

Assessment of Management Effectiveness in Selected Marine Protected Areas in the Western Indian Ocean



Final Report

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EXECUTIVE SUMMARY

A Workbook for assessing management effectiveness in MPAs in the WIO has been developed, based on the workbook and methodology developed for World Heritage sites and using the WCPA/METF Framework. This report provides the results of testing the Workbook at eight pilot sites in three countries:

Kenya:	Kiunga Marine National Reserve Malindi Marine National Park & Reserve Watamu Marine National Park & Reserve Mombasa Marine National Park and Reserve Kisite Marine National Park/Mpunguti Marine National Reserve
Tanzania:	Mafia Marine Park, Mnazi Bay-Ruvuma Estuary Marine Park
Seychelles:	Cousin Island Special Reserve

The project was carried out under the oversight of the Eastern African Group of Experts on Marine Protected Areas (GEMPA-EA) and is closely linked to the WCPA-Marine/WWF global initiative on MPA management effectiveness. It was facilitated and co-ordinated by the Eastern Africa Regional Programme (EARP) as one component of the NORAD funded WIO Marine Biodiversity Conservation Project, as a contribution to the implementation of the Nairobi Convention work programme, and to the activities carried out under the International Coral Reef Action Network (ICRAN).

The assessments involved the completion of a set of worksheets or tables for the six components that METF have identified as being fundamental to all assessments:

- Context: What is the starting point; what is the vision?
- Planning: How will the vision be reached?
- Inputs: What resources are needed?
- Process: What are the management actions?
- Outputs: what was produced?
- Outcomes: what was the impact?

The assessment is therefore broad, looking not only at impacts but also at the effectiveness of the management process. It does not require the collection of new data, unless that can be done quickly but provides a 'snap-shot' of management effectiveness at a particular point in time, with recommendations for improvement. It complements the approach that has been developed by WCPA-Marine and which is also being tested at pilot sites around the world, of which Mafia Island Marine Park is one. An important aspect of the project was that it was experimental in nature, and it was made clear that sites were helping to development a mechanism that, if successful, could increase the success of MPAs in meeting their objectives. The project involves new concepts for the region and a 'language' that is still developing.

Activities carried out

The project started with an introductory workshop for the participating sites designed to ensure that they understood the methodology and the process, and to help them make adaptations to suit their particular situation. The first step was for each site to set up a small 'implementation team' to lead the assessment, preferably comprising core technical staff and key stakeholders. The composition of the teams varied between sites, some making use of volunteer assistance, some using only Park staff, and one site employing a consultant. The Kenyan sites established a 'national co-ordinating team' with two senior members of KWS who provided technical support as well as administrative and logistical assistance. The implementation teams were responsible for completing the worksheets and then organising workshops at which the stakeholders could review them and reach consensus on the

ratings given. Although all sites recognised the importance of this, many had problems scheduling formal meetings and consultations, and the process used for review was very variable. All sites found that a questionnaire, rather than the tabular-format worksheets, was an easier means of getting feedback from stakeholders. Each site produced a final assessment report. These were variable in quality, depending on the experience and skills of the MPA staff in writing and analysis.

Results

Although the methodology was probably too complex for some sites, all involved found a benefit in the process. It helped MPA staff to think about the reasons behind the establishment of the site, how their management activities can have an impact on both biodiversity and stakeholders, how even small insignificant management issues can affect the overall success of an MPA, and it encouraged them to look more carefully at their management plans. All six components of the methodology were considered useful, and all sites felt that the results of the assessments should be incorporated into the review and revision process for management plans and, in the case of Mnazi Bay, into the development of the first management plan.

The general impression from the assessments is that some MPAs are having a positive impact on some forms of biodiversity (corals, fish, turtles) but that the socio-economic impact is unknown. Despite a number of monitoring initiatives underway, the results of the assessments indicate that they are rarely adequate for helping to measure the effectiveness of an MPA. Furthermore, results from monitoring programmes and research are often carried out by independent researchers, and are not always made available to or interpreted in an appropriate manner for MPA staff. Major efforts are needed to ensure that monitoring and research are designed and implemented to provide the information that is needed for management and to involve MPA staff and stakeholders.

Most sites reported that the assessments were particularly valuable in terms of improving relationships with stakeholders. In all cases, the stakeholders expressed great appreciation of the exercise. The assessments also revealed that stakeholders are often very unaware of the aims of the MPA, the legislation relating to it, and how it operates. This indicates a need for better communication with stakeholders and provision of more targeted information. At the same time the extent of stakeholder involvement in assessments was probably insufficient to ensure that the assessment was truly participatory. In some cases, this was due to lack of time, but it was also a result of the traditional top-down approach to management that is changing only now to consultation.

The concept of self-assessment is not yet well understood or accepted in the countries involved, particularly where government institutions are involved. This made it difficult to introduce the methodology and to ensure that assessments were carried out in as transparent and objective manner as possible. For many of the worksheets a higher ranking tended to be given than was warranted in this initial assessment.

Many sites felt that the assessment took up too much time in relation to their day-to-day management activities, providing further support for the need for a simpler method. Ensuring that assessments are repeated in 2-3 years time will help to build capacity within MPA staff for analysis, although it is clear that additional specific training on data analysis, interpretation and report writing is urgently needed. It will be important for most MPAs starting off the process to have advice from individuals or organizations familiar with the concept and methodology.

Conclusion and recommendations

The project has demonstrated that short (3-6 months), low-cost assessments can be useful. The more detailed WCPA-Marine approach is probably also useful if an MPA has the resources, the more detailed assessment giving a more rigorous assessment. Recommendations are made for the pilot

sites themselves, organizations such as IUCN and ICNAN that have been supporting them, and also to the broader Western Indian Ocean MPA community as follows:

- Undertake the activities needed to complete the initial assessments
- Ensure that recommendations are followed up at each site
- Revise the Workbook and expand the approach to other MPAs in the WIO
- Mainstream assessments into MPA management and ensure their sustainability
- Improve monitoring, research and access to relevant information so that assessments of management effectiveness can be based on good data and lead to adaptive management

1. INTRODUCTION

1.1. Background

The concept of using assessments and the results of monitoring programmes to adapt and improve management of protected areas has come into being relatively recently but has evolved very rapidly. The need for tools and guidelines to evaluate the ecological and managerial quality of protected areas was recognized at the 1992 World Parks Congress in Venezuela, with the result that in 1996 IUCN set up a Management Effectiveness Task Force (METF) under the World Commission on Protected Areas (WCPA) to look at this issue. In 1999, IUCN and WWF held a joint workshop to review the growing number of assessment methodologies being produced for protected areas, and to explore options for a more harmonized approach. Case studies from Costa Rica, Brazil, Peru, India and Australia and other countries, largely related to terrestrial protected areas, were presented.

Out of the discussions, and with additional work by METF, came a framework methodology which was published in 2000 (Hockings et al., 2000a). This provides overall guidance in the development of assessment systems and encourages basic standards for assessment and reporting. IUCN's global programme on improving protected area management through assessments now involves a wide range of partners including WWF, TNC, UNESCO, the World Heritage Convention, and the marine component of WCPA. Increasingly governments and civil society want accountability and evidence that setting aside areas of land and sea for biodiversity conservation is worthwhile. Accountability is also required at the international level, with institutions such as the Convention on Biological Diversity requesting parties to report on the status of their protected areas.

1.2. The WIO Project

In November 2001, a workshop was organised by IUCN-EARP, with WIOMSA, in Zanzibar as an initial step in raising awareness and developing an approach to assessing MPA management effectiveness in the region. In June 2002, a module on assessing management effectiveness was held at the WIOMSA/CZMC Regional Training Course in MPA Management, St Lucia, South Africa. These preliminary activities resulted in general agreement that assessment of MPA management effectiveness would be a valuable activity, although there are a number of constraints, such as lack of funding, personnel and at present a lack of clarity on the methodologies being proposed.

The WCPA/METF Framework and, more specifically, the Workbook and methodology developed for assessing management effectiveness in World Heritage sites (Hockings et al., 2000 b and c) have been adapted for use in MPAs in the WIO (Mangubhai, 2003). The World Heritage initiative is a four-year UNF/UNESCO/IUCN 'Enhancing Our Heritage' project which includes five Eastern African pilot sites (of which two - Greater St Lucia Wetland Parks and Aldabra Special Reserve - have marine components).

This report concerns the testing of the method described in the Workbook at eight pilot sites in three countries (Table 1). Although initially it was planned to involve only six sites, eight subsequently participated (under the same budget and time framework). The sites were selected to represent a range of types of MPA (different management regimes, different degrees of accessibility and threat, different degrees of experience and establishment). Initially only two sites in Kenya were selected but subsequently it was agreed that it would be useful to include all the managed MPAs in this country, as an opportunity for an assessment of a national *system* of MPAs. Diani Marine Reserve was excluded as it currently has no active management. Malindi Marine Park and Reserve was part of the initial selection as it is an ICRAN demonstration site. It had been hoped to include Dar es Salaam Marine Reserve System as this is also an ICRAN demonstration site, but there was insufficient capacity and organisational framework at this MPA for an assessment to be made. It had also been hoped that Chumbe Coral Park, in Zanzibar, would participate as an example of an MPA

managed through the private sector, but personnel changes at this site made this impossible over the period involved.

Table 1. Sites at which the methodology was tested

Marine Protected Area	Date established	IUCN Category	Size sq km
<i>Kenya</i>			
Kiunga Marine National Reserve	1979	VI	250
Malindi Marine National Park	1968	II	6.3
Watamu Marine National Park	1968	II	10.0
Malindi –Watamu Marine National Reserve*	1968	VI	245
Mombasa Marine National Park and National Reserve	1986	II/VI	10/200
Kisite Marine National Park/Mpunguti Marine National Reserve	1978	11/VI	28/11
<i>Tanzania</i>			
Mafia Island Marine Park	1996	VI	822 of which 615 is marine
Mnazi Bay-Ruvuma Estuary Marine Park	2000	Not yet assigned	650 of which 200 is marine
<i>Seychelles</i>			
Cousin Island Special Reserve	1968/75	Ia	0.28

* The Reserve joins both the Malindi and Watamu Marine Parks (which also share one management plan). Logistically, and because there are two wardens, these sites were treated as two Park/Reserve sites.

The project was carried out under the oversight of the Eastern African Group of Experts on Marine Protected Areas (GEMPA-EA) and is closely linked to the WCPA-Marine/WWF global initiative on MPA management effectiveness. It was facilitated and co-ordinated by the Eastern Africa Regional Programme (EARP) as one component of the NORAD funded WIO Marine Biodiversity Conservation Project (a partnership programme to assist WIO countries in implementing the Jakarta Mandate), as a contribution to the implementation of the Nairobi Convention work programme, and to the activities carried out under the International Coral Reef Action Network (ICRAN). The project was lead by a consultant, Ms. Sue Wells, who prepared this report.

2. METHODOLOGY

2.1. Main principles involved

The framework guidelines prepared by WCPA/METF lay out a set of principles to guide assessments, and these are fundamental to the methodology used in the WIO. The key ones are:

- Information from an assessment should be used to help improve MPA management, influence policy and raise awareness. The results are not for making judgments of a negative or critical nature - the aim is to generate positive change, not to alienate stakeholders.
- There is no single method for an assessment – methods vary between sites depending on needs and the local situation.
- There are several levels at which assessments can be carried out. Relatively few MPAs in the WIO have the capacity or resources to carry out the most detailed level of assessment, which looks at whether the management objectives of an MPA have been achieved. Less detailed levels of assessment are nevertheless very helpful for identifying gaps and problems

in management, helping to prioritise activities, and finding out what is needed to improve management.

- Assessments must be carried out in a participatory manner, involving managers, MPA staff, and all stakeholders.
- An assessment should include biological, social, cultural, economic, and management issues as well as any others that influence the MPA.

The project is using an approach based on the methodology developed for use in World Heritage Sites. The assessments thus involve the completion of a set of worksheets or tables for the six components that METF have identified as being fundamental to all assessments:

- Context: What is the starting point; what is the vision?
- Planning: How will the vision be reached?
- Inputs: What resources are needed?
- Process: What are the management actions?
- Outputs: what was produced?
- Outcomes: what was the impact?

The assessment is therefore broad, looking not only at impacts but also at the effectiveness of the management process. It does not require the collection of new data, unless that can be done quickly. Rather, the assessment uses existing data, the aim being to provide a 'snap-shot' of management effectiveness at a particular point in time, with recommendations for improvement. It complements the approach that has been developed by WCPA-Marine (Pomeroy et al., 2002) and which is being tested at pilot sites around the world, of which Mafia Island Marine Park is one.

An important aspect of the project was that it was experimental in nature. Sites were not provided with a tried and tested method, but were asked to help in the development of a mechanism that, if successful, could help to increase the success of WIO MPAs in meeting their objectives. The project involves new concepts for the region and a 'language' that is still developing. Numerous methodologies are being developed, as shown during the 2003 World Parks Congress sessions on assessing management effectiveness. For those familiar with coral reefs, the situation is perhaps analogous to the development of coral reef monitoring methods 1-2 decades ago. As a result, the terminology can be confusing and some of the components poorly defined. This was made clear to participating sites, so that they could understand their role in contributing to a broader regional and global activity.

Although the overall framework is relevant to all protected areas, specific components may not be applicable at any one site. Thus, Mnazi Bay Ruvuma Estuary Marine Park did not complete the worksheet for assessing the management plan, as it does not have one yet. Similarly, several MPAs were not able to assess impacts/outcomes fully because of lack of relevant data, but the assessment helped them to identify gaps in information and thus where monitoring programmes should be developed or improved.

2.2. Activities involved

2.2.1. Introductory workshop

An introductory workshop for the pilot sites participating in the project was held in Malindi, Kenya, 7-9 April 2003. This was designed to ensure that representatives from each site understood the methodology and the process, and to help the sites make adaptations to suit their particular situation. The workshop programme was based around the draft Workbook. Each component of the assessment was presented, and sample worksheets tested. There was also a presentation on the assessment underway at Mafia Island Marine Park using the WCPA-Marine methodology, and a brief update on plans for the WPC. The workshop was attended by 18 people, with all sites represented apart from

Mombasa which was brought into the process later. Apart from one person from the Seychelles, all participants at the workshop subsequently played a major role in their site assessments. Draft work plans were prepared for each site. Following the workshop, IUCN-EARP issued contracts to each site to cover the financing required for carrying out the assessments (meeting costs, local travel, communications etc).

2.2.2. Implementation teams

The first step in the assessment was for each site to set up a small ‘implementation team’ to lead the assessment, preferably comprising core technical staff and key stakeholders; it was suggested that if the capacity of the MPA was very limited a consultant might be necessary. The composition of the teams varied between sites:

- Watamu included, in addition to KWS staff, representatives from NGOs and CBOs and a JICA volunteer;
- Malindi had a similar team to Watamu but also used students and included a representative of the boat operators
- Kiunga had a team comprising KWS staff and WWF representatives (WWF being the main partner organisation)
- Mombasa’s team comprised KWS staff and an honorary warden
- Kisite included, with the KWS staff, the District Fishery Officer, an Honorary Warden (local businessman), and a youth group chairperson who had been involved in fisheries data collection in the MPA
- The teams for the two Tanzanian sites comprised entirely personnel from the MPAs
- Cousin Island used six staff members from the NGO that manages the MPA, including the Warden, plus a consultant who had previously worked for the NGO

The Kenyan sites established a ‘national co-ordinating team’ with two senior members of KWS who provided technical support as well as administrative and logistical assistance to all the sites. In particular, they organized a joint meeting of the MPAs to compile the National Context worksheet, helped to develop a common method for the inputs worksheet, and organized two meetings of the sites involved at which progress with the assessments were discussed. The Marine Parks and Reserves Unit in Tanzania allocated a member of staff to co-ordinate the assessments for the two Marine Parks, but information has not been made available to indicate what activities were carried out.

2.2.3. Compilation of worksheets

The sites were expected to use existing reports and other literature, or interviews and discussions. In Kenya, an annotated bibliography of references and research reports relevant to all sites was provided by KWS to all the sites. Sites were urged to base the worksheets on actual facts and results of research, surveys and monitoring programmes, rather than on the opinions of members of the implementation (although the latter was often the case, even if data were available). It was pointed out that this is particularly important when identifying ‘threats’ – e.g. it is easy to say that tourists are damaging a reef, but that this might not in fact be true. Sites were also urged to provide the sources of the information (e.g. scientific papers, anecdote, reliable experts), but no sites gave indications in their final reports that this had been done.

The implementation teams were urged to be as specific as possible when filling in the sheets without going into too much detail. This was recognised as a difficult balance, but teams were asked to remember that the purpose of doing the worksheets was to identify recommendations for improving management, in the hope that this would help them to stay focused. Some sites compiled the worksheets in groups, but in other cases, the sheets were compiled by the MPA warden alone which was perhaps not as good an arrangement.

The implementation team at Mnazi Bay Ruvuma Estuary Marine Park had considerable difficulties with the worksheets, due to their lack of experience. A scorecard developed by the World Bank for use in GEF projects related to MPAs was therefore provided during the consultant's final visit, and assistance provided in initiating it. It was felt to be a better approach than some of the sheets in the Workbook, but despite initial enthusiasm the form was apparently not completed. It is discussed further in section 4.

2.2.4. Review of worksheets

A key part of the assessment methodology is the review by all MPA staff and stakeholders of the worksheets to reach consensus on the ratings given. It was recommended that a minimum of two workshops should be held, one with 'managers', including members of the Management Committee or Board, and one with 'stakeholders'. It was also suggested that smaller consultations would be necessary to ensure that everyone's views and opinions were included. The review component of the assessment is often difficult to schedule and it was recommended that meetings that are already part of the annual work plan be used as much as possible. For example, the assessment could be made an agenda item at a scheduled meeting of the Management Committee. However, it appears that this rarely, if ever, happened.

The schedule of meetings was different for each site, as a result of different stakeholder groups and different levels of willingness and ability to participate. All sites realised the importance of input from the full range of stakeholder groups, but in many cases they had difficulty organising the necessary meetings and consultations. In Kenya, the sites had two joint meetings with the national co-ordinators (involving KWS staff only). Mombasa also had one workshop with a mixed group of stakeholders; Kisite had a series of meetings with the different stakeholder groups as it was felt that separating the groups was more effective in getting opinions from them; and Malindi and Watamu had a joint initial stakeholder workshop and then individual discussions between the Warden and local groups.

Some sites had one-on-one sessions with key individuals who did not have time to attend a long multi-stakeholder meeting, such as hoteliers and government officials. For example, Cousin I. held no workshops with stakeholders but instead used targeted interviews with individual stakeholders, using a specially prepared questionnaire. The Kenyan sites also developed a questionnaire, at the initiative of the wardens of Watamu and Malindi, based on the worksheets, for those stakeholders who would have problems understanding the worksheets (e.g. fishermen and local boat operators), from the point of few of language and the tabular format. This was subsequently also used by the Tanzanian sites, and is discussed further in Section 4 in relation to the proposed review of the Workbook.

2.2.5. Preparation of assessment report

Once the sheets are complete, the methodology requires that an assessment report is prepared, giving results, comments on the methodology, and recommendations for improving management, monitoring or other aspects at the MPA. As requested, most sites produced an interim report so that progress could be reviewed, comments provided by the technical consultant, and preliminary results from the assessments included in the presentation made at WPC. All sites then produced a final report. These varied considerably in quality. The report for Cousin is of high quality, reflecting the experience and technical competence of the NGO managing this MPA.

The worksheets and final reports for the Kenyan and Tanzanian sites were of a lower quality and did not always reflect the quality of the assessment (e.g. the assessment at Kisite was carried out much more effectively than is apparent from the report). The better ones reflected the greater technical and analytical abilities and writing and English language skills at certain sites e.g. Malindi and Mafia. Given that these were pilot assessments, this is perhaps of not too great concern, although it does

mean that at some sites the lack of clarity in the final report will make it difficult to follow-up recommendations and to compare future assessments with this initial assessment. In many cases, the information provided and the recommendations identified are too superficial or generalised to be useful in management, and there has been little analysis or interpretation of the completed worksheets. This is partly because several sites had difficulty in understanding the need to be specific and clear, without going into too much detail, and partly because the worksheet format was too complex as discussed in Section 4.

Ideally, all the Kenyan and Tanzanian reports should be edited for clarity, factual accuracy, and consistency (in several cases there are conflicting statements), and the recommendations and results should be clearly summarised. Several sites did not initially follow the recommended format for the final report (see section 4). Some reports are missing pages or worksheets (in one case, two biodiversity outcome tables are presented with different information results but there is no socio-economic outcome table). Finally, in some cases the interim report was submitted as the final report, and comments provided by the consultant were not incorporated. In particular, it appears that the initial energy and enthusiasm with which the Kenyan sites addressed the assessment died out in the final two months. This may have been linked to the fact that the two national co-ordinators were leaving at this time as a result of job changes.

2.3. Technical assistance provided

In Kenya, the consultant participated in the joint Malindi-Watamu workshop attended by representatives from a range of stakeholder groups from both MPAs. The site visit to Kiunga had to be cancelled due to logistical problems. At Kisite, the consultant attended a stakeholder workshop for fishers. At both sites visited, time was spent with the Wardens and other key staff clarifying the worksheets and methodology. The consultant also attended two joint meetings of all sites (although Kiunga was absent from the first and Kisite from the second) with the national KWS co-ordinating team in Mombasa. The first meeting proved very useful in harmonising the methodology between sites and agreeing on approaches; it was also attended by staff from IUCN-EARP.

As mentioned above, the Tanzanian sites decided they would prefer to initiate the assessment with training sessions. The Mafia training involved MPA personnel only and so allowed each worksheet to be discussed in considerable detail. At MBREMP, the training session included several District officers and representatives of two NGOs. Both sessions were used to ensure that the worksheet compilation had started, and were considered useful by the MPAs. The consultant also met with key staff in the Marine Parks and Reserves Unit in Dar es Salaam to discuss co-ordination of the assessments at the two Tanzanian sites. These meetings did not result in any visible improvement in co-ordination activities, although the assessment report for Mafia mentions that a joint meeting of the two sites was held.

Between the site visits, comments and feedback on the draft worksheets were provided, and briefing notes on particular issues were sent to the sites. However, problems with communications and lack of experience of MPA staff in reading such materials meant that these were not always an effective means of communication. Comments sent on the worksheets were often not used in subsequent drafts, or until the consultant made a further visit in person. For Kenya and Tanzania, the site visits and meetings with the wardens were definitely the most effective approaches and this form of technical assistance should be given more attention in any future assessments.

There was no request from Cousin I. for the consultant to visit or participate directly in the assessment, but an informal discussion was held with one member of the implementation team in Nairobi, part way through the assessment, and comments were provided on part of the interim report.

3. RESULTS OF THE ASSESSMENTS

All sites involved were extremely positive about the process. The following results were common to many of the sites:

- Improved understanding by MPA staff and stakeholders of the issues involved in management of the site and of why it was protected. Many of the MPA staff at the Kenyan and Tanzanian sites did not fully understand the reasons why their MPAs had been established – i.e. the protected area values and the significance of the sites for biodiversity. There was relatively little knowledge of species on the IUCN Red List, of the categories for globally threatened species or of programmes such as Birdlife’s Important Bird Areas initiative. For these MPAs, the biodiversity objectives in the management plans are very broad. The selection of appropriate management targets was useful to focus thinking on why the MPA had been set up. It was suggested that each MPA should compare the management targets they had selected with those selected by other MPAs in their country (see table 2 for example of Kenya). The MPAs in these countries have fairly comprehensive social, economic, and cultural objectives that are more specific, and management targets could more easily be selected that related directly to them.
- Interventions for improved management were recommended at all sites and many of these could be implemented immediately, as they often require little or no new funding
- The planning component helped sites to understand that management plans are dynamic and must be modified and revised to suit changing conditions.
- The assessment of national context showed that international conventions and treaties have very little relevance at the site level. Staff of the Kenyan and Tanzanian MPAs were not familiar with the relevant conventions and the roles that these play. Nature Seychelles pointed out that they do not bring any obvious benefits (although they might be expected to increase funding) and that participation in meetings is restricted to certain government officials who rarely provide feedback at the site level.
- For all sites, except for Cousin I. for some of its biodiversity targets, data were lacking to assess outcomes. This is despite the long existence of some of the MPAs and the considerable investment in monitoring activities in the region, demonstrating that these have generally not been well designed, or that monitoring information is not returning to the MPAs.

Table 2. Management targets selected by pilot sites in Kenya

Target	Mombasa	Kisite	Malindi	Watamu	Kiunga
<i>Biodiversity</i>					
Corals/Reefs	X	X	X	X	X
Beach	X		X	X	
Sea grass	X		X	X	X
Mangroves				X	X
Turtles	X	X	X	X	X
Marine mammals*	X	X			X
Birds					X
Fish	X				X
Coconut Crabs		X			
<i>Other natural</i>					
Currents					X
Landscape					X
Islands		X		X	
<i>Socio economic</i>					
Fisheries	X		X		X
Tourism/eco-tourism	X	X	X	X	X
Research	X	X	X	X	X
Education/awareness	X	X	X	X	
Income generation					X
Cultural/historical		X			X

* Mombasa specifies dolphins, Kiunga specifies dugong

3.1. Kenya

Kenya has a fairly unified network of MPAs, administered by Kenya Wildlife Service (KWS). The sites have been established for a relatively long period of time (from 17 to 35 years). The total area of the MPA at Kisite (MNP and MNR) is only 39 sq km, but all the other sites are responsible for management of some 200 sq km or more of marine waters. Apart from a few small, uninhabited islands, there are no terrestrial areas within the boundaries (which stop at high water mark), although there is a 100 ft wide buffer zone at some of the sites. However, the sites vary enormously in terms of direct human pressure, from Mombasa which lies immediately off a major urban area and tourism centre, to Kiunga located in the remote northern area bordering Somalia (although an estimated 1000 resident and 1000 migrant fishers use this reserve). All sites, however, including those that are remote from urban developments, are used by large numbers of fishers. All the sites have management plans that run from 1999/2000 to 2004/5 and a well established management structure with trained staff and operational procedures. Staff numbers are relatively high compared with MPAs in other countries, most sites having 20-30 personnel. Sites vary in the amount of technical assistance that they receive. Most have had intermittent assistance through projects, but Kiunga has had long-term support through WWF's Kiunga Marine National Reserve Conservation and Development Programme since about 1996.

Some of the main outcomes of the assessments are:

1. The assessments at each site provided some indication that management was being effective to some extent in terms of biodiversity protection. For example, fish and reef health within some of the Marine Parks (no-fishing areas) are better than in the Reserves (which have less active management) or outside the MPAs, based on data gathered by the two research organisations (Coral Reef Conservation Project and CORDIO) that carry out research and monitoring in the Kenyan MPAs in association with KWS. At Malindi fish abundance has increased in the Marine Park, but coral health and turtle numbers have declined. The text summary of the Kiunga assessment states that turtle numbers have increased, but the work table does not show this information. Overall, it is likely that there is considerably more data on corals, fish and turtles than was used in the assessments.

For most management targets, there is insufficient, or inappropriately designed, monitoring to provide the type of data that are need to assess the impact of management. Where there are appropriate monitoring and research results, this information is often not easily available to MPA managers and staff (although independent discussions with some of the researchers involved suggests that data are made available). In any case, this highlights the need for more structured and sustainable monitoring programmes, using methods that MPA staff can participate in, and mechanisms to ensure that copies of data and results are kept at each MPA site, and are understood and available to all MPA staff. Monitoring programmes need to take into account a broader range of the management targets involved if KWS is to be able to demonstrate the role of MPAs in biodiversity protection and sustainable development, and thus increase political commitment for MPA management. Even where monitoring has been initiated (e.g. the Reefcheck method has recently been introduced at KWS) or mechanisms exist to discuss research needs (e.g. joint meetings between KWS and the Kenya Marine and Fisheries Research Institute), MPA staff do not seem to have fully understood the relevance of these activities in terms of assessing management effectiveness and most sites did not mention the existence of these initiatives. The assessment of Mombasa Marine Park did not make full use of a paper on effectiveness at this site prepared earlier by a KWS staff member (Muthiga, 2001). Similarly, Kiunga did not appear to use information from past WWF reviews and evaluations in its assessment.

2. The important role of local communities and other stakeholders was highlighted by the assessment. To the surprise of some KWS staff, fishers (the source of many of the conflicts) showed considerable support for the Marine Reserves (though not the Marine Parks), and at Kisite they even recommended increasing the size of the Reserve. Kisite appears to have particularly good relationships with the majority of its stakeholder groups (primarily fishing communities and boat

operators, with only about three major tourism operators). Mombasa has carried out a lot of work with its stakeholders, but still does not have effective involvement of the tourism industry, demonstrated by the fact that tour operators and hoteliers did not attend the assessment workshops. The assessment for Mombasa recommends that a stakeholder forum be set up for this MPA.

3. The management plans were all prepared at the same time to the same model and are due for revision in 2005 or 2006, with revision every 5 years. The assessment results could be used in the revision, and it was suggested that this initial assessment could be considered as the 'mid-term' review of the management plans. Although all the sites rated the adequacy of their plans very highly (perhaps because this part of the assessment was carried out with the KWS staff involved in the preparation of the plans), it would be worth considering some amendments and new approaches. For example, the current plans are based on an analysis of issues at the time of their preparation (i.e. they are issue driven) rather than on an analysis of how the objectives for each site might be reached (i.e. objective or outcome driven). Current thinking is that the latter approach is more effective in that it lays out a strategy for reaching the overall aim of the MPA. In discussions, people thought this approach might be better and that it should perhaps be when the plans are revised. The revised plans should also lay out a clear process and schedule for the 5 yearly review. Malindi and Watamu currently have a joint management plan, as the Reserve component is common to both sites. The information gathered during the assessment indicates that there are sufficient differences at each site to make separate plans necessary, with some form of co-ordinating mechanism to ensure joint management of the Marine Reserve. As mentioned above, all MPAs in Kenya have the same broad categories of objectives (biodiversity protection, sustainable resources use, research, and awareness and education), but there are specific differences between the sites that were identified through the management targets. These should be brought out more clearly in the revised management plans.

4. The management plans and objectives do not distinguish clearly between the Parks and the Reserves, although these have been set up for different purposes. The assessment provided an opportunity to look more carefully at the management needs of each and the teams were asked to be clear in the worksheets as to whether they were referring to the MPA area as a whole or to the reserve or Park. The design assessment for the Malindi/Watamu MPAs, and the assessment of adequacy of their joint management plan revealed positive steps that could be taken to clarify the responsibilities of these MPAs in relation to their shared responsibility for the Marine Reserve. The assessment for Mombasa recommended that the Reserve should be zoned for different activities (e.g. watersports, fishing) to reduce conflict and it is understood that this recommendation is also in the management plan. The boundaries of the Park in relation to the Reserve reportedly changed early on the life of this MPA area; this was not referred to in the assessment although it would be interesting to know if the changes had been satisfactory. The Mombasa assessment also points out the difficulty of patrolling the Reserve which, unlike other Kenyan MPAs, extends beyond the reef crest into open water; it is thought that only about 15 sq km of the total 200 sq km Reserve is used by fishermen. The assessment of Kisite recommended an increase in the size of the Reserve south to the Tanzanian border, but revealed lack of consensus as to whether the Park component is too large or too small.

5. Although in general the national context for MPAs is supportive in Kenya in terms of political will, the assessment of this component (done as a joint activity by all sites together) indicates a number of issues that need resolving. MPAs are designated under the Wildlife Act which is more strongly oriented towards terrestrial protected areas. It is being revised, which presents an ideal opportunity for ensuring that the necessary changes are made to cover the needs of MPAs, but it is not clear that there is an adequate process for this. Linked with this is the fact that although the MPAs receive good support from the KWS Coast office in Mombasa, they feel that there is little interest in their activities from Headquarters in Nairobi, with few visits from senior management. This was emphasised by the fact that senior KWS personnel did not play any part in the assessments. In terms of relationships with other government departments, there is a need to clarify and harmonise responsibilities in relation to Fisheries (responsible for fisheries enforcement in the Reserves) and Forestry (responsible for mangrove management), and to improve collaboration with Tourism and with the Coast Development Authority. MOUs have been developed with Fisheries and Forestry to

lay out the various roles of the agencies in relation to MPAs, and these need to be implemented and additional ones drawn up with other government departments as appropriate.

6. All sites rated themselves fairly highly in the components relating to implementation of management plans (outputs) and adequacy of the management process (process), although the worksheets were not always very clearly filled in. Three of the sites analysed the extent to which actions identified in the management plan had been completed or were underway. There is a problem with the way that the % have been calculated, but the results give a rough idea of progress: for Malindi, 30% of the actions have been completed; for Watamu, 20% have been completed; and for Mombasa, none although 60% are underway or making good progress.

7. All the sites had problems doing the input assessment. The national co-ordinators had devised a table to show the unit cost of items such as one day's work by a ranger and an officer, and various pieces of equipment such as vehicles and boats. The sites had used this to analyse funding requirements for different activities. However, most of them did not provide an analysis of the results or explain clearly how the figures were calculated. The figures were also not put into context with the annual government subvention to each site (the 'A.I.E.'), the revenue that is earned through the Marine Parks (which is returned to central government), and other sources of funding, for example donors. The worksheets regularly cite inadequate funding as a cause of poor management.

Malindi analysed the inputs and found that only about 50% of the funds required are available, even though funding additional to the A.I.E had been obtained through the KWS/Netherlands Wetlands Training and Conservation Programme, and ICRAN. At this MPA, revenue from entrance fees for the Marine Park had increased by 28% between 2000 (6.7 mill Ksh) and 2003 (8.6 mill Ksh) but the AIE has gone down over the same period from 2.4 mill Ksh to 2 mill Ksh. Figures for Watamu are not clear in the report, but the narrative text states that the AIE had gone down by 35-40%. In Mombasa, revenue more than doubled between 1998 and 2000 (from just over 5 mill Ksh to over 10 mill Ksh) but dropped to less than 9 mill Ksh in 2002. The AIE for Mombasa has steadily increased from just over 1 mill Ksh in 1998 to over 3.5 mill Ksh in 2003, but is nevertheless much less than the revenue taken by the Park. There seems to be no very clear pattern among the MPAs in trends in revenue and AIE (assuming the figures are correct), but at all sites the AIE is much less than the revenue generated. Although the assessments do not state this, there is clearly no major incentive to work towards increasing visitation as the increased revenue does not feed back into increased funds from central government for management, as identified in an earlier economic analysis of Kisite Marine Park (Emerton and Tessema, 2001).

8. Two of the MPA areas, Kiunga and Malindi-Watamu, are designated as Biosphere Reserves. However, the assessments for the sites did not address the issue of whether the Biosphere designation has provided added value to the sites, or whether management is meeting the specific objectives of the biosphere designation.

3.2. Tanzania

Mafia Island and Mnazi Bay-Ruvuma Estuary Marine Parks are both relatively large multiple-use marine parks (Mafia Island is 822 sq km in total of which 615 sq km is marine; Mnazi Bay is 650 sq km in total of which c. 200 sq km is marine). Both have large numbers of people living within them (Mafia has 11 villages within the park boundaries and 15,000-18,000 people dependent on it; Mnazi Bay has 17 villages within its boundaries and some 30,000 people dependent on it), and both have considerable potential economic importance in terms of future tourism and possible mineral exploitation (highly likely in the case of Mnazi Bay). One site is an offshore island (Mafia), the other an enclosed bay (Mnazi Bay) and extensive mangrove system (Ruvuma Estuary); these aspects of the design would be interesting to look at, but were not covered in the assessment. The two sites are at very different stages of development. Mafia Island Marine Park has nearly ten years of experience, having been gazetted since 1994. Having had technical assistance from WWF since the beginning, it now has a management plan, due for a mid-term review now (with a full review 5 years after the plan

has been approved, i.e. in 2005). Mnazi Bay Ruvuma Estuary was gazetted in 2000 and its management plan is still in the early preparation stages. Both are managed by the Marine Parks and Reserves Unit (MPRU) which, compared to KWS, has relatively little experience and low capacity.

The assessment revealed the lack of experience and capacity at Mnazi Bay Ruvuma Estuary Marine Park, but this is being addressed through the UNDP/GEF project currently underway and the site is keen to repeat the assessments on a regular basis. Mafia's report was of a higher quality than the other Tanzanian and Kenyan reports, reflecting the greater experience and skills of the staff, probably due to the long period of technical assistance from WWF, and because it has been involved in the global WCPA assessment. Even so, it tended to make very general statements in both the worksheets and the summary text that will make it difficult to follow up recommendations, and did not appear to make very much use of previous evaluations and reviews. Although Mafia is also a pilot site for the WCPA-Marine project to test indicators, the assessment report does not make any detailed reference to this. It is to be hoped that the two methods could be compared in the near future. Mafia also did not provide an assessment of its zoning scheme which would have been useful, particularly since Mnazi Bay Ruvuma Estuary will be developing a zoning scheme in the near future.

Some of the main results of the assessments are:

1. Like the Kenyan MPAs, both the Tanzanian MPAs have the same general objectives as laid out in the legislation, but the management targets are slightly different for each site. The assessment suggests that biodiversity outcomes are starting to be met at Mafia. The data gathered under the WCPA-Marine project on focal species abundance was used and showed that coral health has improved in some areas (e.g. Chole Bay) but declined on reefs affected by the 1998 bleaching (e.g. Tutia Reef); though butterfly fish abundance had increased. There has also been an increase between 2001 and 2003 in the number of turtles nesting and the number of eggs hatching, and a decrease in turtle poaching. There are some signs of mangrove regeneration. For other management targets however, as for the Kenyan MPAs, there are no data by which to assess changes. Data on socio-economic parameters is not available to show any changes yet, although in due course fish and octopus catch data may help to show whether there have been improvements.

2. The inputs assessment at Mafia showed the size of donor contributions in relation to government support (c. 80% donors, 20% government), which emphasises the need for this MPA (like others) to find ways of financing itself. The Government contribution goes on salaries and recurrent expenditures, with donor funding is used to cover implementation of activities in the management plan. Inputs were analysed differently from the Kenyan sites (illustrating that there needs to be a more clearly explained method for this component) and a breakdown of actual expenditures by management target was provided. Although there is no summary of this in the report itself, the figures when analysed show that a rather small proportion of the overall financing is spent on the biodiversity management targets as shown in Table 3.

Table 3. Expenditure of financial inputs by management target in Mafia Island Marine Park (dates not known but presumed to be 2002)

Management Targets	US\$	%
Biodiversity	92,400	13
Socio-economic	240,370	34
Administration	369,784	53
Total	702,554	

The high figure for administration is partly accounted for by the fact that surveillance has been included in this category (US\$126,600 or about one third of the total cost of administration), as well as 'support to villages'.

3. In terms of capacity, Mafia has a full complement of staff (about 19 in total, with an additional 6 personnel whose salaries are covered by WWF), although the park personnel consider they need more rangers and a communications officer. In contrast Mnazi Bay Ruvuma Estuary only has 12 staff of which three are drivers. It used the assessment as a capacity building exercise to help identify the issues to be taken into consideration in the preparation of the management plan. Many of the recommendations of the assessment (e.g. the need for a Park office within the MPA) are among the activities to be carried out with the support of the GEF project. The training workshop held at the beginning of the assessment was important in helping participants understand better the purpose of the Park, how it is being set up, and their potential roles in it.

4. Both assessments produced useful recommendations in relation to stakeholders. The Tanzanian MPA legislation provides a better basis for MPA establishment and management than the current Kenyan legislation with clearly defined mechanisms for stakeholder input to management through village committees and a higher level Advisory Committee. However, the assessment revealed that implementing the full participation intended in the law is difficult. At Mafia, local communities are the biggest stakeholder group and are represented on the Advisory Committee. The 11 villages in the park have liaison committees and stakeholder engagement is largely good, but whether there is a major flow of economic benefits to these communities from the Park, as stated in the assessment, could be questioned. The engagement of the hoteliers and fish traders (i.e. the private sector) is however less good. At Mnazi Bay Ruvuma Estuary, more attention must be paid to providing information on the purpose of the park (management targets), and the proposed regulations. There should be further clarification of the boundary, and the rationale of including of certain villages and not others. This is a complex issue since some villages wish to be included because of perceived benefits from the MPA. The initial inclusion of a large area of land (twice the size of the marine area) was probably to ensure that all land-based impacts on the marine environment would be addressed. However, it will create a number of management problems, as the park staff are already discovering. As with other sites, both Mafia and Mnazi Bay Ruvuma Estuary tended to omit mention of conflicts and difficult issues with stakeholders, which is one of the problems of the self-assessment approach led by the MPA authority.

Furthermore, although the assessments did not address this directly, the role of the Districts in the management of Marine Parks has yet to be fully clarified, given that under decentralisation they are technically responsible for management of natural resources. At Mnazi Bay Ruvuma Estuary, there are plans to discuss this through the preparatory work for the management plan.

5. Mafia was able to carry out a detailed outputs assessment since its Annual Action Plans are based directly on the Management Plan. In the year 2002, out of 61 actions planned, 26% were completed, 31% in progress and meeting their targets, 19% ongoing (i.e. recurrent such as patrolling), 18% at the planning stage and 5% not started. Overall performance was rated at 70%. The annual progress report prepared for the Board of Trustees is good measure of outputs.

3.3. Seychelles

Seychelles has many different types MPAs, several of which have been established for a long time. They include the Marine Parks which are government managed MPAs under the Marine Parks Authority, several nature reserves managed by NGOs, and others with substantial input from the private sector. Cousin Island Special Reserve is a long-established protected area (30 years since designation), managed by the NGO Nature Seychelles with well trained staff and substantial investment in skilled management and scientific expertise. The reserve staff are employees of the NGO and the reserve management is part of its overall work programme. There is no direct involvement of the government. The island, 28 ha in size, was designated as a nature reserve initially to protect endemic land birds and important breeding colonies of seabirds and thus was originally entirely terrestrial. In 1975, it was made a Special Reserve and protection was extended to 400 m offshore all round the island, and it now protects important sea turtle populations and a rich fringing coral reef.

Initially there was some reluctance on the part of Nature Seychelles to participate, as it was perceived that the methodology was not oriented towards protected areas that were already ‘up-and-running’. However, once the process was initiated, they considered it a very useful exercise. The final report is of a high quality, indicating the considerable skills and experience of the NGO managing this site.

The management plan has evolved progressively since the first one in 1975 (it has been revised five times) and was the focus of the assessment. The reserve has 8 objectives - five relating to biodiversity protection, one on education and public awareness (including research) and two on governance and management processes. The conservation objectives take precedence in any situation where there is a conflict of interest.

The key results of this assessment were:

1. The protected area is well run and is largely achieving its biodiversity and socio-economic objectives. Status and trends are known for the land and seabirds, turtles and coral species diversity and % cover, and are good. Nesting turtles have increased by 300% in 30 years. Corals have been damaged by the bleaching event in 1998, but otherwise reef health is good. However there is no monitoring of plants, other vertebrates, invertebrates, and many aspects of the marine environment.
2. The management plan is largely adequate – Nature Seychelles recognises the dynamic nature of plans and the need to revise them as protected area philosophy and society itself changes over time; the plan is closely linked to the overall work plan for the NGO. It used the management plan extensively for the assessment, and the results will be used in the revision of the plan, due in 2004. The plan does not prioritise actions intentionally, as experience has shown that priorities defined over a period of 5 or more years tend not to be realistic. Priorities are therefore set at the level of the annual work plan. The main concern is that the marine environment is insufficiently addressed in the plan: there is little monitoring or survey work of marine habitats; no studies on the impact of the no-take area on fisheries outside the MPA boundary; and no other marine management activities. Socio-economic issues are also under-emphasised in the plan.
3. Since the Reserve encompasses the entire island and surrounding waters, the design is considered adequate although it is recognised that there would be value in co-ordinated, integrated management with adjacent islands (Cousine and Aride) and a proposal has been drawn up to address this. The lack of a buffer zone means that illegal activities may occur right up to the edge of the reserve, an issue that is now being looked at.
4. The main threat is considered to be climate change, as it is felt that most human activities that might pose a threat are under control, although there remains a serious risk of introduction of alien species.
5. The national context is generally supportive (over 45% of the land area in the Seychelles is protected) but Nature Seychelles consider that the government provides insufficient financial support. The inputs assessment confirmed, for Nature Seychelles, that its funding base is weak as it is largely dependent on the landing fees of visitors and any down turn in tourism will thus have a major negative impact.
6. The assessment identified the need for development of a different relationship with stakeholders. Nature Seychelles does not consider that it has stakeholders in the sense that the Kenyan and Tanzanian MPAs clearly feel they do, since it has no fishers or other communities whose livelihoods are impacted by the protected area. Instead, it sees itself having a ‘professional’ relationship with the three government agencies that it interacts with (Ministries of Environment and Transport, Tourism and Education) and the police, and a ‘business’ relationship with the tourism operators who use the island. There is no Advisory Body or formal opportunity for

stakeholders to contribute to management issues, and Nature Seychelles feels strongly that they should not do so, in case they over-ride the conservation objectives of the Reserve. However the assessment revealed that local communities would like more opportunities to visit the protected area; that there should be clearer demarcation of the boundaries; that local enforcement agencies would like greater publicity in the media of the regulations relating to the protected area; and that tourism operators and government agencies would like more information about the protected area. This suggests indicate that the stakeholders could play a useful advisory role as in other MPAs; indeed the tourism operators welcomed the assessment as a rare opportunity for feedback. A recommendation was made that a study should be carried out to clearly define their roles and needs.

7. The outputs analysis was based on the ‘Strategic Actions’ component of the management plan. The analysis showed that 36% of the actions were routine management activities (a new category introduced by this site), 43% were completed or making significant progress, 10% were planned and 1% had not started. Some specific capacity building needs were identified through the assessment. This was the only site to recognise that some of the capacity needs could be met through improved management of existing staff resources. The need was identified for a central co-ordinating body for protected areas in Seychelles that would ensure co-ordination between sites, facilitate the development of protected area policies, and help to define of roles of the different types of management agencies such as NGOs.

It has not yet been possible to compare the results with the Aldabra assessment (SIF, 2002), but this should be done – the two assessments will give a good view of how MPA management is progressing in the Seychelles.

4. PROPOSED REVISIONS OF WORKBOOK

The methodology was too complex for some of the MPAs in Kenya and Tanzania, particularly for those where MPA staff lack skills in use of computers (the worksheet format, in Word tables, was not user-friendly for many of those involved), in report writing, and in analysis data and situations. The implementation team at the newly established Mnazi Bay Ruvuma Estuary Marine Park had particular difficulties understanding the worksheets and following the instructions. This was presumably due to lack of experience in using guidelines and manuals, in interpreting written comments sent by e-mail, in making the judgements required in the assessment, and in reporting on the results. This indicates that for newly established MPAs, or new and inexperienced MPA personnel, a different approach is needed with the provision of considerably more on-the-ground technical support. Alternatively, fairly major changes should be made to the Workbook, simplifying the language and tables and making them easier to use. However, the Workbook was almost too simple for the more experienced managers at Cousin Island in Seychelles, and at sites like these consideration should be given to using the WCPA-Marine approach.

The following recommendations are for revision of the Workbook. A few minor changes were made for the version that was made available at the World Parks Congress, but a fuller revision should be undertaken. The sites were asked to provide comments on the Workbook and methodology, but few did so in any detail. However, the discussions held with the consultant, and the results obtained helped to show the types of revision that are needed.

4.1. Introduction

The analogy of a journey by *dala-dala* or *matatu* (public bus) was useful on many occasions and could be explained in a box in the introduction so that other trainers can use of it. An MPA that is not being managed effectively is compared with a bad bus journey (poorly defined management targets = lack of understanding of destination of the bus; unsupportive national context = poor roads,

lack of government support for the bus company etc; inappropriate design = bus too small for number of passengers; insufficient inputs = lack of fuel; outputs = number of passengers carried, ticket revenue generated, time taken; outcomes = arrival at correct destination with happy passengers).

4.2. Instructions on how to carry out an assessment

At some sites, MPA staff appeared to complete the worksheets themselves. Greater emphasis on the participatory approach in future assessments would improve objectivity. There was a tendency for MPA staff to give higher (better) ratings than were perhaps appropriate (the consultant was familiar with several sites in Kenya and Tanzania and thus able to act as an objective observer). The tendency to give high ratings is understandable where MPA staff are government officers and thus probably unwilling to be seen to be critical of processes and management practices established by senior personnel. This also emphasises the importance of ensuring that the worksheets are reviewed by all stakeholders.

Several sites did not fully use existing data and information sources. If they were used, they were not correctly referenced and at some sites, the need for this was not understood, as well as the need to distinguish between opinion, anecdotal information, and scientific data. In some cases this was due to lack of experience of those involved in using data and information for analysis and interpretation, and they tended to use their own personal knowledge. KWS had prepared a bibliography of references relevant to all the MPAs in the country which was a laudable effort, but since it does not indicate which references are relevant to which sites it is difficult to use. Also, the sites did not necessarily have access to the reports and papers listed. The Workbook could perhaps explain more clearly how information can be obtained and how it should be used and cited.

Sites should be asked to clarify what period of time each worksheet refers to e.g. one or more recent years; or the whole period since the park was established. This is particularly important for outputs, for which data may only be available on a yearly basis; outcomes, in contrast, may involve full data sets over several years.

Where MPAs are already involved in a very closely related activity, or are producing a very similar report, it was suggested that they should make use of this in the assessment in order to avoid duplicating work. Few sites did this, even though several of them had recently undergone donor evaluations. This would help to make regular assessment a more sustainable activity and should be stressed in the Workbook.

4.3. Context assessment

4.3.1. Management targets

Many sites had difficulty translating the rather generally worded objectives in their management plans into management targets, and of understanding the concept – that a general objective could be broken down into more specific measurable ‘targets’, based on what is particular at the site in question. The exception was Cousin Island in Seychelles which already has targets with measurable indicators. Further explanation of the relationship between targets and objectives is required, and it should be made clear that numerical, measurable targets are not necessarily required for simple assessment; in fact a better word than ‘target’ is probably needed. Nature Seychelles inserted an additional column into the table to show the MPA objectives in relation to the management targets (in the Workbook, this is only done on the outcome worksheets). It is recommended that the management target worksheet be amended in this way, so that the link between management targets and objectives can be seen from the very beginning.

It should also be made clearer that once the management targets have been selected, the same ones should be used for all the other worksheets in the assessment. Many sites initially selected new management targets for each worksheet. The worksheets used for the trial assessments referred to ‘social and cultural’ objectives, but all sites broadened this to ‘socio-economic and cultural’ and the revised Workbook should use such wording. It was difficult to decide which type of management target to put ‘research’ under, but most sites put it under socio-economic/cultural objectives.

The columns on ‘protected area values’ and ‘additional attributes’ were not easily understood by the Kenyan and Tanzanian sites. The former should be used to describe what it is about the management target that merits the site being a protected area: e.g. if turtles are a management target, the protected area value might be that the MPA has the largest population in the country. Mafia Island MP has ‘significance statements’ in its management plan that express these values. The column on ‘additional attributes’ is for other points that might be relevant to the management target, but that perhaps do not contribute to the fact that the site is an MPA. Clearer explanations and terminology will be required in the revised Workbook.

4.3.2. Threats

The methodology requires that potential and current threats are identified separately, and that each threat is analysed in terms of the stress caused to the management target, and the source of the stress. The former proved difficult, as many current threats are likely to continue into the future or intensify, and so the worksheets tended to be repetitive. The implementation team for Cousin Island suggested that a more appropriate distinction might be stresses that are happening regularly and those that happen only occasionally.

For current threats, it was agreed that sites should focus on the main threats and not try and list everything. Similarly it was agreed that sites should not spend too much time on potential threats unless there are some very clear ones on the horizon (e.g. titanium mining in Kisite; a possible fish processing plant on Mafia).

The terminology for and concept of sources and stresses is confusing – ideally a better word for ‘stress’ is required. It is easiest to think of the source as the ‘human activity or natural event’ that causes the stress. Also, it is difficult to decide how far back to go in terms of identifying sources. For example, poverty may ultimately be the source for many stresses, but MPA managers may not be able to have much influence on such a large source and it may be better to think more specifically of the impact of such an issue on those involved with the MPA. Poor fishers may use damaging fishing methods which cause a ‘stress’ on the MPA, and the source in this case would be destructive fishing. A clearer explanation, with more examples, is needed in the Workbook, as once understood, all those involved saw the importance and use in management of making such a distinction.

It took some time for sites to understand that there may be several sources for one stress, and conversely, a single source may cause several stresses. The following table was used to illustrate how to fill in the columns that describe the ‘severity of the stress’ and the relative contribution of the source to the stress, and could be used as an example in the revised Workbook. The Workbook should emphasise that the sources should be lined up with the correct stresses, and extra rows added to the table as necessary.

Management target	Stresses	Severity of stress	Sources	Relative contrib.. of source to stress
Coral reef fish	Decline in fish abundance	Low in Park and Reserve but potential for increase in Reserve	Overfishing	Main cause of fish decline
Corals	Bleaching	High in localised areas	Global warming	Main source
	Broken corals	Medium in localised areas	Anchoring of boats	Small contribution
Ecotourism	Low visitor numbers	Varies seasonally and with socio-political situation	National travel bans for foreigners	High contribution in 2003
			Competition with better known, more accessible MPAs	Low level all the time

4.3.3. Stakeholder engagement

Most sites did not understand that there are two ways to do this sheet:

- as separate worksheets for each management target; this is recommended because stakeholders may have different levels/types of engagement in relation to the different targets – and in this case the summary sheet is completed;
- as a single stakeholder engagement assessment for the MPA as a whole, in which case, the summary sheet is not needed.

Despite extensive explanations, several sites did the assessment as a whole, but also completed the summary sheet, often giving different ratings in each one. It is suggested that for the revised Workbook, the idea of doing separate stakeholder assessments for each management target is dropped, along with the summary worksheet.

The Kenyan and Tanzanian sites had no problems in understanding and defining their stakeholders, but this presented a problem for Cousin Island in the Seychelles. The revised Workbook would benefit from a definition of stakeholders (e.g. *'people, groups, communities and organisations who use and depend on the MPA, whose activities affect it, or who have an interest in these activities, including government agencies, NGOs, local users, universities and researchers'*.) The Kenyan management plans have a very long list of stakeholders, so for the assessment each site identified the key groups relevant in its own case. There was uncertainty as to whether the management authority/park staff should be considered as a 'stakeholder' – some sites did so, others did not, and some guidance could be usefully given.

There were some questions about what 'opportunities' for engagement mean, and this should be clarified in the Workbook with examples e.g. – formal opportunities (e.g. representation on an Advisory Committee) or informal opportunities (e.g. helping to promote/create public awareness about the MPA by guiding tourists round it).

All the sites ended up designing questionnaires for use with stakeholders, as it was found that the tables were too complicated to use with most of them. The worksheet could recommend this as a regular procedure and provide examples or a generic version based on those used in the pilot assessments.

4.3.4. National Context

MPA staff at sites in Kenya and Tanzania tended to have little knowledge and understanding of the national legislation, policies and issues that might affect the running of their site, so completion of this worksheet was a useful training exercise. This experience showed that it is probably best if the sheet is completed with the assistance of and input from the national protected area agency as individual sites may not have the necessary information. External technical assistance may also be required as staff of the protected area agencies themselves do not necessarily understand some of these issues. The Workbook needs to emphasise that the questions should be used to guide the completion of this worksheet. It might be better to put them directly on the worksheet.

The Workbook should emphasise that this sheet should focus on **relevant** information. For example, sites initially tended to list **all** environmental conventions, regardless of whether they were relevant, and many did not know the difference between a convention or treaty and an international organisation (often confusing TRAFFIC with CITES). We could consider giving more guidance on this in the Workbook itself, with an explanation of what treaties and conventions are, and a list of relevant ones.

4.4. Planning

4.4.1. Adequacy of management plan

Most sites failed to complete the small table on p. 26 in the Workbook that requires a summary of the plans available for the site (e.g. management plan, separate policy-related plans, operational plans etc.) This should perhaps be incorporated into the worksheet on management plan adequacy.

4.4.2. Design

This worksheet was omitted from the initial Workbook, but a draft worksheet was provided for the assessments with guidance notes. This was incorporated in the revision prepared for the World Parks Congress. In the final revision, this should be fully revised and incorporated.

4.5. Inputs

Most sites found this worksheet very difficult as budgets and financial reporting are rarely organised according to objectives or management targets. A simpler, clearer approach is needed, and this should be addressed in the revision of the Workbook, perhaps also looking at examples from protected areas in other regions. Cousin I. did the most detailed analysis, including information on how resources are obtained, but their report does not explain the methodology in detail. In revising this section, it would be useful to contact Nature Seychelles.

4.6. Process

4.6.1. Assessment of Management Processes Worksheet

It was thought that it might be best to do this worksheet towards the end of the assessment, once all the main issues had been discussed and reviewed. It should be compiled in a group process, or at least very thoroughly reviewed as the ranking is a matter of judgement. Although the Workbook proposed a numerical rating, a qualitative rating such as 'Very Good, Good, Fair and Poor' could equally well be used as was the case for Aldabra in the World Heritage assessment. This should be considered for the revision of the Workbook. It was generally agreed that the 'effective percentage' column is not useful as it gives no additional information and entails extra work – it should be

deleted in the revised Workbook. The ‘additional points’, added to certain criteria, caused much confusion, and a better method for dealing with these important questions should be found. The final column in the table, currently headed ‘Explanation for choice of rating and recommendations’ should be divided into two to ensure that both explanation and recommendations for improving the situation are given.

4.6.2. Assessment of capacity

This worksheet has the same problems as the inputs worksheet – most staff do not work on one management target or issue only and it is thus difficult to approach the assessment in this way. It was suggested that a simple way to start would be to list the personnel with information about their skills and training in relation to their jobs. Some sites (e.g. Mnazi Bay) were doing a capacity needs assessment as part of their work programme and it was suggested they might use this activity for the assessment. This sheet should be given more thought during the revision of the Workbook.

4.7. Outputs

4.7.1. Assessment of management plan implementation sheet

The Kenyan sites did not seem to have a regular system for reporting directly against the activities identified in their management plans but both Cousin Land Mafia had well developed reporting systems and used these in the assessments. For example, the Tanzanian marine parks produce a ‘consolidated’ annual report covering all their activities for the Board of Trustees each year which has a format very similar to the worksheet for ‘assessment of management plan implementation’. This report, with the addition of a column to relate the activities and outputs to the management targets, was used by Mafia rather than the worksheet. The Kenyan MPA management plans have a list of activities with target dates and this list was used for the assessment. More guidance on how to use existing reporting formats and information should be provided in the Workbook for this component.

Cousin added an additional rating to the list for ‘routine management activity’ and this should be considered for the revised Workbook. The final column for ‘comments/recommendations’ should be divided into two columns, one headed ‘progress made’ and one for recommendations. The former would allow information to be given on what activities had been carried out; the latter should give clear, specific recommendations relating to follow up on each activity in the management plan.

4.8. Outcomes

4.8.1. Assessment of Biodiversity Objectives/Assessment of Socio-economic Objectives

The Kenyan and Tanzanian sites had to be reminded that the assessment of biodiversity objectives involves only the management targets that relate to biodiversity objectives; and assessment of socio-economic objectives involves only management targets that relate to socio-economic objectives. This will need to be made clear in the revised Workbook. There is no sheet for management targets associated with ‘other natural values’ which may contribute to the confusion; the Workbook revision might want to consider whether this would be useful.

Columns 3 (measurement and indicators) and 4 (results) were not understood by the sites in Kenya, though after considerable explanation one site grasped the concept and used available data to fill in the results column. This to a large extent reflects the lack of understanding of monitoring and the role it plays in MPA management. This component should be explained in more detail in the Workbook for others who have the same problem. The Workbook should also emphasise the need to fill in this worksheet with researchers and those involved in monitoring programmes.

The column on overall health is probably not very useful for sites where long-term data or regular survey work are lacking. The Kenyan and Tanzanian sites filled the column in, but the ratings largely represented the opinions of the wardens, rather than any scientific assessment. Similarly the preferred status column is not very meaningful where good data are lacking. Nature Seychelles pointed out that this column is in any case difficult to complete as even if the preferred status is not being met, it may be the best available. Equally, the column asking whether the situation is reversible is not clear, as the condition of most populations and ecosystems is indeed reversible.

4.8.2. Ranking threats

Several sites did not appreciate that this worksheet can only be undertaken once the worksheets for current and potential threats in the Context session have been completed. The ranking system was too complex for most of the sites and needs re-thinking. It is not clear whether this component adds value to the assessment as a whole and it might be better to leave it out so that in this final section, the MPA sites concentrate on assessing their impact on the management targets.

4.9. Additional points to consider in Workbook revision

4.9.1. Recommendations

Recommendations may come up at any stage in the assessment and in the course of compiling any of the worksheets. Watamu initially kept a running record of all the recommendations that are being made, linked to the relevant component of the assessment, which was good but subsequently was not included in the final report. It was recommended that other sites should do this, but none did. It would be worth drawing attention to the importance of the recommendations, and even providing a template to record these. Sites should be urged to produce precise, action-oriented recommendations that can be carried out.

4.9.2. World Bank scorecard

A scorecard has been developed by the World Bank for use in GEF projects related to MPAs (Staub and Hatzios, 2003). This was adapted from a tool developed by the World Bank-WWF Alliance for use in terrestrial protected areas (Stolton et al., 2003) which is based mainly on the Process worksheet in the World Heritage Site Workbook, and thus does not address assessment of outcomes. The aim is to provide a quick overview of the initial state of management efforts and subsequent progress over a period of years. Data from assessments using the scorecard is to be put on line (www.MPAscorecard.net). The score card should be filled out by MPA staff and take a maximum of half a day to complete. A revision of the World Bank version was prepared for Mnazi Bay Ruvuma Estuary and could perhaps usefully be included in the revised Workbook, for use by new sites, or those that wish to do a very quick assessment of progress.

4.9.3. Final assessment report

A format for the interim and final report was suggested:

1. Methods used – how the assessment was carried out

- who was on the implementation team (names, positions, organisations)
- what was each person's role and responsibilities in the assessment
- what meetings were held – when, where, who attended, what was discussed and what resulted
- How was the information gathered; list of sources (N.B. sites should keep a record of their sources of data and references)

2. Results achieved

- Worksheets

- Text summary of main results of the assessment and conclusions
3. *Review of methodology*
- Any problems with the methodology or comments on the worksheets

Most of the sites used this after several reminders. Expanded instructions on how to write the final report would be useful for sites with little experience of report writing. The final report should have a brief description of the MPA giving the type and date of designation, size of both marine and terrestrial components, number of staff, number of users etc. It should also be stressed that the results of each worksheet should be analysed and interpreted, and also checked for conflicting statements; several of the site assessments have different results for the same questions where they recur on different sheets.

5. RELATED PROJECT ACTIVITIES

5.1. Input to World Parks Congress

Preliminary results and experiences were presented at the World Parks Congress (WPC), Durban, September 2003, through discussions at two sessions:

- General contributions were made during a workshop organised by WCPA-Marine before the official start of the WPC, at which the results of the WCPA-Marine initiative were presented.
- A powerpoint presentation was made at the main session on assessing MPA management effectiveness (part of Workshop Stream 5 'Maintaining Protected Areas for Now and the Future')

Minor revisions were made to the Workbook (e.g. all work tables moved to annexes at the end; section on design assessment and the stakeholder questionnaire included) and a small number of copies were distributed.

5.2. Exchange visits

Under the ICRAN co-financing for this activity, a budget line was included for exchange visits, which are a major activity within the global ICRAN initiative. The initial aim was to link these visits with the assessments themselves, so that sites could visit each other at key times in the assessments to share experiences. The difficulties in planning and organising each individual assessment however precluded incorporating exchange visits into the early stages. Each site indicated which MPA they would like to visit, and it was felt that a suitable time for visits would be during the final assessment workshops, when results were being presented to the stakeholders. Most of the exchange visits have now taken place. The visit of the Malindi Marine Park representative to Mnazi Bay Ruvuma Estuary Marine Park took place at the time of the final workshop for this assessment. There appeared to have been limited planning for the visit, but the Malindi representative made useful contributions at the workshop. It is recommended that an assessment of the exchange visits and their contribution to the project be made.

5.3. Module for WIOMSA/CZMC training manual

A module on assessing management effectiveness had been included in the training course for MPA managers organised by the Western Indian Ocean Marine Science Association (WIOMSA) and the Coastal Zone Management Centre (CZMC) in June 2002, as part of the session on monitoring and evaluation. This was based on the draft Workbook that was in preparation at the time, and was presented by Sue Wells (IUCN-EARP) and Lani Watson (WCPA-Marine), with a case study on the St Lucia World Heritage Site assessment by Jean Harris. The module was written up at the request of WIOMSA and was incorporated in the training course manual that was revised and launched at WPC (Francis et al 2003).

6. CONSTRAINTS

6.1. Capacity issues

The assessments at sites in Kenya and Seychelles coincided with a period of extensive personnel changes. The Warden at Malindi changed during the period of the assessment, and Watamu's warden was very new. Subsequently both members of the national co-ordinating team left KWS. At Cousin Island, the administrative officer who attended the introductory workshop left the NGO just before the assessment started. It was suggested that the Kenyan sites should address the problem of personnel changes in their assessments, for example giving a strong recommendation that MPA personnel, particularly those who have received significant marine-oriented training, should not be transferred so readily to terrestrial protected areas. This recommendation was not made however, perhaps because the sites were worried about appearing to criticise KWS.

6.2. Inadequate planning

The Kenyan and Tanzanian sites found it difficult to develop and then implement their work plans for the assessments. Activities were often delayed or new ones introduced without reference to the overall plan, which also made it difficult for the consultant to assist sites. In addition, many sites were unable to explain clearly how the funds were being used. In some cases, funds had been used for unnecessary activities. This difficulty in following the short and fairly simple work plan for the assessment is perhaps in itself one measure of management effectiveness at some sites. Wardens and senior staff in Kenya and Tanzania would benefit from further training (including practice 'on-the-job') in planning and reporting.

6.3. Lack of direct involvement by senior levels of national protected area agencies

In Kenya and Tanzania, where more than one site was involved, it would have been better if the national management authorities (MPRU for Tanzania and KWS Mombasa Coast office for Kenya) had been directly involved in the project, with some financial support for their contributions. The KWS Mombasa office did, nevertheless, play a major role in organising logistics, holding meetings and providing assistance and support to the individual sites. Where funding was essential, the individual sites were asked to contribute to this from their funding from IUCN. MPRU did not play an active role in the Tanzanian assessments although there were two discussions with the technical consultant and MPRU staff, and an apparent willingness to be involved. There was also no presentation of the assessments to either the Kenyan or Tanzanian agencies at the end, and thus no formal endorsement of the results. This was largely due to lack of funds, and is currently being addressed in future follow-up activities.

6.4. Over-complex methodology

As discussed earlier, the worksheets were too complex for some of the MPA staff and also for review by some of the stakeholder groups. This may have been partly because it had been adapted from a set of very detailed methods, aimed at well established sites with good capacity (the method was first developed in Australia). It might have been better to have designed the worksheets from scratch, and to have incorporated a questionnaire approach into the methodology throughout. The worksheets have been found to be too complicated in other places where the methodology is being piloted by WCPA's Management Effectiveness Task Force, and possible solutions should be discussed with those involved in METF.

6.5. Poor communication with the sites

Problems were encountered in providing technical advice through e-mail to some of the sites in Tanzania and Kenya. Malindi did not have functional e-mail throughout most of the assessment;

others had had it installed very recently (e.g. Kisite) and had very little experience using it. Several of the personnel involved in Kenya and Tanzania had difficulties dealing with written comments; it seems that they were often not received (probably because of e-mail problems); sometimes not read; and sometimes possibly not understood. Verbal communication proved much more successful. The work plan for the consultant indicated 3 days of technical input per site, and was the minimum required for the Tanzanian and Kenyan sites. However, in several instances less direct input was provided than intended partly because of the reluctance of sites to ask for help and partly because of the slowness in work planning and poor co-ordination overall. As a result, the emphasis had to be on correspondence, or in the case of Kenya on joint meetings with the wardens from all the sites, which worked well in the case of those Wardens who attended regularly.

7. CONCLUSIONS

Although the methodology was probably too complex for some sites, all involved found a benefit in the process. It helped MPA staff to think about the reasons behind the establishment of the site, how their management activities can have an impact on both biodiversity and stakeholders, how even small insignificant management issues can affect the overall success of an MPA, and it encouraged them to look more carefully at their management plans. All six components of the methodology were considered useful, and all sites felt that the results of the assessments should be incorporated into the review and revision process for management plans and, in the case of Mnazi Bay Ruvuma Estuary Marine Park, into the development of the first management plan.

All sites have similar protected area values relating to coral reefs, mangroves, sea grasses and threatened species such as turtles, dugong. Socio-economic management targets relate primarily to fisheries and other marine resource use, tourism, and all sites have objectives relating to research and environmental education. The general impression from the assessments is that some MPAs are having a positive impact on some forms of biodiversity (corals, fish, turtles) but that their socio-economic impact is unknown. Despite the numerous monitoring initiatives underway (Mangubhai, 2002), the results of the assessments indicate that these are rarely adequate for helping to measure the effectiveness of an MPA. Furthermore, results from monitoring programmes and research are often carried out by independent researchers, and are not always made available or interpreted in an appropriate manner for MPA staff. Major efforts are needed to ensure that monitoring and research are designed and implemented to provide the information that is needed for management and to involve MPA staff and stakeholders. This conclusion reflects the wider debate in the conservation and scientific literature concerning the need for monitoring programmes that are more appropriately designed to support biodiversity conservation and management (e.g. Danielsen *et al.*, 2003).

Most sites reported that the assessments were particularly valuable in terms of improving relationships with stakeholders. In several instances, the assessment was the first time that the MPA staff had approached a stakeholder group for information and opinions. In all cases, the stakeholders expressed great appreciation of the exercise. The assessments also revealed that stakeholders are often very unaware of the aims of the MPA, the legislation relating to it, and how it operates. This indicates a need for better communication with stakeholders and provision of more targeted information. At the same time the extent of stakeholder involvement in assessments was probably not sufficient to ensure that the assessment was truly participatory. In some cases, this was due to lack of time, but it was also a result of the traditional top-down approach to management that is now gradually changing to consultation. Mombasa reported that stakeholders were surprised by the discussions as, in their minds, workshops and meetings were for the purpose of providing them with 'training'.

The concept of self-assessment is not yet well understood or accepted in the countries involved, particularly where government institutions are involved. This made it difficult to introduce the methodology and to ensure that assessments were carried out in as transparent and objective manner

as possible. For many of the worksheets a higher ranking tended to be given than was warranted in this initial assessment. For example, the assessment of the adequacy of the management plan was difficult for most MPA managers, probably because they were generally prepared and approved by senior staff in the organization. For both the Kenyan and Tanzanian MPAs, there was no very evident support from higher levels of management which meant that the assessments probably had a low priority in terms of activities to be undertaken by the park staff. Some of the sites initially thought that the assessments would be too difficult to carry out, but were very enthusiastic once they had understood what was required and once the process was underway.

The regular personnel change encountered at many sites is a common problem and directly affects the effectiveness of a protected area. Kenya in particular has a major constraint, in that KWS policy is to move staff around, often at very short notice. As a result, individuals who may have received specific marine PA training may find themselves transferred to terrestrial protected areas and vice versa, resulting in Wardens with little marine experience. This is one of the reasons, why Kenya does not have a more solid cadre of MPA managers and practitioners, despite Kenya's long history of MPA management. Nevertheless, in Kenya, the process of carrying out the assessment as a national-level exercise enhanced collaboration and experience sharing between the MPA staff of the different Parks and Reserves, particularly the Wardens, who appeared to both benefit from the exercise, and to enjoy the discussions that it engendered. It had been hoped that MPRU would facilitate a similar collaboration between the two marine park sites in Tanzania, but it appears that this agency lacks the capacity for this type of activity.

In Kenya, younger wardens (Malindi/Watamu) found the assessment easier than the older ones (Mombasa/Kisite) partly because the approach of self-assessment was perhaps less intimidating for them; partly because of their greater familiarity with computers, tables and report writing. On the other hand, the older Wardens had a much greater understanding of how the MPAs functioned and what were obstacles and constraints. Many sites felt that the assessment took up too much time in relation to their day-to-day management activities. This provides further support for the need for a simpler method, although if personnel remain constant, the next assessment should be quicker as people will have some training in the methodology. Ensuring that assessments are repeated in 2-3 years time will help to build capacity within MPA staff for analysis, although it is clear that additional specific training on data analysis, interpretation and report writing is urgently needed. Although Cousin Island assessment was carried out without external technical assistance, this is probably an unusual situation, and it will be important for most MPAs starting off the process to have advice from individuals or organizations familiar with the concept and methodology. The MPA managers training courses organized by WIOMSA, provide one means of disseminating information about the methodology.

The project has thus demonstrated that short (3-6 months), low-cost assessments can be useful. The WCPA-Marine methodology involves a more detailed assessment of the outputs/outcomes that takes time and requires the collection of new data, and often significant funding. Ideally, an MPA should have a management plan, baseline data (a benchmark) from the time that it was established, and have been in operation for a period of time (2 years is suggested) before such an assessment is conducted. However, the guidebook (Pomeroy et al., 2002) is useful reading for anyone carrying out even a simple MPA assessment, and many of the indicators described could be used. Both the WCPA-Marine approach and the simpler but broader WIO methodology described here are probably needed. The broader one is probably particularly useful in this region, where there is limited capacity and resources. But if an MPA has the resources, the more detailed assessment will provide more information and give a more rigorous assessment.

Finally, the recently completed Toolkit for Managing Marine Protected Areas in the WIO (IUCN 2004) provides guidance on assessing management effectiveness and a host of other activities covered in the Workbook assessments. The Toolkit will also be available on the web (www.wiomsa.org/mpatoolkit.htm), and will provide an invaluable reference source for MPA managers as they assess the various aspects of managing their MPA.

8. RECOMMENDATIONS

These are directed at the pilot sites themselves, organizations such as IUCN-EARO and ICRAN that have been supporting them, and also the broader Western Indian Ocean MPA community.

8.1. Possible additional activities to complete the initial assessments

Although not catered for in the initial work plans, it was felt that each site should have a final feedback workshop with its stakeholders to present the results of the assessment. This is partly because the assessment at many sites was more of an 'oral' process than the methodology was designed for.

Also overlooked in the original work plans, was the need, in Kenya and Tanzania, for simplified Kiswahili summaries of the final assessment report so that all stakeholder groups benefit from the results. In Kenya, the potential for an overview national-level report, pulling together the results of all the assessments, that KWS would take the lead in preparing, has been discussed, and is planned for presentation at the International Coral Reef Symposium in 2004. Funding for these additional outputs would need to be identified.

The participants at the introductory workshop in April 2003 requested a final regional workshop to share results. This seems a good idea, and could perhaps be considered.

8.2. Follow-up activities at each site

Recommendations coming out of the individual assessments take two forms:

- changes to the management process itself or new management interventions, where sufficient information is available to show that certain aspects of management are inadequate; and
- collection of new information where data are insufficient to make a statement about a particular management activity, impact etc - this might mean recommendations for improving monitoring programmes or developing new ones, carrying out research etc.

The long-term aim is for the sites involved to act on the recommendations, and then repeat the assessment in 2-3 years time to see the changes (see below). As mentioned in the main body of the report, some of the recommendations can be followed up very easily with existing resources at the sites. However, there are others that will require external support in the form of funding or technical assistance. ICRAN and IUCN-EARP may wish to consider whether they will develop further partnerships with the sites to follow-up this initial work. If not, the MPAs should consider seeking other donor support.

8.3. Revision of the Workbook and expansion to other MPAs

IUCN-EARP has already agreed, and has the funding (through the NORAD funded WIO Marine Biodiversity Project), to revise the Workbook to make it easier for other MPAs to use, particularly those that do not have a lot of experience or have limited skills in analysis and report writing. Recommendations made in this report will be used in the revision. It might also be worth considering translation of the Workbook into other languages (particularly French) for use in non-anglophone countries in the region.

Expansion to other MPAs in the region could occur naturally, through dissemination of the Workbook and sites themselves taking the initiative to undertake assessments. Alternatively,

organizations could take a more pro-active role in developing a programme to expand the approach, seeking funding and technical input as required. In either case, it would be useful to identify how better links could be established with the WCPA-Marine initiatives and other assessment activities both within the region (e.g. World Heritage Site assessments) and elsewhere (e.g. World Bank Scorecard). One option might be for an organization such as IUCN-EARO to convene a workshop to compare the recent pilot initiatives at World Heritage sites in the Eastern African with the MPA trials, bringing in any additional experience as relevant. The WCPA METF might also be interested in such an initiative, in terms of disseminating lessons learned.

8.4. Future assessments and sustainability of the programme

Ultimately, it is hoped that MPAs will mainstream assessments into their monitoring and reporting systems at regular intervals in order to develop an adaptive management approach. Both Kenya and Tanzania have stated that they would consider this, and the management plan for Cousin Island is due to be reviewed in the very near future and the assessment results will be used for this. Many MPAs have requirements for periodic review of the management plan, and assessments could fit in well with this.

It is essential that costs are kept as low as possible if assessments are to be mainstreamed into an MPA's monitoring and reporting system. The main funding requirements are for data collection, holding stakeholder consultations and meetings, and preparation of the final report, and these depend greatly on the logistics of the MPA and its capacity. In the long run, the costs of the assessments themselves must be met by the MPA.

Experience suggests that most MPAs will need further training in carrying out assessments and probably technical assistance during any initial assessment for new sites. For this reason, financial as well as technical support will be required, and a longer-term programme could be developed in the WIO, with a focus on mainstreaming assessments into MPA management.

8.5. Improvements in monitoring, research and access to relevant information

The need for improved monitoring and research in MPAs in the WIO was stressed in many places in this report, and is re-iterated here, as it is an area that agencies such as IUCN-EARO and ICRAN might be willing to support. Detailed recommendations are not provided here, but could be developed by looking more carefully at the results of the pilot assessments.

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ANNEX 1. Schedule of events and activities

Activity	Dates	Days planned	Days used
Preparation of training materials and assistance with development of workshop programme	February – March	2	2
Introductory workshop, Malindi	8-9 April	2	2
Preparation of workshop report	April	0	1
Provision of technical support to sites –as itemised below		15	15
Assistance at joint Malindi – Watamu stakeholder meeting	18 June		1
Meeting with all Kenya site wardens, Mombasa	19 June		1
Meeting Kisite (fishers stakeholder group workshop)	20 June		1
Mafia – training and initiation of assesment	23-25 June		2
Mnazi Bay-Ruvuma Estuary – training and initiation of assessment	26-28 June		2
MPRU meetings	4 July/29 August		0.75
Informal discussion with member of Seychelles implementation team	August		0.25
Feedback to sites on worksheets and reports through e-mail	July – November		3.5
Participation in final stakeholder workshop at Mnazi Bay	16-17 September		1.5
Final meeting with Kenya site wardens, Mombasa	27-28 October		2
Amendments to Workbook	First week September	1	1
Preparation for WPC presentation and participation in sessions on management effectiveness, WPC, Durban	1st week Sept and ,8 and 12 September	4	4
Assistance with exchange visits		1	0
Preparation of paper for WCPA and final report	November and December	5	5

ANNEX 2. Outputs produced

1. Training presentations and materials for, and report of, introductory workshop, Malindi April 2003 (submitted to IUCN-EARP)

2. Reports for each site assessment prepared by site implementation teams:

- Nature Seychelles. 2003. Assessing Management Effectiveness of Marine Protected Areas Report (Final): Cousin Island Special Reserve, Seychelles.
- Warden Kisite/Mpunguti Marine Park and Reserve. 2003. Assessment of management effectiveness of marine protected areas. Draft Report Contract No. EARO/25831-0021/795. (*for Kisite/Mpunguti*).
- Warden Mombasa Marine Park and Reserve. 2003. Assessment of management effectiveness in Mombasa Marine National Park and Reserve. Report: Contract no. EARO/25831-0021/800
- Kenya Wildlife Service 2003. Assessment of management effectiveness of marine protected areas: Malindi Marine National Park and Reserve. Report to IUCN-EARO, November 2003. Contract No. EARO/25831-0021/794
- Warden Watamu Marine Park. 2003. Assessing management effectiveness of marine protected areas. Watamu Marine National Park and Reserve. Report to IUCN-EARO, Contract No. EARO/25831-0021/794.
- Kazimoto, S.L., Chale, T. and Msina, C. 2003. Assessment of management effectiveness: Mafia Island Marine Park. Final report to IUCN-EARO. Contract No. EARO 25831-0021/797
- Mnazi Bay-Ruvuma Estuary Marine Park 2003. Report on the Management Effectiveness Assessment, Mnazi Bay – Ruvuma Estuary Marine Park, Tanzania. Oct 2003.

3. Final report (this document)

4. Materials prepared for WPC

- Powerpoint presentation
- Paper for WCPA CD-ROM: Wells, S. and Muthiga, N. 2003. Assessment of management effectiveness in selected marine protected areas in the Western Indian Ocean.

4. Revision of the Workbook – preliminary revision carried out to produce version suitable for distribution at WPC:-

Mangubhai, S. and Wells, S. 2003. Assessing management effectiveness of marine protected areas: a Workbook for the Western Indian Ocean. IUCN-EARO/GEMPA

5. Module for WIOMSA training manual:

Wells, S., Watson, L. and Mangubhai, S. 2003. Assessing Management Effectiveness in a Marine Protected Area. Module 10. In Francis, J., Johnstone, R., van't Hof, T., van Zwol, C. and Sadacharan, D. (Eds). *Training for the Sustainable Management of Marine Protected Areas: a training manual for MPA managers*. CZMC/WIOMSA, 267 pp.