

Expansion of Western Indian Ocean Regional Socioeconomic Monitoring Network in Island Countries, improvement of regional information sharing, data analysis and evaluation of SocMon project

Final Progress Report for the period October 1, 2007 - September 30, 2009

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Contact information:

CORDIO East Africa, #9 Kibaki Flats, Kenyatta Beach
PO. BOX 10135, Bamburi, 80101, Kenya
Tel/fax: +254-41-5486473. E-mail: iwanyonyi@cordioea.org URL:
www.cordio.org, www.cordioea.org

Principal investigator or contact responsible for conducting the project:
Innocent Wanyonyi

Geographic coverage of the project: Western Indian Ocean countries within the Nairobi Convention/UNEP Regional Seas region
African mainland countries - Kenya, Tanzania, Mozambique
Indian Ocean Islands- Comoros, Madagascar, Seychelles, Mauritius

1. ACKNOWLEDGEMENTS

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2. INTRODUCTION

CORDIO East Africa (Coastal Oceans Research and Development in the Indian Ocean, formerly Coral Reef Degradation in the Indian Ocean) has been lead implementer of SocMon in which primary regional partners the IUCN-World Conservation Union, the Western Indian Ocean Marine Science Association (WIOMSA), the Seychelles government and World Wildlife Fund for nature Ecoregion programme (WWF-EAME) and various site partners participated actively. The main site partner for activities implemented under grant award NA07NOS4630028 were Seychelles Centre for Marine Research and Technology-Marine Parks Authority (SCMRT-MPA) and Community Centered Conservation (C3).

SocMon WIO was born out of the need to increase the quality and availability of socioeconomic information in the Western Indian Ocean (WIO) region to help decision makers and managers make informed decisions in relation to coastal and marine resources management. This is the final progress reporting for activities under the grant award number NA07NOS4630028 whose objectives were revised as follows:

1. a) To establish 2 new sites for Socio-economic monitoring bringing the number of sites participating in the SocMon WIO network from 12 to 14;
b) To conduct a data analysis, training & writing workshop
2. To strengthen sites capacity for the future sustainability of monitoring in SocMon WIO:
 - a) To implement field-based training modules for SocMon through the soon to be established regional network of trainers;
 - b) To implement SocMon WIO site databases at the new sites
3. To develop regional and global Socio-economic information sharing systems
 - a) To analysis of data from site databases at regional level to generate regional patterns and to provide information
 - b) To disseminate the regional information outputs in forms compatible to the global Reefbase socio-economic database and posted on the world wide web;
4. To consolidate the regions Socio-Economics working group at national nodes paying particular attention to increasing activities at one new national programme, the Comores to strengthen their national programme
5. To conduct a review and evaluation of SocMon,

- a) To assess SocMon WIO implementation and make recommendations for the ways forward for sustainability in the region
- b) To conduct joint programmes and evaluation/assessment with other regional SocMons.

Details of activities under each of the objectives were reported during the intermediate project progress reporting's, this is final progress report summarises achievements made during the 24 months period of implementation from October 1 2007- September 30 2009 following the granting of 6 months extension and change of budget lines.

3. ACHIEVEMENTS OF EACH OBJECTIVE UNDER THIS GRANT

Objective 1

A revised project plan was made in which SocMon WIO was allowed to initiate 2 new sites instead of 3 new sites as originally proposed, the 1 site for South Africa at Coffee Bay in Kwa Zulu was cancelled thus bringing the total number of sites supported directly under SocMon WIO initiative by CORDIO to 14 and not 15 in countries of the WIO. During this period a balance of the portfolio of sites was achieved by ensuring focus on the Island sites, the two new sites were initiated in Seychelles by the Seychelles Centre for Marine Research and Technology-Marine Parks Authority (SCMRT-MPA) at Curieuse Marine National Park and neighboring coastal communities and at Ste Anne Marine National Park and neighboring coastal communities of Mahe East Coast. The two sites completed a technical report on their work which has now been incorporated into regional reporting.

Instead of initiating SocMon at a third site, a change of budget lines was granted enabling SocMon WIO to hold a sub-regional data analysis workshop. The WIO SocMon team recognized the fact that data collection, analyses, storage, and accessibility can have a significant impact on current and future application of SocMon data. At some sites, team members had very limited computer knowledge and analysis skills, this prevented data to be analysed, disseminated and being taken up. The data analysis training was held from November 7 - 11, 2008 for sites from mainland countries of the Western Indian Ocean that participate in SocMon i.e. Kenya, Mozambique and Tanzania. There were 14 participants including non SocMon sites with interest in SocMon participated. The training workshop provided

data managers needed skill to do SocMon data entry on their own, to analyze, to disseminate results accordingly and to write reports for different level audiences.

Objective 2

SocMon is home grown and has adopted a site-based approach including training of new SocMon teams. The regional team of trainers includes 7 people from Seychelles; Rodney Quatre of SCMRT-MPA was assigned to conduct the training for the 2 new Seychelles site teams at Curieuse and Ste Anne Marine National Parks. The new teams included 2 new SCMRT-MPA staff who were assigned the responsibility of SocMon site coordinators.

Objective 3

After the global programme de-emphasised the global database with original data, CORDIO East Africa focused on consolidating outputs from all the site databases into a regional output written up as a WIO report. This has now been incorporated as an ongoing activity that will always lead to updating of the report annually with new site monitoring results.

The emphasis was to learn from and share experiences among sites in the WIO region. A major tool identified to achieve this objective was the use of the Website for Western Indian Ocean Marine Science Association which hosts SocMon WIO WebPages (www.wiomsa.org) including availability of all SocMon tools on the website.

Objective 4

A national network was set up in the Comoros with assistance of CORDIO East Africa to facilitate C3 (Community Centered Conservation) who lead the process, training and coordination was also provided to AIDE (Association d'Intervention pour le Developpement et l'Environnement) who were first to do SocMon in Comoros.

Objective 5

An evaluation of monitoring at 14 SocMon sites and other non-SocMon supported was completed. SocMon WIO initiative has supported the highest number of monitoring conducted within the WIO region. Since 2003, a total of 39 monitoring cycles have been conducted in the WIO, of which 28% by Non Governmental Organisations (NGOs) have completed reporting while another 28% by government managed sites have not submitted complete technical reports and will continue into

2010. Exemplary sites that have already used SocMon information at the local management site level include Tanga, Msambweni, Riviere Banane, Quirimbas, Andavadoaka, Velondriake, and RUMAKI sites. A few countries have started incorporating SocMon information at national level e.g. the Beach Management Unit (BMU) regulations in Kenya which have benefited a lot from Msambweni information. Sites' needs, situations and context varied across the region, their objectives for doing the monitoring also varied thus a large number of socioeconomic variables have been investigated across the sites. However most sites started by monitoring occupations, source of income, as well as resource use patterns. Site level managements were mostly interested in detecting changes in what people did for a living and how they do it in relation to marine and coastal resources. Sites have also assessed or monitored perceptions of resource conditions, problems and solutions, perceived level of impacts of activities, compliance, enforcement, awareness of rules and regulations. Few sites investigated Material Style of Life, which indicates trend in the well being of coastal communities.

Some of the main constraints to SocMon in the WIO were identified as being regular staff changes and the need for continued capacity building and training in SocMon at site levels; Financial and human resource constraints and the need for continued funding support at the local level and to disseminate experiences at regional level; Access to information and the need to ensure socio-economic information sharing at national levels for ease of access to each country's stakeholders

4. CONCLUSION

By the end of the funding period under the NOAA grant award *NA07NOS4630028*, the SocMon WIO programme coordinated by CORDIO EA has achieved desired results for the intended objectives, which in effect has solidified the foundation of socioeconomic monitoring in the region.

5. APPENDIX 1 REPORT SUMMARY- SOCMON IN SEYCHELLES

The newly formed Seychelles National Parks Authority (S.N.P.A), formerly known as the Seychelles centre for Marine Research and technology – Marine Parks Authority (SCMRT-MPA) implemented SocMon at two sites in Seychelles:

Curieuse Marine National Parks



The Curieuse Marine National Park was designated in 1979, more than 21,000 tourists visited the island in 2007, it is



one of the most visited in the Seychelles. Main attractions in the reserve include giant tortoises in the wild, natural forest of the endemic coco de mer palm, mangrove trails, turtle rookeries, snorkeling and diving among others It is also the only Marine Protected area in the area of Praslin/La Digue which offers B.BQ free of charge. Curieuse MNP plays a very important role in socio-economic development of the Praslin community.

Ste. Anne Marine National Parks



Ste Anne was one of the first designated Marine Protected Areas in the South Western Indian Ocean. Attraction to the island include



glass bottom boats, snorkeling and B.B.Q. its also frequented by yachts as it provides shelter from prevailing winds, The MNP will experience significant increase in development with the planned construction of 3 new 5 star hotels, a residential development and a marina.

The SocMon work was carried out during the period October 1 2007- September 30 2009.

Purpose of the Socio-economic monitoring

The main purpose for carrying out the socio economic surveys at both sites was to look at the current conditions of these marine protected areas and get feed back from various stakeholders with regards to the sate of the natural environment, the threats as well as their views the tourism activities/developments. The information collected in the long term will show whether the various tourism activities and developments in these two marine parks are actually benefiting the community or not. It will also show perceptions of the stakeholders of management of these two parks and help identify any needs for change in approach.

Indicators selected at the two Seychelles sites

- Tourist profile K27
- Community Incentives K34
- Attitudes and perception
- Perception of resource conditions S19
- Perceived threats S20
- Awareness of Rules and Regulations - S21
- Enforcement S23
- Perceived Coastal Management problems and solutions - S24
- Non-market and Non-use values - S28

Results at the Sainte Anne Marine Park were quite similar to that of Curieuse.

Results at the Curieuse Marine Park

Perception of resource conditions

Mangrove, forest, beaches were perceived to be in very good and good conditions by above 43% interviewed while at least 35 % thought mangrove were very good and sea grass were not good nor bad (average condition). 28 % perceived coral reefs to be good and another 28% thought they were not good nor bad (average) and 18% thought they were in bad or very bad condition.



Perceived threats

The highest perceived threat was anchor damage from yachts visiting the marine parks, especially cruise linersim and smaller cruises followed by Uncontrolled

development mainly on Praslin island, Poaching/Illegal fishing, Pollution, and erosion respectively. These 5 combined accounted for a total of 84% of perceived threats

Awareness of Regulations

The level of awareness of regulations with regards to various activities relating to a marine park amongst the various stakeholders was very high above 55% for most and highest for fishing shell/sand collection and lighting of beach fires.

Compliance and Enforcement

There were few areas where stakeholders thought there was very little or no enforcement the highest being hotel development 20% while for most other areas it was up to 10%. On the other hand 18% thought there was full compliance with lighting of fires.

10% of stakeholders interviewed thought that there was very little or no enforcement when it comes to poaching and hotel development. While 15% and 10% thought there was full enforcement on lighting of fires for BBQ's and collection of shells respectively.

Non- market and Non-use values

Between 65-75 % fully agreed with the statements that: A) The reefs are important for protecting land from storm waves. (indirect non-market value), E) I want future generations to enjoy the mangroves and coral reefs. (bequest non-use value) and G) We should restrict development in some coastal areas so that future generations will be able to have natural environments. (bequest value)

And 55% fully agree that F) Fishing should be restricted in certain areas even if no one ever fishes in those areas just to allow the fish and coral to grow. (existence value)

Between 41-70% completely disagreed with the statement that B) In the long-run, fishing would be better if we cleared the coral. (indirect non-market value), D) Coral reefs are only important if you fish or dive. (existence non-use value) and H) Seagrass beds have no value to people. (existence value)

33 & 30% stakeholders respectively fully agree and agree that C) Unless mangroves are protected we will not have any fish to catch. (indirect non-market value) while 22% fully disagree.

Results for the Sainte Anne Marine Park.

Perception of Resource conditions

There is no significant mangrove habitat within the Sainte Anne Marine National Park. For existing resources, 55-63% of interviewed stakeholders thought seagrass, upland forest and beach resources were still in good condition. While 45% thought corals were average and 35% thought they were in bad condition

Perceived Threats

In addition to development, anchoring and poaching/illegal fishing that were seen to be threats in Curieuse, reclamation was also an important threat in Ste Anne. Respondents believed that the extensive reclamation works carried out along the East Coast of Mahe during the past 20 years or so have had negative effects on the marine ecosystems of Ste Anne, especially the coral reefs.

Awareness of Rules and regulations

The level of awareness of existing rules and regulations within the park was very high in all areas, ranging from 86% in fishing to 70 % in hotel development while non awareness was very low, ranging from 20% in fishing to 30% in hotel development

Compliance and Enforcement

Most respondents believed that there was very little or no compliance for hotel developments, poaching, water sports and the collection of shells was more or less sufficient compliance with regards to the lighting of fires/BBQ, residential development and marine transport

Non- market and Non-use values

Most of the stakeholders were aware of the indirect benefits from marine and terrestrial ecosystems and the need for some form of environmental protection including MPAs

Over 65% of responses fully agree that A) the reefs are important for protecting land from storm waves. (Indirect non-market value), E) I want future generations to enjoy the mangroves and coral reefs. (Bequest non-use value)

F) Fishing should be restricted in certain areas even if no one ever fishes in those areas just to allow the fish and coral to grow. (Existence value) G) We should restrict development in some coastal areas so that future generations will be able to have natural environments. (Bequest value) and 50% fully agree that

Over 65% of responses strongly disagreed that B) in the long run, fishing would be better if we cleared the coral. (Indirect non-market value) and 40-45 % strongly disagree that H) Seagrass beds have no value to people. (Existence value), and that D) Coral reefs are only important if you fish or dive. (Existence non-use value)

30-38% either fully agree or agree that C) unless mangroves are protected we will not have any fish to catch. (Indirect non-market value)

Conclusion

Over all for both sites, most feedback from the stakeholders seemed to show that most of the resources are still in good condition, except for coral reefs, this is mainly due to the slow recovery of the coral reefs around the inner granitics of the Seychelles. Turner et. al. (2000) found that on 57 sites in the inner granitics, coral mortality was about 90 to 95%.

Developments, damage by anchors, poaching, pollution and beach erosion have all been identified by the stakeholders as major threats to the marine ecosystems of both Curieuse and Ste Anne marine parks. Some of the major concerns were with regards to the hotel developments, especially the size of the ones being constructed and the damages that being caused or may cause to the natural environment in and around both MPA's.

In terms of compliance, again, the same issues were of concerns and these were developments and poaching mainly. A study conducted by Woods (2004) found that only 20% of poachers thought that fish stock should be protected compared to 50% of non-poachers. Most poachers believe that fish stock cannot be depleted easily and therefore there is no need for MPA's. Work needs to be done therefore in terms of education and awareness to show this group of stakeholders the importance of MPA's.

Issues identified where park users were not complying with the rules, enforcement seemed to be absent as well. This means that there needs to be an increase in enforcement in these areas in order to improve compliance and also more education

and awareness to show the stakeholders why these particular rules and regulations are there.

Most respondents also believed that there was a need to protect the natural environment and that it is necessary to have some forms of protected areas. They were also aware of the various indirect benefits (non-market/non-use values) that ecosystems have for everyone.

Recommendations

- There should be more efforts to ensure that the current conditions of the MPA's are maintained or improved.
- More attention should be given to ensure the protection of coral reefs, so as to allow recovery to take place at a greater pace.
- More mooring buoys should be placed in the MPA's and specific areas with no coral cover should be designated for anchoring (zonation).
- There should be improved regulations and policies regarding developments, especially those regarding hotel developments
- Management for the two MPA's (SNPA) should increase enforcement to ensure that rules and regulations are maintained.
- MPA staff should be provided with more training, be better equipped and empowered to deal with major issues such as hotel development. As it stands it is the Planning Authority and Ministry of environment who have more power over any developments in MPA so therefore there might need to be some changes with regards to procedures for such processes.
- There should be an update of the existing laws and regulations, especially where fines are concerned.
- Facilities on Curieuse could be upgraded and a fee then charged for the use of the facilities (e.g. BBQ facilities). Curieuse currently has the cheapest landing fee of all the MPA's in eth area and most services are provided free of charge. The extra revenue that will be collected can then be used for better management of the MPA.
- There should be more education and awareness programmes for the general public, especially the MPA stakeholders on the importance of having marine protected areas and also show how they can benefit directly or indirectly from the natural ecosystems in MPA's as resources.

Lessons learnt from the process

One of the most important lessons learnt was the length required for a particular survey and the design of the survey forms. Most respondents, especially the boat operators, tour operators and residents were not willing to spend more than 10 minutes answering to the questionnaires. Tourists interviewed on Curieuse also showed signs of their time being taken up in a survey when they wanted to visit the island. On the other hands those interviewed on board yachts showed to be more relaxed and more willing too provide the interviewers with information.

Another lesson learnt is that most of the time stakeholders operating in the parks as well as residents were not too keen on answering questions from staff of the Seychelles National Parks Authority, even though it was mentioned that they were from the research department. In some cases people who were approached were quite hostile, some even refusing to participate in the survey. Most people are willing to talk to students who carry out the survey during school holidays.

Communication strategy

Following the completion of the surveys at Curieuse and Sainte Anne Marine National Park, the information collected was disseminated to the various stakeholders as well as the general public. This should hopefully raise awareness on the various issues that were addressed. Information to the general public will be done by the use of national media, which are mainly television, radio and the newspapers. Information to MPA management as well as policy makers can be made available via the Environmental Management Plan of Seychelles (EMPS) committee as well as making the documents made available to the relevant ministries and other governmental departments.

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Seychelles SocMon Team

The Seychelles SocMon Team consists of the following staff members from the Seychelles National Parks Authority (S.N.P.A):

Mrs. Helena Francourt (Ste Anne Site Coordinator)

Ms. Sylvanna Antat (Curieuse Site Coordinator)

Mrs. Barbara Kilindo

Ms. Michelle Etienne

Mr. Daig Romain

Mr. Rodney Bonne

Mr. Rodney Quatre

Additionally, other people who helped with the survey includes:

Ms Gilberte Gendron (Marine unit, Department of Environment)

Ms. Kettya Constance (Maritime Training Centre Student) **(M.T.C)**

Indicators selected in Seychelles sites

- Tourist profile K27
- Community Incentives K34
- Attitudes and perception
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Figure 1.0- The location *Location of Curieuse and Ste Anne Marine national Parks* in relation to the inner granitics of the Seychelles archipelago.



Summary statistics for survey data Curieuse Survey May/June 2009

- **Which aspect(s) of the Curieuse Marine Park interests you the most?**

	Nature	Beaches	Diving/snorkeling	Culture	Others
Tourists	27	13	13	8	8
Boat Operators	12	4	10	4	6
Residents	19	11	6	4	3

- **How would you describe current conditions of each of the following resources?**

1. Tourists

	5	4	3	2	1
mangroves	15	11	5		
coral reefs	1	8	8	4	11
seagrass	7	9	8	2	
forest	20	8	2		
beaches	18	13	1	1	

2. Residents

	5	4	3	2	1
mangroves	6	12	3	0	0
Coral reefs	5	6	7	4	2
sea grasses	7	4	7	4	2
upland forest	8	9	6	1	0
beaches	13	4	2	4	1

3. Boat Operators

	mangroves	coral reefs	seagrass	forest	beaches
5	4	2	5	7	10
4	6	6	3	5	4
3	5	2	5	3	1
2	0	3	2	0	0
1	0	2	0	0	0

- **What do you perceive as the top 5 major threats to the health of the coastal resources?**

1. Tourists

	Quantity
anchor damage	16
poaching	12
introduced species	6
development	16
Water sports	7

erosion	11
pollution	19
reclamation	4
Others	1

2. Residents

	Quantity
Anchor Damage	18
Poaching /illegal fishing	16
Introduced Species	3
Development	17
Water sports	7
erosion	12
pollution	12
reclamation	2
others	2

3. Boat Operators

	<u>QUANTITY</u>
Anchor damage	12
Development	8
Pollution	11
Poaching/illegal fishing	9
Water sport	4
Introduce species	5
Erosion	11
Others	4

- **Are there rules and regulations related to the following activities?**

1. Tourists

	yes	no
Fishing	25	6
mangroves	11	15
resident development	18	14
water sports	20	12
marine transportation	22	10
hotel development	22	10
Shell/sand/..	24	7
Lighting fires...	20	21

2. Residents

	yes	No
Fishing	22	1
mangrove use	7	7
residential development	12	10
Water sports	15	5
marine transportation	12	11
hotel development	13	10
shell/sand/plant collection	19	3
lighting fires on beaches /BBQ	19	4

3. Boat Operators

	Yes	No
Fishing	14	1
Residential develop	4	2
Water sports	4	9
Marine Transportation	10	4
Hotel development	4	11
Shell/Sand/Plant collection	12	3
Light fire on beach	14	1

- **To what extent do you agree with these non-market and non-use value statements**

1. Tourists

	1	2	3	4	5
The reefs are important for protecting land from storm waves	2	4	1	4	22
In the long run fishing would be better if we cleared the coral	24	3		2	3
Unless mangroves are protected we will not have any fish to catch	8	1	3	8	11
Coral reefs are only important if you fish or dive	21	3		1	6
I want future generations to enjoy the mangroves and coral reefs	4			2	26
Fishing should be restricted in certain areas even if no one ever fish in those areas just to allow the fish and coral to grow	5			5	22
We should restrict development in some coastal areas so that future generations will be able to have natural environments	3			2	26
Seagrass beds have no value to people	17	2	9	1	2

2. Residents

	1	2	3	4	5
The reefs are important for protecting land from	1	0	1	7	15

storm waves					
In the long run fishing would be better if we cleared the coral	15	3	1	1	2
Unless mangroves are protected we will not have any fish to catch	6	1	0	7	10
Coral reefs are only important if you fish or dive	9	4	4	2	5
I want future generations to enjoy the mangroves and coral reefs	2	0	0	5	16
Fishing should be restricted in certain areas even if no one ever fish in those areas just to allow the fish and coral to grow	3	1	1	4	11
We should restrict development in some coastal areas so that future generations will be able to have natural environments	2	0	0	6	14
Seagrass beds have no value to people	10	1	1	5	4

3. Boat Operators

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
The reefs are important for protecting land from storm waves	0	0	0	2	13
In the long run fishing would be better if we cleared the coral	13	1	1	0	0
Unless mangroves are protected we will not have any fish to catch	2	3	1	3	4
Coral reefs are only important if you fish or dive	5	5	3	0	2
I want future generations to enjoy the mangroves and coral reefs	0	0	2	0	13
Fishing should be restricted in certain areas even if no one ever fish in those areas just to allow the fish and coral to grow	2	1	0	0	7
We should restrict development in some coastal areas so that future generations will be able to have natural environments	0	1		2	12
Seagrass beds have no value to people	4	2	2	1	6

- **To what extent do people comply with coastal management rules and regulations?**

1. Residents

	1	2	3	4	5
Fishing and poaching in no take zone	7	9	1	3	3
mangrove use	4	1	0	5	5
residential development	6	4	5	4	4
Water sports	5	4	3	4	6
marine transportation	6	2	5	4	6
hotel development	14	1	2	2	5
collection of shells etc	5	4	4	4	5
lighting fires/BBQ	5	0	2	4	10

2. Tour Operators

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Fishing & poaching	3	1	0	0	3
Mangrove use		3	1	0	2
Residential Development	1	3	3	1	0
Water sports	4	2	2	0	0
Marine Transportation	1	0	3	3	1
Hotel Development	6	0	0	1	1
Collect Shell/Sand	2	0	3	1	2
Light Fires (BBQ)	1	1	0	0	6

- **To what extent are the rules and regulations enforced?**

1. Residents

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Fishing and poaching in no take zone	5	4	5	4	5
mangrove use	1	0	5	3	2
residential development	4	3	4	5	5
Water sports	5	3	4	2	9
marine transportation	4	2	5	3	5
hotel development	8	4	3	1	5
collection of shells etc	4	3	3	4	10
lighting fires/BBQ	3	1	2	5	12

2. Tour Operators

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Fishing & poaching	6	1	0	1	0
Mangrove use	1	0	0	1	0
Residential Develop	1	2	3	2	0
Water sports	2	3	1	2	0
Marine Transportation	1	1	2	3	1
Hotel Development	3	4	1	0	0
Collect Shell/Sand	1	3	2	2	0
Light Fires (BBQ)	1	1	0	2	4

- **How often are violators caught breaking the rules?**

1. Tour Operators

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Fishing &	2	0	3	2	1

poaching					
Mangrove use	0	0	2	1	1
Residential Develop	0	1	4	3	0
Water sports	4	1	1	2	0
Marine Transportation	2	1	2	3	0
Hotel Development	5	1	0	2	0
Collect Shell/Sand	2	2	1	1	2
Light Fires (BBQ)	3	0	1	2	2

Summary statistics for survey data Ste Anne Survey May/June 2009

- **Which aspect(s) of the Curieuse Marine Park interests you the most?**

	Nature	Beaches	Diving/snorkeling	Culture	Others
Tourists	11	15	9	4	0
Boat Operators	7	5	3	0	0
Residents	6	6	4	0	0

- **How would you describe current conditions of each of the following resources?**

Residents

	V. Good	Good	Good nor Bad	Bad	Very Bad
mangroves	n/a	n/a	n/a	n/a	n/a
Coral reefs		2	3	3	
sea grasses	3	3	2	0	0
upland forest		4	2	2	0
beaches		5	1	2	0

Boat Operators

	V. Good	Good	Good nor Bad	Bad	Very Bad
mangroves	n/a	n/a	n/a	n/a	n/a
Coral reefs			2	4	1
sea grasses		5	2		
upland forest	1	4	1	1	
beaches		4	3		

Tourists

	V. Good	Good	Good nor Bad	Bad	Very Bad
mangroves	n/a	n/a	n/a	n/a	n/a
coral reefs		4	11	5	
seagrass	5	12	3		
forest	3	14	2	1	
beaches	4	12	3	1	

- **What do you perceive as the top 5 major threats to the health of the coastal resources?**

	Residents	Boat Operators	Tourists
Anchor Damage	4	4	3
Poaching/illegal	4	3	2

fishing			
Introduced Species	1	1	2
Development	4	4	6
watersports	2	1	3
Reclamation	4	3	1
erosion	3	2	2
pollution	2	2	1
others	1	1	1

- **Are there rules and regulations related to the following activities?**

Residents	yes	No
fishing	7	1
mangrove use		
residential development	7	1
watersport	6	2
marine transportation	6	2
hotel development	7	1
shell/sand/plant collection	7	1
lighting fires on beaches /BBQ	6	2

Tourist	yes	no
fishing	17	3
mangroves		
resident development	14	6
water sports	13	7
marine transportation	14	6
hotel development	13	7
shell/sand/..	14	6
lighting fires...	11	9

Boat tour operator	<u>Yes</u>	<u>No</u>
fishing	6	1
mangrove use		
residential development	5	2
watersport	6	1
marine transportation	4	3
hotel development	6	1
shell/sand/plant collection	6	1
lighting fires on beaches /BBQ	5	2

- **To what extent do you agree with these non-market and non-use value statements**

RESIDENT

	1	2	3	4	5
a) The reefs are important for protecting land from storm waves. (indirect non-market value)			1	3	4
b) In the long-run, fishing would be better if we cleared the coral. (indirect non-market value)	4	2	2		
c) Unless mangroves are protected we will not have any fish to catch. (indirect non-market value)			2	3	3
d) Coral reefs are only important if you fish or dive. (existence non-use value)	4	3	1		
e) I want future generations to enjoy the mangroves and coral reefs. (bequest non-use value)				3	5
f) Fishing should be restricted in certain areas even if no one ever fishes in those areas just to allow the fish and coral to grow. (existence value)			2	3	3
g) We should restrict development in some coastal areas so that future generations will be able to have natural environments. (bequest value)			2	3	3
h) Seagrass beds have no value to people. (existence value)	2	2	4		

TOURIST

	1	2	3	4	5
a) The reefs are important for protecting land from storm waves. (indirect non-market value)			2	6	12
b) In the long-run, fishing would be better if we cleared the coral. (indirect non-market value)	14	3	3		
c) Unless mangroves are protected we will not have any fish to catch. (indirect non-market value)			4	7	9
d) Coral reefs are only important if you fish or dive. (existence non-use value)	15	2	3		
e) I want future generations to enjoy the mangroves and coral reefs. (bequest non-use value)				4	16
f) Fishing should be restricted in certain areas even if no one ever fishes in those areas just to allow the fish and coral to grow. (existence value)			2	3	15
g) We should restrict development in some coastal areas so that future generations will be able to have natural environments. (bequest value)			2	3	15
h) Seagrass beds have no value to people. (existence value)	1	13	6		

TOUR OPERATOR

	1	2	3	4	5
a) The reefs are important for protecting land from storm waves. (indirect non-market value)			1	3	3
b) In the long-run, fishing would be better if we cleared the coral. (indirect non-market value)	4	2	1		
c) Unless mangroves are protected we will not have any fish to catch. (indirect non-market value)			1	5	1
d) Coral reefs are only important if you fish or dive. (existence non-use value)	5	2			
e) I want future generations to enjoy the mangroves and coral reefs. (bequest non-use value)				3	4
f) Fishing should be restricted in certain areas even if no one ever fishes in those areas just to allow the fish and coral to grow. (existence value)			1	4	2
g) We should restrict development in some coastal areas so that future generations will be able to have natural environments. (bequest value)				4	3
h) Seagrass beds have no value to people. (existence value)	1	3	2	1	

- To what extent do people comply with coastal management rules and regulations?

Residents	1	2	3	4	5
Fishing and poaching in notake zone	4	2	2		
residential development			3	5	
watersport		4	3	1	
marine transportation		1	3	4	
hotel development	3	3	2		
collection of shells etc		4	2	2	
lighting fires/BBQ		1	2	5	

Tour operator	1	2	3	4	5
Fishing and poaching in notake zone		4	2	1	
residential development		5	2		
watersport		4	2	1	
marine transportation		1	5	1	
hotel development	3	1	2	1	
collection of shells etc		4	2	1	
lighting fires/BBQ		1	3	3	

1 = No Compliance
 5 = Full compliance

- How often are violators caught breaking the rules?

Residents

	1	2	3	4	5
poaching		4	3	1	
residential development		1	3	4	
watersport		3	2	3	
marine transportation		5	2	1	
hotel development	3	3	1	1	
collection of shells etc		4	3	1	
lighting fires/BBQ		1	3	4	

Boat/tour operators

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
poaching		4	3	1	
residential development			4	4	
watersport		3	3	2	
marine transportation		2	5	1	
hotel development	2	3	2	1	
collection of shells etc		2	3	3	
lighting fires/BBQ		1	2	5	

1 = No enforcement
 5 = Full Enforcement



6. APPENDIX 2 REPORT SUMMARY OF THE SOCMON WIO EVALUATION

The evaluation study sought to take stock of the progress and gains made in the socioeconomic monitoring carried out over the past five years in different sites across the region. The basic aim was to find out whether the objectives of the initiative have been matched and met with the individual site objectives. The evaluation also sought to understand the challenges faced in the course of carrying out the monitoring activities with a view of providing solutions and recommendations to these challenges and ultimately improve the next monitoring cycle. This will also be the basis of developing a new Regional Strategic plan for SocMon WIO for the period 2011 – 2016. The Strategic plan (2004 – 2009) currently in use was also re-assessed to ascertain its success so far.

Monitoring has been carried out in 16 sites across the WIO. These sites were evaluated to ascertain the impact of the programme on the intended target groups and the abilities of the local sites to implement the whole monitoring process with the training, funding and technical support provided.

Evaluation was carried out based on the project reports from all the sites where the SocMon programme was implemented, periodic reports, workshop proceedings, tools and guidelines, articles and papers were also evaluated. This was done to find out if these outputs were presented in a system and format pursuant to the needs and capacity of the target audience. The intrinsic quality of the outputs in terms of the information they conveyed, was also evaluated.

The purpose of the evaluation therefore was to:

1. Determine the extent to which the overall objectives of the programme have been achieved.
2. To assess the effectiveness of the different processes used to achieve the objectives
3. To assess the quality of the products emanating from the process

The objectives of the evaluation were to:

1. Establish whether the project has met its objectives
2. Establish how successful the project management has been
3. Determine whether the outcome of the project has been useful to the intended recipients

4. Identify ways the project can be improved

Achievements and evaluation of the project against objectives of SocMon WIO as provided in the strategic plan 2004-2009:

Objective # 1: Establish socio-economic monitoring at a representative suite of sites in the region, managed by different partners under a single framework.

Development of a monitoring process and the associated information management system at the local/project level was to be eased by the inclusion of local level partnerships. Moreover, the role of a SocMon regional team, identified under the SocMon WIO framework is to facilitate the implementation of the initiative's vision and strategy by establishing a functional regional socio-economic monitoring network of sites around the region.

Initially, 10 sites were selected to form a network that became base whose capacity was to be developed to enable them effectively build not only database for socioeconomic information in the region, but also come up with a response to data management, storage and analysis challenges experienced at these very sites. The criteria for selecting the sites mainly hinged on their homegrown need to carry out socioeconomic monitoring.

As a precursor to this, a lot of capacity development had to be integrated into the SocMon Program. The Programme advanced the site based training module in which an entire site team was trained at the site and training tailored specific to site conditions. Later, a training of trainers (ToT) workshop was held in Seychelles in 2007 whose aim was to help initiate the development of in country capacity by training more resource persons to conduct the site based trainings. Following this training, a *Guide for Trainers* was developed in English and French as a guidance tool for the trainers. Technical and other support to the SocMon network was to be provided to the sites by SocMon WIO through continued technical assistance and training in socioeconomic monitoring techniques, provision of SocMon trainers and coordination.

Another capacity development was related to data management. Through the network of sites, SocMon WIO developed a site level database in addressing the challenges associated with ineffective data management and analysis procedures at regional level, each site team was trained in the use of this vital tool. The site databases were also integrated at the regional level in conformity with the SocMon Global platform originally based on the SocMon-reefbase Global database but later revised to site summaries. Broader comparisons between sites, information and experience sharing was thus to be achieved through this database.

CHALLENGES FACED IN IMPLEMENTATION OF THIS OBJECTIVE

High implementation costs: experience from project implementation revealed that for sites implemented in partnership between two institutions such as the transboundary Kenya-Tanzania site and the Andavodoaka site in Madagascar bore higher costs.

Logistical issues: Reaching some of the sites sometimes posed a challenge not in as far as the sites were far-flung, but with regard to dependence on inefficient infrastructural network.

EVALUATION OF THE SUCCESS IN ACHIEVING THIS OBJECTIVE

At inception, the SocMon initiative did not put a ceiling on the number of sites to be established within the envisaged network, consequently there is the possibility of establishing more sites in response local needs. So far 16 monitoring cycles have been conducted and 14 sites established. This objective is therefore deemed ongoing and has been successful.

Objective # 2: Facilitate coordination of monitoring activities in the Western Indian Ocean through a socio-economists network, promoting standardised monitoring throughout the region.

A Regional Partnership Workshop held in 2005 in Mombasa, drew project managers and social scientists from 11 countries in the region and set in motion processes that started the development of the regional SocMon WIO process. The resultant need for one organisation to spearhead this network put CORDIO at the pinnacle of the coordinating structure. The coordination duties are handled by and through a SocMon WIO coordinator, who is backed by a SocMon Advisory Board comprised of experts and key regional figures. This board provides advice and support on technical issues concerning socioeconomic monitoring in the WIO when called upon. Site co-ordinators co-ordinate all activities necessary for carrying out all SocMon functions at site level, and are responsible for keeping the sites updated with new SocMon WIO information and updates.

CORDIO (EA) is the coordinating organization in this initiative and through products such as the SocMon manual for the Western Indian Ocean which was printed in English and later translated and printed in Portuguese, French and Kiswahili. CORDIO hopes to standardize monitoring activities in the region in order to yield

comparable results which will be the basis of the regional, and subsequently, the global database. Consequently the CORDIO hub provides continuous training and support to all sites in the region to encourage these site projects to establish an extensive SocMon WIO network.

Table 1: SocMon sites and implementing partners at the site

	SocMon Site	Country	Local Institution	Implementing	Description of site
1	Tana Delta	Kenya	Kenya Wildlife Service/ Marine Forum KESCOM	Kenya	Mainland, artisanal fishery and larger scale estuary
2	Diani-Chale Marine Reserve	Kenya	CORDIO (EA)		Mainland, artisanal fishery, tourism
3	Msambweni	Kenya	Kenya Fisheries Department		Mainland, artisanal fishery
4	Shimoni- Muheza Trans- boundary	Kenya & Tanzania	Kenya Marine Forum, Coastal Zone Conservation Project, KESCOM, Tanga Coastal Resources Centre	Tanga	Mainland, trans-boundary area, artisanal fishery and larger scale
5	Tanga	Tanzania	Tanga Coastal Zone Conservation Project, Tanga Coastal Resources Centre		Mainland, transboundary area, artisanal fishery, some tourism
6	Rumaki Seascape Mafia Island Marine Park	Tanzania	Mafia Island Marine Park (MIMP) and WWF Tanzania M		Remote, small island, some tourism
7	Mnazi Bay- Ruvuma Estuary Marine Park	Tanzania	Mnazi Bay-Ruvuma Marine Park (MBREMP)	Estuary	Remote, artisanal fishery, large estuary, trans-boundary issues
8	Quirimbas Marine National Park	Mozambique	WWF Mozambique		Remote small Islands, artisanal fishery
9	Andavadoaka	Madagascar	Blue Ventures, Conservation Society	Wildlife	Island, Artisanal fishery, remote
10	Velondriake Community Marine Area	Madagascar	Blue Ventures		Islands, tourism, small scale fishery
11	Rodriguez	Mauritius	Shoals Rodriguez		Islands, artisanal fishery, some tourism, relatively developed
12	Grande Comore	Comoros	Association of Internation for Development and the Environment (AIDE)	Centered	Islands, artisanal fishery for Moheli, some tourism
13	Mitsamihouli and Moheli Marine Park	Comoros	Community Conservation (C3)		Islands, artisanal fishery for Moheli, some tourism
14	Curieuse Marine National Park	Seychelles	Seychelles National Parks Authority (S.N.P.A) formerly Seychelles Center for Marine Research and Technology, Marine Park Authority (SCMRT – MPA)		Islands, tourism, small scale fishery
15	Ste Anne Marine National Park	Seychelles	Seychelles National Parks Authority (S.N.P.A)		Islands, tourism, small scale fishery

Objective # 3: Establish a functioning Socio-Economists Network based on activities in the monitoring programmes and dissemination of information.

Coordination and networking among the established network of partners is paramount to the SocMon initiative since this not only encourages wide consultations and exchange for information and experiences, but also enables easy comparisons of results to be made at the regional level, effectively making them more relevant at the global level. Close collaboration, partnerships and sharing of experiences will also help in learning and where necessary tailoring study methods in response to different site demands and in line with their unique characteristics.

Objective # 4: Establish a coordinated data archiving reporting and sharing protocol for partners within the region and applicable to sites outside.

For a better and in-depth understanding of the coastal resources, and associated threats to human beings effective monitoring systems should by necessity integrate both biophysical and socioeconomic perspectives in their enquiries. A regional workshop (WIOMSA/IUCN 2003) provided an ideal forum calling for social scientists' involvement in coastal management and research. amid the acknowledgement that socioeconomic monitoring is widely been put forward as an important tool for the improvement of management of coastal resources in the region. CORDIO saw the need to develop a database that will be both responsive to these needs and also transcend the challenges posed in doing so. The SOCMON Microsoft access-based database sought to do this. This database has gone need-driven refinement and improvement as it remains one of the ways of solving the problem of the need for raw data both at site and at regional level. With the set-up database easing information gathering and presentation, there was a need to set up the relevant reporting mechanisms and protocols to enable uptake of generated information, especially to the end-users, who were the primary target of the overall initiative. Communities and local stakeholders were identified as primary recipients of information to necessitate awareness and active participation in existing governance systems. Coastal resource managers were also targeted for reception of data that they would use for decision-making and management purposes. The same data was also deemed important in research and intervention purposes in as far as studying long term and comparative societal dynamics. SocMon products borne out of this initiative addressed these reporting needs. The products were tailor-made to specifically address the different segments of stakeholders.

EVALUATION OF THE SUCCESS IN ACHIEVING THIS OBJECTIVE

- As was envisaged, there was a continual need to continually refine the database in response to unforeseen challenges that emanated from its use. However outstanding sites Mozambique, Comoros modified databases effectively for site use while Tana, Transboundary, Diani Chale effectively used existing database.
- The database required basic training on its features and use, however simplified, its hands on use still required close technical response in order to achieve accurate and uniform results in terms of usage.

Objective # 5: Establish reporting and educational guidelines for disseminating the information widely, targeting managers, government policy makers, resource users and schools.

The SocMon initiative had one major objective; which was to generate information and data to help coastal resource managers understand the socioeconomic standing as well as perceptions of resource users on this resources and their management. Since this socioeconomic context is continually changing, monitoring is done on a continual basis in order to yield information that can easily point to trends in resource use and perceptions. As such, there was deemed a need to establish reporting and educational guidelines to be used in disseminating the emanating information in a timely, organized and systematic way.

EVALUATION OF THE SUCCESS IN ACHIEVING THIS OBJECTIVE

- This objective is ongoing and its shelf life will depend on that of the project. The information presented and the tools and guidelines however need to be translated in more local languages, to increase the lateral reach as well as enhance better understanding especially in the local context.
- Beside outstanding examples of Quirimbas, Andvavadoaka, Msambweni and as yet, there is no clear feedback system to help gauge whether the information gathered from the monitoring process has been able to impact on management practices and decision-making processes, this being the very nerve of the initiative.

Table 2: SocMon planned activities' status of implementation

Planned Activity	Implementation status
Holding a Regional Partnership Workshop	The Regional Partnership Workshop was held (in June 2005)
Holding a drafting workshop for the SocMon WIO manual	The drafting workshop was held
Publishing/producing standardised guidelines in the form of a SocMon WIO manual	The Socioeconomic Monitoring Guidelines for Coastal Managers of the Western Indian Ocean were published in 2006 and then translated and published in 3 other languages (French in 2007, Swahili in 2008 and Portuguese in 2009)
Training of sites in socioeconomic monitoring techniques.	16 sites are being monitored with technical assistance from CORDIO East Africa
Development of SocMon Database at both site and regional levels.	a Microsoft Access database has been developed for archiving and analyzing data
Coordination of SocMon WIO network.	CORDIO continues to coordinate SocMon WIO work
Facilitation of reporting and awareness products for different target audiences.	Reporting and feedback systems have been put in place and are dictated by local and immediate needs.

CHALLENGES IN IMPLEMENTING THE SOCMON INITIATIVE

- Interferences and delays to start monitoring at some sites due to various reasons such as problems associated with SocMon team members at the site lacking basic computer knowledge.
- Organizational restructuring and high rates of staff changes in some institutions.
- Institutional bottlenecks: At one site SocMon work was considered of less priority in relation to other project activities and was not allocated resources on time.
- Sometimes the data collection process has been resisted in some particular communities due to community fatigue and in some instances, distrust of the whole process emanating from a lack of proper understanding of the goals and/or intentions of the exercise.

CONCLUSIONS AND RECOMMENDATIONS

- It is necessary to continue adapting other resultant products as with the guidelines and for site specific needs such as translation into local languages to ease the understanding of the objectives of the project among local communities. This would also be useful to assist in the expansion of the SocMon programme to other regions, and to expedite the training of new site teams.
- Mechanisms need to be put in place to ensure that the disseminated information not only systematically presented but is taken up by the targeted recipients. This is especially important where government agencies and organizations are concerned.
- There is need to increase the number sites monitored in order to achieve a greater representative index in the region.
- CORDIO need to work closely with the regional sites in order to select study variables that will give a clear picture on resource use and management. Some variables, such as successes in coastal management, conflicts over resources, residency, business development and ownership, sources and access to credit, management resources, tourist profile, healthcare e.t.c. have been identified but have not being investigated.
- The initiative needs more financial support in order to channel the same support to new sites in other sites within the region.
- Much of the research completed has involved only baseline monitoring or single assessments. There is however need to initiate long-term monitoring programmes, especially in response to the need to do this in some sites.
- To widen the audience and increase information uptake, channels used for sharing information and materials e.g. translation of materials to local languages, and creation of easily accessible databases.
- Inclusion of the community structures at all stages of the project should be ensured in order to achieve community ownership and acceptance both of the project process and the ensuing results.
- The goals and objectives of the project should be unequivocally explained to the community in order to avoid heightened and unrealistic expectations.

List of Selected SocMon outputs

- **GILDAS A. & HARRIS A.** “Socioeconomic Monitoring Initiative for Velondriake Community Managed Protected Area, Madagascar”
- **WANYONYI N I. *, OBURA D. & MALLERET-KING D.** “Coastal Communities Adaptation and Resiliency to Vulnerability: An Analysis of Livelihood Activities in Kenya”
- **WANYONYI I.,** *Integrating Socio-economic Monitoring at coastal management sites in the Western Indian Ocean*
- **HARDMAN E. R., BUNCE M., BLAIS E. F. I., DESIRÉ S. M., GIOVANNI S. J., RAFFIN & PERRINE S:** “Socioeconomic Monitoring Initiative at Rivière Banane, Rodriguez”
- **CORDIO (E.A)** “Expansion and Consolidation of SocMon WIO (Western Indian Ocean)”- February 13, 2009.
- **Wanyonyi, I. and Tunje, J.** “Socio-Economic Monitoring of Fisheries Resource Use patterns and Fisher’s Perceptions: Implications to the Management of Diani-Chale Artisanal Fisheries” in ‘Samaki News’ – Dept. of Fisheries newsletter, V. No. 1, April 2008.
- **CORDIO (E.A):** “Draft Regional Socioeconomic Monitoring in the Western Indian Ocean Report, December 2009”.