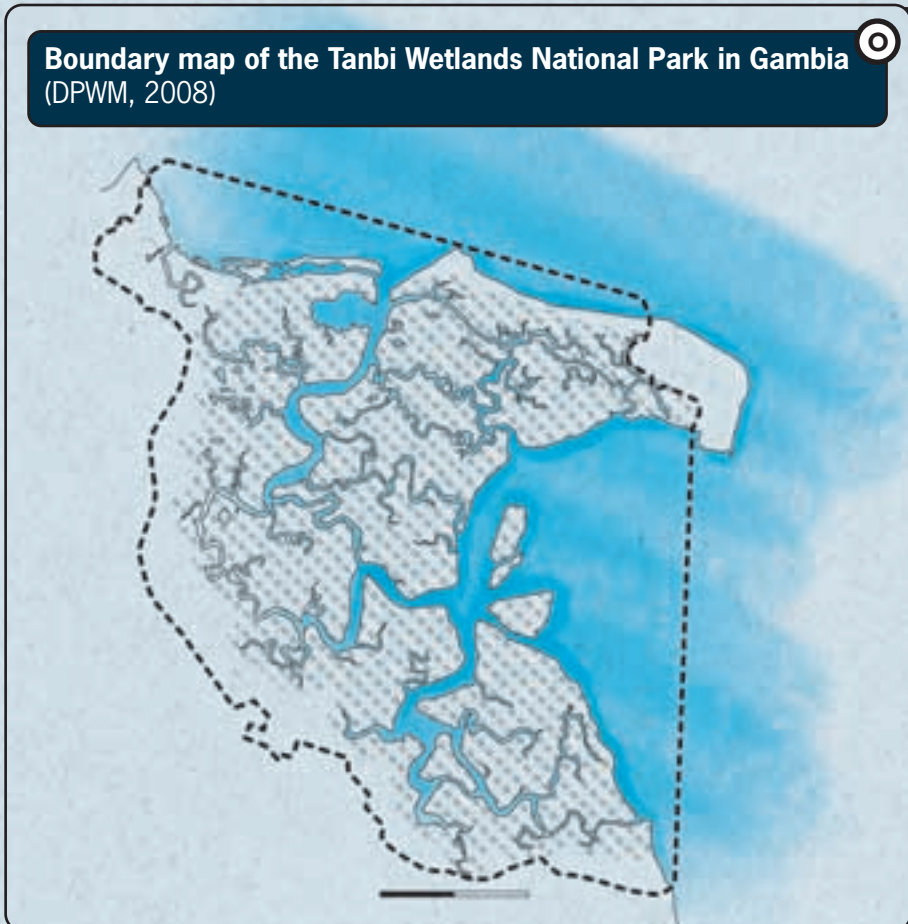
*Suggestion (map on the next page):*

*It is appropriate here to choose the scale and background of the map in order to use the same for the rest of the document.*



FIGURE 2

**Boundary map of the Tanbi Wetlands National Park in Gambia** (DPWM, 2008)



### 3. Governance of the MPA

► Agencies and responsibilities

Establish a list of all agencies involved in managing the site and clarify their status (regulatory bodies, management committees, village committees, and monitoring committees, etc.). This part could be illustrated as a chart (see Figure 4, page 57).

Establish individual responsibilities for various management aspects of the site, resource persons and contacts: details of these contacts should be continually reviewed and updated.

► Facilities and infrastructure

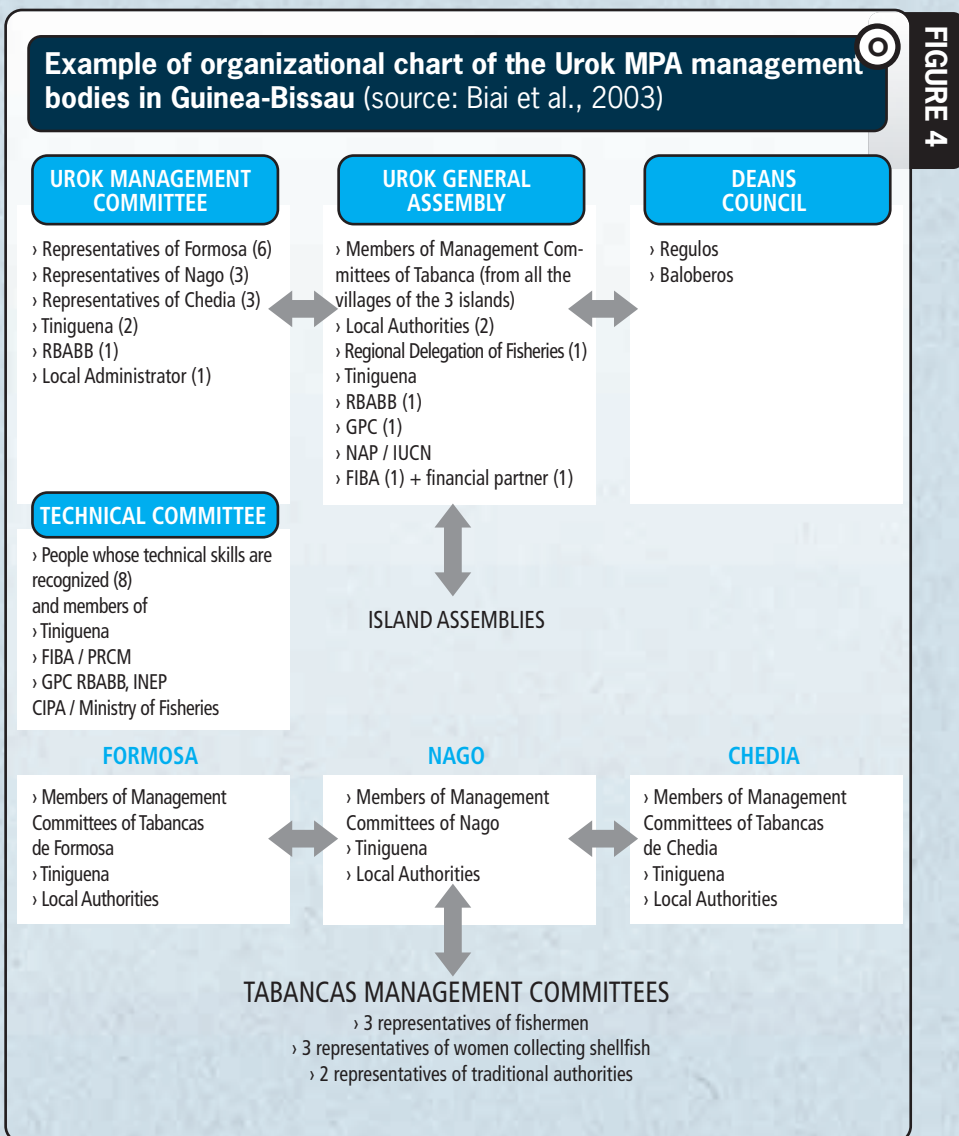
Briefly describe constructed facilities and infrastructure of the site, and their structure and purpose if applicable (see example on the next page with the PNBA).

► Internal policy of the manager

Skills and internal policy of an organization will have a decisive influence on the way of envisaging management of a site. An association of fishermen will not have the same approach as the managers of a national park. Describe here what are the manager's objectives in relation to his/her charter's objectives. Which approach for managing the MPA?







### Suggestion:

Attach in an annexe copies of statutes of management committees, and monitoring committees.

## 4. Inventories, classifications and international commitments

Identify the various agreements governing the MPA territory (Ramsar, and Biosphere Reserve, etc.) at international, national and regional level. Present this in the form of a summary table containing classifications, names of areas, dates of classification and their surface areas.

Remember international conventions to which the country is committed and with which MPA objectives fall in line (CBD, and Abidjan Convention, etc.).



## 5. Land and regulatory context

► Land tenure

Describe the land tenure of the site with reference to official documents in the appendix (public domain, and private plots of land, etc.).

► Easements and rights of use

Map all rights (right of way, and easements, etc.) held by other partners, e.g. right of way, collecting shells, peat harvesting, hunting, and sacred sites, etc..

► Other plans in force

Describe any other plans into which the MPA fits (local development plans, and fishery management plans, etc.).

## 6. Historical development and MPA land use

Over the centuries, most sites have been the subject of successive human settlement. If information is available, it is important to shed light on these traces of the past, which will be useful for future ecological and socio-economic assessment. Compare the information gathered (in the form of maps for example) with the current situation. Below is an example of the location of shell mounds in the Saloum Delta National Park (PNDS).

FIGURE 6

**Location of shell mounds in the PNDS, reflecting land use by resident populations**  
(source: DPN, 2010)



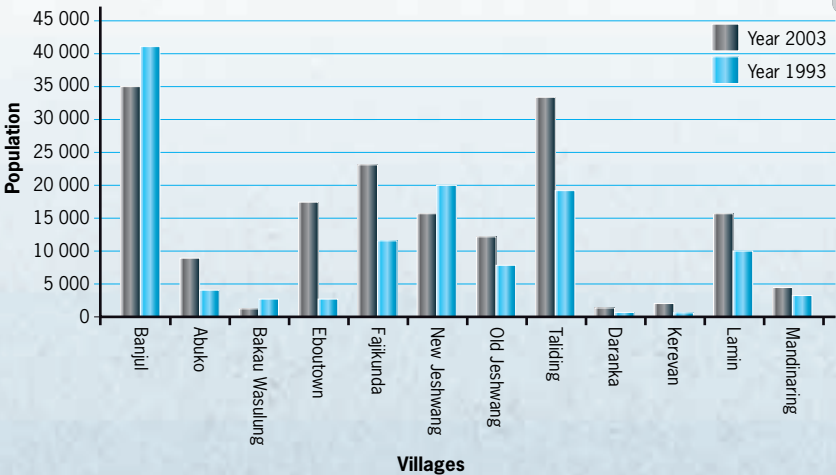
7. General socio-political framework

Write a short summary on population levels (demographics) and trends, administrative organization of the territory, diagrams, and various public and international plans and programs, etc.

*Suggestion:*  
NB: this is not about describing in detail the socio-economic aspects which will be discussed later.

Example of a histogram of neighbouring populations to the Tanbie National Park in Gambia (source: DPWM, 2008)

TABLE 4



A2. PHYSICAL CHARACTERISTICS OF THE MPA

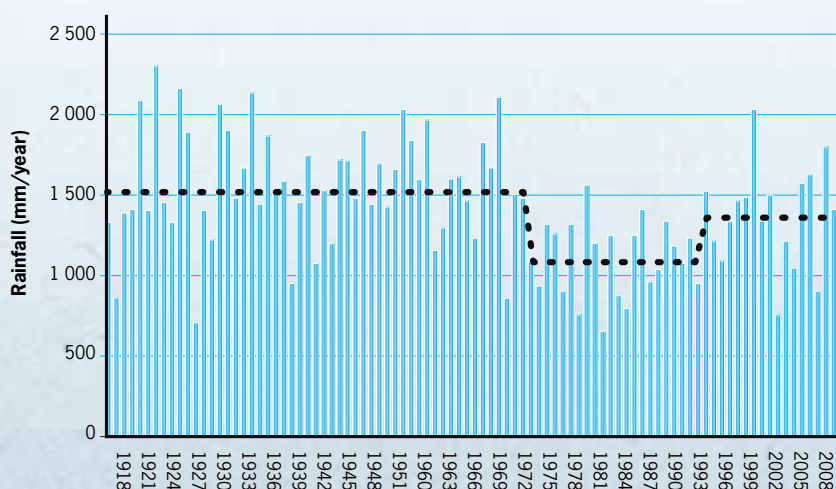
1. Climate

- *Climate of the country and eco-region*  
Resume the characteristics of the climate of the country and the West African eco-region (rainy season, and average temperatures, etc.).
- *Regional and local climate*  
Describe in more detail the MPA's regional climate and climatic features of the site (elevation, exposure, aspect, and vegetation) and specify how they influence the local climate and / or what effect the climate has on the site.

*Suggestion:*  
In most cases, the description cannot be accompanied with accurate data because it is often lacking, but major trends are often known and will be used as a first step in supporting the description.

TABLE 5

Example of weather data collected from the Meteorological Service in Ziguinchor contained in the document on establishing Kawawana MPA in Senegal (source: Laffargue, 2010)



## 2. Hydrology

### ► Groundwater

Describe the characteristics of groundwater, including groundwater dynamics (drought, etc.) and water quality.

### ► Streams

Describe the characteristics of surface water, influence of marine and brackish water, seasonal flow, physical-chemical data and the presence of contaminants if known etc. This section can be illustrated by a map (e.g. Figure 7 on the next page with hydrology at the Saloum Delta National Park).

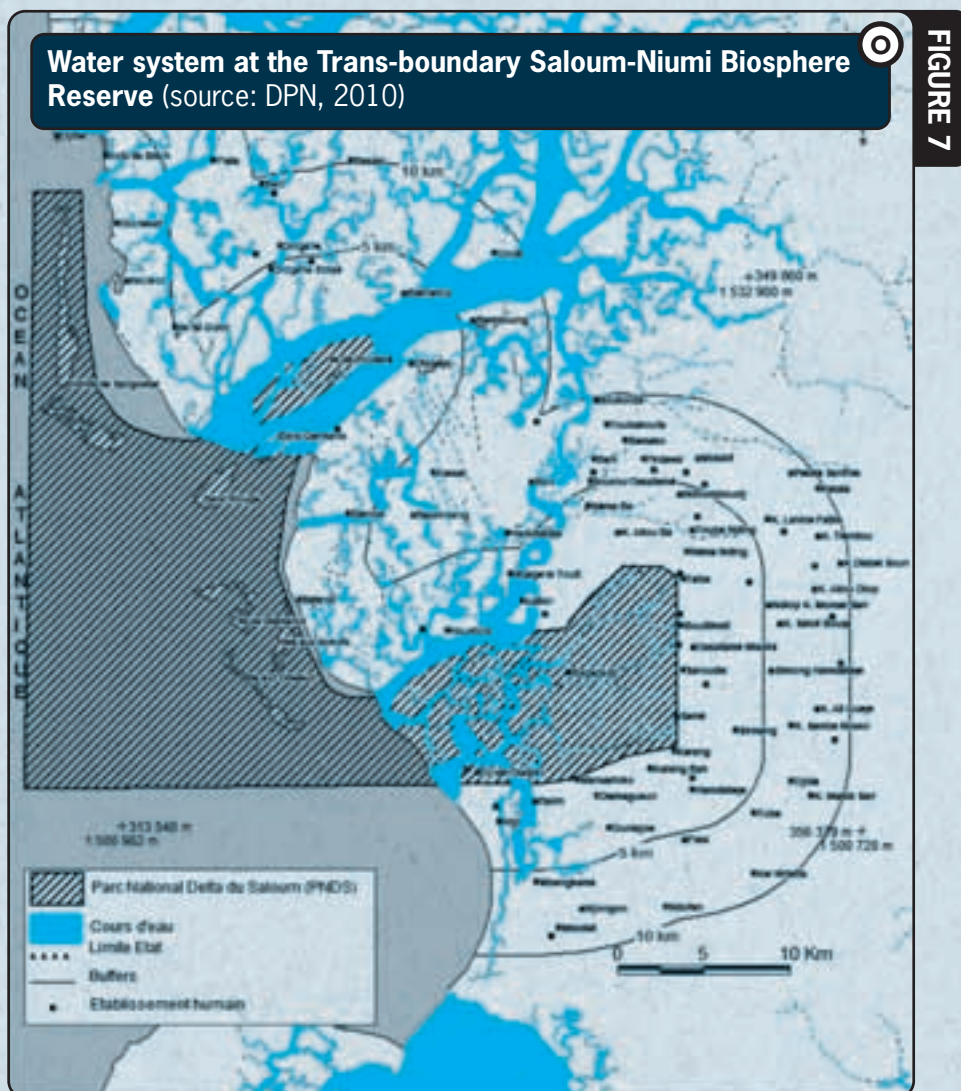
### ► Coastal waters

Describe the characteristics of coastal water (salinity, and temperature, etc.) as well as the phenomena of tides and currents.



**Acquiring information is relatively costly and is not generally of major importance for site management. In general, it is up to each manager to assess the costs/benefits of each piece of information in relation to his/her management objectives and the means at his/her disposal.**





### 3. Geology and geomorphology

#### ► History and geological formations

The objective is to have a good understanding of geological formations and their structures, to understand the geological history of the studied territory, and to establish relationships between geology and landscapes, etc.

If information is available, place the MPA in its geological environment, and summarize the geological history of the region, type of outcrops, and major structures, etc.

#### ► Nature of soils

At the interface between substrate and vegetation, soils are important to consider in interpreting landscape, habitats, and crop sites. Insert a soil map of the territory here if it exists (see the example in Figure 8, page 63 of the Joal Fadiouth MPA map in Senegal).

### Description of soils of the Trans-boundary Saloum-Niumi Biosphere Reserve (source: Mat Dia, 2003)



Based on studies by ISRA and IRD, the soil cover of the PNDS Basin and its borders is made up of the following soils:

- ▶ Leached tropical ferruginous soils developed on the sandstone cover of the continental terminal, and on continental dunes respectively;
- ▶ Acid sulphate soils from the salt flats; barren and unfit for agriculture. They serve as a repository for some birds such as Grey-headed gulls and scoffers, and some mammals such as the Green Monkey that feed on Fiddler crabs that colonize this soil type;
- ▶ Poorly-developed hydromorphic organic soils on existing mudflats. They are foraging areas for some migratory birds such as the Whimbrel and the Eurasian Curlew.
- ▶ Mineral soils and poorly-developed soils on recent sandbars or an accumulation of aeolian silt which is a prime resting place for terns;
- ▶ Rendzina-type calcimorphic soils, rich in organic matter from shell midden deposits.

#### *Suggestion:*

If such data is lacking, the general characteristics can be described and the collection of more accurate data can be added as an objective of the management plan (see insert above).

## 4. Land formations and their dynamics

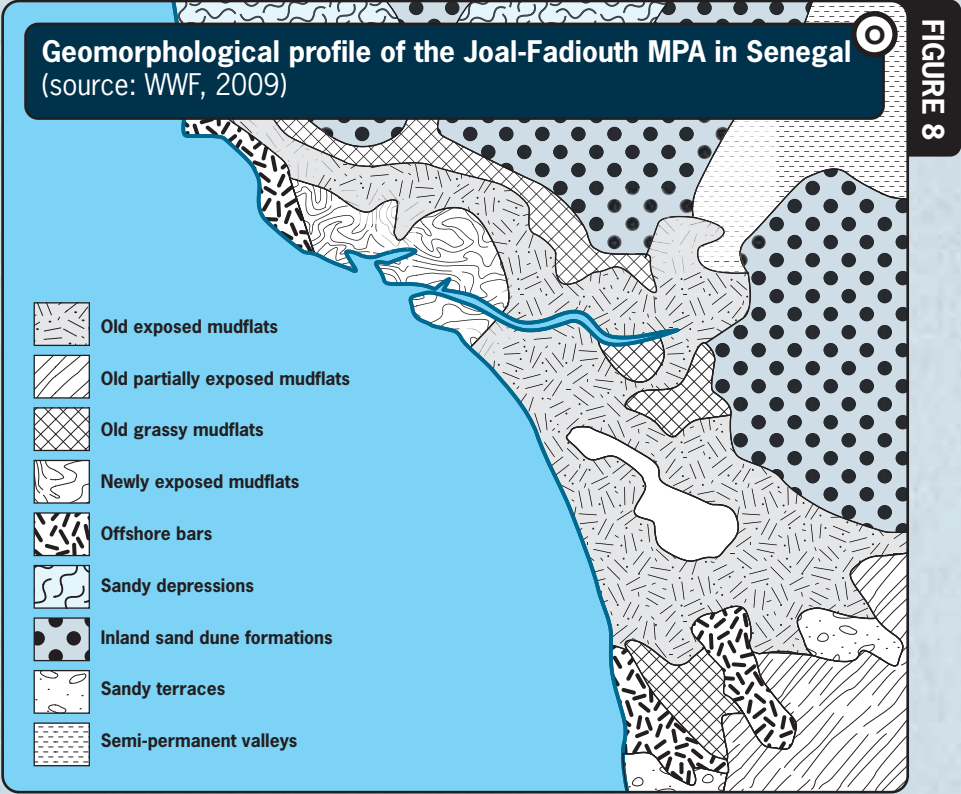
### ▶ Relief formations and landscapes

Identify and describe land formations, typical landscapes and resulting dynamics (in particular, hydrogeology).

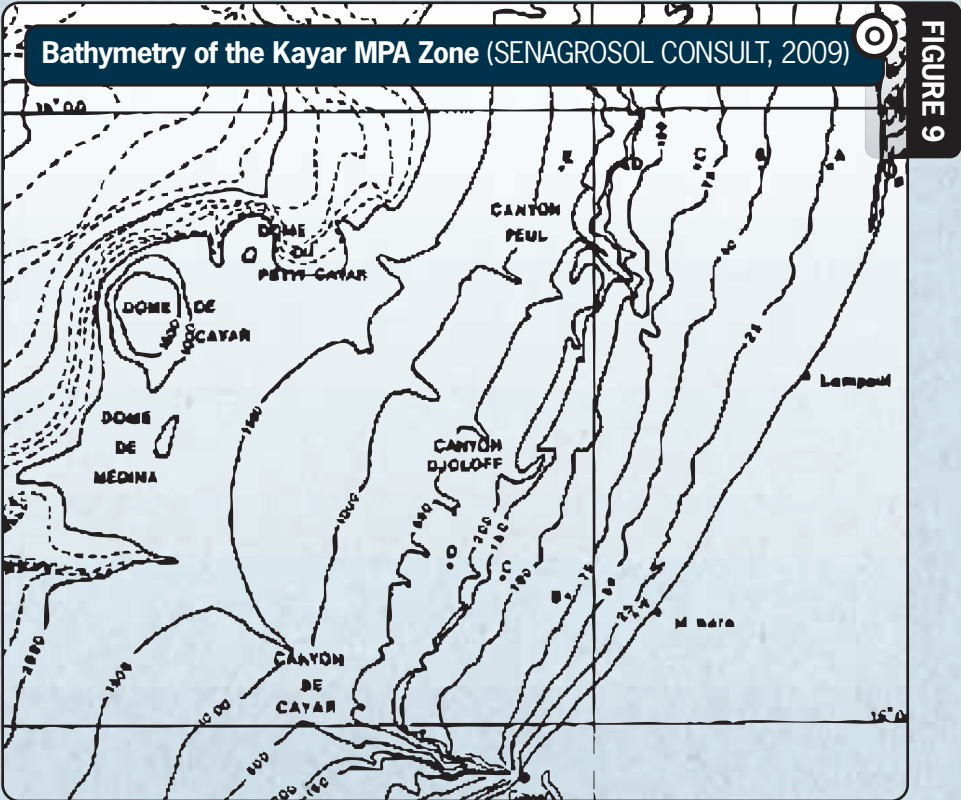
### ▶ Bathymetry and shoreline evolution

Describe the bathymetric land formations, the processes of erosion/ sedimentation, and the evolution of the coastline, etc. (e.g. with a map such as the one presented on the next page for the Kayar MPA in Senegal).





**FIGURE 8**



**FIGURE 9**

## 5. Geological Heritage

### ► *Remarkable geological objects*

Describe, if known, the presence of outstanding geological features, such as fossils, folds, faults or natural cavities.

Determine their readability, their conditions and their vulnerability to corruption (looting, and works, etc.) in order to identify potential conservation issues.

## A3. BIOLOGICAL AND ECOLOGICAL CHARACTERISTICS OF THE MPA

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### 1. Habitats and ecological processes

#### ► *Baseline*

Describe the baseline of habitats and identify specific indicators allowing the evolution of habitats to be evaluated (bioindicator species, surfaces, and invasive plants, etc.).

Describe habitats, ecosystems, biotopes or communities that are important, typical or rare. It is important to place the site in its national or regional context, especially in the case of biotopes or species whose presence is internationally significant. The use of maps is paramount. An example of mangrove mapping is presented in Figure 10 below.

To put the site in context, also give a short description of adjacent areas, focusing particularly on the localization of the site within a wider natural or semi-natural area, or if it is surrounded by intensive agricultural areas, focus on production forests, and commercial or urban development areas.

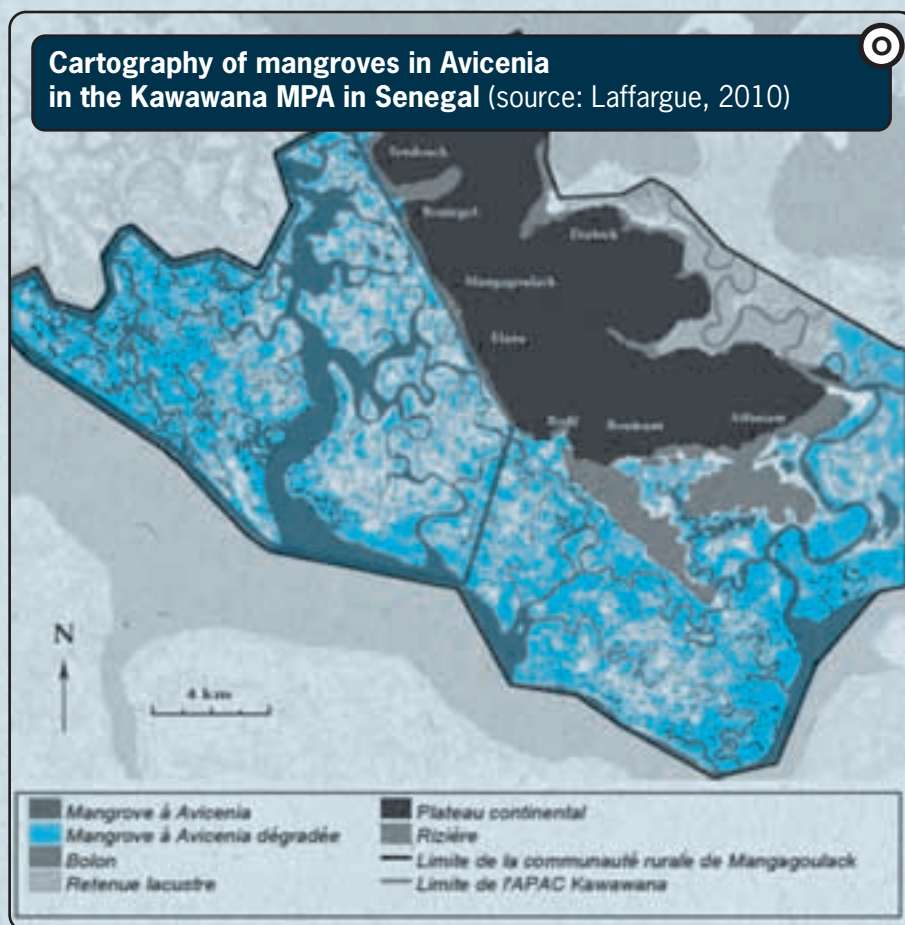
#### ► *Factors of influence and dynamics of vegetation*

Describe environmental or human factors that will affect habitats (sunlight, salinity, grazing, and fishing, etc.).

These factors may be the cause of habitat succession (following fire, storms, etc.). Also describe series and successions of habitats that have dynamic linkages between them (secondary forests, etc.).



## FIGURE 10



Suggestion:

Key plant species will be described below. The description of vegetation suggested here concerns mainly large areas. Key plant species will be described below. Feel free to enrich the text with pictures showing the large areas described.

## 2. Animal and plant species

► Baseline

Describe the baseline of populations, and identify indicators. Clarify the nature of damage if any (overfishing, and pollution, etc.). Estimate the threats facing some species in the light of socio-economic or natural trends.

The description of species will consist of an analysis of population for each group: number of registered species, dominant and frequent species and typical species.

Describe dominant or typical species and their ecological interaction if they are known. List and map especially abundant or localized species and comment on their distribution and seasonal variations.

Describe, when required (marine species in particular), biological characteristics such as migration or reproduction cycles which will affect management (i.e. reproduction outside the MPA, export of larvae, and genetic mixing with neighbouring populations, etc.). An example is given below with the localization of fish nurseries in Tristao.

Describe the dominant marine plant species, and if possible a description of communities (in relation to depth, and salinity, etc.).

► Factors of influence

Consider in the same way as habitats, and how these factors are related to species considered important for conservation. Describe the environmental and human factors that will affect conservation of these species (climate, available food, and fishing, etc.).

### Suggestions:

The lists of species should be placed in the appendix.

Focus descriptions on species that face conservation challenges (species that are vulnerable, remarkable, and commercial, etc.)

These descriptions will provide the basis for establishing the MPA's conservation challenges.

## FIGURE 11





## A4. SOCIO-ECONOMIC AND CULTURAL FRAMEWORK OF THE MPA

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It is important here to describe the socio-economic activities inside AND outside the MPA. Their evaluation is critical in understanding the state of habitats and species, anticipating the evolving trends of the MPA and, *in fine*, defining management objectives and strategies.

### 1. Cultural representations of the MPA

► Perception of the MPA by populations

Further to investigation, describe perceptions of the MPA by local populations and the place of humans within this tool.

► Perception of Nature by populations

Describe how Nature is seen by local populations. Identify sites having importance in cosmogony or with socio-cultural practices, and animal and plant species with special status.

### 2. Local knowledge, and past uses of the site

Describe traditional knowledge and current and past uses of the site, including practices that may be related to conservation action conducted on the site.

### 3. Cultural, landscaped, archaeological and historical heritage of the MPA

Describe cultural, religious, landscape, archaeological and historic interests that could be considered.

### 4. Socio-economic activities within and around the MPA

► Description of socio-economic activities

Describe different socio-economic activities concerning the MPA (both within and around it). Here, the following major types of activities are suggested:

- Subsistence activities (including agriculture, fishing, and harvesting, etc.).
- Forestry activities;
- Tourist activities;
- Activities related to nature conservation;
- Hunting;
- Extraction;
- Education, and research;
- Criminal acts and surveillance of nature
- Others etc.



► Baseline

Assess here the socio-economic baseline development of the MPA and list indicators to be monitored during the execution of the management plan.

► Factors of influence

Describe the factors likely to influence socio-economic activities of populations dependent on the MPA. Potential alternative activities developed within the MPA will be described here.

*For more detail:*

*'SocMon Afrique de l'Ouest' Guide to be published.*

## **A5. VALUES AND CHALLENGES FOR THE MPA**

---

### **1. Value of the natural, cultural and socio-economic heritage of the MPA**

Summarize and analyse here all the values of habitats, species, activities, etc. that have been previously described, highlighting the site-specific values that must be preserved or restored, by specific management measures.

► Habitats

Habitat evaluation is based on several categories of criteria (rarity, vulnerability, and importance in ecological processes, etc.). It is about making a combined evaluation based on internationally and nationally known texts and recommendations, but also based on knowledge of the site (spawning, nurseries, and resting places, etc.).

► Species

Establish the list of species of international or national importance; typical or rare. Provide their status and ecology, and describe - if known – their specific requirements in terms of management.

► Socio-economic and cultural heritage

Highlight the socio-economic and culturally remarkable aspects that should be taken into account to define objectives and management measures (existence of traditional practices of resources management, and sacred sites, etc.).

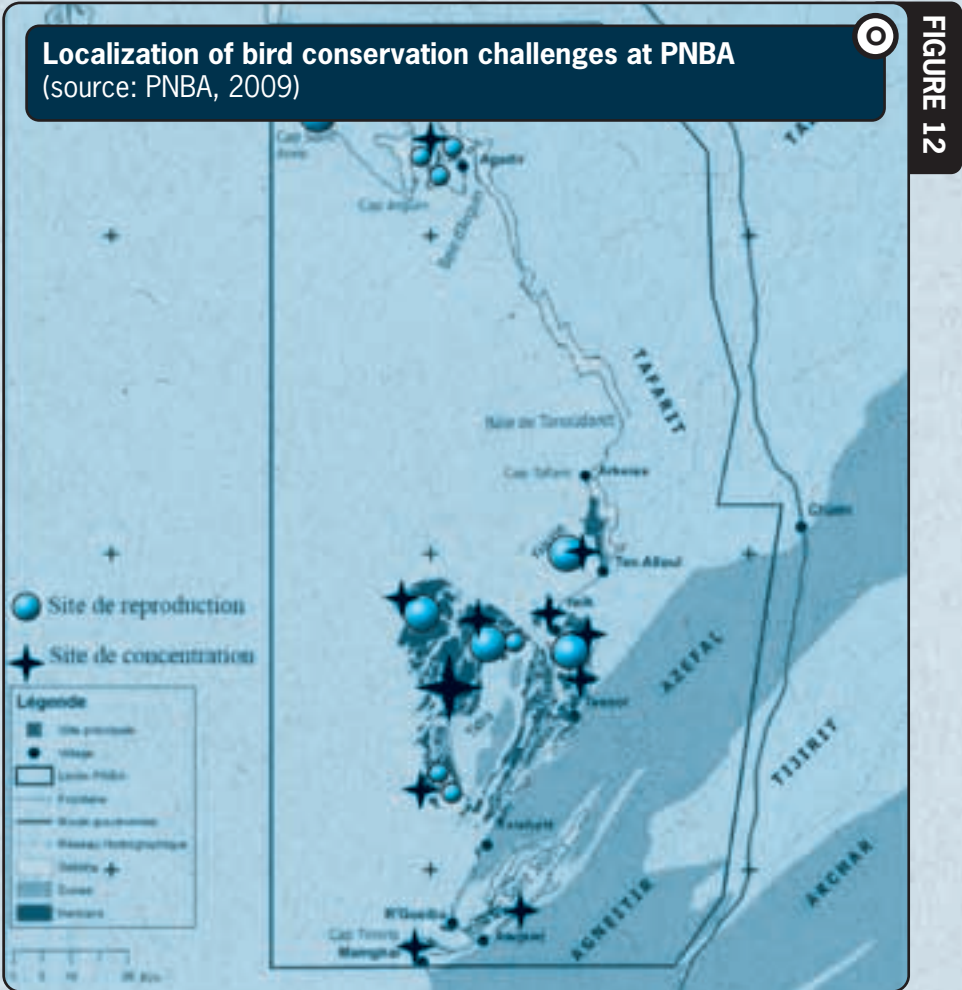
### **2. Challenges for the MPA**

Formulate various types of challenges here:

- Conservation challenges (relating to habitats, species, etc.).
- Socio-economic challenges (concerning the safeguarding of activities in the MPA, the standard of living, etc.).
- Educational and cultural challenges (concerning the MPA's vocation to raise awareness, and MPA cultural values, etc.).
- Challenges of understanding the MPA heritage (about the need for additional knowledge, and research, etc.).

The formulation of challenges can be presented in a table (e.g. Table 6) and accompanied with maps (e.g. Figure 12).

Summary of challenges for Tristao Alcatraz MPA in Guinea (CNSHB, 2010)	
Challenges related to conservation	Challenges related to the mangrove
	Challenges related to wetlands and migratory birds
	Challenges related to endangered species
	Challenges related to Alcatraz Island and Shipwreck Island
	Challenges related to natural resource exploitation
	Agriculture and Livestock
Hunting Control	Fishing
	Manuring
	Exploitation of oil palm trees
	Salt production
	Mining
Social Challenges	Traditional knowledge and practices
	Migratory flows
	Island position and precariousness of populations' living conditions





## SECTION B Objectives and activities

### B1. INITIAL OBJECTIVES OF THE CREATION OF THE MPA AND PREVIOUS MANAGEMENT

Make a baseline of objectives already identified, such as the dossier on establishing the MPA, and study reports, etc. They should be a source of inspiration, but not necessarily a basis for the architecture of the plan.

Do not forget the previous or traditional management methods, and indicate whether there were conservation operations or development on the site. Identify successes or failures, and conclude with orientations for the objectives and strategies to implement.

### B2. OVERALL OBJECTIVES

Make a list of the overall objectives (see step 4 on page 39).

Once the overall objectives are listed, it will be possible to group them together or simplify them to make them as clear as possible. An overall objective should be formulated in one short sentence (e.g. improving living conditions of populations, and the sustainability of fisheries in the MPA, etc.). Each objective must be completed with a short rationale indicating the baseline, state of conservation, and indicators which will be used.

### B3. SPECIFIC OBJECTIVES

Create a table summarizing the overall objectives and relating them to specific objectives (e.g. Table 7). Check the consistency of these objectives. Check also that the targets are well described (see the SMART insert). Write a short

TABLE 7

Theoretical example of overall objectives and specific objectives

OVERALL OBJECTIVES	SPECIFIC OBJECTIVES
1. Ensure preservation of biodiversity and sustainable use of natural resources of the MPA	1.1. Improve knowledge on the dynamics of species and habitats
	1.2. Preserve nursery areas located in the mangrove and estuaries of the MPA
	1.3. Protect and / or restore habitats and key species of the MPA (mangrove, area of food and spawning of turtles, etc.).
2. Improve the living conditions of populations	2.1. Support the rehabilitation of key infrastructure in villages of the MPA (wells, dams, etc.)
	2.2. Promoting sustainable funding mechanisms for the management of the MPA and local development

rationale under each specific objective (details of the location, duration, the statement referred to at the end of the plan and indicators of success, etc.).

**SMART Test** (source: Chiffaut, 2006)



INSERT

- ▶ **Specific:**  
*Is the objective clear and focused (not too general)?*
- ▶ **Measurable:**  
*Could it be measured that it was achieved through quantitative or semi-quantitative indicators?*
- ▶ **Accessible :**  
*Is it feasible with the human, technical and financial means of the manager?*
- ▶ **Realistic:**  
*Is there any chance to achieve it during the planned period? Is it not too risky?*
- ▶ **Time-related:**  
*Is there a deadline ?*

## B4. MANAGEMENT STRATEGIES

### 1. Description of the different options and management strategies

Present the various options and strategies that have been selected here (see step 5). Explain by presenting the significant elements that have shaped the strategic choices.

### 2. Management measures

Present here in a clear manner the main management measures that have been taken, such as zoning or the definition of specific regulations on the exploitation of resources.

## B5. ACTIVITIES

### 1. Description of the activities

For the main activities, it is necessary to create a table to be completed (see below). Each line of the table must be completed to the best of your knowledge, especially in respect of 'responsibility' and 'cost.' For the term 'responsibility', it is very important to indicate the title and / or the name of the person such as 'Director of Fisheries Department' and not 'Fisheries Service' otherwise the responsibility will be diluted. Regarding the cost, if the exact figure is not available, an accurate approximation will suffice, or it may be postponed in terms of required resources (equipment to be acquired, and men / days etc.), but this information must necessarily be postponed.

TABLE 8

### Proposed activity sheet

NAME AND ACTIVITY CODE
Specific objective:
Management strategy:
Priority:
Implementation schedule:
Localization:
Methodology for implementation:
Person in charge:
Execution:
Partners:
Provisional budget:
Funding:
Material:
Indicator to evaluate the outcome:

### INSERT

- These sheets must be completed only for the MPA's main activities. This is a lengthy and sometimes tedious job, but it often helps the manager to identify the difficulties associated with some activities before implementing them, and which will allow for the continuation of protocols for intervention when the manager is replaced.

## 2. Logical Framework

Build the logical framework by summarizing overall objectives, specific objectives, and activities (see *draft template* below). It is important to formulate activities while remaining as close as possible to the specific objective and by asking what means will be used to achieve it. Anticipate systematically what an objective requires in terms of work, monitoring, maintenance, and administration, etc. For example, for objectives related to conservation, also plan control monitoring to ensure they are met at the end of the plan.



TABLE 9

Proposed logical framework template

Overall objectives			
Write your overall objective here			
Specific objective 1.1: write your specific objective here	Indicators	Means for verification	Assumptions
Activities			Budget
Write your activities here			
Specific objective 1.2: write your specific objective here	Indicators	Means for verification	Assumptions
Activities			Budget
Write your activities here			

### 3. Activities programming

The management plan should give thoughtful consideration to programming activities during the duration of the plan so as to provide the work program for each year, and the financial means and human resources required.

This section must be as accurate and sound as possible, since it constitutes the operational core of the management plan. It must be readable and accessible as it is continuously referred to by the person or persons responsible for managing the MPA.

Explain in detail each activity according to the objectives of the plan; indicate the year of implementation, the time and frequency, and the priority. Indicate who will be responsible for the execution (MPA, service provider, community, etc.) and estimate the financial cost (operating and capital) and human (an example is provided with Table 10 below).

TABLE 10

Example of a five-year programme of activities table

	Five-year Timetable					Period	Frequency	
Specific Objective 1.1								
Activity 1.1.1	X	X				March-Sept	Weekly	
Activity 1.1.2	X					July	Occasional	
Activity 1.1.3								
Specific Objective 1.2								
Activity 1.2.1								
Activity 1.2.2								
Activity 1.2.3								

**Suggestion:**

Here, the focus is to organize the sequence of operations between them and their periodicity rather than setting specific dates for each.

#### 4. Annual Action Plan

Each year, to produce activities programming based on forecasts made in the five-year work plan, while adjusting financial requirements. The annual action plan should be developed based on the financial means available to the manager. It is important to add columns giving details of those funds.

	Steering	Cost of operation			
		Operation	Investment		TOTAL
			Nature	Cost	
	MPA	€ 1 000	Equipment purchase	€ 500	€ 1 500
	MPA + providers	€ 200	Consultancy	€ 3 000	€ 3 200

## SECTION C Management and Planning Evaluation System

Two types of evaluation are described: an annual assessment, based on the activities results, and a final assessment that will lead to writing the new version of the plan.

### C.1 Annual Assessment

Describe here the method used for the annual assessment. This can be done based on an annual review of activities, by taking the annual action plan and indicating the state of progress of activities (both technical and financial).

#### *Suggestion:*

*Be careful not to evaluate management effectiveness: there are specific methods for this, which is a completely different exercise. This annual assessment is only to present progress of the plan and to highlight any difficulties encountered.*

### C.2 Final Assessment

Here, you should determine the final assessment process that will be used (which evaluation methods to assess management effectiveness; which methods to review the plan at the end; what dates; and what kind of validation process, etc.).



## About the authors

- ▶ **Charbel Rizk** has a degree in biology, agronomy and environment from the American University of Beirut. He was a project manager of the Lebanese MedWet Coast component which is a wetlands conservation project in the Mediterranean. He has also led projects on integrated management of the Mediterranean coastal area. He currently works as a consultant on projects for the United Nations Development Program of the World Bank and the European Union.
- ▶ **Julien Semelin** Semelin is a graduate from the Institut Universitaire Européen de la Mer, Brest, France. He was manager of Grand Connétable Island Nature Reserve in French Guiana and has also written and implemented the first management plan of this Marine Protected Area. Since 2009, he has managed FIBA pilot projects related to establishing MPAs and to strengthening their management effectiveness in West Africa, in which developing management plans is a priority.
- ▶ **Charlotte Karibuhoye** has a Ph.D. in nature conservation biology from the University of Gottingen in Germany. She worked in the field of natural resource management in West Africa before joining FIBA in 2004 as the coordinator of the MPA support project. Since 2007, she has coordinated the FIBA MPA program, RAMPAO that aims to strengthen the Regional Network of MPAs in West Africa. Charlotte Karibuhoye is also Vice-President for Central and West Africa at the IUCN World Commission on Protected Areas (WCPA).

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# Methodological Guidebook

for the Development  
**of Management Plans  
for Marine Protected Areas**  
in West Africa

Writing a management plan has become essential for any manager of a protected area. Unfortunately, the results can be conflicting if the exercise is not performed correctly. Developing a management plan must first respond to the manager's expectation, and must also be undertaken methodically.

This guide has been written to assist managers of Marine Protected Areas in West Africa in completing their management plans. It aims to be a clear and concise document, illustrated with examples from the sub-region. It is divided in two distinct parts. The first part describes the main stages of writing this document, the creation of a writing team and the determination of evaluation methods. This section refers to the second part, called 'A draft template' that will help the readers to create their own management plan, while following a template that will fit their situation.

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