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PERFORMANCE ASSESSMENT OF BEACH MANAGEMENT UNITS ALONG THE COASTLINES OF KENYA AND TANZANIA

Smart Fish

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Indian Ocean Commission
Blue Tower
5th floor, rue de l'Institut
Ebene, Mauritius
Tel : +230 402 6100
Fax: +230 466 0160
smartfish@coi-ioc.org
www.coi-ioc.org
www.smartfish-coi.org

Authors
N. KANYANGE, P. KIMANI, P. ONYANGO,
S. SWEENARAIN, Y. YVERGNIAUX

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Programme for the implementation of a
Regional Fisheries Strategy for the
Eastern and Southern Africa – Indian Ocean Region

Performance assessment of Beach Management Units along the coastlines of Kenya and Tanzania

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Over the past three years, increasing focus has been put by the SmartFish Programme on better understanding the causes of failure of fisheries management by analysing the governance framework in which it is entrenched.

A regional study on marine fisheries governance in the ESA-IO, undertaken in the early days of the project, looked at assessing fisheries management in the light of so-called "Good Governance Principles", such as transparency, participation, accountability and efficiency.

Although the study revealed that much progress has been accomplished over the last decade, much remains to be done, especially as regards effectiveness, which can be gauged by analysing the various functional relationships between stakeholders (State Departments, research institutions, surveillance bodies, fishers, etc.) in the management of fisheries. The study highlighted that the poor quality of those relationships is often the result of a defective governance system, leading to compartmentalization of services, inefficient linkages between research and decision making and low levels of participation of stakeholders in the management of fisheries, among other consequences.

The Principle of participation is particularly relevant in a context where many countries tend to adopt a favourable stance on the promotion of co-management arrangements for sharing roles and responsibilities between public and private institutions. However, in most countries, participation has been limited to simple consultation of fishers and other operators on an ad-hoc basis rather than leading to a genuine partnership with systematic and clearly established interfaces.

Yet some countries have attempted to set up original institutional schemes to address the issue of participation. In Kenya and Tanzania, this trend towards the promotion of co-management arrangements, coupled with national strategies for the decentralization of government services, has resulted in the establishment of Beach Management Units (BMUs) with the aim of involving stakeholders and resource users in decision making processes related to the management of fisheries.

It is to be noted that BMUs were initially developed for Lake Victoria fisheries, and that their transposition to marine fisheries should not be considered as a straightforward process, due to different socio-economical contexts and issues related to the identification of the most appropriate and coherent level of a marine fisheries management unit.

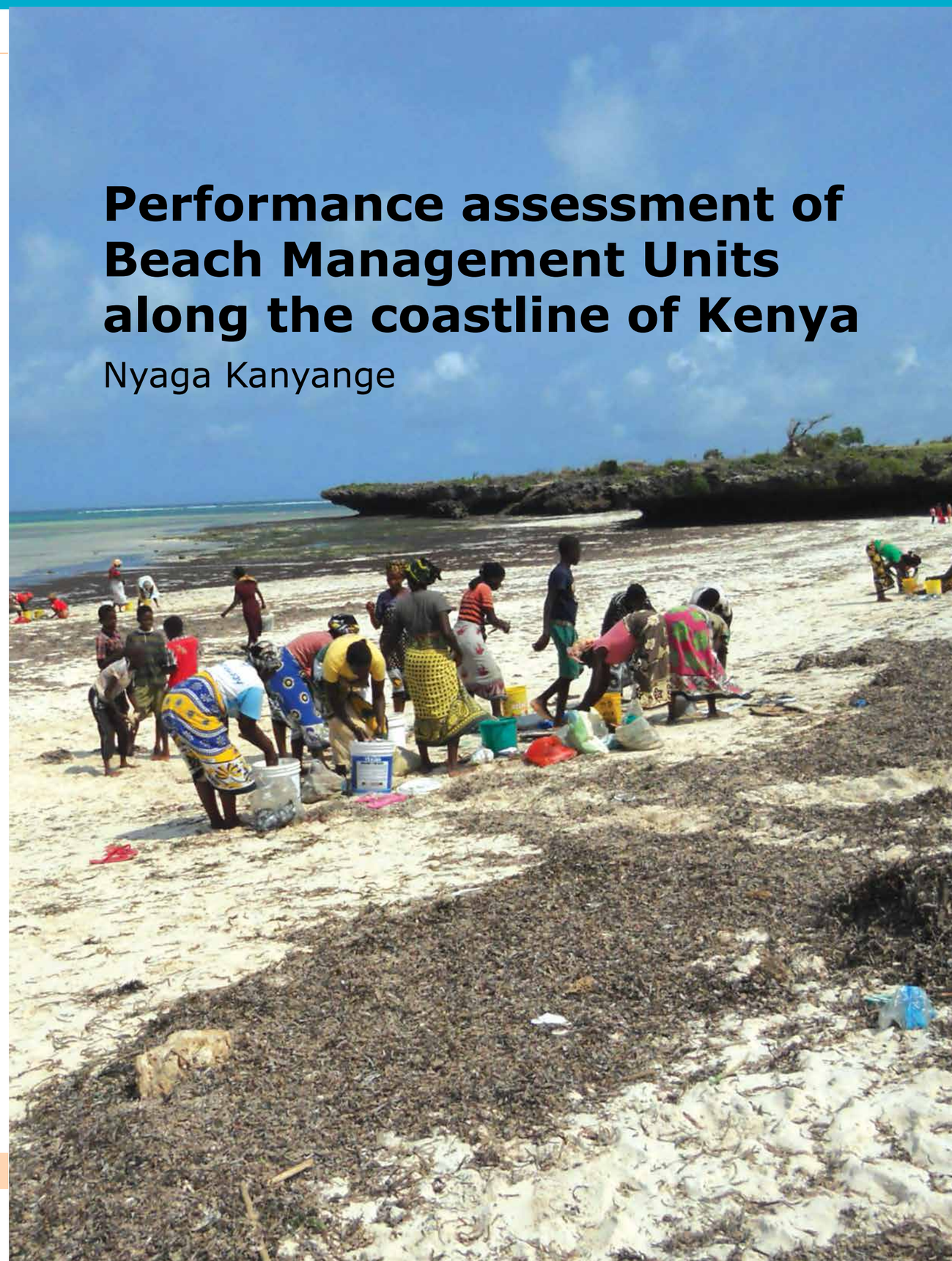
Promoted in the early 2000's as the most suitable solution for improving participation in the management of marine fisheries, BMUs, as they've been designed and outfitted, are progressively showing their limits. However, we should not draw hasty conclusions before recognizing that the way BMUs function on a daily basis remains poorly documented. Although BMUs were given a clear objective and anchored in proper regulations (2007 in Kenya and 2009 in Tanzania), to date very few assessments have been made in terms of how roles and responsibilities are shared with BMUs, and to what extent they are able to fulfil their mandate. As a consequence we still know very little about their performances in the various services that they are meant to provide to society.

The SmartFish Programme therefore undertook a study aiming at assessing the performances of BMUs, in order to broaden knowledge about this unique approach, and draw lessons that could be useful at a regional scale. A first assessment methodology was developed and piloted during a preliminary survey undertaken in Kenya in April 2012. The methodology was then used to survey a sample of BMUs along the Kenyan coastline. Results of the assessment were made available in November 2012. A methodology harmonization workshop was organized in Dar es Salaam in July 2013 in order to fine-tune the approach before replication in Tanzania. The second survey targeted a sample of BMUs along the Tanzanian coastline and preliminary results were shared in November 2013. Both studies were presented at a restitution workshop in February 2014 in Dar es Salaam. All these steps are documented within the present report.

The Indian Ocean Commission is thankful to all individuals who contributed to these studies and provided their valuable input in the preparation of this document, in particular to national consultants, field survey teams and fisheries authorities in Kenya and Tanzania. Special thanks should go to all surveyed fishers and BMU representatives for their time and cooperation. Special thanks should also go to the experts of the World Bank SWIOFish programme and WWF Tanzania who participated actively in methodology calibration jointly with the SmartFish team.

Performance assessment of Beach Management Units along the coastline of Kenya

Nyaga Kanyange



ACKNOWLEDGEMENTS

The success of this work was a result of contributions from a number of people. The efforts made by the Fisheries Department District office staff in arranging for BMU interviews was highly useful, not forgetting their willingness and enthusiasm to provide necessary information. Much appreciation also goes to BMU representatives and other key informants for their sincere responses.

Lastly, it would not have been possible to carry out the exercise without financial support from Smartfish. Thanks also to Smartfish Regional Officer, Mr. Patrick Kimani for providing necessary guidance and perusing the draft. I cannot also forget the initial efforts made by the International Consultant, Dr. Sweenarain for developing and testing the questionnaires.

LIST OF ACRONYMS

BMU	Beach Management Unit
ESA-IO	East and Southern Africa-Indian Ocean
SWOT	Strengths, Weaknesses, Opportunities and Threats
M&E	Monitoring and Evaluation
MCS	Monitoring, Control and Surveillance
CBOs	Community Based Organisation
FiD	Fisheries Department
NSAs	Non State Actors
NGOs	Non Government Organisations

1 EXECUTIVE SUMMARY

Beach Management Units (BMUs) are the backbone of fisheries co-management in Kenya, led by the Fisheries Department, Ministry of Fisheries Development. Enactment of BMU Regulations, 2007 has provided necessary legal framework for the BMUs to operate and about 73 BMUs have been formed in the Coastal region of Kenya since their introduction in 2006.

Implementation of Regional Fisheries Strategy for ESA-IO, commonly known as Smart Fish has initiated a BMU Evaluation Framework in the Kenyan coastal marine fisheries as a pilot project, in its quest to accompany the BMU process in the ESA coastal and riparian countries. The overall objective of the evaluation was to assess the performance of BMUs in the Kenyan coastal marine fisheries. Specific objectives were: i) to assess the organisational performance of BMUs, ii) to verify critical conditions for BMU success, iii) to assess individual BMU member achievements and iv) to assess lead institution governance performance.

Sampling targeted 34% of coastal BMUs situated along the 600 km Kenyan coastline. The coastline is traversed by five counties namely, Kwale, Mombasa, Kilifi, Tana River and Lamu. Structured interviews (Likert six-point scale) and Focus Group Discussions were held with BMU representatives, including executives and individual members. Structured interviews were also done with senior Fisheries Officers in each county. Standard evaluation criteria approaches of effectiveness, efficiency, relevance and other factors such as governance, socioeconomic benefits, human resource development and sustainability were employed. In particular, factors considered included organisation performance, performance assessment, critical factors for success, authority, leadership, political vision and adequacy of resources among others. Aggregated indices (arithmetic mean and 3.5 benchmark) on each item were calculated and plotted in bar graphs while descriptive data was analysed thematically.

BMU performance findings were grouped into four major categories namely; organisation profile, organisation performance, critical success conditions and individual BMU led achievements. A further breakdown of the last three factors resulted into 22 key performance, namely; jurisdiction (satisfactory), adaptability (satisfactory), organisational adequacy (satisfactory), democratic practices (satisfactory), social-cultural considerations (satisfactory), cooperation (satisfactory), collaboration (satisfactory), communication (satisfactory), mutual trust (moderately satisfactory), participation (moderately satisfactory), networking (moderately satisfactory), leadership (moderately satisfactory), conflict resolution (moderately satisfactory), representativity (satisfactory unsatisfactory), cohesion (moderately satisfactory), inclusion (moderately satisfactory), effectiveness (moderately satisfactory), resources (moderately unsatisfactory), efficiency (moderately unsatisfactory), relevance (moderately unsatisfactory), enforcement (moderately unsatisfactory) and cost/benefits (unsatisfactory). These former nine factors can be considered as major constraints to BMU survival.

A closer look at the organisation of the BMUs revealed that nearly all the BMUS were not properly registered with the Ministry of Fisheries and registration process was initially slow due to ambiguous registration requirements. Other requirements such as existence of 30 vessels also contributed to slowing of registration process in areas that could not attain this threshold. However, not all registered BMUs were functional throughout the year and BMU membership number was unlimited. BMUs received technical and financial support from the government and non-government agencies.

Factors such as jurisdiction, conflict resolution and democratic practices were among others, fairly addressed. Considering that Kenya fisheries is common access, fishing area jurisdiction was not a problem as fishing areas were largely customary and sites were shared without major problems. Democratic processes were well guided by the BMU regulations though election of good leaders was still a challenge.

On the other hand, conflict was resolved through integration of the BMU structure for conflict resolution and other people outside the BMUs, such as village elders and religious leaders. However, though it was evident that a level of communication, collaboration, cooperation and networking with resources users and stakeholders was established, there was still a problem of recognition of BMUs by other entities as legal entities, affecting cordial relationship between them.

Adequacy of resources, efficiency, enforcement, costs vs benefits were most demanding for majority of BMUs. Resources were minimal and those that were present, not well utilised. Enforcement was weak as the BMUs failed to have an enforcement mechanisms and lacked powers to arrest, though there was sometimes assistance from FiD and other government agencies such as KWS. Post harvest practices were still low as well as sales and marketing channels. Costs of running BMUs exceeded benefits. Individual members felt that most of their expectations, especially financial were not met though the level of awareness had increased. Provision of credit support had stopped and members sought financial assistance from few cooperatives that existed. On the other hand, fishing was viewed as a 'last resort' job rather than as an enterprise while stakeholder livelihood had not evidently improved.

Fisheries governance assessment was based on 15 key performance indicators namely, information management (satisfactory), conflict resolution(satisfactory), political vision (satisfactory), authority (satisfactory), leadership (satisfactory), institutional human resource development (moderately satisfactory), stakeholder participation (moderately satisfactory), empowerment (moderately satisfactory), formalization (moderately satisfactory), institutional capacity building (moderately satisfactory), implementation (moderately unsatisfactory), planning capacity (moderately unsatisfactory), fisheries management (moderately unsatisfactory), financial resource management (moderately unsatisfactory) and Monitoring and Evaluation (moderately unsatisfactory). The latter seven were below benchmark and need improvement.

SWOT analysis identified major Strengths, Weaknesses, Opportunities and Threats facing BMUs. Among them are the prevailing legal backing (strength), weak capacity (weakness) and insecurity of land (threat). There lies an opportunity to build capacity in various fields.

Information management, conflict resolution, and authority, among others were adequately represented. Information regarding BMU was readily available, conflict was adequately resolved, though sometimes lengthy and adequate authority set in place. In addition, there was adequate fisheries legal backing, though under review, to support establishment and implementation of BMUs. Specific legal backing in related areas such as environment and forest was lacking. There was apparently understaffing, insufficient resources, inadequate baseline studies including M&E framework and absence of a dedicated BMU unit, that among others, negatively affected delivery of services. Other hindrances included the inability to fully undertake fisheries research and inadequate interagency partnerships in order to improve legitimacy of BMUs to address crosscutting issues.

Key recommendations

i. Expansion and strengthening of existing BMU financial and technical resource bases.

ii. Registration of BMUs as Fisheries co-management institutions

iii. Conferment of fisher user rights through a co-management policy

iv. Securing of land for BMU infrastructural development

v. Improvement of fish production, marketing and distribution channels

vi. Improvement of post-harvest practices and technologies through training and provision of appropriate equipment

vii. Improvement of fisher skills to professionalise fishing and change attitude from 'last resort job' to a profitable business

viii. Reviving cooperatives since BMUs are fisheries co-management tools and cannot fully provide credit support and other social services to members

ix. Creation of a BMU special unit within the Fisheries Department to improve service delivery

x. Improvement of existing interdepartmental and interagency partnerships to address cross-cutting and emerging issues

xi. Development of a comprehensive monitoring and evaluation criteria to monitor and evaluate the performance of fisheries co-management arrangement

2 INTRODUCTION

Beach Management Units (BMUs) are the premise of fisheries co-management in Kenya. They bring altogether resource user groups and state actors to share responsibilities in resource management and conservation as an imperative to improve livelihoods of people dependent on these resources. An array of Community based organisations both formal as well informal have existed for a long time in the rural coastal areas of Kenya. However, with the enactment of BMU Regulations 402 of the Fisheries Laws 2007, the Ministry of Fisheries Development has intensified its efforts to promote BMU as an institutionalized fisheries co-management organisation in the coastal marine fisheries.

2.1 BMU ESTABLISHMENT IN COASTAL KENYA

Unlike in the Lake Victoria region where BMUs have existed for over 10 years, BMUs are more recent in the coastal region having been introduced within the last six years. Currently, there are about 73 BMUs in the coastal Kenya, including adjacent lakes and rivers and distributed along the 600 km Kenyan coastline and Islands. Their objectives, as stipulated in the BMU regulations 2007 are as follows:

(a) to strengthen the management of fish-landing stations, fisheries resources and the aquatic environment;

(b) to support the sustainable development of the fisheries sector;

(c) to help alleviate poverty and improve the health, welfare and livelihoods of the members through improved planning and resource management, good governance, democratic participation and self-reliance;

(d) to recognise the various roles played by different sections of the community, including women, in the fisheries sector;

(e) to ensure the achievement of high quality standards with regard to fish and fish products;

(f) to build capacity of the members for the effective management of fisheries in collaboration with other stakeholders

(g) to prevent or reduce conflicts in the fisheries sector.

In view of these objectives, the BMUs are mandated to support fisheries management and enhance community livelihood in an effective, efficient and sustainable manner. This role is supported by enactment of by-laws specific to each Unit and in compliance with the Fisheries Act and Kenyan Laws in general. Therefore, the Government of Kenya, through the Department of Fisheries has put in place the necessary legal framework for BMUs to operate.

Performance of the BMUs in the Coast region has not been without hitches. There have been challenges associated with leadership, capacity and general management. Documentation about their performance is thus far scanty. Generally, there is poor knowledge about the performance of Coastal BMUs since their introduction in 2006.

In its quest to accompany the BMU process in the ESA coastal and riparian countries, the Implementation of Regional Fisheries Strategy for ESA-IO, commonly known as Smart Fish has initiated a BMU Evaluation Framework in the Kenyan coastal marine fisheries as a pilot project.The proposed framework is compliant to international best practices related to Monitoring and Evaluation of community based organisations engaged in rural development.

2.2 OBJECTIVES OF THE SURVEY

The overall objective was to assess the performance of BMUs in the Kenyan coastal marine fisheries. Specific objectives were:

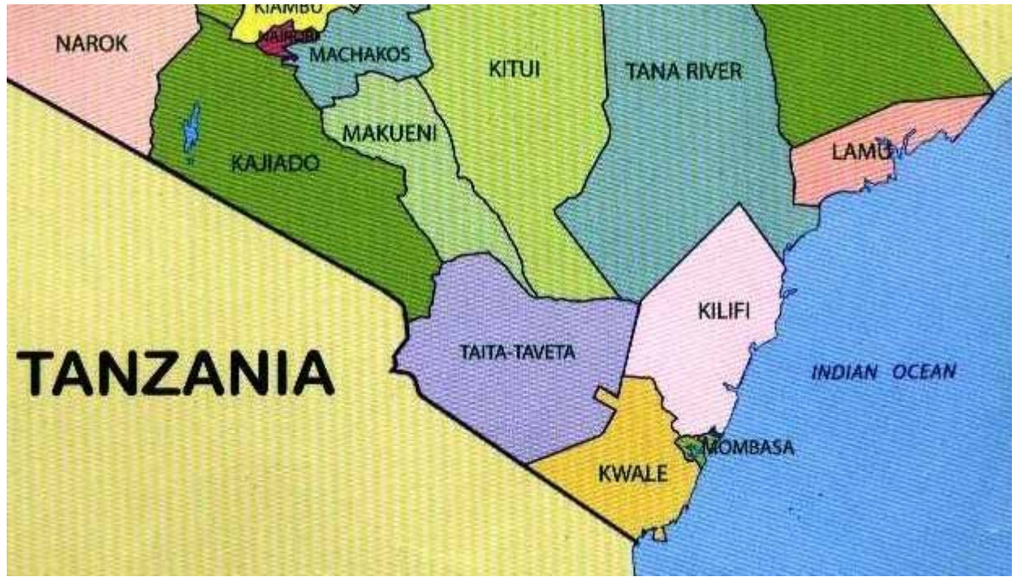
1. To assess the organisational performance of BMUs
2. To verify critical conditions for BMU success
3. To identify critical Strengths, Weaknesses, Opportunities and Threats
4. To assess lead government institution governance performance

3 METHODOLOGY

3.1 GEOGRAPHICAL COVERAGE

Kenyan coastline extends about 600 km from the northern side bordering Somalia and southern side bordering Tanzania. The BMUs are spread across the entire coastline and in the small Islands of Lamu archipelago. The registration for the BMUs by the Ministry of Fisheries Develoment has been ongoing and nearly all the 64 marine based have been registered.

Figure 1 Kenyan Coastal map showing five countries bodering the Indian Ocean



Twenty four BMUs were selected for this study covering all the 5 counties in the coast region; Kwale, Mombasa, Kilifi, Tana River and Lamu (Table 1, Figure 1). Kilifi County comprises of former Kilifi and Malindi districts and Kwale County includes former Msambweni and Kwale districts whereas the rest of the counties retained their district names and jurisdictions (Figure 1). Kwale County and part of Mombasa County are in the southern Coast while the rest are in the northern Coast. Tana River County host the Longest River in Kenya, Tana River, with an extensive delta and estuary. The only two marine BMUs in Tana River County could not be sampled due to prevailing insecurity triggered escalating resource use conflict between farmers and nomadic pastoralist communities

Table 1 List of BMUs sampled and their administrative locations (Counties)

Lamu	Kilifi	Kwale	Mombasa
Amu	Bofa	Mwaembe Kijiwe Mtu	Kidongo
Faza	Kilifi Central	Mwaepe	Likoni
Kizingitini	Mayungu	Shimoni	Mtongwe
Matondoni	Ngomeni	Vanga	Old Town
-	Takaungu	Gazi	-
-	Uyombo	-	-
-	Shella	-	-
-	Watamu	-	-
-	Kuruwitu	-	-

Table 2 Percentage of BMUs sampled against the County (Marine) total

County	County Total	Total Sampled	% of County Total
Lamu	21	4	19
Tana River	2	0	0
Kilifi	17	9	53
Mombasa	7	4	57
Kwale	17	5	29
Total	64	22	

3.2 SAMPLING METHODOLOGY

Sampling involved both personal interviews and Focused Group Discussions. These were done in a combined setting where the BMU heads (mainly chairpersons) were purposively interviewed with participation of two or more officials while an ordinary member (preferably ex-official) was interviewed separately. A second level of personal interviews targeted senior government Fisheries officers (District/ County and Provincial) was held.

3.3 ASSESSMENT CRITERIA

The Evaluation Framework was a combination of several approaches used to assess governance, organisation and management performance of BMU in the Kenyan coastal marine fisheries. The approach was partly derived from the 'Fishery Co-management-A Practical Handbook' by [1]Pomeroy and Rivera-Guieb (2006), FAO-Theory of fisheries co-management and the Logical Framework of Project Management. It consists of tracking the changes or impacts that have resulted from the implementation of the BMU using measurement criteria such as a) Relevance b) Effectiveness and c) Efficiency. Additional criteria such as governance, socioeconomic benefits and human resource development and sustainability have been incorporated.

The interviews were based on modules (annexed) developed by a senior fisheries expert through extensive literature search. This uses a Likert six-point scale as follows:

1-Highly unsatisfactory

2-Unsatisfactory

3-Moderately unsatisfactory

4-Satisfactory

5-Moderately satisfactory

6-Highly satisfactory

BMU interview modules included Organisation Performance, Performance Assessment, Critical factors for Success and BMU Led Individual Assessment. Interviews for senior Fisheries Officers focused on aspects such as Authority, Leadership, political vision and adequacy of resources among others. These two levels of interactions (Government vs BMUs) provided a perfect platform for collection, collations, clarifications and assurances.

3.4 DATA TREATMENT AND ANALYSIS

Data was entered in excel spread sheets and analysed accordingly. Aggregated indices (arithmetic mean) for each factor/indicator were calculated and plotted in graphs while descriptive data was analysed thematically. Plots were made where the factor had more than two indicators. Aggregated indices varied from 1 to 6 according to Likert scale where 3.5 was considered as the benchmark.

4 FINDINGS

Findings for BMU performance and fisheries governance are broken into various categories. Other than expert judgement and observations, the findings were purely based on perceptions, experiences and knowledge of the interviewees and were grouped into organisation profile, BMU outcomes, BMU achievements, individual benefits and fisheries governance.

BMU performance focused on organisation profile, BMU outcomes, achievements and individual benefits while fisheries governance focused on Authority, Leadership, Political Vision, Institutional capacity building, Institutional human resource development, Empowerment, Financial Resources Management, Planning Capacity, Information Management, Stakeholder Participation, Formalization, Implementation, Conflict Resolution, Fisheries Management and monitoring and Evaluation (M&E).

A SWOT analysis was also done to identify the Strengths, Weaknesses, Opportunities and Threats facing BMUs.

1 Pomeroy R.S. and Rivera-Guieb, R. 2006. FISHERY CO-MANAGEMENT: A Practical Handbook. CAB International in Association with the International Development Research Centre.

4.1 BMU PERFORMANCE

4.1.1 BMU Profile

Assessment of the BMU profile was based on general BMU information, such as registration status and year of formation, membership, BMU functions and funding sources.

4.1.1.1 BMU registration

About 71% of BMUs sampled were formed in the years 2006/2007 and the rest 2008/2010. All BMUs interviewed were already registered with few awaiting delivery of their registration certificate. Unregistered BMUs cannot perform their functions legally such as collection of levies, MCS, etc., impacting heavily on their operations.

Registration of BMUs has not been a smooth process. Initially, pilot and subsequent BMUs were registered through the Ministry of Gender, Children and Social Services, under whose mandate the registration of CBOs and Groups falls. Such registration was social based and could not give BMUs legal mandate to operate their fisheries co-management functions and hence the issuance of registration certificates by the Director of Fisheries, Ministry of Fisheries. Following this, about 33 BMUs were issued with new certificates from the Ministry of Fisheries and another problem arose. The certificates lacked authentication and could not be recognised by banks and microfinance institutions as original documents, implying that BMUs could neither open bank accounts nor access soft loans, prompting the Fisheries Department to recall them and suspend the registration process. Currently, the department is in the process of reviewing registration based on validity and social considerations and new authentic certificates will be issued. Appropriate registration of BMUs will be the first major step towards their legal institutionalisation.

4.1.1.2 BMU Membership

A BMU is made up of assembly members and the executive committee as the implementing arm. BMU assembly members ranged from 54 to 500, with 9 to 15 for executive members. Women were fairly represented in the executive committees but inadequately represented in the assemblies. BMU regulations are clear about the total number and gender composition of executives (9 to 15 and 1/3 women) and not the total number of members. Where membership was too large, it was generally observed that members lacked commitment and were not fully aware and involved in the BMUs current affairs. Large membership has been reported by [2] Pomeroy et al. (2001) to restrict effective communication and decision making. Therefore, BMU assembly membership should be limited in order to enhance effective communication and decision making.

4.1.1.3 BMU functions

BMU functions were assessed in terms of their level of activity, fisheries management, putting in place enabling environment for fisheries development and improvement of resource users livelihoods. About 91% of BMUs were active most of the time in a year and a large proportion (82%) had also ensured that there was an enabling environment for fisheries development and improvement. A relatively greater portion (64%) was already involved in various daily management activities, while 86% felt that resource user livelihood had not improved. These factors will be discussed in details in the proceeding sections.

2 Pomeroy, R. S., Katon, B. M., Harkes, I. 2001. Conditions affecting the success of fisheries co-management: lessons from Asia. Marine Policy 25: 197-208.

4.1.1.4 BMU Funding and Technical Support

Funding and technical support from various sources were evident, though the impact and rationale for funding was unclear. About 82% of BMUs interviewed had already received some technical support from government (FiD) and from NSAs including international donors. Technical support was mainly in the form of training of BMU officials in management, finances, leadership, etc. and exchange visits to see best practices. The challenge with this approach of targeting executives was the need for new training whenever a change of officials occurred. Many BMUs had new untrained executive teams since retraining was not always forthcoming with each change of guard. The BMUs entirely relied from the government and NGOs for technical support. None (0%) received technical support from other sources.

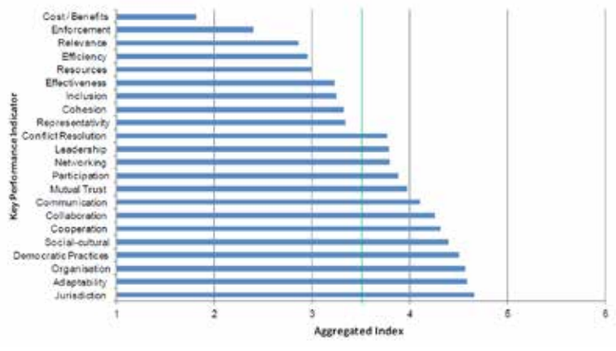
Funding from the government was indirect, where about 73% of sampled BMUs received outboard engines boats to facilitate patrols. The rationale was that BMU fisher members who owned boats would use them for patrols, or at least they would find a way of acquiring a boat. As a result, the engines were not effectively used for the intended purpose and some were rented out. The initiative would have probably worked better if both the boat and engine were provided to pilot BMUs, instead of giving many engines to many BMUs. In addition to outboard engines, 18% of sampled BMUs received indirect funding for infrastructural development. In addition, there was direct and indirect funding from local NGOs sourced from international donors where 68% of sampled BMUs benefited. Most of donor funding was directed towards improvement of infrastructure such as BMU offices, landing stations and purchase of fishing boats and gears.

Funding from other sources was minimal and generally, BMUs did not attract the attention of other potential support sources other than the government and non-government organisations. This notwithstanding, there is urgent need for additional technical and financial support from government and non-government sources.

4.1.2 BMU Outcomes

Key performance considered for BMU outcome assessment were jurisdiction, adaptability, organisational adequacy, democratic practices, social-cultural considerations, cooperation, collaboration, communication, mutual trust, participation, networking, leadership, conflict resolution, representativity, cohesion, enforcement, inclusion, effectiveness, resources, efficiency, relevance and cost/benefits. Results are summarised in figure 2, where nine out of 22 critical factors were below benchmark (marked in green line). These key performance indicators were then broken into specific indicators discussed in the proceeding sections.

Figure 2. Aggregated index for BMU key performance indicators



4.1.2.1 Jurisdiction

Jurisdiction was considered with respect to spatial delimitation of fishing areas and definition of landing site boundaries.

BMU representatives were generally satisfied with customary delimitation of fishing areas that were normally within the lagoon, about 1 to 3 kms offshore. As mentioned, fishers have shared the fishing sites for centuries without major problems. However, with the introduction of Marine Parks, some sites were hived off, increasing pressure on the remaining ones. Fishers were also refused free passage through the parks forcing them to spend extra time and fuel navigating round the parks that traverses their landing and fishing sites. Recently, though not pronounced, uncertainty has arisen and caused conflict in situations where one adjacent BMU banned use of illegal gears in their by-laws while the other did not. This may as much a case of lack of by-law harmonisation as well as unclear fishing area delimitation.

The seaward limit remains unspecified in the BMU regulations and could pose a problem should the fishers get capacity to fish beyond their customary sites. Thus far, Kenyan fisheries is common access property and access to the fishing areas remains open and anyone can fish (e.g. migratory fishers from Tanzania) as long as they adhere to BMU by-laws and fisheries regulations. Conferment of property rights to fishers/BMUs would clearly define their security, durability, transferability and exclusivity, and would require clear definition of the property (stock or area based). In advent of conferment of user rights to fishers, the current fishing area demarcation would be inadequate and would require expansion and spatial planning among other requirements.

Definition of landing site boundaries was not a major problem either in majority of BMUs since they were based on administration boundaries that were clearly defined. Problems arise where one site would not qualify to form a BMU. BMU regulations stipulate that a minimum number of 30 vessels is required to form a BMU. Therefore, BMUs with less than this number were required to merge against their will, making it difficult to manage a fairly large area. Even though delimitation of BMU landward jurisdiction seemed not to be a major problem, physical location of BMUs was. Some BMUs operated under shades of trees for fear of eviction due to lack of land tenure,others were victims of land grabbing where land allocated to private development denying fishers' access to the beaches. Generally, the physical size of BMUs was fairly manageable though physical locations seaward were not always clearly defined or existent. There is urgent need to secure land for BMU development, and revise the 30 vessel requirement and in addition spell out clear fishing site delimitations and harmonise BMU by-laws.

4.1.2.2 Adaptability and Organisational Adequacy

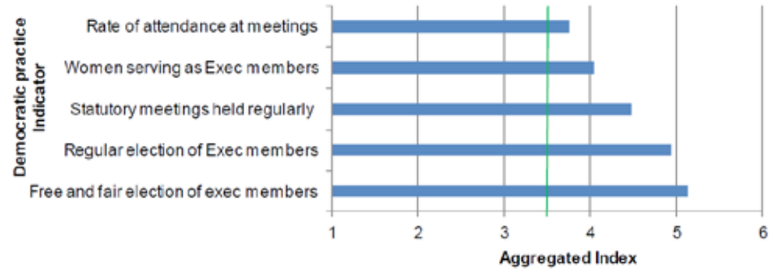
Adaptability was assessed with respect to flexibility of by-laws to match changes occurring in the fisheries sector while Organisational Adequacy focused on adequacy of legislation/institutional framework and organisational structure of BMU.

The BMU by-laws were found to be flexible enough to adapt to changes occurring within the fisheries sector since they can be amended as need be. However, their amendment has to be in conformity with the Fisheries Act, thus any delays in amendment of the Act might negatively impact on the flexibility of the by-laws. Current Fisheries Legislation is largely skewed towards fresh water fisheries and does not fully address marine fisheries issues, particularly on use/disuse or restriction of certain gears specific to marine fishing. The Fisheries Act is currently under review and such issues have been considered. On the other hand, organisational structure of the BMUs was found to be adequate, except in a few cases where members mentioned the need to have an executive oversight arm, citing that all the powers were vested in the executive. Adaptability of the by-laws and BMU organisational adequacy were generally satisfactory.

4.1.2.3 Democratic Practices

Critical factors for consideration were holding of free and fair elections of executive members, regular election of executive members, regular statutory meetings, woman inclusion in the executive and attendance of meetings (Figure 3). All these factors contributed towards democratic governance of BMUs and were above benchmark.

Figure 3 : Aggregated index for democratic practice indicators



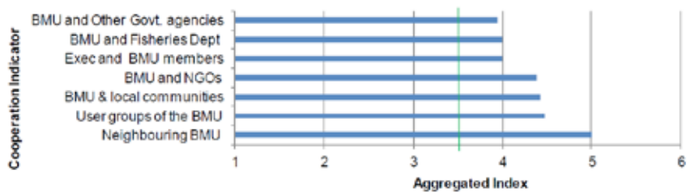
Regular free and fair elections were held in majority of BMUs as stipulated by the BMU regulations. Elections were presided by a Fisheries Officer as required. One general and quarterly meetings were held for the assembly and one monthly meeting for the executive committees. Dissolution of the executive committees before the end of their four year tenure was common and where dissolution was denied by the Fisheries Officer, the BMUs remained nearly non-functional. Women were adequately represented in the executive committees as required (1/3 gender rule) and attendance of executive meetings was reportedly higher than the assembly. Overall, democratic practices were satisfactory and election framework was adequately addressed in BMU regulations.

4.1.2.4 Socio-cultural practices

Assessment of social-cultural practices was based on Inclusion of local knowledge and social cultural practices in running of BMUs. Fishers used traditional local knowledge and skills to perform duties such as construction of canoes, dhows, outrigger canoes, nets, etc.

Use of traditional weather forecasting was also reported. This was useful in predicting changes in the sea conditions in order to guide fishers in the sea. Social cultural practices were equally observed, where applicable, such as in conflict resolution and conveying messages through the well-established community social networks. In multi-cultural, multi-religious areas, where BMU members comprised of different ethnic and religious groups, social-cultural practices were not immediately visible. Nevertheless, the inclusion of social cultural practices in running of BMUs was generally satisfactory.

Figure 4 Aggregated index for cooperation indicators

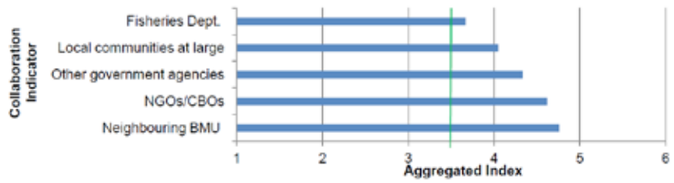


Cooperation was fairly good at all levels, except a few exceptions where there was suspicion and mistrust. This was related to lack of transparency while implementing BMU projects and affected both government and non-government organisations with which BMUs had the most interaction.

4.1.2.6 Collaboration

The level of BMU collaboration with neighbouring BMUs, NGOs/CBOs, FiD, other government agencies and local communities at large was considered and was highest between neighbouring BMUs and lowest between FiD (Figure 5).

Figure 5 Aggregated index for collaboration indicators.

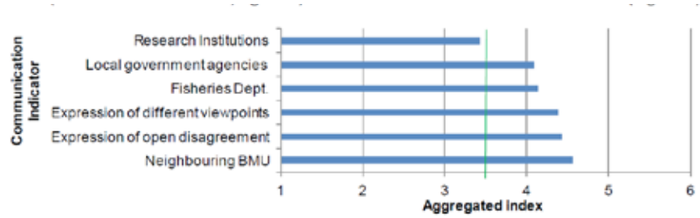


Collaboration was highest between neighbouring BMUs than any other group, probably because of proximity and homogeneity that existed between closely related or similar communities. Results also indicated that collaboration between BMU and Fisheries department was moderately unsatisfactory; a factor that can be attributed to perceived little involvement and consultation in implementing government projects aimed at BMU development.

4.1.2.7 Communication

Assessment of level of communication included factors such as expression of different viewpoints by BMU members including open disagreements, communication with neighbouring BMUs and government agencies. Communication level was highest between neighbouring BMUs (similar to collaboration, figure 5) and lowest between research institutions (Figure 6).

Figure 6 Aggregated index for communication indicators.



The level of communication varied between BMUs and other agencies. It was found out that majority of BMUs had little experience with research institutions, probably resulting in lowest communication between them.

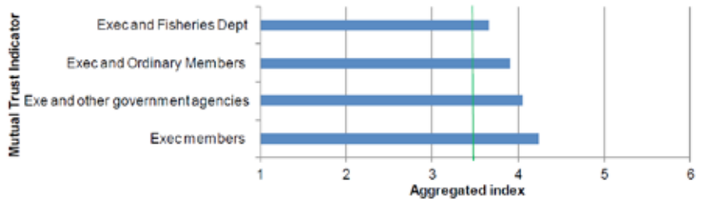
Expression of different viewpoints within BMU was fairly good though not always considered in decision making. Communication was done using letters, phones and well established social networks. Open disagreements were existent though not violent.

Cooperation, collaboration and communication were interrelated. Often, where cooperation was lacking, constructive communication and collaboration deteriorated. However, proper communication was key to successful cooperation and collaboration. Nevertheless, at all levels, cooperation, collaboration and communication were satisfactory.

4.1.2.8 Mutual Trust

The level of trust of BMU executives was assessed against government, non-government agencies, among themselves and ordinary BMU members. It was highest among the BMU executives and lowest between executives and FiD (Figure 7).

Figure 7: Aggregated index for mutual trust indicators.



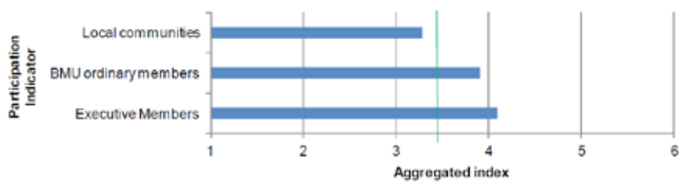
There was a high degree of trust among the executive members than between the executives and other agencies, such as the Department of Fisheries. Ordinary members did not satisfactorily trust their own executives either. It appeared as if suspicion was high among the ordinary BMU members over the executives, who accused them of misuse of funds, corruption, collusion with Fisheries Department and failure to protect their interests. However, some of the accusations were largely due to misunderstandings and poor communication between the BMUs and the executives. In spite of this, majority of BMU members seemed to have very high expectations from BMUs, while contributing very little. When these

expectations were not met, they often felt sidelined and remained adamant. The lowest level of trust between the executives and the FiD could be attributed to unwillingness by each party to rely on actions of the other. While the executives cited numerous verbal unfulfilled FiD promises, the FiD considered BMUs that did not trust to have failed leadership and mismanagement. Often, it is the executives who failed to trust the FiD than vice versa. A case at hand concerns BMUs in Mombasa County where members claimed to have been unfairly compensated over lost livelihood and fishing areas to pave way for Mombasa Sea port expansion. However, trust between the executives and other government agencies were higher than that of FiD, perhaps because of reported little and limited interaction with them. Although mutual trust was generally moderately satisfactory, there is need to enhance trust among and between different parties.

4.1.2.9 Participation

Participation of executive members, ordinary members and local communities in running of the BMUs was considered in assessing participation. Participation of executives was higher than local communities and ordinary members (figure 8).

Figure 8 : Aggregated index for participation indicators.

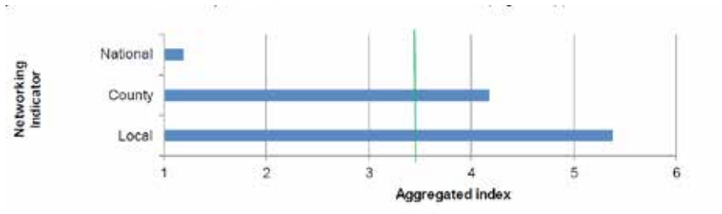


Participation was highest for executives than ordinary members and local communities. Local communities had least participation. Highest participation for executives suggests they had highest influence and probably control in decision making. Lower participation of ordinary members and local communities could be as a result of many factors, among them lack of commitment and willingness to participate. Participation for both ordinary members and local communities was moderately unsatisfactory and satisfactory for executives. There is need to investigate further and ascertain actual factors leading to lower participation of ordinary BMUs and local communities.

4.1.2.10 Networking

Networking was assessed at the local, county (district/provincial) and National levels. It was highest at the local and county levels and lowest at national level (Figure 9).

Figure 9 Aggregated index for networking indicators.

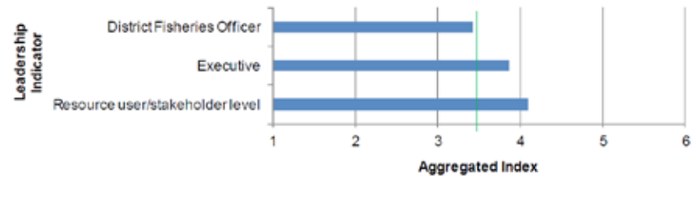


Strength of local networks could be attributed to the nature of local networks and the proximity of national BMUs. Local social networks were fairly strong and were long established before the BMUs existed through intermarriages and migrant fishing, among others. From the national outlook, BMUs in Kenya are located at two extreme locations (L.Victoria and Indian Ocean) and characterised by different fisheries and social-economic settings. Connection between these two extremes was lacking despite the effort by FiD to institute a national BMU network. The network was formed to tackle broader issues such as marketing and harmonise conflicting interests through favourable policies and programs. These issues seemed poorly understood by BMU representatives. Though this network is at its infancy, the marine/coastal region is currently unrepresented. Networking at all levels was generally moderately satisfactory.

4.1.2.11 Leadership

Leadership was assessed at the levels of resource user, BMU executives and district/county fisheries department (Figure 10).

Figure 10 : Aggregated index for leadership indicators.



Leadership at executive and FiD levels was met with many challenges. Often, at the executive level, there were allegations of misuse of funds, mismanagement, absenteeism, lack of consultation in decision making and failure to delegate responsibilities. Leadership failure at the executive level was largely attributed to the way members elected their leaders. A number of issues were noted. First, aspiring candidates took advantage of the largely semi-illiterate community and successfully lobbied for support. Second, such leaders always got support from their ethnic/kinship members if they happened to be the majority.

Third, vetting process for aspiring leaders was not always rigorous despite the presence of fairly good requirements prescribed in the BMU regulations. This scenario is reflective of the general national political situation, where incredibly bad leaders get into positions of power through the ballot using similar influences and loop holes. It was observed that good leadership in majority of BMUs was lacking and needs streamlining.

At the Department of Fisheries county/district level, laxity, poor monitoring of BMU activities and lack of transparency were cited. There was a concern that questions and clarifications raised by the BMU executives regarding certain actions by the department often received unclear and or delayed responses. Additionally, regular visits by the department officials were lacking, thus minimising contact time available to clarify issues.

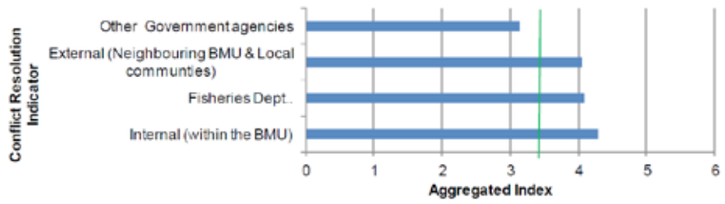
Resource users were quite independent of the BMUs. Their position towards BMUs was clear and they only engaged the BMUs at the time of need. The main concern was lack of commitment, but generally satisfactory.

Leadership at all levels was moderately unsatisfactory. Leadership streamlining is needed especially at the BMU level.

4.1.2.12 Conflict Resolution

Conflict resolution was assessed at government, external (neighbouring BMU and Local communities), non-government and BMU levels. It was highest at BMU level and lowest with other government agencies (Figure 11).

Figure 11 Aggregated index for conflict resolution indicators.



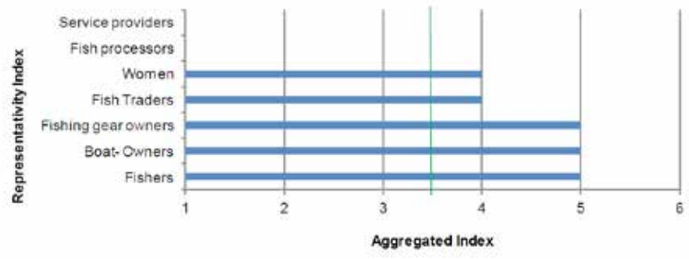
Majority of BMUs demonstrated ability to resolve internal conflicts. Conflicts were largely related to financial issues (misuse of funds) and gear use. However, conflict was rarely resolved through conflict resolution committees set up through the by-laws, rather, the entire executive was involved and facilitated by village elders. This implies BMUs opted to integrate traditional conflict resolution mechanisms with the newly instituted BMU mechanism. Consequences for offenders were mainly stern warnings and reprimands; perhaps the ''judges'' feared reprisals and blame. Where the culprits were close friends or family members of the ''judges'' it was difficult to take effective punishments. BMUs often dealt with minor but often sensitive offences. However, unresolved cases were referred to higher authorities, such as the fisheries department, chiefs, police, etc., in which case action was more severe. Thus, The FiD was instrumental in conflict resolution although disputes forwarded to them took longer to be resolved.

Cases involving BMU members and external persons were rather challenging as external parties sometimes failed to recognise the BMU legitimacy. Conflict resolution was satisfactory at all levels, except where other government agencies were involved.

4.1.2.13 Representativity

Representativity was assessed in terms of representation of different stakeholders in the BMU assembly. Representatives considered were fishers, boat and gear owners, fish processors, fish traders, service providers and women. Fishers were highly represented (Figure 12).

Figure 12 Aggregated index for representativity indicators.



Fishers were highly represented since they normally comprised of the largest BMU membership, as observed in communities that entirely depended on fishing as a main source of livelihood. The BMU regulations stipulate that boat owners and crews shall have a 30% representation each, traders 10% and others 30%. Under this category, fishers without boats belong to crew's category. Fish traders comprised of fried fish traders (mama karangas), private dealers and agents of fish processors.

Their representation in the BMU was satisfactory though in few cases overrepresented, both in the executives and assembly. Whereas the BMU regulations provide for membership of single entities, fish processors and beach restaurants were not BMU members as single entities. Instead they were represented by their agents, who also qualified to be members as stipulated in the regulations. Representation in the BMU, including women, was generally satisfactory except for processors and service providers who were represented by their agents.

Additionally, representativity was determined by many other factors including the number of registered members. One of the requirements for registration was possession of a national identity card, a document considered to be a right of every Kenyan above the age of 18 years. Verification of identity, especially near boarder points where there is an influx of people from neighbouring countries has been a challenge. Consequently, BMUs situated near the boarders could not register every willing member due to lack of identity cards. Representativity was therefore determined by not only the number of registered stakeholders, but also stakeholders possessing national identity cards. This might have also affected voting process discussed in other sections.

4.1.2.14 Cohesion

Cohesion was appraised among different stakeholders of the BMU in terms of the manner in which they related to each other and how they understood and perceived common problems, among others.

The BMU membership comprised of different categories of stakeholders, associated with different ethnic and religious backgrounds. However, cohesion was highly unsatisfactory where BMU stakeholders were comprised of different ethnic groups, such as in townships, where the Bajuni/Swahili communities dominated over local Mijikenda communities. In spite of this, unsatisfactory cohesion/solidarity was also observed in highly homogenous groups, prompting urgent need to investigate the underlying factors causing lack of cohesion in such groups. Lack of cohesion seemed to destabilise BMUs and made them vulnerable to external disturbances. Although satisfactory level of cohesion was found in about 14% BMUs, overall, it was moderately satisfactory.

4.1.2.15 Inclusion

Assessment of inclusion was based on how certain groups, particularly loose groups and women were included in BMU. Loose groups consisted of minor/unpopular stakeholders (e.g. speargun fishers, women) and other poorly unrepresented smaller groups. Speargun fishers were adequately represented in the BMUs, forming majority of BMU members in 5% of the BMUs. Though popularly accepted as non-destructive, speargun use is illegal. Other loose groups (e.g. fisher groups) were found to exist and their members were largely represented in the BMUs. However, some of these groups fizzled out as the BMUs got established. On the contrary, it was observed that some fisher groups emerged strongly in areas where the BMUs were weak and failed to represent them. Women representation was apparently inadequate. Generally, inclusion of various groups in the BMUs was moderately satisfactory.

4.1.2.16 Effectiveness

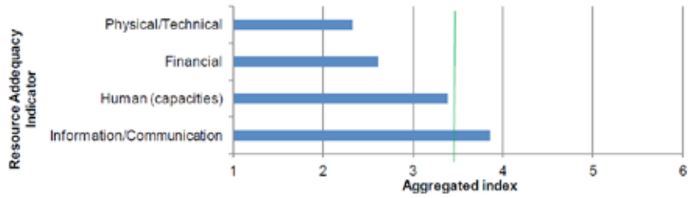
Effectiveness was appraised with regard to compatibility between BMU management objectives and stakeholders' priorities (common problems or interests).

Seven BMU objectives are clearly defined in the current BMU regulations. In a broader sense, the objectives were congruent with stakeholder priorities. The objective of poverty alleviation was the most compelling to majority of BMUs, with little achievement. Specifically, fishers expected economic gains to enable them acquire fishing vessels and gears and access profitable markets. Nevertheless, the objective of preventing and alleviating certain conflicts was satisfactorily achieved. A lot more is required to operationalise the BMUs in order to enable them achieve their objectives fully.

4.1.2.17 Resources

Available resources appraised were physical, financial, information and human. Information/communication was the highest resource indicator and physical /financial lowest (Figure 13).

Figure 13 Aggregated index for resource adequacy indicators.



Physical/technical resources were rather inadequate. Technical resources were vested in the BMU executives through trainings and support from government and non government agencies. Presence of basic functional infrastructure such as landing station, water and electricity was lacking in majority of BMUs and the existing ones were inadequate or in bad state.

Financial resources were similarly scarce. However, imminent and persistent financial wrangles suggested that the BMUs were receiving some revenue and that it was not well accounted for thus compounding the problem of financial scarcity. Financial resources are critical in supporting BMU functions and operations, without, which they would remain, handicapped.

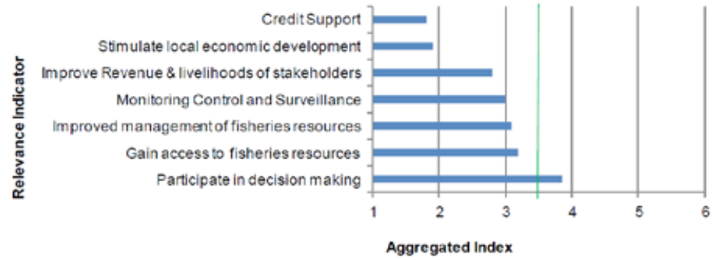
BMUs utilised little Information/communication resources within their midst. Information sources included the BMU itself, local community, government and non-government agencies. Information coming from different sources was not necessarily verified before use leading to misunderstandings and sometimes aroused conflict. Communication tools largely available, such as mobile phones were critical in communication, though maintenance was a problem.

Human resource, though at their disposal, was not fully mobilised. BMUs lack enough human support to undertake their activities.

4.1.2.18 Relevance

Factors considered when assessing relevance were level of participation in decision making, gaining access to fisheries resources, improved management of fisheries resources, Monitoring, Control and Surveillance (MCS), improved revenue and stakeholder livelihoods, stimulation of local economic development and provision of credit. All these factors were below the benchmark, except participation in decision making (Figure 14).

Figure 14 Aggregated index for relevance indicators.



As discussed in the proceeding sections, there was a certain level of involvement of members in decision making. This mainly happened during assembly meetings that were held four times in a year. However, decisions needed to be made at a higher frequency than this and the executive took charge since they met almost monthly. BMU representatives argued that involving all the members in every decision slowed the decision making process and after all, members generally lacked personal initiative to express their ideas. While this could be true, it was difficult to draw a line between issues requiring the decision of executives only and those that needed approval from assembly. Participation in decision making was moderately satisfactory.

BMUs attempted to regulate access to fisheries resources, mainly through control of entry and imposing levies as specified in the by-laws. BMUs served as entry points to the sea, such that anyone wanting to use the resources for recreation, fishing, anchoring, etc, needed to get permission from them and paid a specified fee. However some users, such as aquarium fish harvesters, contested this move arguing that they were granted licenses by the fisheries department to operate in the open access Kenyan.

It could therefore be said that, BMUs controlled access to artisanal fisheries resources, though not effectively. Imposing of levies to control access was evidently a means of income generating as opposed to improvement of fisheries management. Migrant fishers from Tanzania for instance were a good source of income as they were easily allowed to fish within the BMU jurisdiction after they paid agreed fees. Therefore, it can be concluded that imposing of levies is a means of generating income rather than improving fisheries management. Nevertheless, there is a perceived slight improvement in management of fishery resources in about 20% of BMUs, though the general perception is moderately unsatisfactory.

Stakeholder livelihoods had not significantly improved while government revenue collection slightly increased. Funding from external sources enabled a number of BMUs acquire fishing vessels and associated gears, as they perceived these as priorities. While majority of the vessels were run down in the long run, fishers directly benefited in the short run, triggering the need to carry out a comprehensive

needs assessment survey and identify justifiable sustainable livelihood interventions. On the other hand, collection of vessel licensing revenue improved slightly, as discussed in other sections.

The ability of BMUs to stimulate local economic development was rather weak due to their inability to empower stakeholders and users economically. However, since BMUs are fisheries co-management tools, economic benefits could be intangible and unquantifiable, thus BMUs had a great potential to stimulate local economic development.

4.1.2.19 Efficiency

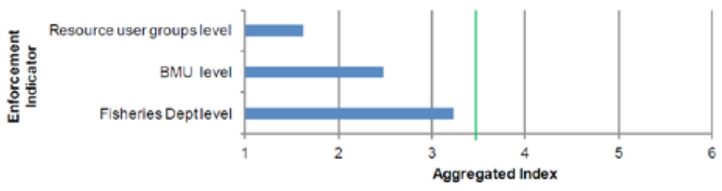
The proportionality between the size of fish resources and BMU structure was a major consideration in assessing the efficiency of BMUs.

Majority of inputs were related to fishing (mainly vessels and gears), and fishing resources did not seem to match the size of the BMU. Fisher population has increased significantly in the last 20 years following general population increase and lack of jobs. Along the Kenyan coast, fishing is viewed as a low profile job attracting less educated and jobless. Increase in number of fishers has led to increase in effort followed by relatively low catches. In some instances however, about 20% of BMU representatives mentioned that the fishing resources during the calm seasons were adequate and the major challenge was means of accessing them. Generally, the proportion between the size of fish resources and BMU structure was moderately unsatisfactory.

4.1.2.20 Enforcement

Enforcement of rules and regulations was assessed at the BMU, FiD and resource user group levels. Enforcement was largely below benchmark with the FiD level being closet to benchmark and resource user groups level being lowest (Figure 15)

Figure 15 Aggregated index for enforcement indicators



Enforcement at BMU and resource user levels was minimal. Other means were often used, such as sanctions and promoting awareness in order to improve compliance. The BMUs through their by-laws may have the power to enforce, but they lacked the mechanisms, tactics and tools (such as ammunition and secure remands) to do so.

At the FiD level, enforcement was compromised by irregular or no patrols and to some extent political interference. For instance confiscated illegal/destructive gears easily found their way back into the waters following political interventions. The department also tended to over rely on BMUs to provide information regarding law breakers. Nevertheless, enforcement at all levels was important in promoting adherence of law and regulations and when applied inappropriately was counterproductive.

4.1.2.21 Cost and Benefit Analysis

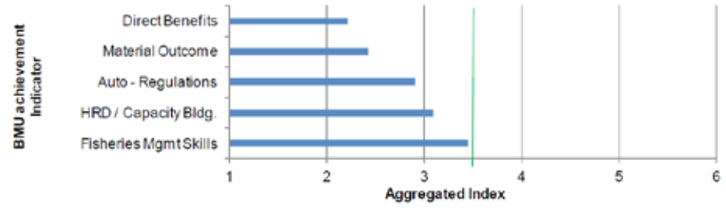
The extent to which the BMU, major and minor groups benefited with regard to cost (time, money, etc) was appraised in order to determine their perceived cost/benefit status.

User groups incurred various BMU related costs such as attending meetings/function, paying levies and participating in voluntary activities such as beach cleaning and patrols. In return the perceived benefits were little, though expectations for benefits were high. The user groups considered their input into the BMUs to be mainly voluntary and could not be matched with benefits. However, BMU executives benefited from meeting allowances and gaining knowledge through trainings, though they mentioned that their contributions in the BMU affairs could not equally match these benefits. Generally, user groups, including the BMU executives, felt that they were giving more than they could receive back and were making voluntary contributions to keep the BMU running.

4.1.3 BMU Achievements

BMU achievements were assessed with regard to gaining fisheries management skills, human resource development and capacity building, auto-regulations, material outcomes and direct benefits. The indices were below benchmark index (Figure 16) and are discussed in the next sections in details.

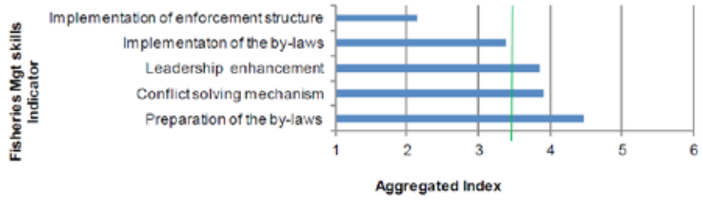
Figure 16 Aggregated index for BMU achievements key performance indicators



4.1.3.1 Fisheries Management Skills

Levels of achievement of fisheries management skills were assessed through the ability of the BMUs to prepare and implement by-laws, establish conflict solving mechanisms and enforcement structures. Preparation of by-laws was highest indicator and implementation of enforcement structure lowest (Figure 17).

Figure 17 Aggregated index for fisheries management skills indicators.



Preparation of by-laws was a requirement for registration of BMUs. The executives prepared the by-laws with guidance from FiD and non-governmental organisations and later presented them to the assembly for approval. Given the reported relatively low meeting turn out rate in some BMUs, it was likely that by-laws did not get approval from majority of members. However, it was evident that there was a fairly good level of participation of the members in the final stages of by-law preparation. By-law preparation skills were satisfactorily vested in the executives and there was clear format set up by the FiD to guide their formulation.

Implementation of by-laws and putting in place an enforcement structure is rather challenging. By-laws addressed issues such as collection of levies (fish landing, visiting vessel anchorage, renting of vessels and gears, tour operating etc.), hygiene and sanitation, prevention of fishing related crimes, registration, duties and powers of executives, environmental conservation (disuse of illegal gears, prevention of mangrove cutting, turtle conservation etc.), MCS, meeting procedures, credit support, beach security, vessel licensing, consequences for defaulters and violators, etc. Majority of these could not be implemented due to non-compliance. For instance, majority of BMU members failing to pay fish landing levies mentioned that either they did not trust the executives with their money or they were not getting any tangible benefits in return.

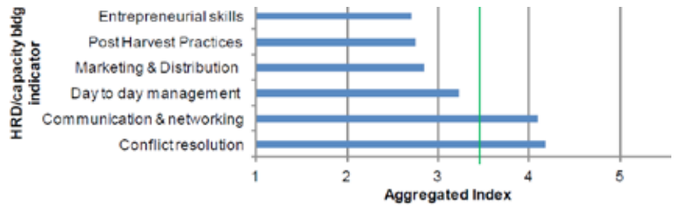
Another point of view regarding non-compliance was related to credit support, where the service was discontinued in 90% of the BMUs for failure of members to repay soft loans. Debtors complained of failure to raise the instalments following low catches. However, it was ascertained that during peak fishing periods, they could raise enough cash to repay the loans, which they did not. Nevertheless, there was a general feeling that implementation of the by-laws was moderately satisfactory though enforcement structures were inadequate.

Disputes were resolved through a structured, though not always formal, mechanism. The BMU by-laws provided for formation of conflict resolution committees. Though these existed in majority of the BMUs, conflict resolution was wider, involving other members of the executives and village elders. Notably, traditional landing site heads were also involved in conflict resolution, though they did not have a special position in the BMU leadership. They were co-opted as regular members. Nearly all disputes were solved this way, indicating the need for the BMU structure to adapt to this system, or alternatively find a way of incorporating different players into the conflict resolution mechanism. The manner in which disputes were resolved was important in ensuring that rules were followed and consensus was built .Overall, conflict resolving mechanism was moderately satisfactory. The level of enhancement of leadership skills was exposed through the general progress made by the BMU. Progressive BMUs were predominantly characterised by good leadership while retrogressive ones had poor leadership. Often, it was the leadership of the executives that determined the level of progress made by the BMUs. Though majority of the BMUS were characterised by poor leadership, there was a general realisation by the members and executives that leadership was a good determinant of progress. Thus, by the time this survey was done, 18% had already changed leadership by dissolution of the executives and were expecting progress in near future. As such, leadership enhancement skills were generally moderately satisfactory.

4.1.3.2 Human Resource Development and Capacity Building

Indicators considered here were conflict resolution, communication and networking, daily management, marketing and distribution, post-harvest practices, entrepreneurial skills and succession planning. Conflict resolution, communication and networking were top leading indicators in this category and above benchmark (Figure 18).

Figure 18 Aggregated index for Human Resource and Capacity Building indicators



As discussed in preceding sections, conflict resolution mechanisms were consistent with social needs and norms though not always compatible with BMU conflict resolution structures. On the other hand, there was a perception that communication and networking were adequately addressed. For instance letters of meeting attendance were sent in advance and where notice boards existed, a posting was done for members to view. Members also communicated constantly by telephone especially when urgent issues arose. However, the challenge was the manner in which the members responded to messages sent out by the executives. Sometimes they failed to comply with the call without sending any apologies. Generally, communication was effective one way and not the other, where members failed to give timely feedback regarding issues communicated to them by the executives.

Daily management of the BMUs had many challenges. A major challenge was constrained resource base where executives lacked or had inadequate infrastructure and expert knowledge about management. BMUs executives were not necessarily management professionals and besides, had other core responsibilities. Though willing to volunteer their services, there were limits as they also needed to work and earn a living. Additionally, due to misconceptions, misunderstandings, lack of clarifications and presence of unconvinced members, BMUs 26 constantly experienced persistent internal wrangles that largely affected their daily management. Daily BMU management was moderately unsatisfactory and below benchmark. Capacity building, incentives and change of attitude are needed to improve daily management.

The manner in which fish and fishery products were produced largely affected marketing and distribution. Majority of fishing boats were owned by business people who hired fishers and crews from the villages at unsatisfactory remunerations. Hired fishers and crew had no authority over whom and where to sell their fish and at what price, in fact majority sold their catch to the merchants who provided them with the fishing equipment and facilitation. Similalry, independent fishers using their own vessels found themselves at the mercy of traders who dictated fish prices. Traders transported fish to nearby markets by road often using unhygienic means (Photo 1) while ‘Small traders’ commonly called mama karangas bought smallest and low priced fish to meet customers’ demands. Generally, BMUs played a minimal, often insignificant role in marketing and distribution of fish and fishery products. Proper production, marketing and distribution mechanisms are urgently needed.

Photo 1. Fish ready for transport to the market (left) and baskets used to temporarily store fish (right) at Mayungu. © Photo Credit : Nyaga Kanyange

Similarly, fish treatment after capture was largely undesirable as many challenges ensued. Fishers using open dug-out canoes and spending an average of three hours in the open sun either placed the fish on board uncovered or stuffed them in traditional perforated baskets (Photo 1). While at the landing beach, fish are offloaded from the canoes and sold directly to traders, who immediately transported them to their coolers located few Kilometres away. Thus, it took an average of six hours from capture to proper storage where fish was ready for the market. Some fish were sun dried for later use while small traders semi-processed (scaling, gutting, etc) them directly on the beach (Photo 2). Majority of BMUs lacked proper surfaces, structures and equipment to handle fish in the sea and on land, a factor that highly compromised the quality of fish sold to the consumers. However, about 1% of BMUs using larger vessels were equipped with inboard coolers. Overall, post harvest treatment of fish was poor and needs improvement.

Photo 2. Pre-processing of fish at Mayungu beach. © Photo Credit: Nyaga Kanyange

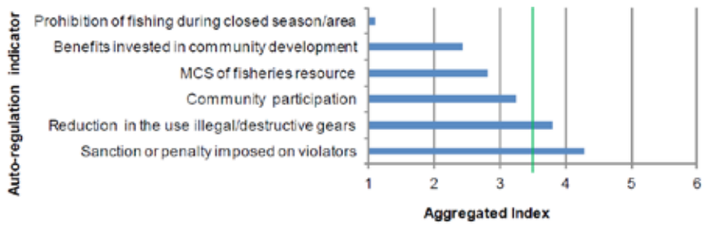
Entrepreneurial skills seemed to be present among the BMUs though not quite fruitful. Short trainings offered could not be put into use due to lack of capital for business establishment. Fishing related equipment such as modern boats, coolers, transport vehicles are expensive and require high capital investment. In contrast, majority of fishers still viewed fishing as a of last resort alternative livelihood and failed to make adequate savings even where reasonable returns were achieved. Strategic interventions are needed in order to professionalise fishing and change the attitude of fishers.

The issue of succession planning did not seem to bother BMU representatives. They reluctantly argued that since leaders were elected into office occasionally and that the choice of the leader depended on the outcome of the election, succession planning was not necessary. However, it was noted in about 2% of the BMUs that the youth had taken up leadership positions under direct influence from their seniors. However, upon further investigation, it was clear that this approach was rather a replacement planning strategy and not succession planning as such. Weak or inexistence of succession planning decreased the availability of potential experienced and capable leaders to occupy vacant leadership positions. Capacity development is highly needed in this area.

4.1.3.3 Auto-regulations

The ability of BMUs to regulate themselves in the presence of externalities was assessed in terms of success of sanctions or penalties imposed on violators, reduction in the use of illegal/destructive gears, community participation (time, money and effort, etc), MCS of fisheries resource, benefits invested in community development and prohibition of fishing during closed season/area. Success of sanctions or penalties imposed on violators was highest and prohibition of fishing during closed season/area lowest (Figure 19).

Figure 19 Aggregated index for auto-regulation indicators



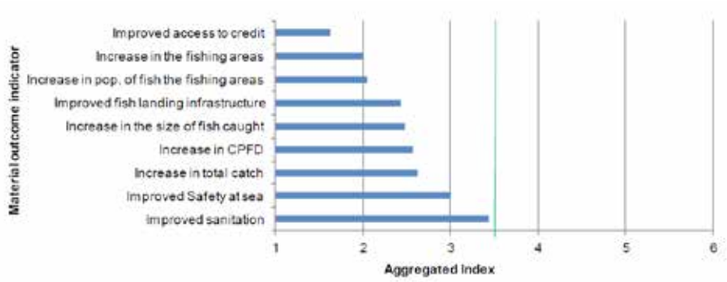
Sanctions and compliance were more effective than penalties. Success of sanctions imposed on violators could be attributed to a fairly good conflict resolution mechanisms discussed earlier and increased awareness. Awareness about the use of destructive and illegal gears was high among BMU members. This increased the level of compliances, though surprisingly, illegal/destructive gears were still in use. Self monitoring and surveillance that could be associated with MCS enabled the BMUs to monitor their resources though they could not take prompt action against the offenders due to reported lack of patrol boats. Associated with lack of a patrol boats was a high level of unpreparedness during emergencies, where fishers were reported to capsize just within the vicinity and could not be rescued. Often, rescue came too late. Prohibition of fishing areas and seasons was non-existent except where the BMUs were part of community conservation areas.

Local community participation in BMU activities was restricted while benefits invested in community development were minimal. Local communities often participated in occasional activities such as beach clean-ups and conflict resolution. They also supported the BMUs morally. There was little or no evidence of technical and financial support from the local communities. Instead, the local communities expected such benefits from the BMUs. BMU contributions towards the communities included educating orphans and contributing towards medical bills and development of Madrasas. Generally, there was a higher expectation from the community to benefit from the BMU than vice versa.

4.1.3.4 Material outcome

Indicators under consideration included increases in total catch, fishing area, quantity of fish caught per fisher (CPFD), fish size and population of fish in the fishing areas, and improvements in safety at sea, fish landing infrastructure, access to credit and sanitation of public beaches. Material outcome indicators were below benchmark (Figure 20).

Figure 20 Aggregated index for material outcome indicators



Similarly, it was a challenge to ensure safety at the sea especially during the rough South East monsoons, when the number of capsized boats was reportedly highest. Crimes also occurred in the sea, affecting BMU operations, though some were outside their mandate. Given, the weak BMU MCS mechanisms discussed in the previous sections, it was predictable that BMUs were unprepared to promptly rescue distressed vessels and combat offenders. However, with intervention of other stakeholders such as hoteliers, private individuals, KWS, FiD and Kenya Navy, safety at the sea has improved, though not to the satisfaction of BMUs.

BMU representatives curiously expressed dissatisfaction with the continued disuse of FiD patrol boats even during critical moments. The boats spent most of the time at the dock and were not seen doing regular patrols. Overall, safety at the sea is multifaceted and requires concerted efforts from different stakeholders. BMUs alone may not ensure safety of their members while in the sea.

Changes in total catch, fishing areas, quantity of fish caught per fisher (CPFD), fish size and population of fish the fishing areas varied depending on the season. Respondents mentioned that catches were generally higher during the calm North East monsoon periods than the rough South East monsoons. They also observed that increase in catch was congruent with increase in sizes, depending on the target fish. However, general trend over the last decade was deteriorating and fishers expressed dissatisfaction over seasonal dependent fishing.

Inadequate or lack of fish landing infrastructure was an inherent problem in majority of BMUs due to a number of factors, critical among them, lack of land. The government has recognised this problem and has tried to deal with it for years. Another problem was failure to complete and use completed infrastructure. About 20% of projects initiated by the government were unused or incomplete. Cold rooms and ice making plants initiated more than four years ago were still incomplete or unused (Pictures 3,4). In the face of such failures, government representatives blamed lengthy procurement procedures, an explanation that can be linked to prevailing heavy bureaucracy affecting government contracts. On the other hand, some projects implemented by BMUs themselves were abandoned and remained incomplete (Picture 4), largely due to misuse of funds. Even though Kenya is currently going through political and institutional reforms, corruption is still significantly affecting delivery of services in both the government and non-government sectors. Strict adherence to national procurement procedures would largely improve delivery of quality infrastructure badly needed by the BMUs.

Photo 3. Unused government funded fish cold room (left) and stalled government funded ice making machine (right) in Vanga. © Photo Credit: Nyaga Kanyange

Photo 4. Incomplete government funded fish market at Old town, Mombasa (left) and stalled BMU funded office (right) in Watamu. © Photo Credit: Nyaga Kanyange

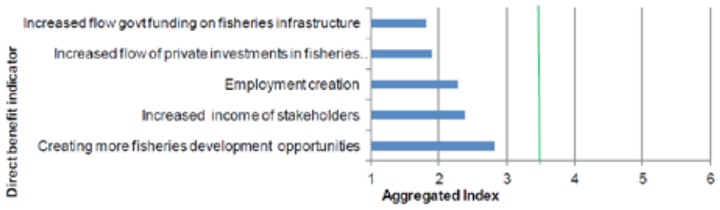
There appeared to be declining ability of BMUs to provide credit to members. The BMU regulations empower BMUs to provide credit to members as long as they do not offer the services of co-operative societies. Given the challenges outlined in the preceding sections, this role almost ceased and majority of BMU members could not access credit. However, some BMUs in Lamu County have managed to form cooperative societies. The co-operatives, though with challenges, provided a platform for fishers to borrow in a friendly environment. One of the cooperatives (Photo 5) hosts the local BMU and Field Fisheries Office. Formation of a co-operative alongside a BMU is highly recommended, since BMUs are a fisheries management tool and cannot fully provide credit support and other social services required by members.

Photo 5. Rasini Fishermen Co-operative Society building in Lamu County.
© Photo Credit: Nyaga Kanyange

4.1.3.5 Direct benefits

Direct benefits accruing to the BMUs was assessed in terms of creating more fisheries development opportunities, increased income of stakeholders, employment creation, increased flow of private investments in fisheries sector and increased flow govt funding on fisheries infrastructure. The indicators were below benchmark (Figure 21).

Figure 21 Aggregated index for BMU direct benefit indicators.



Though majority of BMUs had created conducive environment for operations, opportunities for fisheries development were not easily forthcoming. A lot more needed to be done, such as provision of infrastructure, building of trust among stakeholders, good leadership at all levels, etc, as discussed in preceding sections. Nevertheless, rewarding flow of government funding on fisheries infrastructure still remains a growing problem. This notwithstanding significant flow of private investments in artisanal fisheries sector was lacking. Private investors are sensitive to cost related factors such as poor roads and post harvest losses and most importantly, require high volumes that can assure profitable returns. These factors were apparently unattractive.

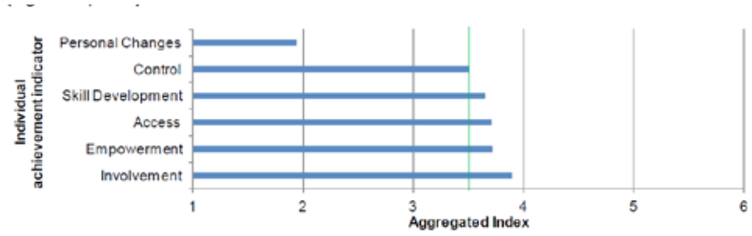
Efforts to create employment and improve income of stakeholders appeared to have been made, though not quite visible. BMUs employed casual workers to maintain cleanliness, data collection, security, etc. Most of these jobs were not very attractive to members and it could not be ascertained the extent to which they improved livelihoods. While BMUs seemed to fail in creation of direct sustainable employment, they seemed to indirectly support stakeholder employment in other sectors such as tourism, where tourists benefited from conserved areas.

In return, BMUs benefited from levies remitted to them by the conserving entities. The conserving agencies, mainly another community group, joined the BMU in order to enjoy the statutory provisions. However, BMUs are in the process of establishing co-management areas through various initiatives. Generally, employment creation and improvement of stakeholder income were moderately unsatisfactory.

4.1.4 Individual Achievements

Assessment of individual involvement was based on individual empowerment, access (information, resources, etc), skills development, control (BMU operations, resources, etc) and personal changes. All the indicators were above benchmark index except personal changes (Figure 22). They are discussed in detail in the sections below.

Figure 22 Aggregated index for BMU Individual achievement indicators



4.1.4.1 Involvement

Involvement of members in BMU formation (By-laws, definition of boundaries, etc) and BMU implementation were main factors considered.

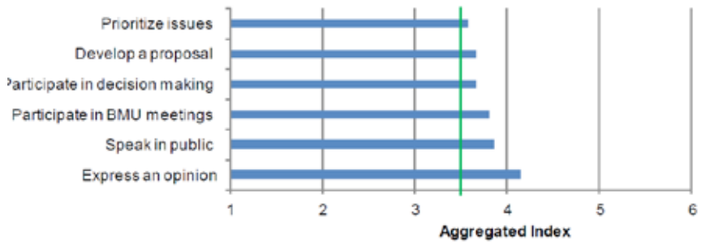
As noted in the introductory sections, marine BMUs were hurriedly introduced at the coast without prior consultations and awareness. Members had to contend with the fact that an institution needed to be established with particular guidelines borrowed from fresh water BMUs. Formation of by-laws was guided by the BMU regulations, where the executives drafted and presented them to the assembly for approval. Members were not given ample time to internalise and make contributions and were generally satisfied with their involvement. Apparently, formulation of by-laws was the main factor in BMU establishment process and required involvement of members. Other factors such as definition of boundaries were already pre-defined in the BMU regulations.

After establishment, active involvement during implementation was minimal. Often, individual members were required to perform voluntary activities such as MCS, beach clean-ups etc, while decision making was largely left to executives. Individual members mentioned little involvement in critical decisions affecting BMU functions. Another involvement was attendance of statutory quarterly meeting and not all members attended. Involvement during BMU implementation was moderately unsatisfactory.

4.1.4.2 Empowerment

Indicators for empowerment were the abilities of individual members to express an opinion, speak in public, participate in BMU meetings, participate in decision making, develop a proposal and prioritize issues.

Figure 23 Aggregated index for individual member empowerment indicators

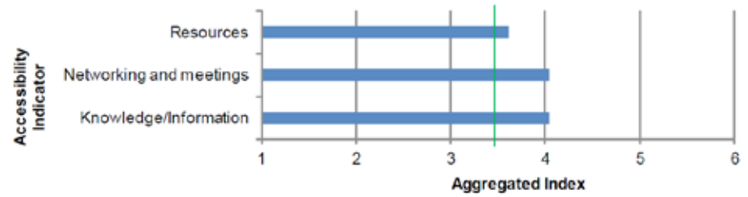


Certainly, an element of empowerment was prevalent within individual members. They expressed satisfaction with the way they expressed their opinions, though not necessarily heard. Assembly meetings provided an opportunity for members to collectively participate in pertinent BMU issues. In majority of BMUs, there was explicit freedom for members to express themselves, prioritise issues and propose new ideas. However, about 19% of individual members interviewed expressed dissatisfaction with the way assembly meetings were conducted, citing that they just attended the meetings to listen to executives rather than engage in discussions. A common trend was lack of personal initiative by members to express opinion and propose new ideas to the executives and fellow members. Empowerment is equivalent to "letting the power out" since people already have the power. Thus, it could be said, through observations, that individual BMU members possessed immense power that was not let out. Awareness creation on the rights of individual members, advocacy and activism are needed.

4.1.4.3 Accessibility

Access to knowledge, information, networks, meetings and resources (physical, technical, financial) were main factors considered in assessing accessibility. Individual members generally expressed moderate satisfaction in accessing available resources (Figure 24).

Figure 24 Aggregated individual member accessibility indicators

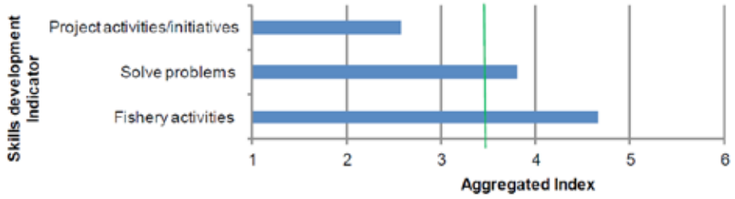


Though limited, resources such as information, knowledge and infrastructure were within the reach of individual members. For instance, financial records and any other official documents were easily accessible without major barriers. Some BMUs updated members by displaying information on notice boards. Existing knowledge, such as boat making and nets repair was shared considerably among members. Access to finances was however a concern to majority of members as they could not easily get credit. There is need to expand and strengthen the existing BMU resource base.

4.1.4.4 Skills development

Individual members' skills in fishery activities, problem solving and running of project activities/initiatives was assessed and found to vary from moderately unsatisfactory to satisfactory (Figure 25).

Figure 25 Aggregated individual member skills development indicators.



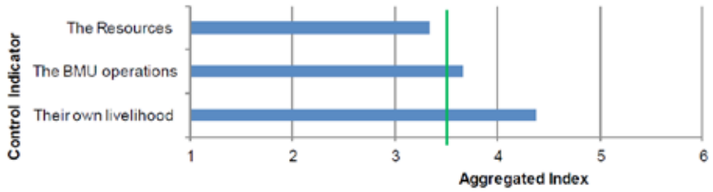
Skills were gained in various fields, mainly through experiences and trainings. Trainings mainly targeted the executives, who after failure to get re-elected contributed to individual members' pool of skills. There was general perception among individual members that there was adequate fishing and fishery related skills and only adequate capital was needed to put them into use. Noting the compelling nature of this perception, there is urgent need to shift from artisanal to semi-commercial fishing, where fishers will be equipped with adequate knowledge and capital.

Ability of individual members to solve problems and run project activities was limited. Individual members could only solve minor problems since they did not have the power to solve larger conflicts. On the one hand, Individual members lacked professional knowledge in running projects-they largely used personal experiences and wisdom. Capacity is needed in these areas.

4.1.4.5 Control

Results for the assessment of individual members' control of BMU operations, resources and their own livelihood varied from moderately satisfactory to satisfactory (Figure 26).

Figure 26 Aggregated index for individual member control indicators.



Though individual members could to a large extent control their own livelihoods, they could not fully control BMU operations and resources. Control of BMU resources and operations was subject to collective action, contrary to control of individual livelihoods that was largely dependent on personal decisions. Control of resources, operations and livelihoods may be influenced by the level of empowerment discussed in previous sections since empowered people have greater power to make collective and individual decisions affecting their lives.

4.1.4.6 Personal changes

Personal changes were assessed in terms of awareness, sense of responsibility, self respect, initiative, self confidence, generating new ideas, willingness to take risks and the impact on customs and community values. All these factors were below benchmark and generally weak (Figure 27)

Figure 27 Aggregated index for personal change indicators.

There were few or no personal changes occurring to individual members that could be associated with implementation of BMUs. Change of awareness and an improved sense of responsibility were the only factors that majority of members felt were achieved, though moderately unsatisfactory. The rest could hardly be explained by BMU existence. For instance, few individuals were willing to take risks since they felt that BMUs could not guarantee them surety. Personal changes were a measure of the extent to which BMUs transformed personal lives and if this failed to happen, members lost confidence and commitment. Nevertheless, individual members expected tangible benefits as key to addressing prevailing poverty and when this was not forthcoming, they failed to recognise other benefits as remarkable.

4.2 BMU SWOT ANALYSIS

SWOT analysis identified major Strengths, Weaknesses, Opportunities and Threats facing the BMUs, as summarised in table 3.

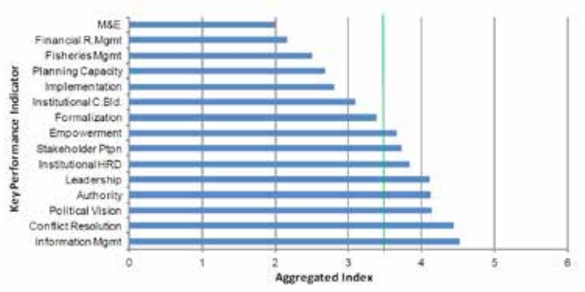
Table 3 BMU SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
- enabling legal framework (Act, Regulations, by-laws) - ability to bring stakeholders together	- poor financial base - mismanagement of meagre resources - lack/inadequate infrastructure - poor leadership - low technical capacity - low empowerment of the members - poor commitment and motivation of members - poor cohesion - lack/poor sense of ownership - perceived lack of tangible benefits by stakeholders -poor selling and marketing structures	- financing of BMU activities and infrastructure - capacity building - trust building - cohesion building - establishment of BMU managed conservation areas - conferment of user rights - improvement of stakeholder income and livelihood -enhancing selling and marketing of fish and fishery products	- land tenure insecurity - legitimacy-not always popular - political interference - unclear definition of user rights - lack of partnership arrangements with other stakeholders - high illiteracy levels within the community - deteriorating trust between BMU and FiD

4.3 FISHERIES GOVERNANCE

Indicators considered during assessment of fisheries governance were information management, conflict resolution, political vision, authority, leadership, institutional human resource development, stakeholder participation, empowerment, formalization, institutional capacity building, implementation, planning capacity, fisheries management, financial resource management and Monitoring and Evaluation (M&E). Nearly half of them were below benchmark (Figure 28).

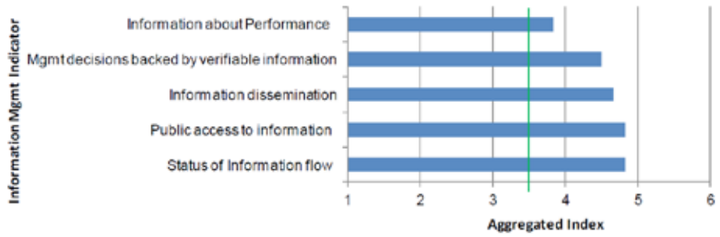
Figure 28 Aggregated index for fisheries governance key performances indicators.



4.3.1 Information management

Information management assessment put into consideration status of information flow, public access to information, information dissemination, performance information and whether management decisions were backed by verifiable information. The indicators were above benchmark and largely satisfactory (Figure 29).

Figure 29 Aggregated index for information management indicators.



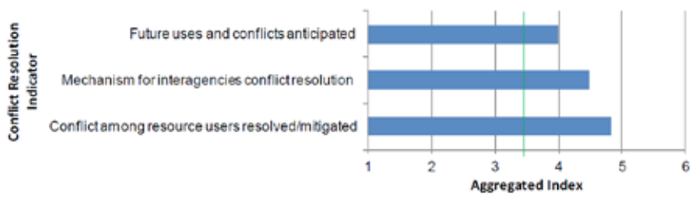
Information flow to and from BMUs followed certain procedures. Information coming from the BMUs was communicated to the field officers who conveyed the message to the district/county office. Similarly, information dissemination mostly followed the same hierarchy. Sometimes direct communication occurred between the BMU executives and the district/county officers. Fisheries officers also communicated laterally except when directives came from top ranks. This kind of flow was reportedly effective and satisfactory. Initially, the general public and stakeholders could easily access BMU related information from the department.

Fisheries management decisions also followed certain procedures. Information received from the field officers or BMU executives was verified before a decision was made through constant feedback and field visits. Although such decisions were satisfactory, it was challenging where scientific information was lacking. The extent to which fisheries management decisions were backed by scientific evidence could not be ascertained. For instance, information about performance of BMUs/fisheries required data collection that was not immediately available. Nevertheless, information about performance was moderately satisfactory.

4.3.2 Conflict Resolution

Factors considered were whether conflict among resource users were resolved or mitigated, mechanisms for interagency conflict resolution were in place and whether future conflicts were anticipated. They ranged from moderately satisfactory to satisfactory (Figure 30)

Figure 30 Aggregated index for conflict resolution indicators.



The department monitored conflict and devised means of resolution and mitigation. The BMUs were expected to develop conflict prevention mechanisms that would lessen the possibility of conflicts arising. The department heavily relied on early warnings, such as complaints from stakeholders to anticipate conflict, an approach hindered by slow flow of information.

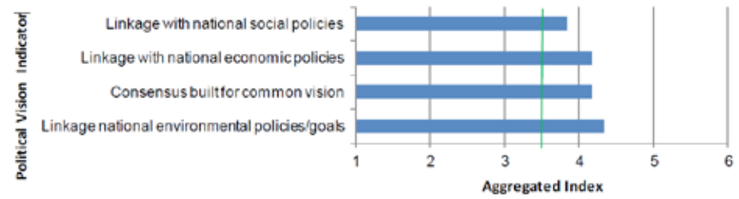
There is also, however, another point to be considered. The district fisheries officers, who were also committee members, attended meetings of newly established BMU networks, where potential conflict indicators were raised.

When conflicts arose, the department held conflict resolution meetings involving a wider audience, including village elders and other agencies (local administration, KWS, etc.). However, occurrence of analogous conflicts put at stake the extent to which lessons learnt from past conflicts were used.

4.3.3 Political Vision

Political vision for BMUs was assessed through investigating the linkages with national environmental policies and goals, consensus building for common vision and linkages with national social-economic policies. The factors were largely satisfactory and above benchmark (Figure 31).

Figure 31 Aggregated index for political vision indicators.



Undoubtedly, existing national environmental, social and economic policies encourage growth and development of BMUs. The economic, political and social pillars outlined in Kenya's 2030 generally address the issues BMUs seek to achieve. Vision 2030 is Kenya's political, economic and social blueprint that sets national goals achievable in 30 years. Similarly, national environmental, economic and social policy documents address BMU issues indirectly, where phrases such as 'natural resource co-management', 'sustainable exploitation of marine resources', 'gender equity' 'industrialisation and job creation' and 'food security' are mentioned.

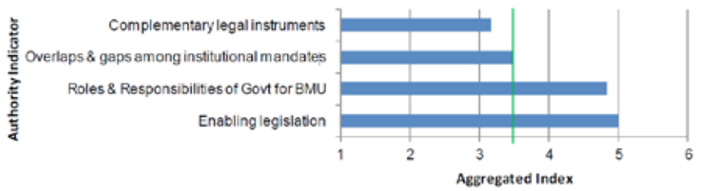
Though consensus building for a common BMU vision has been unclear, it is currently being addressed. The process of streamlining fisheries issues is ongoing and there will be a common vision, mission and objectives clearly outlined for BMUs in the country. Additionally, implementation of Fisheries Component of Kenya Coastal Development Project (KCDP) has started, where cross-cutting fisheries issues, including BMU development will be addressed.

4.3.4 Authority

Authority was assessed in terms of enabling legislation, roles and responsibilities of government for BMUs, overlaps and gaps among institutional mandates and complementary legal instruments. The

former two were below benchmark and moderately satisfactory (Figure 32).

Figure 32 Aggregated index for authority indicators.



Tremendous efforts have been made to jump-start and legally empower BMUs in coastal Kenya. The Fisheries Act, CAP 378, Sec 23F provides for establishment of BMU regulations, improvement of fishing ports and waters. It is under this provision that the BMU regulations, 2007 were enacted. Though the regulations are not flawless and currently under review, they have provided a clear roadmap to guide BMU establishment and implementation. Complementary legislations include EMCA Act 1999, KWS Act 1989, KMA Act 2006 and Forests Act 2005. EMCA provides for enacting of environmental by-laws and creation of conservation areas while the Forests Act encourages community utilisation and conservation of forests (including mangroves). The KWS Act largely focuses on conservation of protected areas and KMA concerns issues of vessel registration and maritime safety.

These complementary legislations however, are quite general and do not give particular mention to BMUs. There is need for these legislations to specifically recognise BMUs in order to empower them further.

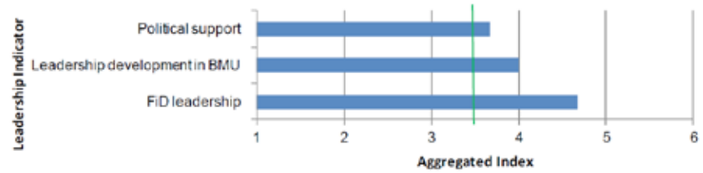
Institutions implementing the above statutes are Fisheries Department, National Environment Management Authority, Kenya Wildlife service, Kenya Maritime Authority and Kenya Forest Service. Overlaps and gaps among their mandates have been identified, often resulting to conflicting articles addressing similar issues. For example the introduction of a pilot beach management program by Kenya Wildlife Service, mainly focusing on tourist related issues within its areas of jurisdiction. The same area is managed by a BMU and though there are possibilities of working together, not much attention was paid to existing BMUs at the inception stage. Similarly the introduction by KFS of Community Forest Associations (CFAs) within the mangrove area co-managed by BMUs missed the opportunity to link CFAs and BMUs operations. This implies that a licensed BMU mangrove crab fisher could unknowingly infringe forest regulations since mangroves and fisheries are regulated by different institutions. Consequently, there is concern over a wider legitimacy of BMUs, where other government departments fail to fully recognise them as legitimate institutions. There is need to harmonise conflicting articles and mandates and recognition of BMUs across government institutions.

Roles and responsibilities for Fisheries officers were guided by the terms specified in their appointment letters. However, the roles increased as demand for deliverables increased. This was the case with introduction of BMUs in the coast region, where specific officers were assigned the responsibilities of dealing with BMUs in addition to their daily work. This addition rather than specialisation of work affected delivery of BMU services since the officers needed to attend to other matters. Allocation of a specific unit for BMU would greatly improve BMU delivery services and ease workload on officers.

4.3.5 Leadership

Factors considered in assessing leadership were leadership development in BMU, FiD leadership and political support for BMUs. While these three were above benchmark, political support and leadership development in BMU were moderately satisfactory and FiD leadership satisfactory (Figure 33).

Figure 33 Index levels for leadership indicators



Kenyan leadership is democratic and the FiD has adopted this approach within itself and within BMUs. Discussions and meetings about pertinent BMU issues were common, where fishers and staff engaged each other in order to find common solutions and to lay future foundation. Leadership at the department level regarding BMU affairs was generally satisfactory.

Leadership challenges within BMUs were numerous and were constantly addressed according to the regulations. The regulations are guided by the Fisheries Act and the Kenyan constitution. The new constitution emphasises critical leadership issues such as integrity and honesty that were formerly silent. Lack of integrity and honesty was prevalent among BMU leaders and this might improve once the regulations are revised and enforced.

The political class appeared not to be well versed with BMU issues. Awareness about BMU within the political class was inadequate. In spite of this, however, political interference was also reported, where politicians desperate for political support overruled fisheries officers' decisions to compound illegal gears. The gears often found their way back to the waters at the frustration of the fisheries officers and BMU executives. Overall, political support for BMU development was moderately satisfactory.

4.3.6 Institutional Human Resource development

Evaluation for this criterion was based on two broad factors namely, i) the capacity of FiD to plan, implement, monitor and evaluate BMU and ii) capabilities to drive BMU process. These factors were above benchmark and moderately satisfactory.

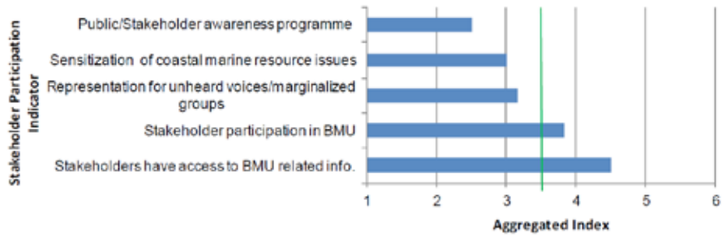
Availability of people willing to work and access financial and technical resources are mong key requirements necessary for running an institution. The FiD was reportedly understaffed and lacked adequate human resource to fully implement its activities. These affected ministerial offices and field work, where retired field officers (fisheries scouts) who provided constant field support and extension services, were never replaced. In spite of this apparent shortfall, the FiD has a relatively higher number of staff compared to other government department and has recently recruited additional junior staff.

Another issue was inadequate financial allocation which did not meet financial requirements. Consequently, BMU activities such as monitoring and evaluation, training and technical support were not provided sufficiently.

4.3.7 Stakeholder Participation

Factors considered for evaluating stakeholder participation were stakeholders access to BMU related information, stakeholder participation in BMU, representation for unheard voices/marginalized groups, sensitization of coastal marine resource issues and presence of a public/Stakeholder awareness programme. Stakeholders access to BMU related information had the highest index and presence of a public/Stakeholder awareness programme lowest (Figure 34).

Figure 34 Aggregated index for stakeholder participation indicators.



As discussed in the preceding sections BMU related information was readily available at the FiD. District/ county department heads kept information regarding BMU registration, names of executive members and ordinary members, minutes, MOUs, and any other relevant information. This information, and any other, was readily available to stakeholders upon request.

Representation of marginalised groups (women, speargun/harpoon/fence/foot fishers, etc), in BMUs was not satisfactory. However, members of these groups were adequately represented individually rather than as organised groups.

The department was sparingly involved in public/stakeholder awareness coastal and marine resource issues mainly through meetings and forums and in conjunction with departmental partners who were largely drawn from non government agencies. Though moderately unsatisfactory, prevailing sensitization efforts increased awareness of coastal and marine issues among the stakeholders and the public in general.

4.3.8 Empowerment

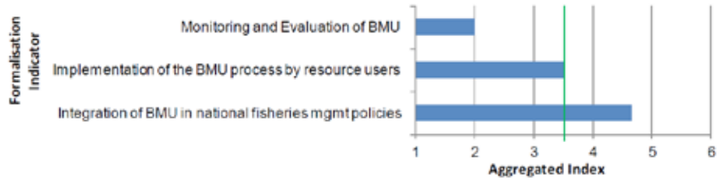
Level of ownership of BMU by stakeholders was generally assessed as an indicator of empowerment. Ownership varied and could be largely attributed to the manner in which BMUs were introduced, among others. Community members, who would have otherwise been BMU members were still internalising the concept of a Beach Management unit since initial awareness was lacking.

Though majority of BMU stakeholders viewed the institution as their own, they still perceived it as a tool used by the department to achieve its objectives. Moreover, as much as they perceived BMUs as their own institutions, they lacked full capacity to operate them.

4.3.9 Formalization

Factors considered for assessment of formalisation of BMU process were integration of BMU in national fisheries management policies, implementation of the BMU process by resource users and Monitoring and Evaluation. Indices for these factors varied from satisfactory to unsatisfactory (Figure 35).

Figure 35 Aggregated index for formalization of BMU process indicators.



The National Oceans and Fisheries Policy, 2008, recognises the challenges faced by stakeholders in the coastal and marine environments. Issues such as, inaccessibility of beaches, MCS, lack of domestic fishing fleets and inadequate infrastructure that directly affect local fishers are conspicuously featured. Though BMUs are not particularly mentioned in the policy, addressing local fisher issues would have a direct impact on BMUs.

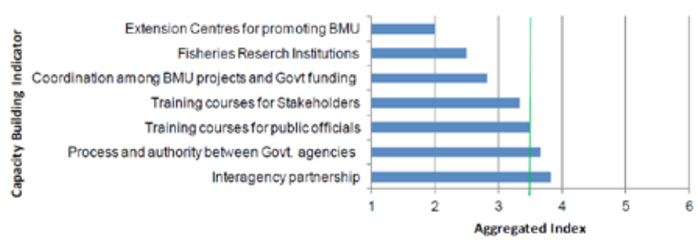
Implementation of BMU process by resource users could be largely linked to legitimacy and visibility of BMUs. The few resource users who recognised BMUs were willing to help, contrary to stakeholders who did not recognise BMUs and failed to provide support.

While annual BMU evaluations were evident, monitoring was rather invisible and weak. This will be discussed in details in the M&E section.

4.3.10 Institutional Capacity Building

Institutional capacity building was assessed in terms of interagency partnerships, process and authority between government agencies, training courses for public officials and stakeholders, coordination among BMU projects and government funding, fisheries research institutions and extension centres for promoting BMUs. They varied from moderately satisfactory to unsatisfactory, with only the first two above being above benchmark (Figure 36).

Figure 36 Aggregated index for capacity building indicators.



The FiD fostered partnerships with other government departments, mainly due to closely related or similar issues that needed joint attention. Pertinent among the institutions were KWS, KFS, NEMA, KMA, Planning department and KMFRI. KMFRI is a research institution in the same ministry as FiD. KWS, KFS, NEMA and Planning department are in different ministries and guided by separate statutes. Though more partners are needed in order to address cross-cutting and emerging issues, interagency partnerships were moderately satisfactory.

A marked level of technical capacity has been built within the FiD staff and stakeholders. This was mainly through short general trainings on fisheries and fisheries related topics. Few specific BMU trainings have been offered to the staff and they mainly targeted staff working in the lake and coastal regions where BMUs are found. Senior staff without previous experience in these regions had limited knowledge about BMUs. Aside from this, technical capacity has not yet extended to a level of establishing extension centres for BMUs. Extension services provided by lean field staff were reportedly insufficient. Adequate provision of extension services and strengthening of technical capacity are needed.

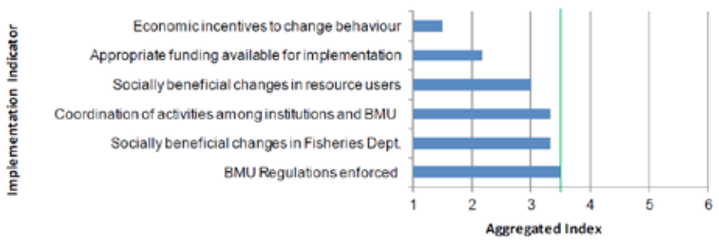
The government did not directly fund the BMUs with expectation that they will raise their own funds to sustain their functions. Thus, government projects targeting BMUs were implemented by the FiD directly, drawing dissatisfaction from BMU executives due to little participation and involvement in financial planning and execution of the projects.

However, with regard to government funding, another issue has emerged. The FiD plans to introduce BMU Levy Trust Fund, where, among other measures, BMUs will remit their catch levies to the ministry and in return get 80% of their remittances at the end of financial year. A simple interpretation of this peculiar funding measure is that the BMUs will contribute 20% of their catch levies to the FiD in a manner that will strain them financially as they wait to get their money back. The success of government funding was rated according to the way government projects targeting BMUs were implemented and this was found to be moderately unsatisfactory.

4.3.11 Implementation

Factors considered here were enforcement of BMU regulations, socially beneficial changes occurring in FiD and resource users, coordination of activities among institutions and BMU, availability of appropriate funding for implementation and economic incentives to change behaviour. All these factors were below benchmark (Figure 37).

Figure 37 Aggregated index for implementation indicators



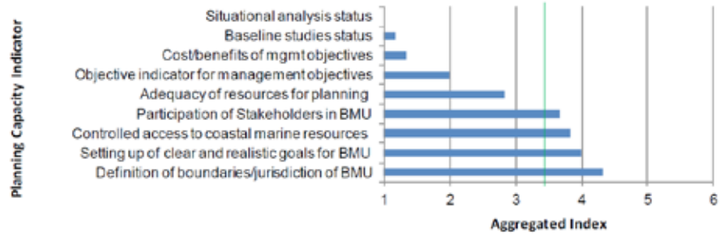
Enforcement of BMU regulations was demanding in the midst of seemingly lean staff and limited resources. There was concern from the senior officers that BMU executives did not always follow advice from the department and that they did not fully understand their roles. However, the department strived to excel in compliance rather than impose penalties. In spite of this, compliance was low, compelling the department to embark on enforcement.

Socially beneficial changes were minimal and they included a slight change of attitude towards the resource ownership. In some instances, fishers gradually recognised the impact of their actions (e.g. use of destructive gears) on their own resource and sparingly restrained from such actions. This was beneficial to both BMUs and the department. Aside from this, the department reported an increase in boat license levies since the BMUs were instrumental in facilitating payments.

4.3.12 Planning Capacity

Planning capacity was assessed in terms of definition of boundaries/jurisdiction of BMUs, setting up of clear and realistic goals for BMUs, controlled access to coastal marine resources, stakeholder participation, adequacy of resources for planning, objective indicator for management objectives, cost/benefits of management objectives, baseline studies status and situational analysis status. They ranged from highly unsatisfactory to satisfactory (Figure 38).

Figure 38 agrregated index for plannning capacity indicators.



As discussed in the preceding sections, definition of boundaries/jurisdiction was satisfactory given the current status of open access fishing. However, more is needed to resolve pending boundary issues and remove impeding barriers. Despite the open access state of the Kenya fisheries, BMUs have to some extent managed to control access to their customary fishing sites through imposing of various levies to visitors.

The BMU regulations have set clear blanket goals/objectives for BMUs. The goals guide the BMUs in formulating their own objectives spelt out in their constitutions. Whether these goals were realistic could not be ascertained as majority of BMUs were still in their infancy.

Apparently, there was little or no evidence for objective indicators for management objectives, cost/benefits analysis of management objectives, baseline studies status and situational analysis status. As discussed in previous sections, BMUs were introduced in the coastal region without any baselines.

As discussed in previous sections, inadequacy of funds was reported as one of major hindrances to steering BMU progress and in implementing many other departmental activities. While financial allocation for planning was inadequate, mechanisms for planning in order to predict future challenges were indistinguishable. Thus, it could be said that planning capacity was generally hindered by constrained funding and shortage of planning mechanisms.

4.3.13 Fisheries resources management

Factors considered were reduction of destructive practices, increase in government revenue, increase in stakeholder income, socioeconomic benefits from sustainable fisheries, increase in public and private investments, recovery of fish stocks and increase in fish productivity. All, except the first one, were far below benchmark (Figure 39)

Figure 39 Aggregated index for fisheries resource management indicators

According to the Fisheries Department, co-management of fisheries resources was marked with changes in use of destructive practices and slight increase in government revenue. Reduction in destructive fishing, as discussed earlier was largely attributed to co-management arrangements, where BMUs enacted and enforced by-laws against these practices. An improvement, though moderately unsatisfactory, of government revenue was also reported as a result of co-management.

Similarly, changes in stakeholder income and private sector investments were minimal. There was a perception that following introduction of Locally Marine Managed Areas (LMMAs), stakeholders benefited directly or indirectly through creation of fish reservoirs and tourism. A slight improvement of stakeholder income could have been realised though not ascertained due to lack of baselines. On the other hand, public and private investors largely remained at a distance as the government marshalled its meagre resources to invest in the fisheries sector.

Little could be said with certainty about positive changes in artisanal fish stocks and productivity. Fishery statistics were reported on the basis of value and tonnage (family or trophic group). Data from 1999 to 2009 indicated an upward trend in tonnage and value of major fish families except sardines (Fisheries Department, Unpublished data). These two indicators are insufficient to associate the increase with improvement in stocks and productivity. For instance, an increase in effort could easily lead to increase in general catches while posing a threat of overexploitation. Stock assessment data to substantiate these trends was scant or unavailable.

The FiD is also charged with the responsibility of managing fisheries recourses beyond the reach of artisanal fishers. The resources, situated within the territorial waters and in the Exclusive Economic Zone (EEZ), have largely benefited foreign fleets. Although the FiD attempted to monitor these vessels remotely through a remote Vessel Monitoring System (VMS), fishermen severally reported sightings of vessels very close to the reef. Ground monitoring has been weak and there are currently initiatives by Smartfish to strengthen MCS

4.3.14 Monitoring and evaluation

M&E was assessed in terms of definition of performance indicators and whether success or failures of management actions were evaluated. Although effort was made to define evaluation indicators and evaluate BMUS, well defined monitoring indicators were indistinguishable.

Success or failure of management actions, such as co-management arrangements with BMUs was evaluated annually. Indicators considered were i) financial management, ii) record keeping, ii) MCS, iv) conflict management, v) gender integration, vi) community managed areas, vi) critical habitats, vii) infrastructural development and viii) school children enrolment. The last indicator was added due to the low level of school children enrolment within the coastal region compared to other parts of the country. A certain score was then developed and the best BMU awarded a certificate of good performance. These indicators gave a general indication of the performance of the co-management arrangement without taking much into consideration of other factors considered in this evaluation.

However, evaluation reports were not readily available thus a conclusive performance status could not be ascertained. Besides, baselines and situation analysis mentioned in previous sections were lacking. There is need to draw a comprehensive monitoring and evaluation criteria to evaluate the performance of fisheries co-management arrangement. Overall, monitoring and evaluation was moderately unsatisfactory.

5 CONCLUSION AND RECOMMENDATIONS

This report sheds light into critical factors affecting the performance of BMUs in coastal Kenya since their inception in the year 2006. These factors, ranging from organisational structure to individual achievements, as well as fisheries governance provided an insight into their current performance status. Considering critical factors for BMU success, the performance was generally below average, though some factors were well addressed and others neglected.

BMU profile depended on a laid down structure outlined in the BMU regulations. Adherence to this structure was challenging, given the hindrances such as unclear registration procedures and unlimited membership. Nevertheless, despite adherence to the structures, not all were fully functional, implying that presence of a structural framework, though a good starting point, may not guarantee good results.

Factors affecting BMU performance were numerous, critical among them leadership, representativity, conflict resolution, inclusion, costs vs benefits, MCS, mutual trust and Jurisdiction. In the midst of these factors were inadequate resources and infrastructure that further hindered the BMUs to achieve their objectives. Achievement of the objectives was well below expectations, except for few such as conflict resolution, collaborations and local networks. Stakeholder livelihood had not improved and poverty was still thriving. Consequently, as long as the BMUs remained relevant to the co-management concept of fisheries governance, the impending factors need to be addressed in order to enable them function fully.

Since BMUs are a management tool, their achievements in fisheries management and improving resource based issues directly affecting the stakeholders were minimal. For instance, the state of the stock had not improved, there was no increase in sizes and catches of fish associated with improvement in stocks and use of illegal and destructive gears was not eliminated. While such issues cannot be blamed on the BMUs alone, there was a great potential for them to improve the state of the fisheries within their jurisdiction through various means. One of them not evidently used is creation of conservation areas. This role was left to other players while BMUs struggled to get on foot. It is however important to mention that there were relatively good examples of functional BMUs that utilised their little resources and managed to overcome majority of obstacles faced by majority of BMUS.

A SWOT analysis exposed Strengths, Weaknesses, Opportunities and Threats faced by BMUs. A major strength was presence of legal frameworks directly and indirectly supporting establishment and implementation of BMUs. Major weaknesses included poor resource base (financial, physical, technical, information, ect.), mismanagement, poor leadership and poor commitment of members. A major threat was insecurity of land tenure. However, there lies numerous opportunities that if addressed would strengthen the BMUs further. Key among them includes provision of necessary resources, streamlining of both leadership and management and land security.

The findings also cast a glance at fisheries governance issues and provided an insight into the role played by the government in fisheries co-management. The government implementer, the FiD provided sufficient authority, political vision, leadership and ensured stakeholder participation. Financial and institutional capacity shortfalls largely affected establishment and implementation process of BMUs. Nonetheless, the FiD played regulatory and facilitator roles in ensuring functioning of BMUs and can be viewed as the main driver of the fisheries co-management process.

There is urgent need for the following;

i. Limited BMU assembly membership in order to enhance effective communication and decision making

ii. Expansion and strengthening of the existing BMU financial and technical resource bases.

iii. Register BMUs as Fisheries co-management institutions

iv. Conferment fisher user rights through a co-management policy that will also allow delineation of fishing zones to include areas beyond existing fuzzy customary boundaries

v. Secure land for BMU infrastructural development and revise the 30 vessel requirement for BMU registra tion

vi. Streamline leadership especially at BMU executive level

vii. Integration of BMU conflict resolution mechanism with traditionally accepted mechanisms

viii. Improvement of fish production, marketing and distribution mechanisms

ix. Improvement of post harvest practices through training and provision of appropriate equipment

x. I mprovement of fisher skills in order to professionalise fishing and change attitude from 'last resort job' to a profitable business

xi. Improvement of the existing interdepartmental onshore security collaboration since security at the sea is multifaceted

xii. Revive cooperatives alongside BMUs, since BMUs are fisheries co-management tools and cannot fully provide credit support and other social services to members

xiii. Recognition of BMUs by other government agencies as legitimate fisheries co-management institutions

xiv. Enactment of support legislation (EMCA,NEMA,KMA, Forest Act, etc) in order to give BMUs additional legal backing

xv. Need for creation of a BMU unit within the Fisheries Department to improve service delivery

xvi. Improved intergovernmental and interagency partnerships are needed to address cross-cutting and emerg-ing issues

xvii. Improved capacity needed to enable Fisheries Department conduct rapid assessments/research

xviii. Development of a comprehensive monitoring and evaluation criteria to monitor and evaluate the performance of fisheries co-management arrangement

6 ANNEXES

ANNEX 1: QUESTIONNAIRE SUMMARY FOR BMU PERFORMANCE

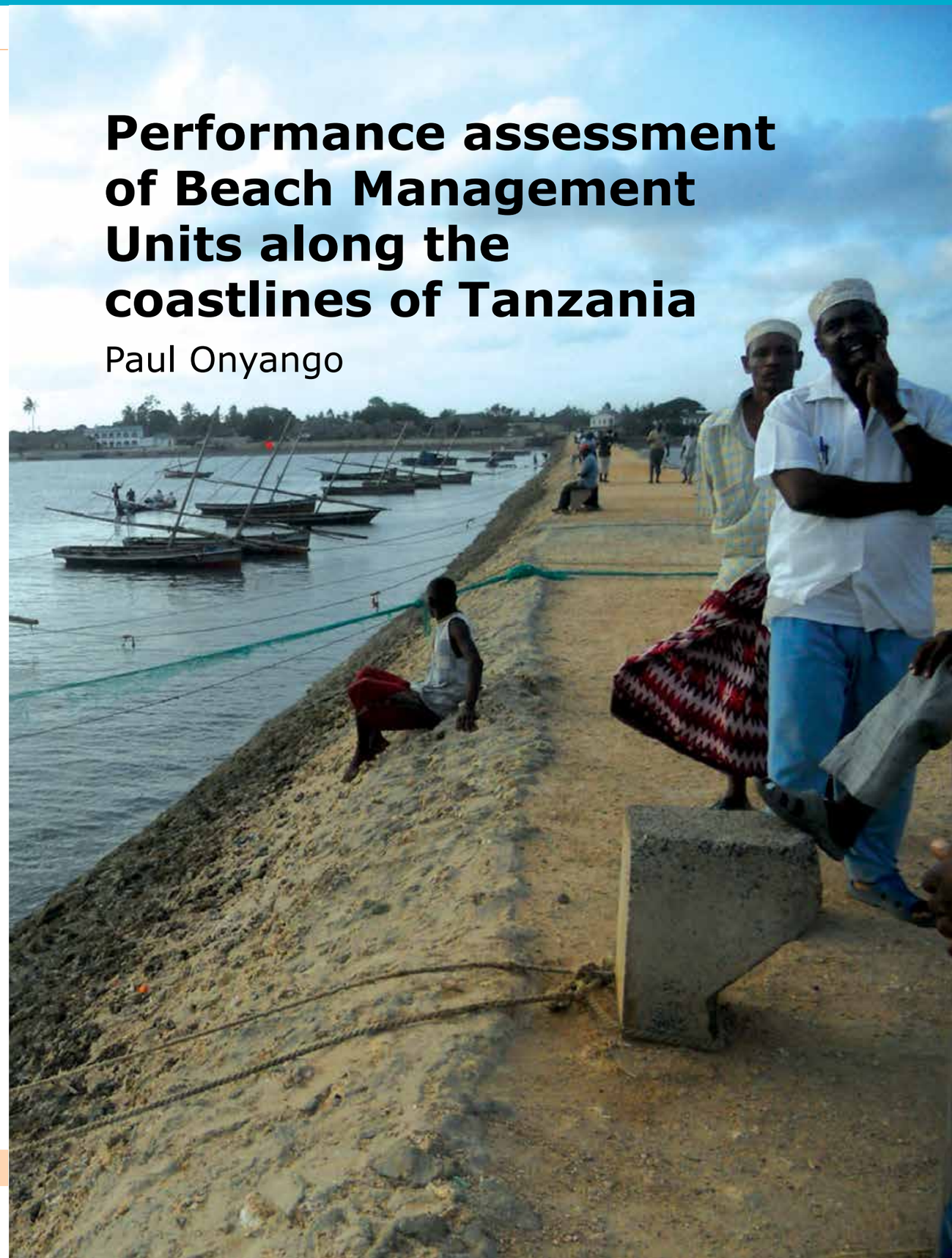
Key performance Indicator	**Performance indicator**
Cohesion	Cohesion within the BMU
Conflict Resolution	Internal, external (neighbouring BMU & local communities), Fisheries Dept, other govt agencies
Effectiveness	Compatibility between BMU mgmt objectives and stakehoders' priorities (common problems or interest)
Enforcement	At various levels-BMU DoF, resource user groups
Inclusion	Loose groups, women
Leadership	At resource user/stakeholder level, BMU - Executive, District Fisheries Officer
Mutual Trust	Among executive members, executive and ordinary members, executive and other govt agencies, executive & DoF
Networking	At various levels-local, district, provincial, national
Participation	BMU ordinary members, executive members, local communities
Resources	Financial, physical, technical, human, Information/Communication
Adaptability	Flexible of by-laws to adapt to changes occurring in the fisheries sector
Collaboration	With DoF, other govt agencies, local communities, NGOs/CBOs, neighbouring BMUs
Communication	Expression of different viewpoints & open disagreements, with neighbouring BMUs, local govt agencies, DoF, research institutions
Cooperation	Among stakeholders vs user groups of the BMU, Executives vs BMU members, BMU vs various govt & non govt agencies, BMUs vs neighbouring BMUs, BMUs vs local communities
Democratic Practices	Free and fair elections, statutory meetings, women serving as officials, attendance of meetings
Jurisdiction	Spatial delimitation of fishing areas, community based (Fish landing sites)
Social-cultural	Local Knowledge, socio-cultural characteristics
Organisation	In terms of Legislation/Institutional framework, organisational Structure
Representativity	Fishers, boat- owners, fishing gear owners, fish traders, fish processors, service providers, women.
Cost / Benefits	BMU, major user groups, marginalized user groups
Efficiency	Proportionality between size of fish resources and BMU structure
Relevance	With reference to BMU objectives-access to fisheries resources, improved management of fisheries resources, participation in decision making, MCS, improve revenue & livelihoods of stakeholders, stimulation of local economic development, credit Support
Fisheries Mgmt Skills	Preparation & implementation of the by-laws (mgmt plans), implementation of enforcement structure, conflict solving mechanism & leadership enhancement
HRD / Capacity Bldg.	Entrepreneurial skills, daily management, post harvest improvement, marketing & distribution, communication & networking, conflict resolution and succession planning
Auto - Regulations	Reduction in the use illegal/destructive gears, MCS of fisheries resource, sanction or penalty imposed on violators, community participation, Closed season/area, benefits invested in community development Increased income of stakeholders, creating more fisheries development opportunities & employment, increased flow of govt funding on fisheries, infrastructure, increased flow of private investments in fisheries sector
Direct Benefits	
Accessibility	Knowledge/Information, networking and meetings, Resources (Physical, Technical , Financial)
Control	Control of BMU operations, resources, own livelihood
Empowerment	Expression of opinion, participation in decision making, prioritisation of issues, participation in BMU meetings, development of proposals, speaking in public
Involvement	BMU formation and implementation
Skill Development	Fishery and project activities, problem solving
Personal Changes	Awareness, sense of responsibility, self confidence, initiative, self respect, generating new ideas, willingness to take risks, impact on customs and community values

ANNEX 2 : QUESTIONNAIRE SUMMARY FOR INSTITUTIONAL GOVERNANCE PERFORMANCE

Key Performance Indicator	Performance Indicator
Empowerment	Level of ownership of BMU by stakeholders
Formalization	Integration of BMU in national fisheries mgmt policies, implementation of the BMU process by resource users, monitoring & evaluation of BMUs
Institutional Capacity Building	Interagency partnership, fisheries research institutions, extension Centres for promoting BMUs, training courses for public officials, training courses for Stakeholders, process and authority between Govt. agencies, coordination among BMU projects and Govt funding
Institutional HRD	Capacity to plan, implement, monitor & evaluate BMUs. leadership skills/ capabilities to drive BMU process.
Stakeholder Participation	Public/Stakeholder awareness programme, sensitization of coastal marine resource issues, stakeholder participation in BMU, stakeholder access to BMU related info, representation for unheard voices/marginalized groups
Authority	Enabling legislation, roles & Responsibilities of Govt for BMUs, complementary legal instruments, overlaps & gaps among institutional mandates
Conflict Resolution	Mechanism for inter-agencies conflict resolution, conflict among resource users resolved/mitigated, future uses and conflicts anticipated
Information Management	Status of Information flow, information about Performance, information dissemination, public access to information, mgmt decisions backed by verifiable information
Leadership	Political support, DoF, leadership, leadership development in BMUs
Political Vision	Consensus built for common vision, linkage with national economic, social policies & environmental policies/goals
Financial Resources Mgmt	Financial resources to implement BMU process, financial contribution to BMU
Fisheries Management	Reduction of damaging practices, recovery of fish stocks, increase in fish productivity, increase in revenue for the Govt, increase in income of stakeholders, increase in public & private investments, socioeconomic benefits from sustainable fisheries
Implementation	BMU Regulations enforced, economic incentives to change behavior, appropriate funding available for implementation, socially beneficial changes in resource users, socially beneficial changes in Fisheries Dept, coordination of activities among institutions and BMU
Monitoring & Evaluation	Performance indicators defined, evaluation of success/failure of mgmt actions
Planning Capacity	Adequacy of resources for planning, baseline studies status, situational analysis status, definition of boundaries/jurisdiction of BMUs, setting up of clear and realistic goals for BMUs, objective indicator for management objectives, cost/benefits of mgmt objectives, participation of Stakeholders in BMUs, controlled access to coastal marine resources

Performance assessment of Beach Management Units along the coastlines of Tanzania

Paul Onyango



LIST OF ACRONYMS

BMU	Beach Management Unit
CFMA	Collaborative Fisheries Management Areas
CSO	Civil Society Organization
DED	District Executive Officer
ESA-IO	Eastern and Southern Africa Indian Ocean
IOC	Indian Ocean Commission
IRFS	Implementation of a Regional Fisheries Strategy
NGO	Non-governmental Organization
MACEMP	Marine and Coastal Environment Management Project
MLFD	Ministry of Livestock and Fisheries Development
RUMAKI	Rufiji, Mafia and Kilwa
SWIOFP	South West Indian Ocean Fishery Project
TCMP	Tanzania Coastal Management Program
WWF-TCO	World Wide Fund for Nature Tanzania Country Office

EXECUTIVE SUMMARY

SMART Fish program under the Indian Ocean Commission (IOC) commissioned a BMU Evaluation exercise using a BMU evaluation framework, which is compliant to international best practices related to Monitoring and Evaluation of community based organizations indulged in rural development. The evaluation exercise involved development of a tool and application of the same in Kenya and Tanzania. The Kenyan study was conducted first before the Tanzanian.

The Tanzanian study covered all the riparian districts bordering the Indian Ocean.

Purpose of the study

The study was undertaken with the purpose of identifying ways and means of strengthening BMUs in the region as well as developing an evaluation framework for the same. Specifically the study was commissioned to among others:

a. Assess the organizational performance of BMUs

b. Verify critical conditions for BMU success

c. Identify critical Strengths, Weaknesses, Opportunities and Threats

d. Assess lead government institution governance performance

Methodology

The survey covered 37 BMUs randomly selected from a list of 204 BMUs along the Tanzania coast. Data was gathered by use of a questionnaire. A total of 67 questionnaires were administered consisting of 37 BMU executive committees, comprising males and females, and women who are not in the Executive Committee belonging to 30 BMUs. The questionnaire was based on 1 to 5 points Likert scale.

1. Highly Unsatisfactory / Highly Declined / Very Useless / Very Low
2. Unsatisfactory / Decline / Useless / Low
3. Neutral
4. Satisfactory / Increased / Improved / High / Beneficial
5. Highly Satisfactory / Highly Increased / Very High / Highly Improved / Highly Beneficial
6. Don“t Know / Not Applicable / No Opinion

Results

BMU Profile

a) All BMUs have elected Executive Committee members

b) Only about 15% are registered.

c) About 88% of the BMUs do not have office building.

d) About 82% of the BMUs have membership registers.

e) Executive committee membership is between 15 to 30 members.

f) On average women comprise about 40% of the Executive Committee members fulfilling the one third gender requirement in the Executive Committee.

g) More than half of the BMUs visited have not been trained in formulation of management plans.

h) About 55% do not have any management plans.

i) Over 90% BMUs do not have any budgets for the current year.

j) Having a sustainable funding is a major challenge facing BMUs.

Functions and operations with satisfactory and or unsatisfactory rating

S/N	Functions and Operations	Rating
1	Level of understanding on Boundaries / Jurisdiction	High
2	Representation in BMU membership	High
3	Representation in BMU Executive Committee	Neither high nor Low
4	BMU record-keeping & reporting: Registration and meetings	Unsatisfactory
5	BMU record-keeping & reporting: Patrol records	Unsatisfactory
6	BMU record-keeping & reporting: Other record-keeping & reporting	Satisfactory
7	Level of awareness of roles & responsibilities	Low
8	Existing level of cooperation	Low
9	Level of trust between BMU members and Executive committee, among Executive committee members, between Executive committee and village government, and executive committee and district authorities	High
10	BMU institutional structure	Satisfactory
11	Level of Conflicts and conflict resolution	Low
12	Ease with which conflicts are resolved	Easy
13	Communication, transparency & freedom of expression	Satisfactory
14	Usefulness of any existing BMU network	Useful
15	Adequacy of Resources	Inadequate
16	Level of training, technical & mentoring support to BMU	Unsatisfactory
17	Level of support on enforcement from	Unsatisfactory
18	Level of financial & equipment support	Unsatisfactory
19	Democratic practices in the BMU	Satisfactory
20	Effect of external factors on BMU performance	High

	Organizational performance (Impacts)	Rating
1	State of the fishery (since BMU formation)	Declining
2	Impacts of BMU since formation (attributable to BMU)	Improved
3	Impact of BMU in terms of skills development	Low
4	Direct benefits attributable to BMU performance	Low
5	Management outcomes attributable to the BMU	Low

S/N	Functions and Operations	Rating
	Fisheries Officers	Rating
1	Understanding on national BMU context	Unsatisfactory
2	Understanding on BMU leadership development	Dissatisfaction
3	Understanding on BMU alignment with national policies	Satisfactory
4	Perceptions on institutional capacity in support of co-management	Unsatisfactory
5	Perceptions on the Knowledge of data management	Unsatisfactory
6	Perceptions on the Stakeholder participation	Satisfactory
7	Perceptions on the Conflict resolution capacity	Satisfactory
8	Perceptions on the Fisheries management	Unsatisfactory
9	Perceptions on the Trends in fisheries, income and food security	Unsatisfactory
10	Perceptions on the Monitoring and evaluation indicators	Unsatisfactory

Major Recommendations

1. Fast tracking registration of BMUs
2. Establish a continuous training and education on BMU operations and functions. This can be provided by fisheries officers and or non-governmental organizations.
3. Establish a system and or culture where new leaders learn about their roles and responsibilities as they take office. Fisheries Staff, or project officers interested in promoting BMUs and or co-management could take lead in ensuring that the change of BMU executive office bearers is backed by a comprehensive awareness raising on their roles and responsibilities.
4. BMU networks were found to be useful to the BMUs. It is therefore recommended that any new project on co-management in the Tanzania coast should among other things build these networks in areas where they do not exist so far.
5. Introduce and operationalize a mentoring unit at the MLFD

1. INTRODUCTION

The SmartFish Program supports the implementation of a regional fisheries strategy for the Eastern and Southern Africa Indian Ocean (ESA-IO) region. Under this objective, the program Result 2.5 aims at initiating a governance framework for sustainable regional marine fisheries management and development through promoting stakeholders participation in decision making and management. This forms part of the overall workplan for the SmartFish programme: „Implementation of a Regional Fisheries Strategy (IRFS) for ESA-IO countries“ launched in February 2011.

The expected results and outcomes of the Programme fall into the five areas namely: fisheries management; fisheries governance; fisheries monitoring, control and surveillance; and regional fish trade and food security. Among the activities implemented to achieve these results is to strengthen the co-management arrangement, instituted through establishment of Beach Management Units (BMUs) that has been initiated in the ESA-IO coastal and riparian countries.

In its quest to strengthen the BMU institution, the IRFS for ESA – IOC, commonly known as SmartFish, initiated a BMU evaluation framework, which is compliant to international best practices related to Monitoring and Evaluation of community-based organizations indulged in rural development. The evaluation exercise involved the development of an evaluation tool and use of the same in a study conducted in Kenya (see Kanyange, 2013). As part of the exercise SmartFish funded a similar evaluation study of the BMUs in Tanzanian coastal marine fisheries which is reported here.

BMUs are partners with the Fisheries Development Directorate in implementing the fisheries policy. However, these BMUs face a number of challenges in fulfilling their designated roles in fisheries management and community development. As a result efforts such as development of BMU National Guideline, capacity building and review of Fisheries Policy have been undertaken to improve their performance. This report provides the findings of an evaluation study carried out using BMU Evaluation framework developed by SmartFish.

Results are presented in four major areas; first, it gives profile of the BMUs, information on holding periodic elections, frequency of holding meetings and registration. It further examines its membership, management plans and formulation of by-laws and sustainable financing. The second part discusses the BMU performance and operations, looking basically at the core functions that BMU are required to undertake. The third part then examines the BMU impact in fisheries management since their formation. Lastly the report discusses the relationship between the fisheries officers and the BMUs focusing on the formers perceptions on how BMUs are supported through legislation, policy and implementation.

The principle question that inspired commissioning of this study was whether BMUs are successful as an approach to decentralized management/co-management of fisheries. This survey shows that despite low and unsatisfactory ratings in a number of management performance variables, implementation of co-management through BMUs in the riparian 12 districts has led to observable impacts, which can acted upon for the successful implementation of co-management in management. However, it is worth noting that it is not possible to achieve highest ratings in all management areas, but it is likely that BMUs can improve their performance as co-management develops.

2. CO-MANAGEMENT INITIATIVES IN TANZANIA COASTAL MARINE FISHERIES

Fisheries managers and fishermen face a multitude of interrelated management and sustainability problems such as deteriorating aquatic habitats; declining fish stocks in coastal and inland waters; declining standards of living among fish resource users; inadequate government staff to manage fisheries and continued budget cuts; and enduring conflicts between and among stakeholders. Neither the usual approaches to fisheries management (generally those based on centralized fisheries-regulation processes), nor attempts by lower-level local authorities to control and enforce centralized regulations are proving adequate in addressing and resolving such issues (Pomeroy and Berkes 1997). These challenges led to efforts in reforming the fisheries from dominant top-down approach to co-management. Pomeroy and Berkes (1997) define fisheries co-management as a partnership arrangement in which government agencies, the community of local resource users (fishers), external agents (non-governmental organizations, academic and research institutions), and other stakeholders share responsibility and authority for decision making over the management of a fishery.

One of the most promising options in the search for alternative approaches is the co-management approach, which seeks the collaboration of users and government in one management framework. Co-management, in the words of Borrini-Feyerabend, Farvar, Nguinguiri and Ndangang (2000) is “the expression of a mature society, which understands that there is no “unique and objective” solution for managing natural resources but, rather, a multiplicity of different options which are compatible with both indigenous knowledge and scientific evidence and capable of meeting the needs of conservation and development (and that there also exists a multitude of negative or disastrous options for the environment and development (p. 1)

In line with establishment of co-management arrangements in small-scale fisheries, the government of Tanzania embraced co-management. This has been institutionalized and operationalized through establishment of Beach Management Units (BMU) at the beach level. The BMUs represent the fishing communities in the co-management arrangement. So far it is reported that about 204 BMUs have been established along the coast of Tanzania (Fisheries Division statistics).

Fisheries co-management in Tanzania brings together resource users, civil society, research and academic institutions, private sector and government both at the local and national level in sharing responsibility and authority in resource management and conservation in order to improve livelihoods of people dependent on these resources. This was made possible with the amendment of the Fisheries Act No 22 of 2003 and enactment of principal Fisheries Regulations of 2009 since then the Fisheries Division within the Ministry of Livestock and Fisheries Development has intensified its efforts to promote BMU as an institutionalized fishing community organization in fisheries co-management in the coastal marine fisheries.

3. OBJECTIVE AND ACTIVITIES OF THE STUDY

The main objective of this study is to undertake an assessment of BMUs in the Tanzanian marine districts with the aim of strengthening the BMU process in East and Southern Africa coastal countries.

Specific objectives of the study:

e. To assess the organizational performance of BMUs

f. To verify critical conditions for BMU success

g. To identify critical Strengths, Weaknesses, Opportunities and Threats

h. To assess lead government institution governance performance

3.1. STUDY ACTIVITIES

Activity 1: Participation in the harmonization of methodology between the SmartFish evaluation framework and the proposed Fisheries Department evaluation framework. Through this activity the evaluation framework tool was discussed in a two days workshop in Dar es Salaam, revised and domesticated to address issues that would be of benefit in ultimately strengthening the BMUs in Tanzania marine fisheries.

Activity 2: Field interviews. This formed the core activity of this study. A total of 25 days was spent collecting data and relevant literature materials for this study. The research team, met several officials and BMU members. The officials met came from the Ministry of Livestock and Fisheries Development, Fisheries Division, the Local District Council Authorities in the districts.

Activity 3: Data processing and analysis with focus on main strata (registered and non-registered BMU, impact of NGOs on BMU was undertaken. Given the long questionnaire for the assessment, adequate time was spent in analyzing the data. Spreadsheet software was used. A statistician was engaged to assist with statistical analysis of the data. After data processing this technical report was then produced.

4. MATERIALS AND METHODS

4.1. STUDY TOOLS

The study used the developed BMU assessment framework. This framework was developed from five modules namely: - performance assessment, critical factors for BMU success, assessment of BMU led individual achievements and assessment of institutional governance. From the framework two questionnaires (Annex 1) which capture important questions in each of the modules were developed.

The study focused on assessment of BMU achievements, critical conditions/variables for creating a suitable/enabling environment to further BMU processes, empowering BMU as resource users to participate actively in the co-management to enhance their livelihoods and how the existing institutional framework impact on the scope of development and achievement of the BMU process.

A five-point Likert scale agreed upon during the two days workshop as appropriate for the assessment of BMUs on the coast of Tanzania, was used to assess the performance of the BMUs. Three groups were targeted for the interviews; the executive committee, women members who are not in the executive committee and senior government officials (district fisheries officers). The executive committee and women members were interviewed separately. The interviews involved group discussions of at least five members. Discussions were carried in such ways that all members came up with an agreeable answer. Senior government officials were interviewed by asking questions directly or by having a discussion on each question with them.

The questionnaires used the five-point Likert scale with point allocations as follows:

1 Highly Unsatisfactory / Highly Declined / Very Useless / Very Low

2 Unsatisfactory / Decline / Useless / Low

3 Neutral

4 Satisfactory / Increased / Improved / High / Beneficial

5 Highly Satisfactory / Highly Increased / Very High / Highly Improved / Highly Beneficial

6 Don“t Know / Not Applicable / No Opinion

4.2. SAMPLING

A total of 37 BMUs (Table 1) were randomly selected from a list of 204, which is about 18% of the total number of BMUs along the coast. The sample size is a good representation of the BMU to ascertain to ascertain a detailed assessment of the BMUs performance in each region and district of marine fisheries Tanzania. The number 37 was arrived at given resource limitation as well as the vastness of the Tanzania coastal area.

Table 4.1. Sampled BMUs by district and region

	BMU	District	Region
1	Jasini	Mkinga	Tanga
2	Mwandusi		
3	Kichalikani		
4	Kwale		
5	Mpirani	Tanga city	
6	Chongoleani		
7	Ushongo	Pangani	
8	Kipumbwi		
9	Kaole	Bagamoyo	Pwani
10	Mlingotini		
11	Kifumangao	Mkuranga	
12	KisijuPwani		

S/N	BMU	District	Region
13	Nyamisati	Rufiji	
14	Mchungu		
15	Pombwe		
16	Mbweramashariki		
17	Kilindoni	Mafia	
18	Dongo		
19	Msasani	Kinondoni	ar es Salaam
20	Kawe		
21	Mjimwema	Temeke	
22	Mbutumkwajuni		
23	Somanga	Kilwa	Lindi
24	Njianne		
25	Mkwanyule		
26	Mnazimmoja		
27	Ruvu	Lindi Rural	
28	Shuka		
29	Mabano	Lindi Urban	
30	Mingoyo		
31	Bank kanisani		
32	Senta	Mtwara Mikindani	Mtwara
33	Namtibwili		
34	Majengo		
35	Mtepwezi		
36	Madaba		
37	Mgao	Mtwara rural	

4.3. DATA COLLECTION

Given the vastness of Tanzanian coast and the limited timeframe which this study had to be conducted, three research assistants, one statistician and experienced data collectors who are familiar with the coastal communities were hired to assist the Lead researcher in data collection. The study covered 14 districts (Kinondoni, Bagamoyo, Pangani, Tanga city, Mkinga, Mkuranga, Rufiji, Kilwa, Lindi Rural, Lindi Urban, Mtwara Mikindani, Mtwara rural, Temeke and Mafia) spread across the 5 regions of Dar es es Salaam, Pwani, Tanga, Lindi and Mtwara as shown in (Figure 4.1).

Figure: 4.1. Map of Study area

4.4. DATA ANALYSIS

The collected data was analyzed by use of MS excel and presented as descriptive statistics. The questionnaire (annex I) comprised a series of Likert-type question statements that when combined described a topic or lead question, for example a topic on boundaries/jurisdiction had several question statements such as (i) Is the marine area under the jurisdiction of the BMU clearly understood? (ii) Terrestrial boundaries of jurisdiction (e.g. fish landing sites) clearly understood? (iii) Are there conflicts over the boundaries of jurisdiction? This is the case for all topics in the questionnaire. Respondents were asked to rank the question statements using a Likert scale of points 1 to 5 as shown here below. Point

6 (Don“t know/Not applicable/no opinion) was not considered as part of the scale although it was listed.

1. Highly Unsatisfactory/Highly Declined/Very Useless/Very Low
2. Unsatisfactory/Decline/Useless/Low
3. Neutral
4. Satisfactory/Increased/Improved/High/Beneficial
5. Highly Satisfactory/Highly Increased/Very High/Highly Improved/Highly Beneficial
6. Don“t Know/Not Applicable/No Opinion

Two levels of analysis were undertaken from the rankings. First we were interested to get a general picture on the topics across the districts. To do this we followed the following steps in our analysis

a). First we summed up the rankings from a topic for each BMU within a district. This was done for all topics

b). From the summations, we calculated a cut off value for each topic in each district. A cut off value was considered appropriate in this case given the nature of the data (ordinal type).

c). We then compared the cut off values across all the districts.

d) The summed up ranks for each BMU within a single district were used to calculate a median. In our results we have used these medians to generate graphs we show as „Figures a“ in the results section.

In addition to the summations, we were also interested to know whether the district rankings could be categorized as either satisfactory/high/increased/improved or unsatisfactory/low/decreased/decline. We therefore calculated a cut off point for each topic/lead question. The cut off points were calculated by taking the number representing the neutral position in the Likert scale (i.e. 3) and multiplying it with the total number of questions statements in each topic/lead question (see table 4.2. for summary of cut off for each topic/lead question).

Note that the median values and cut off points should not be confused. Both are quite exclusively different. In our graphs in the results section, all figures marked a have superimposed with the cutoff line on the district median values to check which districts lie above or below this point. These cutoff points were therefore used to compare the rankings across the districts. Rankings above the cutoff were considered positive in all cases except for conflict and conflict resolution where ranking below the cut off shows positive results.

For fisheries officers (section 5.4. Institutional governance performance) Likert-scale points were used to plot graphs instead of median values, because there was only one questionnaire per every district.

Table 4.2. Calculated cut off points for each topic/lead question

Question Number	Topic/ Lead question	Cut off
2.1	Boundaries / Jurisdiction	9
2.2	Representation in BMU membership	21
2.3	Representation in BMU Executive Committee	27
2.4	BMU record-keeping & reporting: Registration and meetings	21
2.5	BMU record-keeping & reporting: Patrol records	
2.6	BMU record-keeping & reporting: Other record-keeping & reporting	
2.7	Awareness of roles & responsibilities	6
2.8	Existing level of cooperation	27
2.9	Level of trust between:	15
2.10	BMU institutional structure	6
2.11	Conflicts and conflict resolution	24
2.12	Ease with which conflicts are resolved:	18
2.13	Communication, transparency & freedom of expression:	18
2.14	Usefulness of any existing BMU network at:	12
2.15	Adequacy of Resources	15
2.16	Level of training, technical & mentoring support to BMU from:	15
2.17	Level of support on enforcement from:	18
2.18	Level of financial & equipment support from:	15
2.19	Democratic practices in the BMU	9
2.20	External factors	21
3.1	State of the fishery (since BMU formation)	15
3.2	Impacts of BMU since formation (attributable to BMU)	18
3.3	Impact of BMU in terms of skills development	15
3.4	Direct benefits attributable to BMU performance	18
3.5	Management outcomes attributable to the BMU	36

It was noted that the median values were different in each district. It was therefore prudent to know the causes/explanation of this difference. Using the five point Likert scale, we calculated a median value for each particular question in the topic within a district. This was then used to compare results within and across the districts. This was done so as to be able to know the contributions of each question statement to the topic. Since the question statements were ranked by use of a 1 to 5 point Likert scale with a neutral position at 3, points above 3 were considered positive and points below 3 were considered negative except for conflict and conflict resolution where points below showed a positive. In our results section we show this analysis in all graphs marked as Figure b.

5. RESULTS AND DISCUSSIONS

5.1. BMU PROFILE

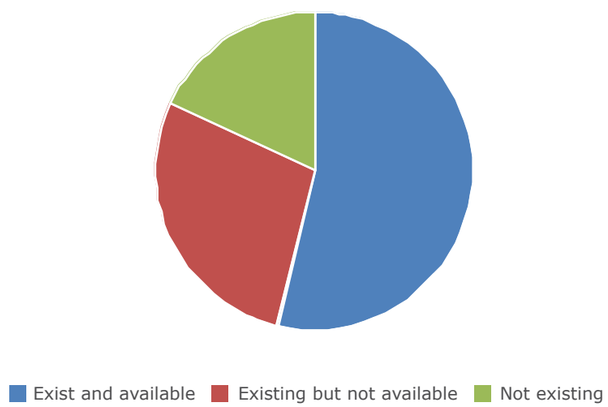
5.1.1. About the BMUs

All the BMUs interviewed had an elected Executive Committee. However, very few have been registered with the relevant authorities. About 3% indicated to have registration but, records at the Ministry of Livestock and Fisheries Development indicate that about 15% are actually registered. Many of the registered BMUs are found in Rufiji, Mafia, Temeke, Kinondoni, Mtwara Mikindani, Mtwara rural and Kilwa districts. It appears that BMUs do not follow the correct procedure especially in attaching the required documents when they apply for registration. Most of the BMUs, 88%, do not have a building to operate from. This can affect performance and record keeping.

All the BMUs were formed between the years 2007-2012. The responses on year of formation verified the validity of the data collected from the BMUs because we had prior knowledge about the period that Marine BMUs were established in the districts bordering the Indian Ocean in Tanzania.

More than half of the BMUs (81%) had a membership register (Figure 5.1). The research team managed to see registers of about 54% of the BMUs. The registers have been updated a clear indication that the BMUs are active. Therefore it can be argued that BMUs in these districts are active.

Fig 5.1. Information on existence of BMU registers.



5.1.2. BMU Membership

Somanga BMU in Kilwa district had the highest BMU membership followed by Kilindoni in Mafia. BMUs with the lowest membership were Majengo in Mtwara Mikindani and Ushongo in Pangani Table 5.1.1.

On average there are 9 males and 6 females in the executive committee, this represent a 60% to 40% respectively. However there were BMUs where the numbers of female members in the executive committee were more than their males like in Mlingotini in Bagamoyo district, Mpirani in Tanga City, Mkwanyule in Kilwa district, and Bank Kanisani in Lindi districts and Madaba in Mtwara Mikindani district. In Kawe of Kinondoni and Chongoleani of Tanga city districts, BMUs had an equal number of males and females in their executive committees. Kawe, Jasini in Mkinga and Mingoyo in Lindi rural had the highest number of females in the executive committee.

It is also the case that most BMUs had their elections sometimes in between 2009 and 2011, although there are some who had their elections in 2008 while others had them in 2013.

Table. 5.1.1. BMU membership

Districts	BMUs	Membership	Number in Executive Committee			Year of last election elections
			Male	Female	Total	
Kinondoni	Msasani	89	6	3	9	2011
	Kawe	161	15	15	30	2011
Bagamoyo	Kaole	60	6	4	10	2009
	Mlingotini	55	2	5	10	2011
Pangani	Ushongo	30	6	4	10	2011
	Kipumbwi	81	11	4	15	2011
Tanga City	Chongoleani	317	5	5	10	2009
	Mpirani	550	6	9	15	2009
Mkinga	Kwale	390	10	5	15	2011
	Kichalikani	-	10	5	15	2008
	Mwandusi	113	10	5	15	2008
	Jasini	40	21	15	40	2012
Mkuranga	Kifumangao	275	9	6	15	2011
	KisijuPwani	78	6	7	13	2011
Rufiji	Nyamisati	500	11	4	15	2013
	Mchungu	324	11	4	15	2011
	Pombwe	700	11	4	15	2011
	Mbweramashariki	521	11	4	15	2008
Kilwa	Somanga	2633	14	1	15	2012
	Njianne	130	10	5	15	2011
	Njianne	130	10	5	15	2011
	Mkwanyule	176	3	7	10	2010
	Mnazimmoja	371	10	5	15	2010
Lindi Rural	Ruvu	137	10	5	15	2009

Districts	BMUs	Membership	Number in Executive Committee			Year of last election elections
			Male	Female	Total	
	Shuka	108	11	4	15	2009
	Mabano	57	9	8	17	2011
	Mingoyo	50	6	14	20	2009
	Bank Kanisan	157	6	9	15	2011
Mtwara Mikindani	Senta	60			15	
	Namtibwili	>500	5	10	15	2010
	Majengo	30	10	5	15	2011
	Mtepwezi	>784	8	7	15	2007
	Madaba	>150	7	8	15	2009
Mtwara Rural	Mgao	494	10	4	14	2011
Temeke	Mjimwema	171	11	4	15	2011
	Mbutumkwajuni	210			30	2012
Mafia	Kilindoni	1149	14	1	15	2013
	Dongo	768	19	11	30	2012

5.1.3. Guidelines, Management plans and by-laws

When interviewed about guidelines, management plans and by-laws, the responses indicated that only 42% of the BMUs have management plans (Table 5.1.2). This is an indication that BMUs are starting to implement their responsibilities. But out of these only 21% had their plans approved by the district authorities. More than half of the BMUs we visited had a copy of the BMU guideline and had received training on preparing management plans. Although some BMUs indicated that they received a Kiswahili copy of the Fisheries Act 2003, the reality is that this translated copy does not exist, what they are referring to is the Fisheries Policy which they have in a translated form.

Management plans and by-laws are crucial for the BMUs to legally implement their roles in co-managing the fisheries resources. In the event that these are absent, they are unable to implement fisheries management adequately.

Table 5.1.2. Responses on the BMU guidelines, management plan and by-laws

Questions on Management Plans, By-laws and Guidelines	Yes %	No %	Not sure %
Does the BMU office have a copy of BMU guidelines?	55	45	0
Does BMU office have a (Kiswahili) copy of the Fisheries Act, 2003	37	57	6
Has the BMU received training on preparation of management plans?	55	44	1
Does BMU office have a copy of the Fisheries Regulations, 2009	37	58	5
Has a management plan been drafted?	42	55	3
Has a management plan been approved by District Council?	21	66	13
Does the management plan contain measures to regulate outside fishers	37	52	11
Does the management plan contain permanent closed areas?	26	64	10
Does the management plan contain seasonally closed areas?	18	70	12
Have by-laws been drafted?	48	51	1
Have by-laws been approved by District Council?	25	70	5
Do by-laws contain measures to regulate outside fishers	43	54	3
Are there by-laws to enforce closed areas?	34	63	4

5.1.4. Sustainable financing

BMUs are generally not financially sustainable, first they do not have any sources of income, and over 90% of them interviewed did not receive any funding from the District Council (DC) in the financial year 2013 – 2014. However, this should not be understood that BMU are required to receive funds from the DC. About 93% of them have neither been awarded nor won tenders to collect revenues on behalf of the District Council. On the other hand, 94% do not receive any revenue from the tender they have won. About 80% of the BMUs do not receive any funding from levies outside the fisheries and about 87% do not receive any funding from taxing fish landings.

Given the financial status of the BMUs, 91% of them do not even prepare their budget estimates. Half of them (45%) do not have any strategy on how to raise funds for their operations. They also do not keep any financial reports (Table 5.1.3).

Finances are crucial in ensuring that BMUs perform their functions and roles effectively and timely. However, with these financial constraints the BMUs can barely execute their responsibilities. This explains why BMUs have not been effective as this report shows.

Table 5.1.3. Financial sustainability of BMUs (in %)

	Preparation of budget estimate for current year	Existence of a strategy on how to raise the required income	Financial reports available for FY 12	Availability of report FY 12	Financial reports available for FY 13	Availability of report FY 13
Yes	5	52	22		13	
No	91	45	73		85	
Don“t know	5	3	5		2	
Existing and available				19		5
Existing and unavailable				3		8
Don“t exist				78		88

5.2. BMU OPERATIONS AND FUNCTIONS

This study examined how BMUs are moving towards achieving the objectives for which they were established. The design of the study did not allow evaluating performance based on meeting specific objectives. This section shows that BMUs as co-management units are involved in decision-making on how to manage and exploit the fish resource as well as monitoring, surveillance and control of the fisheries. BMUs rated themselves to have done well on areas such as addressing conflicts and conflict resolution, level of trust, communication, transparency and freedom of expression, BMU record-keeping and reporting on events that take place at the landings, usefulness of maintaining event books/MCS records, availability of collecting catch data, maintaining BMU institutional structure, communication and democratic practices among others (see Table 5.2.1). They have however not performed well in areas such as keeping records on their registration and meetings, patrols, cooperation, awareness on roles and responsibilities among others (See Table 5.2.2).

Table 5.2.1. Summary of ratings on BMU operations and function

Question statements	Rating	Leading Districts	Last district
BMU record-keeping & reporting: Other record-keeping & reporting	Satisfactory	Rufiji and Mafia	Bagamoyo and Mkinga
BMU institutional structure	Satisfactory	Pangani, Tanga city, Mkuranga, Lindi rural and urban	Mkinga and Mtwara rural.
Communication, transparency & freedom of expression:	Satisfactory	Mtwara rural, Rufiji and Mkuranga	Tanga city, Pangani
Democratic practices in the BMU	Satisfactory	Kinondoni, Bagamoyo and Mtwara rural	Pangani, Kilwa
Usefulness of any existing BMU network at:	Useful	Pangani, Rufiji and Lindi Urban	Kinondoni, Tanga city and Mkinga
Ease with which conflicts are resolved:	Easy	Temeke, Mkuranga and Mtwara Mikindani	Pangani
Level of understanding on Boundaries / Jurisdiction	High	Pangani, Mafia and Kinondoni	Mkuranga, Kilwa
Level of Conflicts and conflict resolution	Low	Bagamoyo and Mtwara Mikindani	Kilwa and Mtwara rural
Representation in BMU membership	High	Mafia, Kinondoni and Pangani	Bagamoyo, Mkuranga
Level of trust between BMU members and Executive committee, among Executive committee members, between Executive committee and village government, and executive committee and district authorities	High	Bagamoyo, Mkuranga and Rufiji	Tanga city Pangani

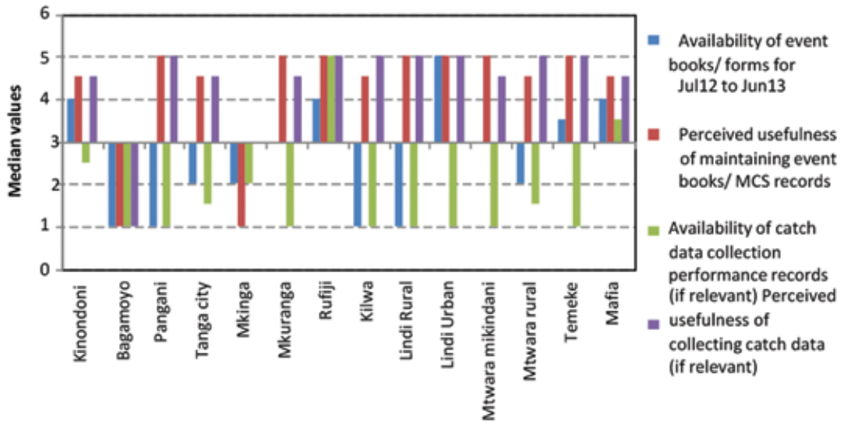
5.2.1. BMU Record Keeping and Reporting: Other record-Keeping and Reporting

BMUs were asked to evaluate their keeping of records and any other form of reporting. On the following areas:*(i) Availability of event books/ forms for July 12 to June 13, (ii) Perceived usefulness of maintaining event books/ MCS records, (iii) Availability of catch data collection performance records (if relevant) and (iv) Perceived usefulness of collecting catch data (if relevant)*. Response options were unsatisfactory to satisfactory with 1 as unsatisfactory and 5 satisfactory and a neutral point at 3.

The results indicate that BMUs in Bagamoyo district perceived all the question statements as unsatisfactory. However, it was only in Mafia and Rufiji where all these question statements were perceived as satisfactory (Figure 5.2.1). Availability of catch data was the most unsatisfactory record

available in all the districts except Rufiji and Mafia districts. Availability of event books was also unsatisfactory in Bagamoyo, Pangani, and Tanga city, Mkinga, Kilwa, Lindi rural and Mtwara rural. It was interesting to note that all BMUs visited had a satisfactory perception in the usefulness of collecting catch data although they did not collect or keep any records on the same.

Fig. 5.2.1. Status of BMU record keeping and reporting: Other record keeping and reporting



5.2.2. BMU Institutional Structure

Two questions were presented to the BMUs in assessing BMU institutional structure. These were *(i) Is the BMU, as an institution, compatible with existing village structures? And (ii) To what extent is the BMU structure appropriate to achieve its objectives?* The results were grouped into two categories of unsatisfactory and satisfactory on a five point Likert scale. 1 represented unsatisfactory while 5 represented satisfactory. A cut off point of 6 was also used in the two categories at a district level.

Results indicated that the BMUs institutional structure was perceived to be compatible with existing village structure and appropriate to achieve its objectives. This was the case among all the districts (Fig. 5.2.2a).

All BMUs were perceived to be an institution compatible with the existing village structures except in Mafia district. Similarly, the BMU structure was perceived as appropriate to achieve its objective except in Mkinga and Kinondoni (Figure 5.2.2b).

Fig. 5.2.2a. BMUs institutional structure.

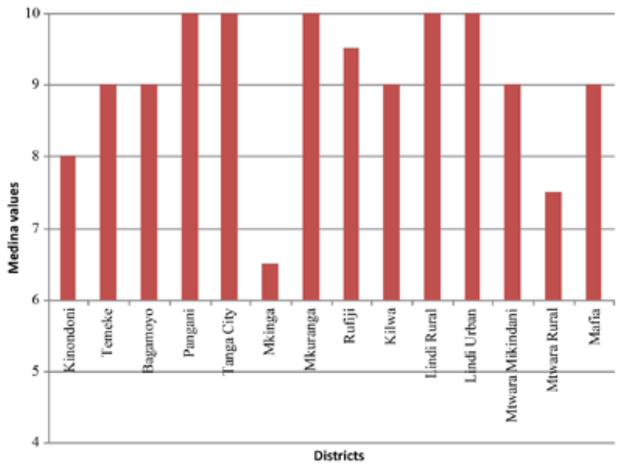
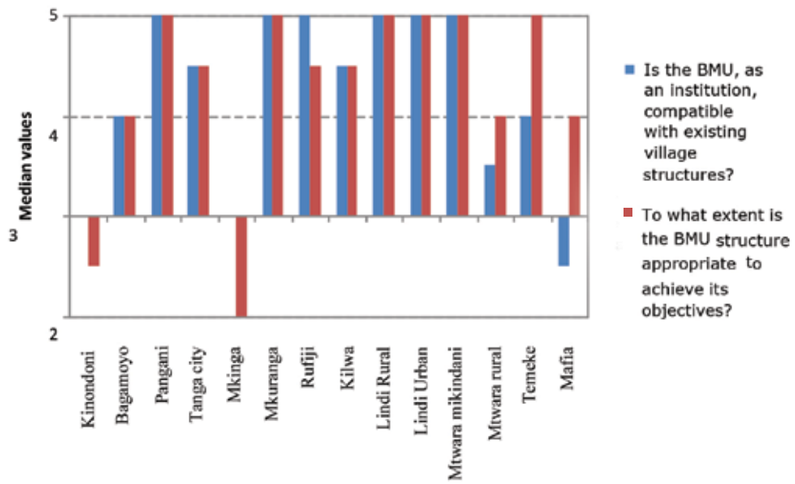


Fig. 5.2.2b. BMUs institutional structure



5.2.3. Communication, Transparency and Freedom of Expression

Communication, transparency and freedom of expression were assessed by presenting six question statements to the BMUs. These were:- *(i) Freedom of expression of different viewpoints by BMU members, (ii) Freedom of expression of different viewpoints within BMU Exec. Committee, (iii) Level of communication with neighbouring BMU, (iv) Level of communication with District Fisheries Officers/ DED, (v) Level of communication with District Council, (vi) Level of communication with the Fisheries Division*. Responses options were unsatisfactory to satisfactory with a neutral position at 3. A cut off point

18 was used to group responses into two categories of unsatisfactory and satisfactory. Points above this cut off were considered as satisfactory while points below the cut off were considered as unsatisfactory.

Generally, communication, transparency and freedom of expression were perceived to be satisfactory. Pangani, Tanga City, Kilwa, Lindi Rural and Lindi Urban districts showed unsatisfactory levels of communication, transparency and freedom of expression (Fig. 5.2.3a).

Freedom of expression of different viewpoints within BMU Executive committee was perceived to be satisfactory in all the districts (Figure 5.2.3b). Communication with District Fisheries officers/DED was perceived to be satisfactory except in Pangani, Tanga city, Mkinga, Kilwa, Lindi urban and Mtwara Mikindani. Level of communication with Fisheries Division was perceived to be unsatisfactory in Pangani, Tanga city, Mkinga, Kilwa, Lindi rural, Lindi urban and Mtwara Mikindani.

Fig. 5.2.3a. Communication, transparency and freedom of expression.

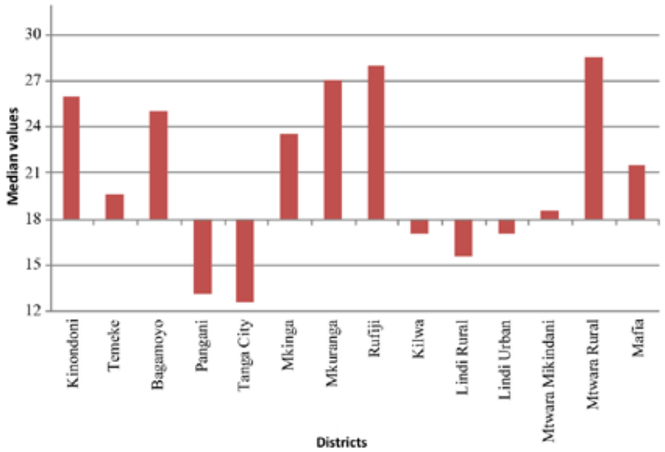
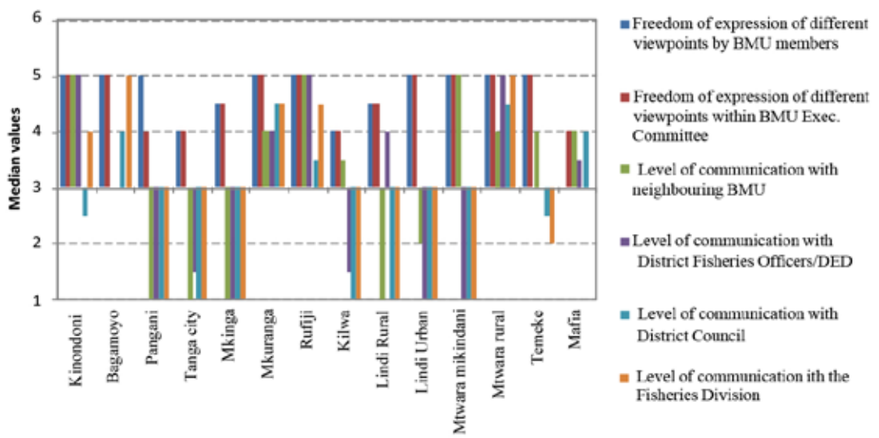


Fig. 5.2.3b. Communication, transparency and freedom of expression.



5.2.4. Democratic Practices in BMU

To assess democratic practices, three question statements were presented to the BMUs. These were *(i) Regular election of Executive members, (ii) Free and fair election of executive members and (iii) Level of participation (turn-out) in election of executive committee.* Response options were unsatisfactory to satisfactory on a scale of 1 to 5 with a neutral point at 3. A cut off point 9 was used to group responses into two categories of unsatisfactory and satisfactory. Responses above the cutoff point represented a satisfactory BMU democratic practice while responses below the cut off represented unsatisfactory democratic practices (Figure 5.2.4a)

Democratic practices in the BMUs were generally perceived to be satisfactory. It was only in Pangani district where democratic practices were perceived to be unsatisfactory (Fig. 5.2.4a). Regular election of executive members was perceived as unsatisfactory in Bagamoyo, Pangani, Tanga city, Mkuranga, Kilwa and Mtwara Mikindani districts. It was only in Pangani district where free and fair elections were perceived as unsatisfactory (Figure 5.2.4b)

Fig. 5.2.4a. Democratic practices in the BMUs

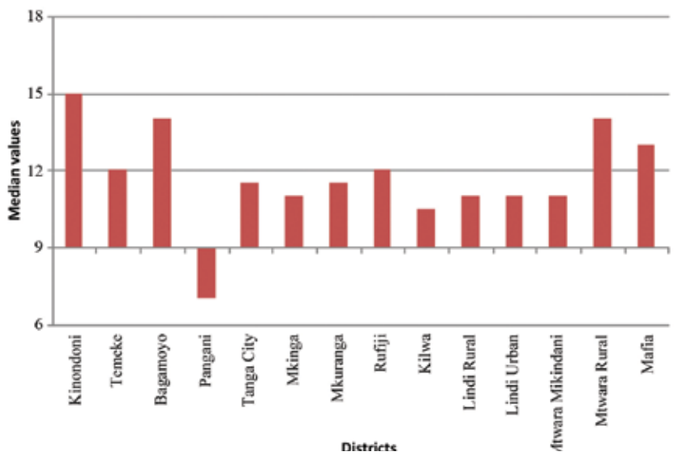
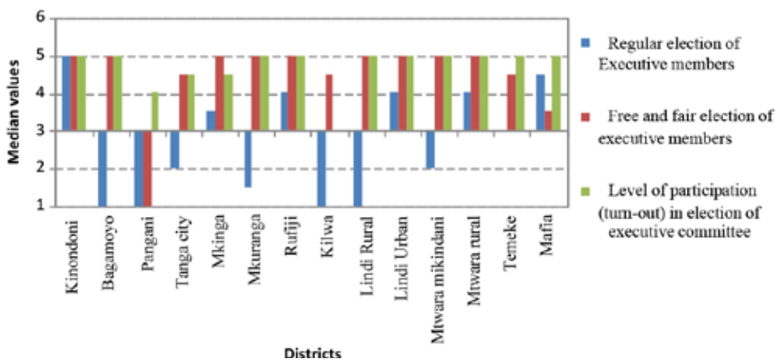


Fig. 5.2.4b. Democratic practices in the BMUs



5.2.5. Usefulness of any existing BMU Network

Usefulness of existing networks was assessed through presenting BMUs with statements on networks such as *(i) Collaborative Fisheries Management Area (CFMA) level, (ii) District level (iii) National level (iv) Cross-border existing*. Responses options were useless to beneficiary with a neutral position at 3. A cut off point 12 was used to group responses into two categories of useless and beneficial. Responses above this cut off were considered as having perceived BMU networks as beneficial while points below the cut off were taken to mean that BMU networks are considered as useless.

BMU networks were perceived to be beneficial in all the districts except Kinondoni, Tanga City, Mkinga, Mtwara Mikindani and Mafia districts (Fig. 5.2.5a). Pangani, Rufiji, Lindi urban and Kilwa led the list among the districts where networks were perceived as beneficial. Mafia district did not find district and national networks to be beneficial although they were indifferent on CFMA. Kilwa, Rufiji, Mkuranga and Lindi urban districts found networks to be beneficial (Figure 5.2.5b). The Worldwide Fund for Nature (WWF) established CFMA in three districts namely Rufiji, Mafia and Kilwa (WWF-TCO). It was expected that BMUs in these districts would perceive them as beneficial. However, this is contrary to Mafia. Bagamoyo, Mkuranga, Lindi urban, Lindi rural, Mtwara Mikindani and Mtwara rural outside the three districts who noted that CFMAs were beneficial due to what they had heard about CFMAs. They had good stories about what they do and how they have helped the BMUs to collaborate across their own borders.

Fig. 5.2.5a. Existing BMU network.

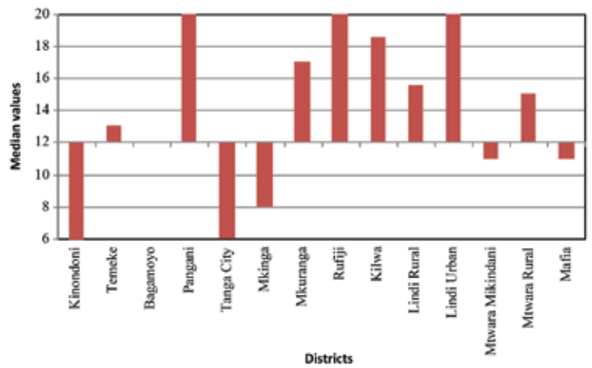
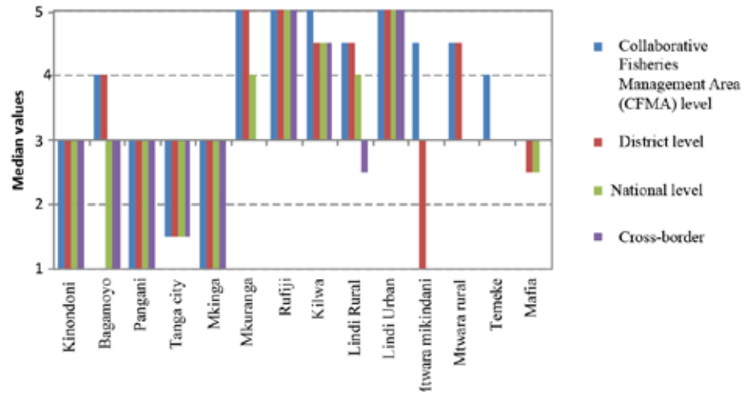


Fig. 5.2.5b. Existing BMU network.



5.2.6. Ease with which Conflicts are Resolved

Resolving conflicts was assessed by use of six question statements namely *(i) Internal (within the BMU), (ii) Other community members / politically affiliated groups, (iii) with migrant fishers, (iv) with neighbouring BMUs, (v) with village Government and (vi) Other Government agencies (e.g. marine parks; Navy)*. Responses were grouped into two categories of very difficult to very easy on a scale of 1 to 5, Where 1 represented very difficult to solve while 5 represented very easy to solve. A cut off point 18 was used to compare district data where BMUs above this cut off were considered as having it very easy in resolving conflicts while those below this cut off were having very difficult.

Across the districts, conflicts were generally found to be easier to resolve (Fig. 5.2.6a).Points less than 18 indicate difficult. Data are median values for each district. Only in Pangani was there a perceived difficulty in resolving conflicts. BMUs in Bagamoyo and Kilwa districts did not have any difficulty neither did they have an ease in resolving conflicts.

BMUs indicated that difficult conflicts to resolve were: conflict with neighbours in Pangani district, internal BMU conflict in Tanga city district, conflict with migrants in Kilwa and Mtwara rural, conflict with other government agencies in Mafia district and conflict with other community members or politically affiliated groups. There was ease of resolving these types of conflicts in other districts (Figure 5.2.6b)

Fig. 5.2.6a. Ease of resolving conflicts

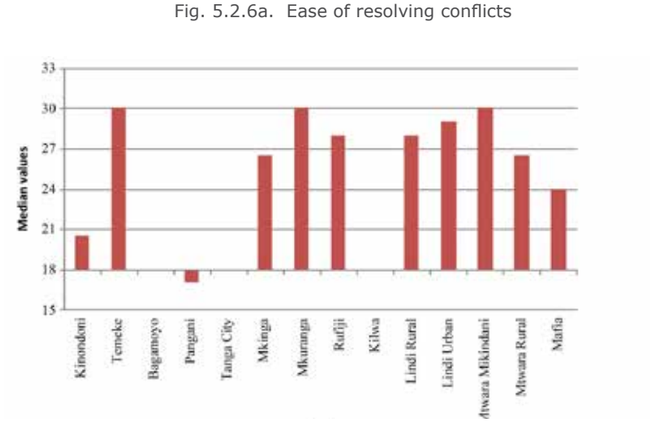
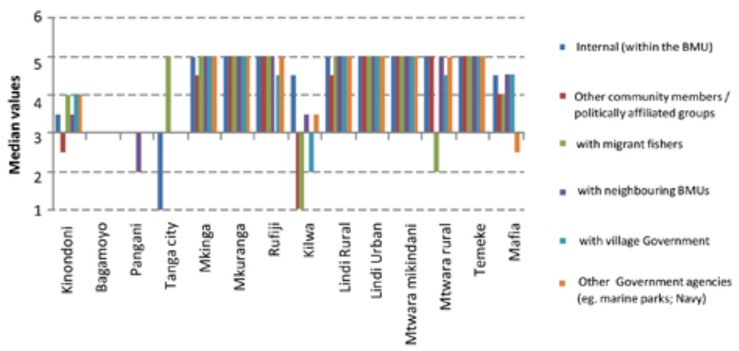


Fig. 5.2.6b. Ease of resolving conflicts



5.2.7. Boundaries and Jurisdiction

Pomeroy and Harkes (2000) have argued that problems and challenges over natural resources, such as conflicts arising from fishing grounds, boundary issues due to uncertainty or limited resources, in many cases originate from both biological and physical attributes of the resource. To address these problems/challenges, communities formulate institutional arrangements. Thus to assess community actions it is important to understand among others their level of awareness on boundaries and jurisdiction of their institutions. It is based on this argument that this study also focused on this topic. Three question statements were asked to seek respondents" perceptions on boundaries or jurisdiction. These were (i) Is the marine area under the jurisdiction of the BMU clearly understood? (ii) Terrestrial boundaries of jurisdiction (e.g. fish landing sites) clearly understood? And (iii) Are there conflicts over the boundaries of jurisdiction? The response options were on a scale from 1 (very low) to 5 (very high) with a neutral answer at position 3 in the scale. The results were then grouped into categories of low and high understanding and are shown in Figures 5.2.7a and b. In Figure 5.2.7a, the data shows overall districts analysis while Figure 5.2.7b shows analysis on the question statements.

Responses from the analysis with a rating of low are presented below the cutoff point 9 in Figure 5.2.7a, while the responses of high are presented above the cutoff point of the graph. BMUs in Mkuranga, Kilwa, and Mtwara rural districts had an overall low understanding on boundary/jurisdiction. The results for Kilwa district is hard to understand given that World Wide Fund for nature (WWF-TCO) had a project in which the capacity of BMUs was enhanced with respect to a number of issues including knowing their boundaries or areas of jurisdiction. The rest of the districts had generally a high understanding (Figure 5.2.7a). The level of understanding in Kinondoni, Mafia and Pangani were very high. While understanding in Bagamoyo was neither high nor low. In Bagamoyo the high understanding on terrestrial boundaries cancelled out with the low understanding on conflicts.

With regards to the question statements, the results show that there is generally a high level understanding on marine and terrestrial areas under the jurisdiction of the BMU (Figure 5.2.7b). However, there was a general low level of understanding on existence of conflicts over boundaries of jurisdiction in all the districts except Pangani and Mafia districts. Understanding of marine and terrestrial boundaries were however high in all the districts except for Mkuranga where understanding was low. The committee understanding of the boundaries was higher than women members of the BMUs. This could be because most women do not go out fishing as men do thus they are not aware of the boundaries.

Fig 5.2.7a. BMU members understanding of the marine and terrestrial area under the jurisdiction.

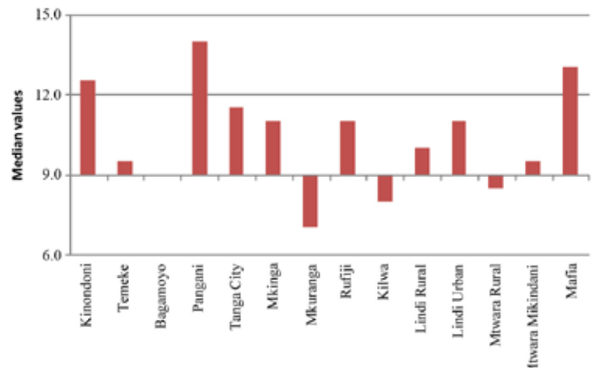
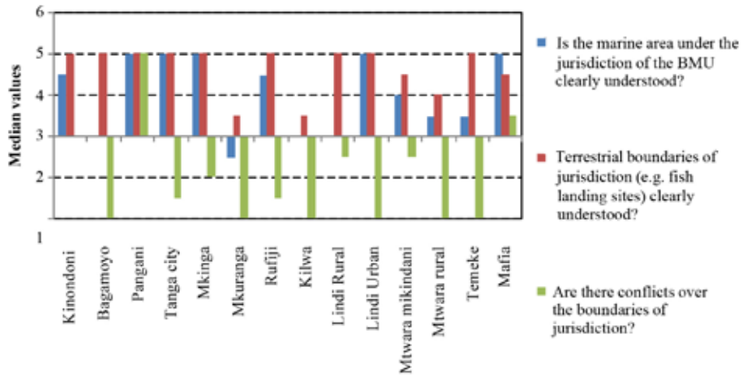


Fig 5.2.7b. BMU members understanding of the marine and terrestrial area under the jurisdiction.



5.2.8. Conflicts and Conflict Resolution

Eight questions were presented to the BMUs to understand Conflicts and conflict, these were *(i) Level of conflicts that BMUs face?, (ii)Level of conflicts between marine resource users within the village? (iii) Level of conflicts between local and migrant fishers (d) Level of conflicts between BMU and politically affiliated parties (iv) Level of conflicts between BMU and village government, (v) Level of conflicts between BMU and village government, (vi) Level of conflicts between village and neighbouring villages, (vii). Level of conflicts between BMU and district authorities and (viii) Level of conflicts between BMU and any other Government agency.* Responses were grouped into two categories of low to high levels of trust on a scale of 1 to five. 1 represented low while 5 represented high. A cut off point 24 was used to assess districts where BMUs above this cut off were considered as having high levels of conflicts while those below this cut off were considered to be having low levels of conflicts. Low levels of conflict were considered as a positive performance for the BMUs while high levels of conflict were considered as negative performance.

Institutional conflicts were generally perceived to be low among BMUs. Points less than 24 (cut off) indicate low levels of conflicts. This is a case where the low median values below the cut off indicate positive results. Bar graph data are median values for each district. All districts showed low levels of conflicts (Fig. 5.2.8a). This is one item in which all BMUs have performed quite well. Besides the aggregated district data, levels of conflict between marine resource users within the village, conflicts between village and neighbouring village, level of conflict between BMU and district authorities and level of conflict between BMU and politically affiliated parties were found to be high in Kinondoni, Pangani, Kilwa, Lindi rural and Mtwara rural (Figure 5.2.8b).

Fig. 5.2.8a. Level of conflicts.

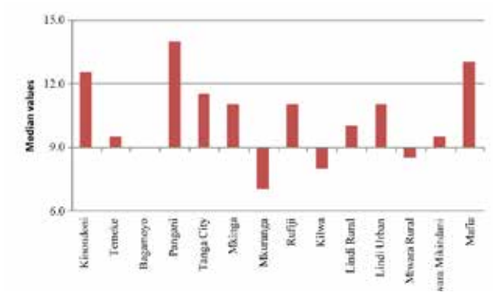
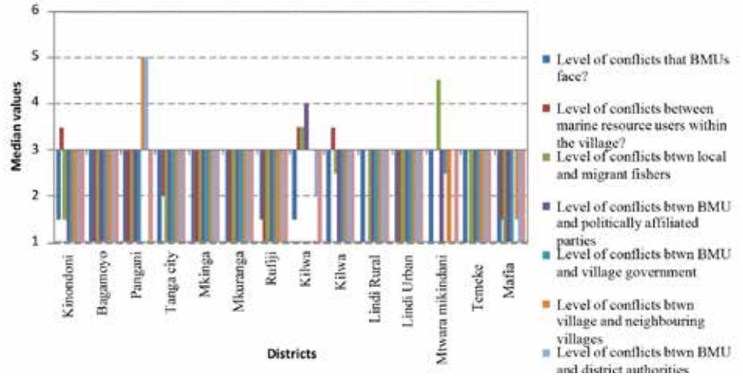


Fig. 5.2.8b. Level of conflicts



5.2.9. Representation in BMU Membership

Representation in BMU membership is a crucial issue as it relates to legitimizing fisheries regulations, as well as regulation formulation and implementation. Therefore to understand the composition of various groups in BMU membership, the executive committee and women members were asked to rate representation of *(i) Different kinds of fishers (gears), (ii) Gender (iii) Boat- Owners (iv) Fishing gear owners (v) Fish Traders (vi) Fish processors and vii) Service providers (restaurants & hotels).* The responses options were 1 (very low) to 5 (very high) again with a neutral answer at position 3 in the scale. Responses were grouped into two categories of Low and High and are presented in Figure 5.2.9a and b below. Figure5.2.9a show analysis of responses at a district level. The responses are also grouped into two categories of low and high starting from a cutoff point (21).

Aggregated district data indicates that Mafia district had the highest representation in BMU membership (Figure 5.2.9a). This was followed by BMUs in Kinondoni, Pangani, Rufiji, Kilwa, Mtwara rural, Lindi rural and finally Tanga city. The other districts had low representation in their BMU membership, with Bagamoyo having the lowest representation followed by Mkuranga, Mkinga, Lindi Urban and Temeke.

The lowest represented fisher groups in the BMU membership varied from one district to another (Figure 5.2.9b). All the fisher groups in all the BMUs in Mkuranga district, except service providers, had lowest representation in the membership. Lindi urban and Bagamoyo BMUs had the lowest representation of gender group. Mafia BMUs had the highest overall membership representation. BMUs in Bagamoyo and Lindi Urban had the lowest representation of all the fisher groups (Figure 5.2.9b). Overall representation of different kinds of fishers (gears) recorded the highest representation in at least Rufiji and Mafia district BMUs.

Fig. 5.2.9a. Responses on representation in BMU Membership

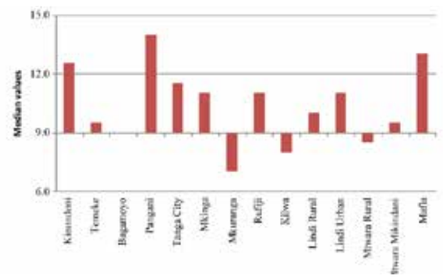
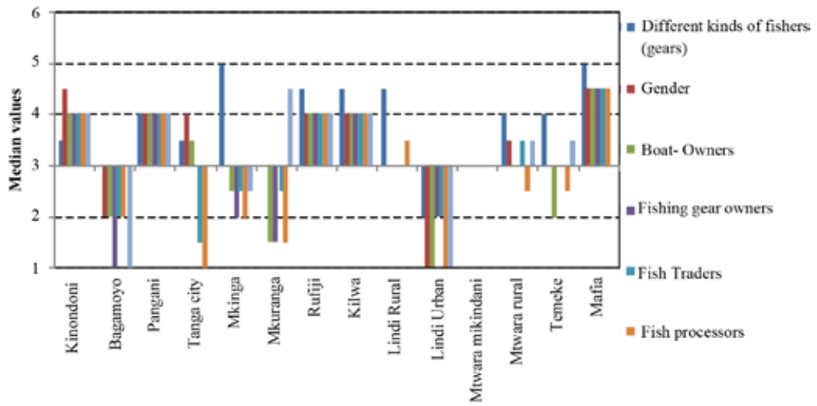


Fig. 5.2.9b. Responses on representation in BMU Membership



5.2.10. Level of Trust between

Five different question statements were present to BMUs to assess their levels of trust among themselves. These were levels of trust between *(i) Executive members, (ii) Executive and Ordinary Members of the BMU, (iii) Executive and village government, (iv) Executive and District authorities and (v) Executive and Fisheries Department.* Responses were grouped into two categories of low to high levels of trust on a scale of 1 to five. 1 represented low while 5 represented high. A cut off point 15 was used to comprehend which districts perceived levels of trust to be low or high. Points below the cutoff point 15 were considered to be low levels of trust while those above this cut off point were considered to be high.

Generally level of trust was perceived to be high in all the districts except Pangani, Tanga city and Kilwa (Figure 5.2.10a). It was also in these two districts where levels of cooperation were also low implying that with a low level of trust, cooperation would also be low. However trust can be high as is the case in Kinondoni, Temeke, and Bagamoyo Mkinga Mtwara Mikindani, Mtwara rural (Figure 5.2.10a) but the level of cooperation low. This probably explains why level of cooperation was perceived to be low in these districts implying close association between trust and cooperation (Figure 5.2.20a). Bagamoyo district however led in perceiving the level of trust to be highest followed by Mkuranga and Rufiji. In fact levels of trust among executive members and ordinary BMU members, executive and village government, executive and district authorities and executive and fisheries authorities were highest in Bagamoyo. Could it be that these groups have colluded to underperform? Going by numbers of districts, trust was perceived to be low between the executive committee and Fisheries Division in all the eight districts, which reported low levels of trust.

On the other hand trust between executive members and ordinary BMU members was high in all the districts except Pangani and Tanga city (Figure 5.2.10b)

Fig. 5.2.10a. Level of trust among members, village government and other authorities

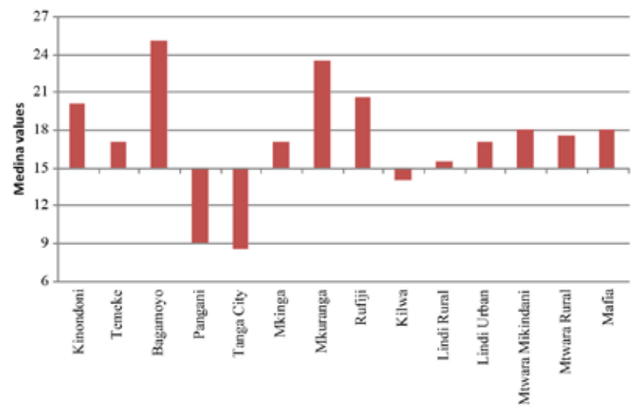
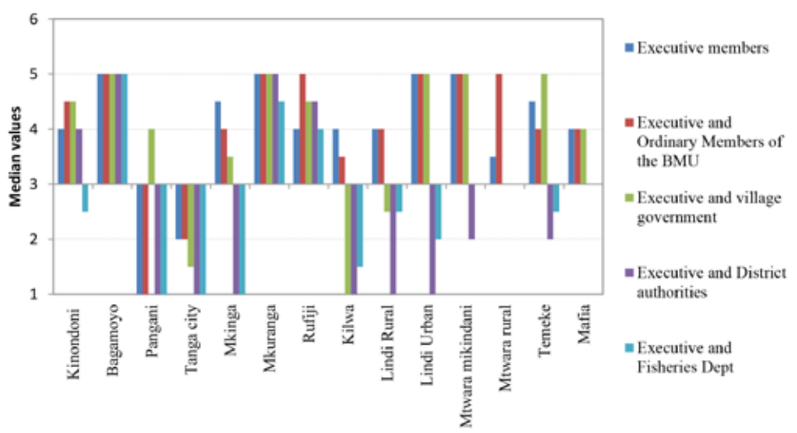


Fig.5.2.10b. Level of trust among members, village government and other authorities.



5.2.11. External Factors

The following question statements were used to assess how external factors affect BMU operations and performance. *(i) Difficulty (including cost) of travelling from village to District HQ, (ii) Level of conflict between political parties in the village, (iii) Presence of migrant fishers in BMU's fishing grounds, (iv) Length of time resident fishers & families have lived in village (v) Degree to which villagers are from common origin/ tribal group etc (vi) Existence of traditional fisheries management before BMU (vii) Quality of infrastructure & facilities at fish landing site(s) in village.* Response options were low to high on a scale of 1 to 5 with a neutral point at 3. A cut off point 21 was used to group responses into two groups of low and high. Low effects of external factors are shown below the cutoff point in Figure 5.20a while high effects of external factors are shown above the cutoff point.

External factors were found to affect operations and functions of BMUs. BMUs interviewed, particularly in Kinondoni, Temeke, Bagamoyo, Tanga City, Mkinga, Lindi Urban and Mtwara Mikindani perceived external factors effect as low while BMUs in Pangani, Lindi rural Kilwa and Mafia districts perceived effect of external factors as satisfactory (Fig 5.2.11a).

External factors which were perceived to have high effect on BMUs were Length of time resident fishers and families have lived in the village. This is one factor which is a requirement for one to become an elected BMU leader according to the BMU guideline (FDD and WWF, 2009). This factor had high effect in all districts except Mafia district (Figure 5.2.11a). Other external factors were difficulty of travelling from village to district which affected BMUs in Pangani, Tanga city, Mkuranga, Mkinga, Rufiji, Lindi rural, and Mafia districts. Presence of migrant fishers in BMU fishing grounds affected all BMUs except those in Kinondoni, Tanga city and Mtwara Mikindani districts. Degree to which villagers are from common origin/tribal groups also affected BMUs in Pangani district.

Fig.5.2.11a. External factors and effects on operations and functions of BMUs.

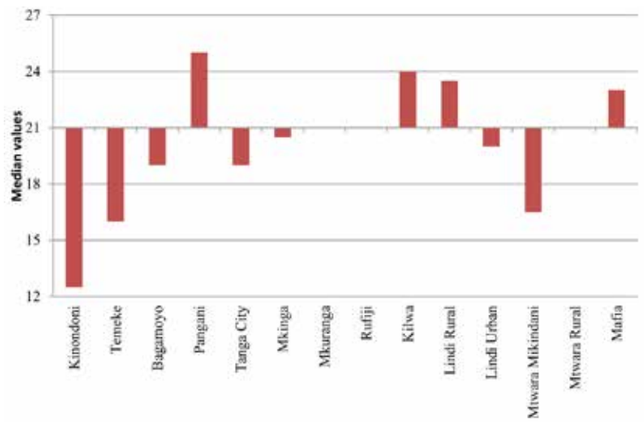
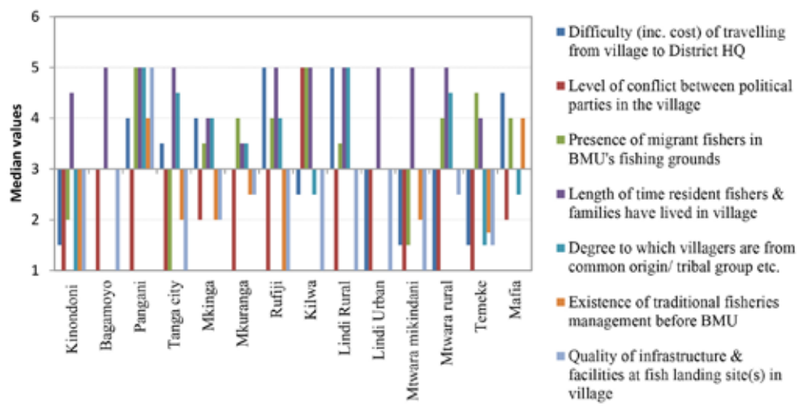


Fig.5.2.11b. External factors and effects on operations and functions of BMUs.



5.2.12. Representation in BMU Executive Committee

One area in which rating was neither high nor low was on representation in BMU in BMU executive committee. BMUs were presented with seven different question statements. These were *(i) Different kinds of fishers (gears), (ii) Gender (iii) Boat- Owners (iv) Fishing gear owners (v) Fish Traders (vi) Fish processors and (vii) Service providers (restaurants & hotels).* The responses options were 1 (very low) to 5 (very high) again with a neutral answer at position 3 in the scale. Responses were grouped into two categories of Low and High and are presented in Figure 5.2.12a and b below. Figure 5.2.12 a show analysis of responses at a district level. The responses were also grouped into two categories of low and high starting from a cutoff point of 27.

Representation in BMU executive committee was almost evenly distributed across the districts. BMUs in Rufiji, Pangani, Kinondoni, Kilwa, Temeke and Mtwara Mikindani districts indicated that their BMUs had a high representation in the executive committee. The rest of the districts had low representation with Mkuranga leading as the district with the lowest representation in the executive committee (Fig. 5.2.12a).

Fishers groups that were not well represented in the BMUs included Fish processors, Fish traders, Fish gear owners, service providers in almost all the districts which had low representation in BMU executive committees. Gender had low representation in Temeke, Lindi Urban, Lindi rural, Kilwa and Mkinga districts (Figure 5.2.12b).

Fig.5.2.12a. The representation in BMU executive committee

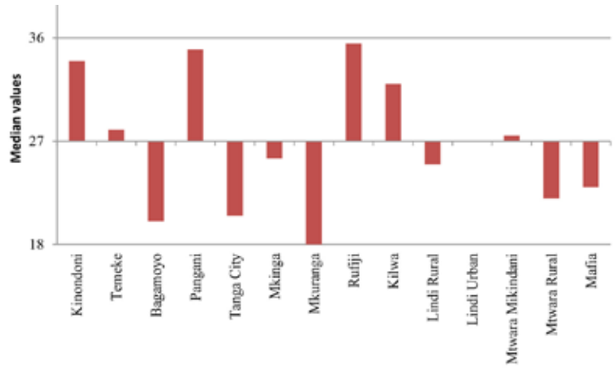


Fig. 5.2.12b.The representation in BMU executive committee

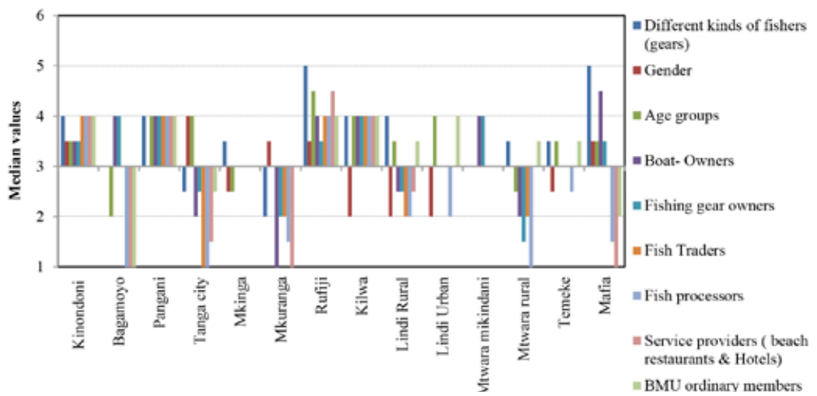


Table 5.2.2. Summary ratings on functions and operations

Question statement	Rating	Leading district	Last district
BMU record-keeping & reporting: Registration and meetings	Unsatisfactory	Kinondoni, Mafia and Rufiji only	Bagamoyo, Pangani and Mtwara rural
BMU record-keeping & reporting: Patrol records	Unsatisfactory	Kinondoni and Rufiji	All other districts except Mafia and Mkuranga
Level of training, technical & mentoring support to BMU from:	Unsatisfactory	Rufiji and Mkuranga	Bagamoyo and Pngani
Level of support on enforcement from	Unsatisfactory	Mkuranga, Rufiji and Mafia	Bagamoyo, Pangani and Lindi Urban and rural
Level of financial & equipment support from	Unsatisfactory		All the districts
Adequacy of Resources	Inadequate	Mkinga, Kinondoni	Temeke, Bagamoyo, Pangani, Tanga city, Mkuranga, and Kilwa
Level of awareness of roles & responsibilities	Low	Mkuranga, Rufiji and Mkinga	Bagamoyo, Pangani, Tanga city, Kinondoni and Kilwa
Existing level of cooperation	Low	Mafia, Rufiji and Mkuranga	Tanga city, Kilwa, and Pangani

5.2.13. BMU record Keeping and Reporting: Registration and Meetings

BMUs were asked to evaluate their record keeping in terms of registration of BMU and holding of meetings. The question statements included *(i) Availability of up to date BMU members' registration record books, (ii) Executive Committee: frequency of meeting in the past 12 months, (iii) Availability of minutes of above meetings, (iv) Attendance at Executive Committee meetings, (v) Frequency of BMU Assembly meetings in past 12 months (should be quarterly), (vi) Availability of minutes of above meetings and (vii) Attendance at Assembly meetings.* Response options were unsatisfactory to satisfactory on a five point Likert scale with 1 as unsatisfactory and 5 satisfactory and a neutral point at 3. A cut off of 21 was used to group the results into two categories of satisfactory and unsatisfactory.

Record keeping and reporting (Registration and meetings); was generally found to be unsatisfactory in most districts except Kinondoni, Rufiji and Mafia (Fig. 5.2.13a) with Bagamoyo, Pangani and Mtwara rural taking lead in unsatisfactory record keeping on registration and meetings.

Updated members registers were noted to be satisfactory in Kinondoni, Tanga city, Mkuranga, Kilwa, Lindi rural, Mtwara Mikindani and Mafia. Attendance to BMU assembly meetings was only satisfactory in Kinondoni. Similarly attendance to executive committee meetings was satisfactory in Kinondoni, Tanga city, Mkuranga, Rufiji and Lindi rural districts (Figure .5.2.13b).

Record keeping in all areas except those mentioned in the previous paragraph seemed to have unsatisfactory assessment. The possible reason for this could be that BMUs do not have designated offices where they can keep record as (data shows that 88% do not have offices). In fact during our field survey, we noted that books were kept with the BMU secretaries in their homes. In some cases where the secretary was absent we could not even see the record books. Moreover our interviews were held in public places whereas BMU office could have been the most relevant location for these interviews.

Fig. 5.2.13a. Record keeping and reporting (Registration and meetings).

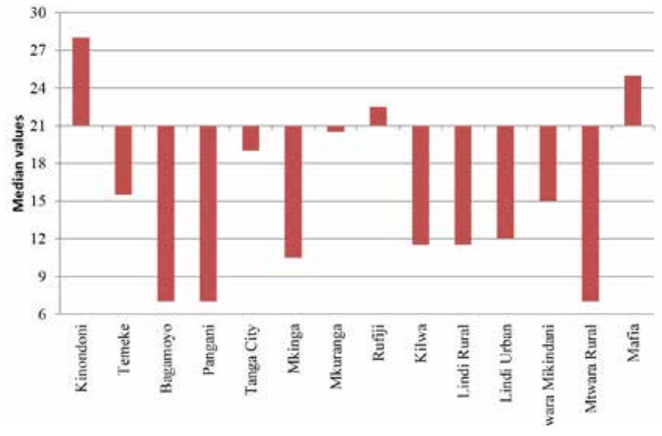
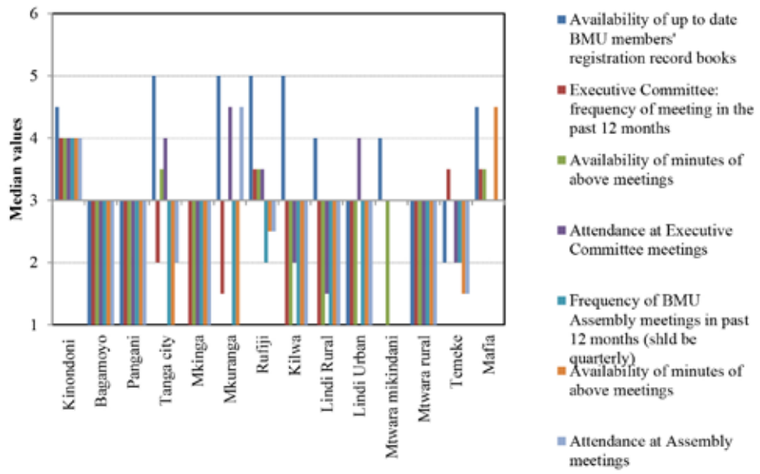


Fig. 5.2.13b. Record keeping and reporting (Registration and meetings)

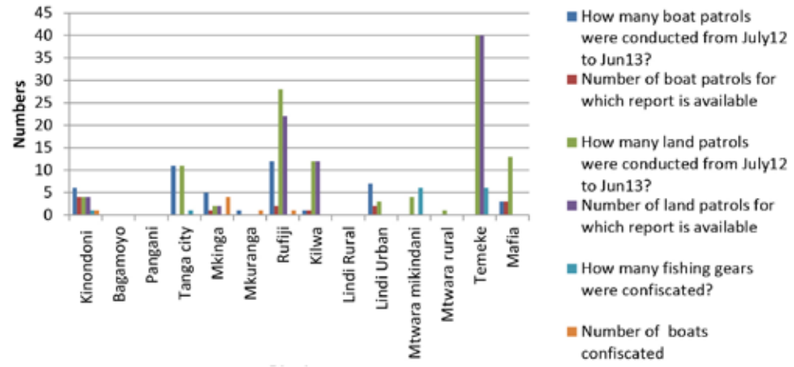


5.2.14. BMU Record Keeping and Reporting: Patrols and Records

On record keeping and report with regards to patrols five question statements were presented to the BMUs. These were *(i) How many boat patrols were conducted from July12 to Jun13? (ii) How many land patrols were conducted from July12 to Jun13? (iii) How many fishing gears (what type) or boats were confiscated? (iv) How many culprits were taken to Police for arrest? and (v) Availability of patrol reports for Jul12 to Jun13.*

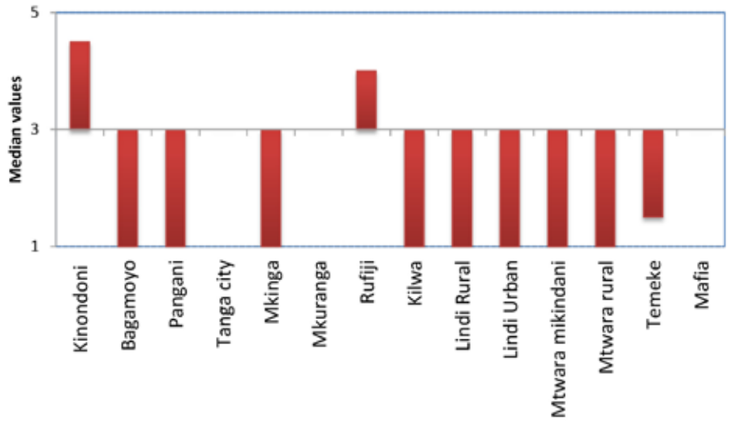
To understand BMU record keeping and reporting on patrols and records, BMU executive committee were asked about two sets of questions. First, they were asked to provide numbers of boat and land patrols they had conducted between July 2012 and June 2013, they were also asked to provide numbers of reports available from those patrols and the number of fishing gears or boats confiscated. The results show that at least all the districts except Bagamoyo, Pangani and Lindi rural had some figures to these questions. Temeke and Rufiji districts appear to have conducted the highest number of land patrols followed by Mafia, Kilwa and Tanga city. However, the number of reports available from these patrols only tallied in Temeke and Kinondoni districts. Rufiji reports were almost equal to the number of land patrols but they still did not keep all the records of the patrols they conducted (Figure 5.2.14a).

Figure 5.2.14a. Analysis of numbers of patrols conducted and reports available from the patrols



Besides knowing the number of patrols conducted, BMUs were also asked to rate availability of reports using the five point Likert scale. Response options were unsatisfactory to satisfactory with 1 as unsatisfactory and 5 satisfactory and a neutral point at 3. The results indicate that BMU members in Kinondoni and Rufiji districts were the only ones who perceive the available reports as satisfactory. However, Tanga city, Mkuranga and Mafia districts were indifferent on availability of patrol reports (Figure 5.2.14b).

Figure 5.2.14b. BMU rating on Patrol record keeping, reporting and meetings.



5.2.15. Level of Training, Technical and Mentoring Support to BMU

Level of training, training, technical and mentoring support to BMUs were assessed by presenting the following question statements *(i). Village government, (ii).District Fisheries Office / District authorities, (iii). Fisheries Division / Ministry of Livestock & Fisheries Development, (iv).Other government agencies and (v) NGO or similar project (e.g. RUMAKI / TCMP/WWF etc).* Response options were unsatisfactory to satisfactory on a scale of 1 to 5, with a neutral point at 3. A cut off point 15 was used to group the responses into two categories of satisfactory and unsatisfactory level of training, technical and mentoring support to BMUs.

Overall, level of training, technical and mentoring support to BMU was perceived to be unsatisfactory in all districts (Figure 5.2.15a). It was only in Rufiji where NGOs support or similar project support was perceived to be satisfactory (Figure 5.2.15b). Rufiji district alongside Mafia and Kilwa have been receiving support from WWF-TCO. It is from this case that Rufiji district which has recognized this NGOs support has also been performing much better in a number of our question statements. It was expected that Mafia and Kilwa would show similar results but it appears that their performance and their mentoring support results are consistent. They perceived mentoring support, technical and training level to be unsatisfactory and this could explain why they did not perform as BMUs in Rufiji district. BMUs in Mkuranga and Rufiji districts also perceived support from District Fisheries Office/District authorities to be satisfactory (Figure 5.2.15b).

Fig. 5.2.15a.The level of training, technical and mentoring support.

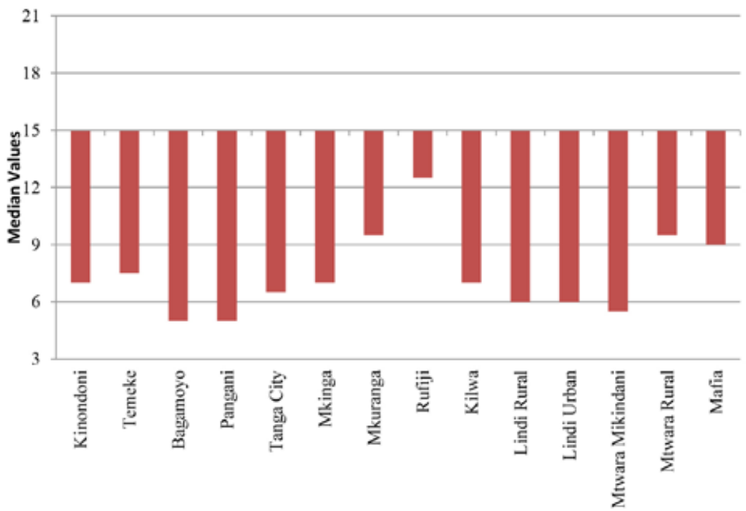
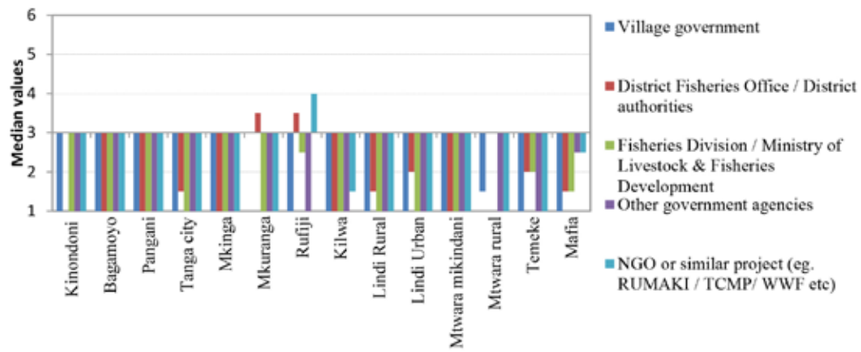


Fig. 5.2.15b. The level of training, technical and mentoring support.



5.2.16. Level of support on Enforcement

Level of support on enforcement was assessed by examining how BMUs receive support from various law enforcement authorities. These included *(i) Village government, (ii) Neighbouring BMUs (including other BMUs within CFMA), (iii) District authorities, (iv) Police / Marine Police, (v) Magistrates and (vi) Fisheries Division.* Response options were unsatisfactory to satisfactory on a scale of 1 to 5 with a neutral point at 3. A cut off point 18 was used to group responses into two categories of unsatisfactory and satisfactory. Level of support from these law enforcement authorities that were unsatisfactory are shown in Figure 5.2.16a below the cutoff point while those that are above the cutoff point represents a satisfactory support.

Generally, the level of support across the districts was perceived to be unsatisfactory except in Mkuranga and Rufiji districts (Figure 5.2.16a). Level of support of enforcement from village government was unsatisfactory in all districts except Mkuranga. This was also evident during the field visit, our communications to the BMUs was simply through the Village government Officers. Support from Police/ marine Police was only satisfactory in Temeke district. Level of support from magistrates and Fisheries Division was unsatisfactory in all districts (Fig. 5.2.16b).

Fig.5.2.16a. Level of support of enforcement from village government,police, magistrates and the fisheries division.

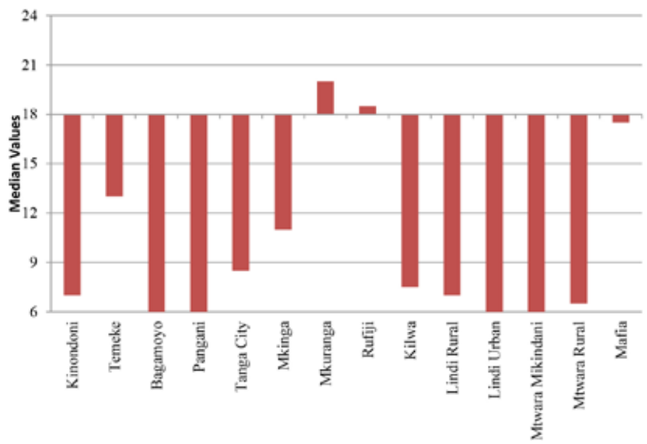
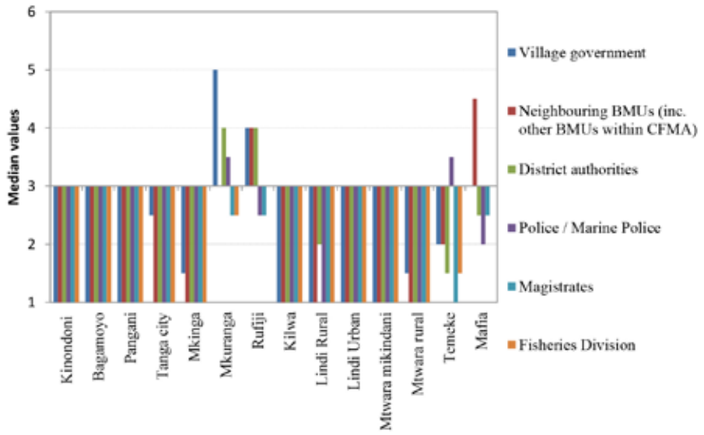


Fig.5.2.16b. Level of support of enforcement from village government, police, magistrates and the fisheries division.



5.2.17. Level of Financial and Equipment Support

The level of financial and equipment support was assessed by examining how BMUs receive financial and equipment support from *(i) Village government, (ii) District Fisheries Office / District authorities, (iii) Fisheries Division, (iv) Other government agencies and (v) NGOs and other external donors.* Response options were unsatisfactory to satisfactory on a scale of 1 to 5 with a neutral point at 3. A cut off point 15 was used to group the response into two categories of unsatisfactory and satisfactory. Unsatisfactory points are shown below the cutoff point in Figure 5.2.17a while those that are satisfactory are shown above the cutoff point.

Overall, level of support across the district was perceived to be unsatisfactory. Government and other organization were perceived to be highly unsatisfactory in all districts (Fig.5.2.17a).

It was only in Mafia district BMUs where level of financial and equipment support was perceived to be satisfactory. Level of financial and equipment support was unsatisfactory in the rest of the districts (Figure 5.2.17b).

Fig. 5.2.17a. The level of financial and equipment support from government and other organization.

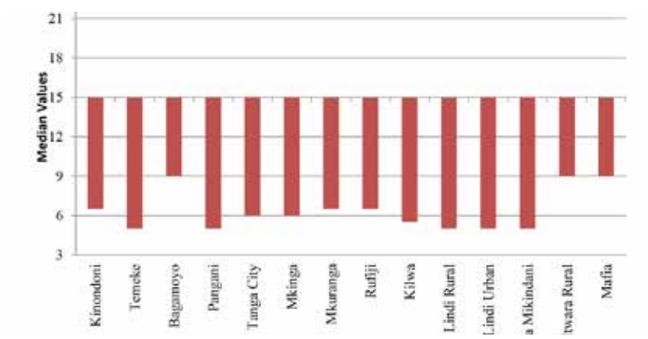
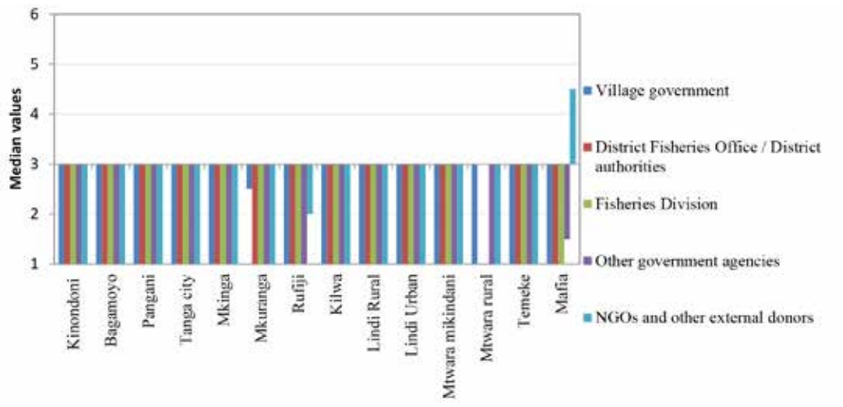


Fig. 5.2.17b. The level of financial and equipment support from government and other organization.



5.2.18. Adequacy of Resources

Five questions namely *(i) Adequacy of revenue to meet operational requirements, (ii) Efficiency with which the BMU uses its financial resources, (iii) Adequacy of equipment resources, (iv) Adequacy of human technical resources within BMU and (v) Adequacy of information resources (e.g. policies & laws) were used to assess adequacy of resources to BMUs.* Responses options were low to high on a Likert scale of 1 to 5, with a neutral position at 3. A cut off point 15 was also used to group the responses into two categories of low adequate resources and high adequate resources.

Resources were generally perceived to be inadequate for all the BMUs to carry out their activities (Fig. 5.2.18a). This results support findings of a BMU census (undertaken for purposes of preparing for SWIOFP II) that was carried out simultaneously with this study where resources were also noted to be inadequate. A detailed analysis of adequacy of resources revealed that all BMUs perceived low adequacy of revenue to meet their operational requirements as well as low adequacy of human technical resources within BMUs. BMUs in Kinondoni and Rufiji had a high efficiency with which BMUs uses its financial resources (Figure 5.2.18b)

Fig. 5.2.18a. Adequacy of resources for the BMUs to carry out their activities.

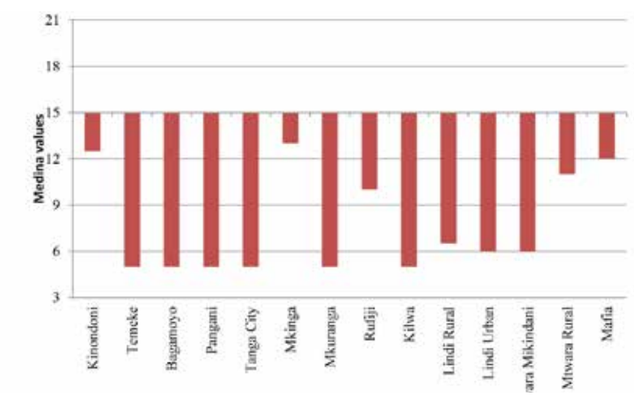
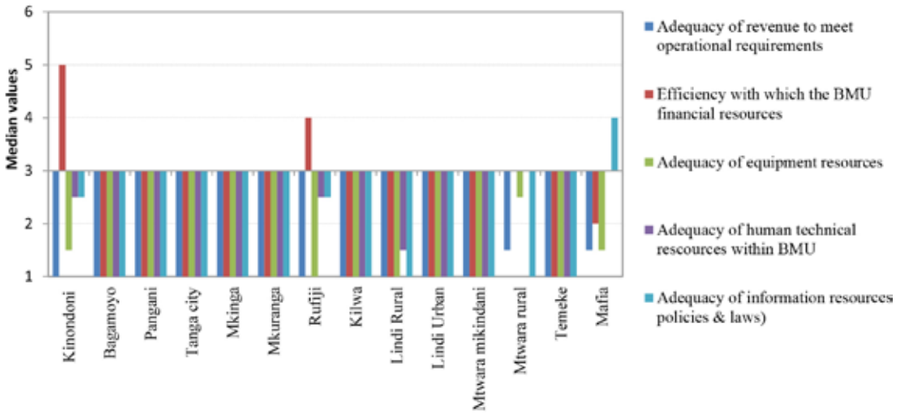


Fig. 5.2.18b. Adequacy of resources for the BMUs to carry out their activities.



5.2.19. Awareness of Roles and Responsibilities

Another area that BMUs were asked to assess themselves was on awareness of their roles and responsibilities. This is an area which plays a vital role in understanding BMUs performance of their roles and operations. Two statement questions which were presented to them were *(i) Awareness of roles & responsibilities amongst Executive Committee and (ii) Awareness of roles & responsibilities amongst Assembly members.* Response options were low to high with 1 as low and 5 high and a neutral point at 3. A cut off point 6 was also used to categorize the district results into low and high awareness levels where median values less than 6 were considered to represent low responses while those above 6 were considered to represent responses perceived to be high awareness levels.

The results indicate that awareness of roles and responsibilities was generally found to be low. It was only in Mkuranga, Rufiji, Mtwara Mikindani, Mkinga and Mtwara rural districts where awareness on roles and responsibilities were perceived to be high. The rest of the districts perceived awareness to be low with Bagamoyo and Pangani districts taking lead in the low levels (Figure 5.2.19a).

Overall results indicate that assembly members were perceived as having the lowest awareness on BMU roles and responsibilities except in Mkuranga, Rufiji and Mtwara Mikindani districts. Ironically it seems that even BMU executive committee in Kinondoni, Bagamoyo, Pangani, Tanga city, Mkinga, Kilwa and Lindi rural also had low awareness on their roles and responsibilities (Figure 5.2.19b). The possible explanations to this low awareness could be that the current BMU executives" capacities have not been enhanced as was the case during the formation of these BMUs. This is a possibility given that the year of last elections i.e. 2013 (Table 5.1) of the BMUs in the districts where awareness levels were perceived to be low. It could also be the case that these BMUs have not been proactive in desiring to find out their roles and responsibilities or that they have forgotten. It is also a pointer that handing over from one executive committee to another is generally weak. Outgoing executive committee members do not provide a thorough briefing to the incoming executive committee.

Fig.5.2.19a. Awareness on roles and responsibilities

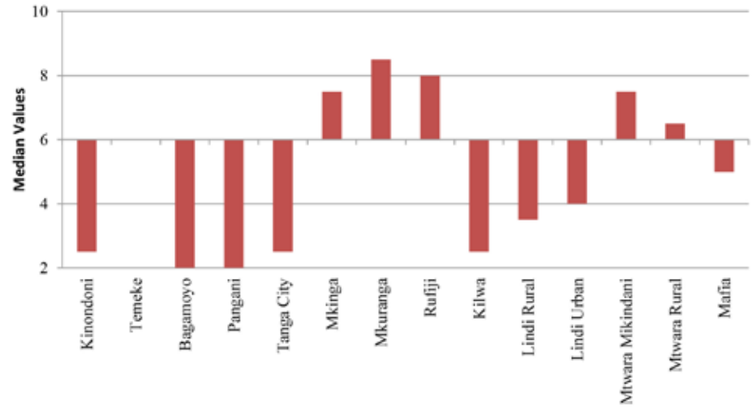
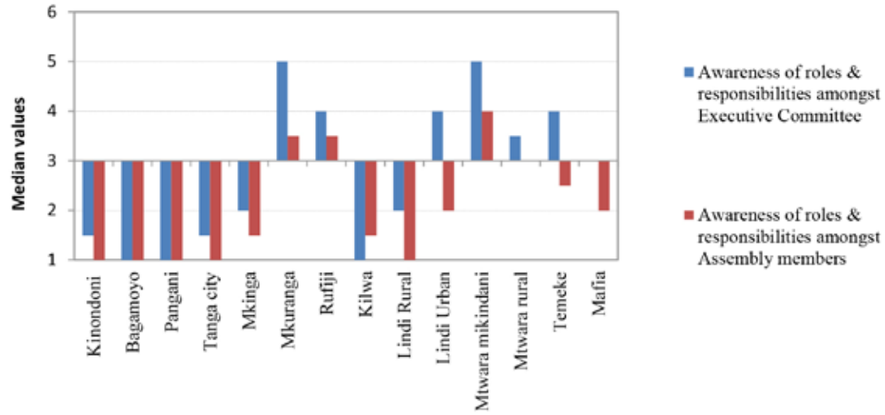


Fig.5.2.19b. Awareness on roles and responsibilities



5.2.20. Existing Level of Cooperation

Levels of cooperation was assessed by presenting BMUs nine different question statement which were *(i) Among user groups within the BMU, (ii) Between Executive Committee and BMU members / community, (iii) Between BMU members & migrant fishers, (iv) Between BMU and the Village Government, (v) Between BMU and District Council, (vi) Between BMU and political parties (vii) Between BMU and Fisheries Division / Ministry (viii) Between the BMU and NGOs / CSOs and (ix) With neighbouring BMUs.* Response options were low to high with 1 as low and 5 high and a neutral point at 3. A cut off point of 27 was used to group the results into two categories of low and high levels of cooperation. Any point above the cutoff point was considered as perceived to be high levels of cooperation while those below the cut off were considered to be low levels of cooperation.

The existing level of cooperation was generally perceived to be low across the districts. Cooperation was perceived to be high only in Mkuranga, Rufiji and Mafia districts (Fig.5.2.20a). This could be due to the location of Mkuranga, Rufiji and Mafia districts BMUs are in the Island where cooperation is key and also because these BMUs comprise members of very few different ethnic communities. In Kinondoni and Mafia districts the BMUs members looked more cosmopolitan than other BMU members in other district. It was low in all other districts with Tanga city recording the lowest in this group. Bagamoyo BMUs were indifferent on whether levels of cooperation were high or low.

On the other hand, levels of cooperation were perceived to be high between executive committee and BMU members in Kinondoni, Bagamoyo, Mkuranga, Rufiji, Lindi urban, Mtwara Mikindani and Mafia districts. Levels of cooperation were also perceived to be high between BMU and Political parties in Bagamoyo and Mkuranga. This is an issue to be explored further given that BMUs in these districts perform poorly. It was expected that a high level of cooperation could be observed in Kilwa district where political parties have generally affected BMUs, but this is contrary to these results. Kilwa, Lindi rural, Mtwara rural and Tanga city were the only districts where levels of cooperation between all the fisher groups were perceived to be lowest (Figure 5.2.19b).

Fig.5.2.20a. Level of cooperation.

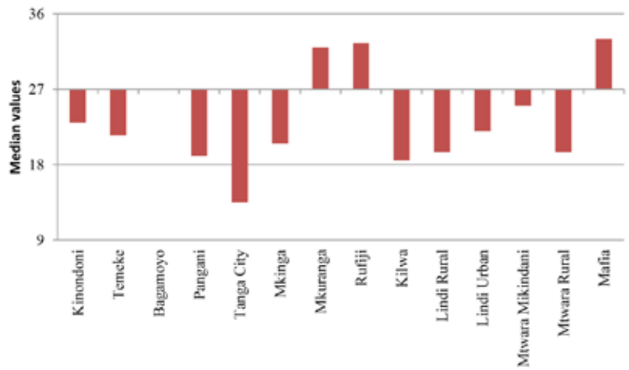
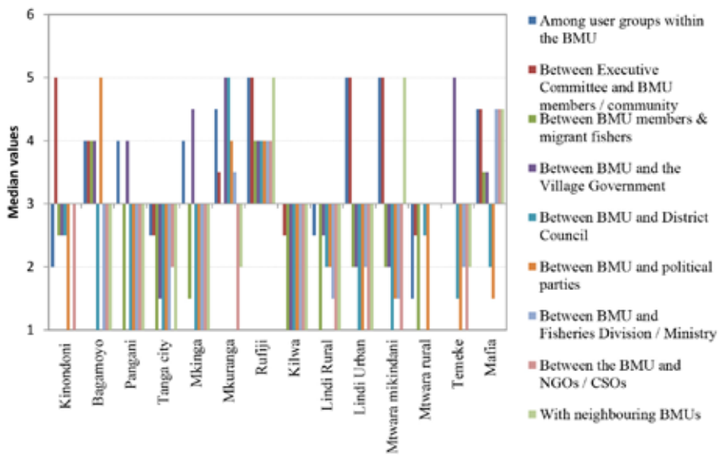


Fig. 5.2.20b. Level of cooperation.



5.2.21. Important species

The three most important fish species are thumbprint emperor *(Lethrinus rhodopterus)* locally known as Changu, white spotted spine foot *(Siganus oramin)* locally known as Tasi, and several species of Prawns or shrimps *(Penaeus indicus, Penaeus monodon, P. semisulcatus, P. latisulcatus, P. japonicus, P. canaliculatus, Metapenaeus monoceros and M. Stebbingi)* locally known as Kamba (Table 5.2.3). BMU members did not identify the species to the family level. These are the common species which are found in a number of landing sites across the marine side of Tanzanian coast. These species are caught by use of nets; traps and hook line (see Table 5.2.4).

Table 5.2.3. Percentage of important fish species

S/N	Common Names	Percent
1.	Snapper or Bream or Emperor fish	14
2.	Rabbit fish	12
3.	Prawns and Lobsters	12
4.	Carangid (Scad, and Trevally African Pompano)	10
5.	Octopus	10
6	Other species	42
TOTAL		**100**

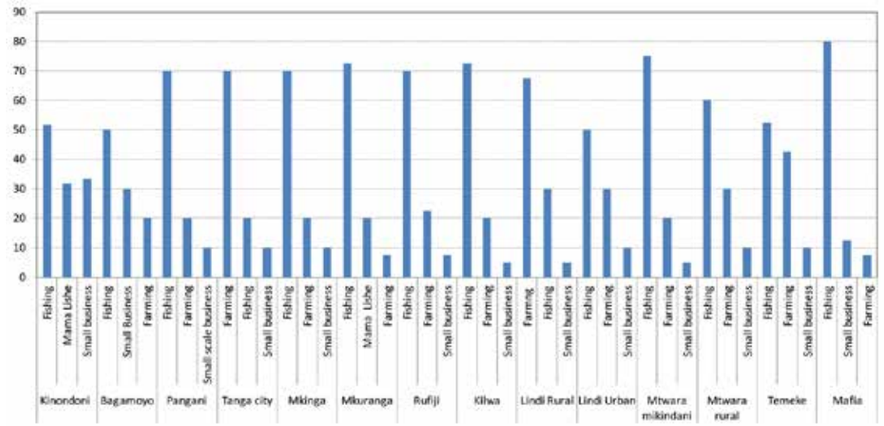
Table 5.2.4. Percentage of gears most commonly used

Gear	Percent
Nets	39
Traps	25
Line	23
Others	13
TOTAL	**100**

5.2.22. Important sources of livelihoods

BMUs were asked to list and rank the three most important livelihood means in their village or street and estimate the relative percentage that each contributes. The results show that fishing was listed as the first important livelihood source in 86% of all the districts (Figure 5.2.21). It was only in Tanga city and Lindi rural districts where farming as opposed to fishing was listed as the most important livelihood source. Tanga city has been notorious in dynamite fishing and even during our interviews we counted six explosions within a span of one and half hours we were interviewing BMUs. This use of explosives has led to a high rate of government patrols in the area and so many fishers have left fishing and are now in agriculture. In Lindi rural fishing is only carried out in the mangrove forests and therefore the fishers here lack proper fishing equipment.

Fig. 5.2.22. Percentages of important sources of livelihoods in each district.



5.3. ORGANIZATION PERFORMANCE ASSESSMENT

In this study, an assessment of the impact of BMUs was also undertaken. BMUs were presented with several question statements ranging from state of the fishery since BMU formation, impacts BMU have had on skills development, benefits and management outcomes attributed to BMUs. In general BMUs have shown that they have had an impact on improving fishers" safety at sea, landing infrastructure, and sanitation and post capture treatment. In the other areas their impact has not been very positive although it can be said that they have shown a promising results as presented below.

5.3.1. State of Fisheries since BMU formation

Five question statements were presented to the BMUs on their perceptions with regards to the state of the fisheries since BMU formation. These were *(i) What has been the trend in quantity of fish caught per fisher (CPU) (ii) What has been the trend in the size of fish caught (iii) What has been the trend in total catches (iv) What has been the trend in populations of fish in the fishing areas (v) What has been the trend in numbers of fishers.* The response options were decline to increase with a neutral answer at position three on the 5 point Likert scale. The results were grouped into categories of „decline" and „increased" and are shown in Figures 5.3.1a and b. A Cut off (15) point was used to group the results (Figure 5.3.1a) into the two categories, those above 15 were considered as being perceived to have increased while those below were considered as having perceived as declined.

The state of the fisheries since BMUs establishments has been generally perceived to be in the decline across all the districts except in Pangani and Mafia districts. .Points less than 15 indicate decline while those above indicate increase (Fig. 5.3.1a). Data are median values for each district. The further away a graph is from the 15 cutoff point on either side the more decline or increase state of the fisheries was observed by the BMUs. However, some BMUs in Tanga City, and Pangani and Mafia districts perceived that the fishery was on the increase (Fig. 5.3.1b). In Mafia and Pangani districts BMU members regarded change in trends of quantity of fish caught and size as well as the trend in populations of fish in the fishing areas were on the increase while in Tanga City and Lindi rural the only increase noted was on the trend of the size of fish caught. This was quite an interesting results in relating BMUs to state of fisheries resources. The results here indicate that with concerted effort in building these BMUs they can eventually have an increased impact on the trends of fish caught and the size of fish landed. Numbers of fishers have on the other hand increased in all districts except Bagamoyo, Rufiji, Lindi urban, Mtwara Mikindani and Mtwara rural.

Fig. 5.3.1a. Responses on State of fisheries since BMU establishment

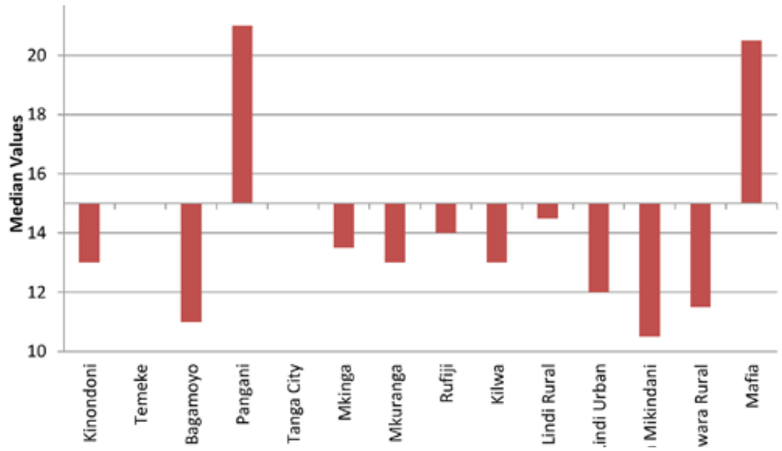
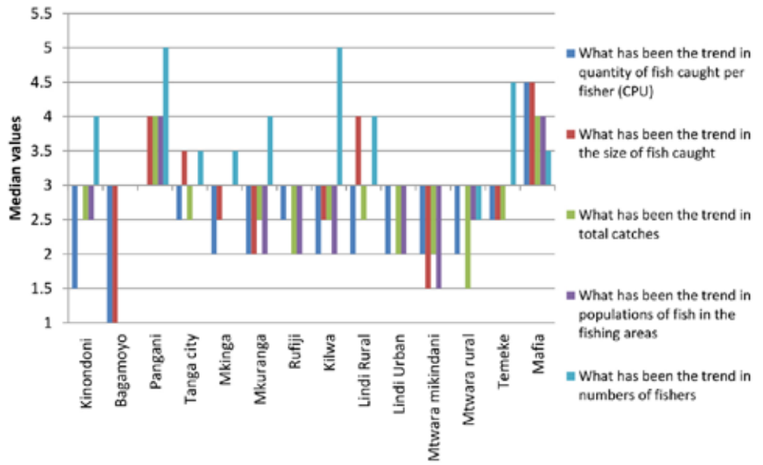


Fig. 5.3.1b. Responses on trend question statements on state of the fishery since BMUestablishment



5.3.2. Impact attributable to BMU since formation

Six question statements were presented to BMUs to get their perception on the impact of BMU since their formation. These included ;- (i) Safety at sea has changed, (ii) Fish landing infrastructure has changed, (iii) Sanitation at landing sites has changed (iv) Sanitation at public beaches has changed (v) Post capture treatment & quality improvement of fish,(vi) Marketing & distribution of fish. The response options were low to high on the 5 point Likert scale. The results are shown in figures 5.3.2a and b. The data was grouped into two categories of low and high impact. A Cut off point (18) was used in identifying which district/s have BMUs been perceived to have had an impact.

Generally it was widely perceived that BMU have had an impact since their formation. Cut off points less than 18in Figure 5.3.2a indicate less impact while those above 18 indicate high impact.

Overall, all BMUs, except in Kilwa, Lindi Urban, Mkinga and Mtwara Mikindani districts, noted that BMUs have had high impact. BMUs in Mkinga district were indifferent on their impacts (Figure 5.3.2a). BMUs have had impacts on safety at sea, in all districts except Lindi Urban, Mtwara Mikindani, Kilwa and Mkinga districts. They have also had impact on post capture treatment, except in the three districts, marketing and distribution in all the districts except in Tanga City. BMUs have had low impact on fish landing infrastructure in virtually all districts except in Rufiji district where impact was noted to be high. The level of perception on the impact of BMUs differed between the executive committee and womenBMU members ($R = 0.072$, $p < 0.014$).

Fig. 5.3.2a. Responses on impact of BMU since formation.

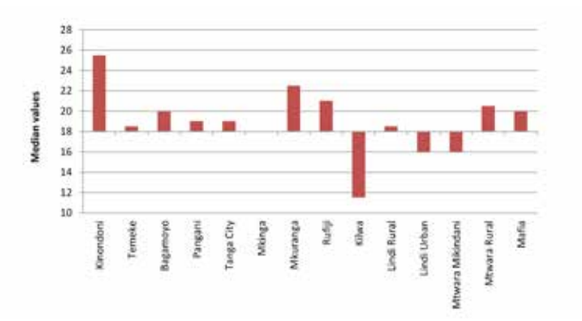
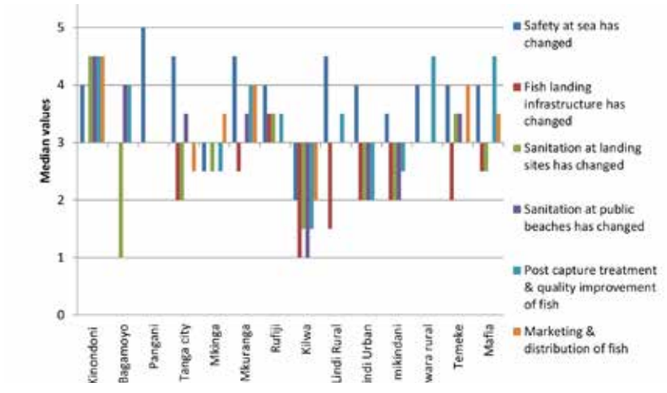


Fig. 5.3.2b. Responses on impacts of BMU since formation.



5.3.3. Impact of BMU in terms of skills development

Five question statements were presented to the BMU on impact of BMU in terms of skills development. (i) Planning & implementation of surveillance & patrolling, (ii) Financial management skills, (iii) Comm*unication & networking skills, (iv) Conflict resolution skills (v) BMU leadership skills. The responses options were „decline" to „improved" on a scale of 1 to 5 respectively (Figure 5.3.3b).* The results were grouped into two categories of "decline" and „improved" and are shown in Figures 5.3.3a and b. A Cut off point (15) was used to identify districts in which impact of BMU in terms of skills developed was perceived to have declined or improved. Any point below this cut off was considered to be low while any point above the cut off was considered improved.

The impact of BMU in terms of skills development was generally perceived to be low across the district except in Mkuranga, Rufiji and Mafia (Figure 5.3.3a). BMU leadership skills were perceived to have improved in Mafia, Mkuranga and Rufiji districts as well as in Kinondoni, Lindi urban and Mtwara rural districts.

Fig. 5.3.3a. The impact of BMU in terms of skills development

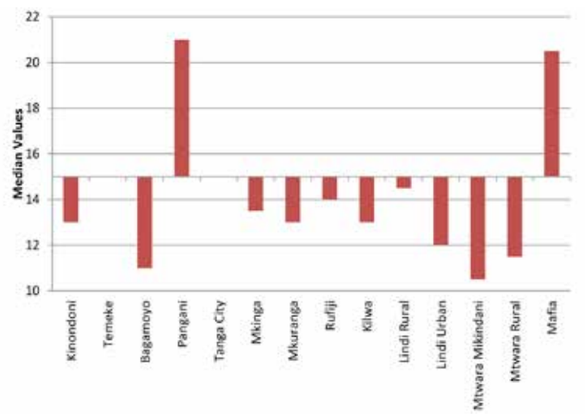
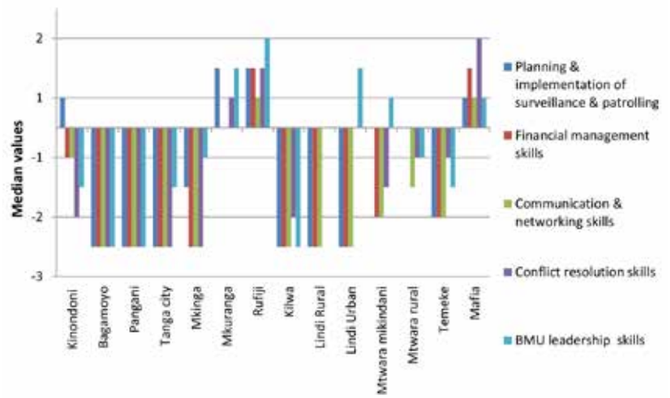


Fig. 5.3.3b. The impact of BMU in terms of skills development



5.3.4. Direct Benefits attributable to BMU performance

To understand the benefits attributable to BMU performance, six question statements were presented to the BMUs. These are:- *(i) Has fishers income changed since BMU establishment? (ii) Has vendors and processors income changed since BMU establishment? (iii) Fisheries development opportunities (e.g. ice making, fishing gear making) have changed (iv) Employment creation, (v) Flow of government funding on fisheries infrastructure has changed, (vi) Flow of private investments in fisheries sector has changed.* The responses options were „decline" to „increased" on a scale of 1 to 5 respectively (Figure 5.3.4b). A cut off point (15) was used to group the results into decline and Increase. Points less than 18 indicate decline while those above 18 were perceived to have increased.

The direct benefits attributable to BMU performance were perceived to be low across all districts (Fig. 5.3.4a). The executive committee and BMU women members perceived direct benefits attributable to BMUs differently ($p < 0.018$). Bagamoyo, Mtwara rural and Mtwara Mikindani, Lindi urban, Tanga City and Temeke districts led in that order in their perception on benefits attributable to BMUs. However in Mkuranga and Mafia districts two direct benefits attributable to BMU were noted to be changes in fisheries development opportunities and employment creation respectively (Figure 5.3.4b.).

Fig. 5.3.4a. The direct benefits attributable to BMU performance.

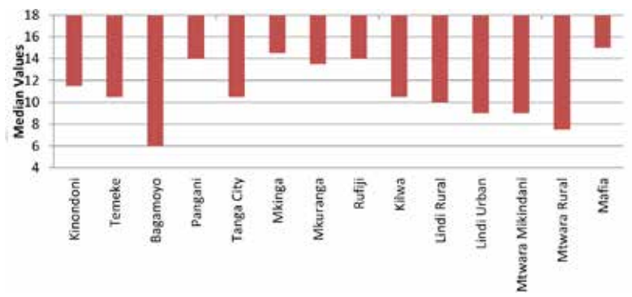
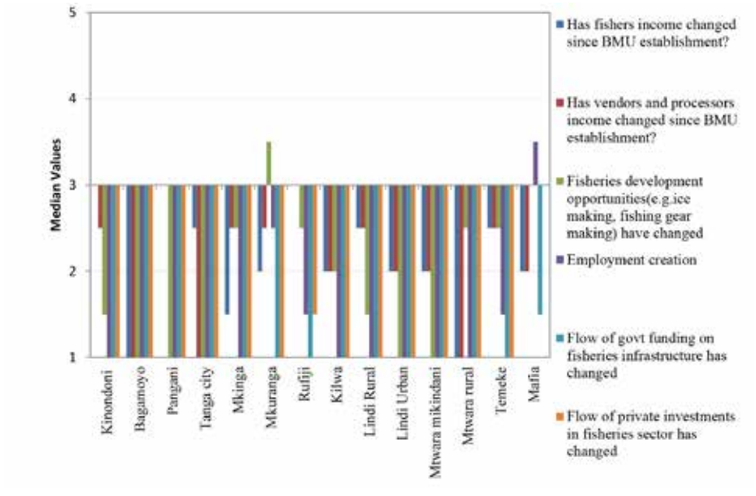


Fig. 5.3.4b. The direct benefits attributable to BMU performance.



5.3.5. Management outcomes attributable to BMU

Flow of private investments in fisheries sector has changed BMU members were also presented with question statements on management outcomes attributable to them. Three sets of question were asked: the first set of question statements were *(i) Incorporation of traditional management practices in management plan, (ii). Effectiveness of implementation of management plan, (iii) Are there emerging issues not addressed by the management plan? Responses options were unsatisfactory to satisfactory on a five point Likert scale (Figure 5.3.5b). A cut off point (36) was used to group the results into unsatisfactory and satisfactory (Figure 5.3.5a).* Results above the cut off were considered to have been perceived as satisfactory while those below were considered to have been perceived as unsatisfactory.

Management outcomes attributable to the BMU were generally low in all the districts except Rufiji (Fig. 5.3.5a). Bagamoyo again was leading as the district with the unsatisfactory management outcomes followed by Lindi Urban, then Tanga City and Mtwara rural. In particular, all the three question statements were perceived to be unsatisfactory in Bagamoyo, Lindi rural and Lindi urban districts. The only satisfactory question statements were recorded on incorporation of traditional management practices in management plan, recorded in Rufii and Temeke and effectiveness of implementation of management plan, recorded in Rufiji and Temeke.

Fig. 5.3.5a. Responses on management outcomes attributable to BMUs.

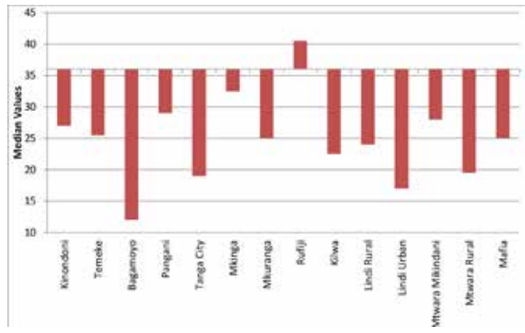
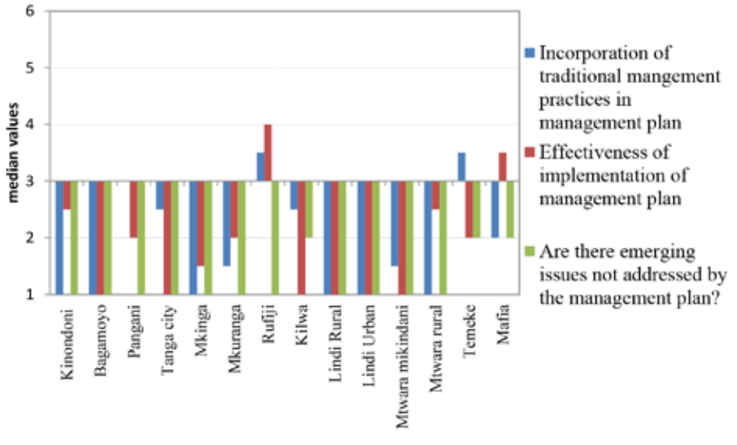
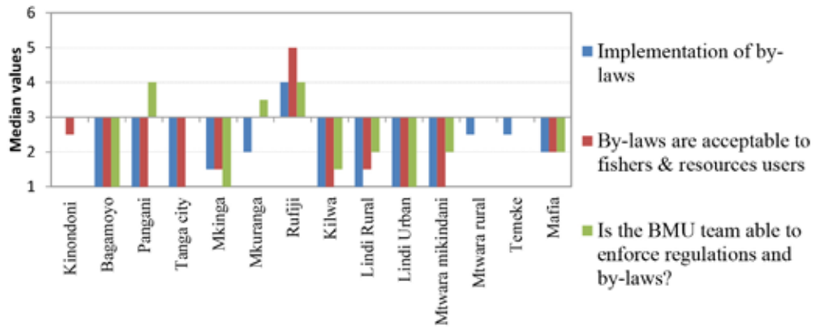


Fig. 5.3.5b Management outcome attributable to the BMU.



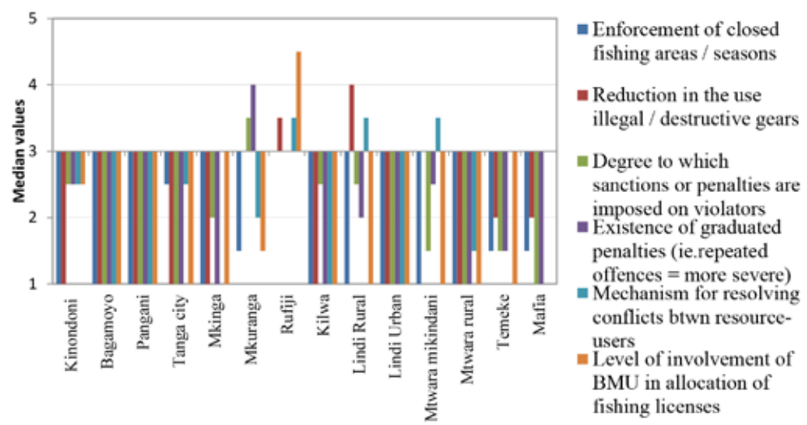
Other management measures assessed were *(i) Implementation of by-laws (ii) By-laws are acceptable to fishers & resources users, (iii) Is the BMU team able to enforce regulations and by-laws?*(Figure 5.3.5c). The data indicate that BMUs in Pangani, Mkuranga and Rufiji noted that they could enforce regulations and by laws. In Rufiji district, BMUs noted that they could implement by-laws, that these by-laws are acceptable to fishers and resource users as well as BMUs being able to enforce regulations and by-laws. All other districts these question statement were considered as having been perceived as unsatisfactory.

Fig. 5.3.5c. Implementation of by-laws.



The last set of question statements assessed included: *(i) Enforcement of closed fishing areas/ seasons (ii) Reduction in the use illegal / destructive gears (iii) Degree to which sanctions or penalties are imposed on violators (iv) Existence of graduated penalties (i.e. repeated offences = more severe) (v) Mechanism for resolving conflicts between resource-users (vi) Level of involvement of BMU in allocation of fishing licenses.* BMUs in Rufiji, Mkuranga Lindi rural, and Mtwara Mikindani districts recorded satisfactory perception on degrees to which penalties are imposed, existed of graduated penalties, reduction in the use of illegal/destructive gears, mechanism for resolving conflicts, level of BMU involvement in allocation of fishing licenses.

Fig. 5.3.5d. Enforcement of closed fishing areas/seasons



5.3.6. Three highest priority need for the BMU to improve performance

BMUs were asked to list three highest priority needs for the BMU to improve performance and rate them in terms of importance. Responses were varied but a number of them listed working tools, training and education as well as registration of their BMUs as being the most important (Table 5.3.1). This appears to be quite consistent with the data in this study. From this list it can be said that capacity building seems to be an important aspect that BMUs need to improve their performance. Finances appears at the bottom of the list indicating that BMU members could be perceiving finances as contributing to their capacity building.

Table 5.3.1.Prioritised list of needs to improve performance.

S/N	Prioritized needs
1	Working tools such as boats for patrols and others
2	Training and education
3	Registration of BMUs
4	Funds for operation
5	BMU Office
6	Cooperation with other organizations
7	Tender to collect revenue

5.4. INSTITUTIONAL GOVERNANCE PERFORMANCE

This section provides results from questions which were presented to Fisheries Officers at the District level. The questionnaire was administered specifically to District Fisheries Officers who handle BMU matters at the district level.

The set of questions here was slightly different from the BMU questionnaire. Here a six point Likert scale was used. Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6 for all questions except for questions on trends in fisheries, income and food security, whose response options were decline to increase. Responses were grouped into two categories of unsatisfactory and satisfactory or decline and increased. All responses between 1 and 3 were categorized as unsatisfactory while those above 3 were considered satisfactory. Similarly, all responses between 1 and 3 were categorized as decline while those above 3 were considered as increased.

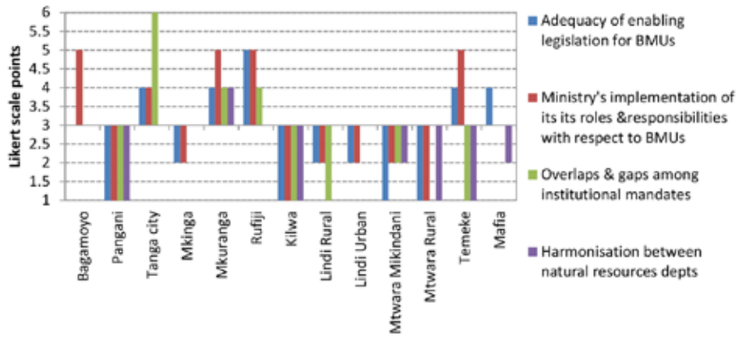
5.4.1. National BMU context

Fisheries Officers were presented with the following question statements to understand their perceptions on the national BMU context *(i) Adequacy of enabling legislation for BMUs, (ii) Ministry's implementation of its roles &responsibilities with respect to BMUs, (iii) Overlaps & gaps among institutional mandates and (iv) Harmonisation between natural resources departments. Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.* The responses were grouped into two categories of dissatisfaction and satisfaction.

Results showed that there is generally an unsatisfactory assessment by Fisheries officers with regard to adequacy of enabling legislation for BMUs and the ministry's implementation of its roles & responsibilities with respect to BMUs and others in Pangani, Mkinga, Kilwa, Lindi rural and Mtwara Mikindani (Fig.5.4.1).

These results corroborate responses from the BMUs who indicated that there was unsatisfactory support from several law enforcement agencies (see Figure 5.16 and 17a and b). The ministry's implementation of its roles & responsibilities with respect to BMUs was assessed as satisfactory in Rufiji, Mkuranga, Bagamoyo, Temeke and Tanga City. This raises questions whether the government is perceived to have done enough to support the BMUs.

Fig. 5.4.1. National BMU context.

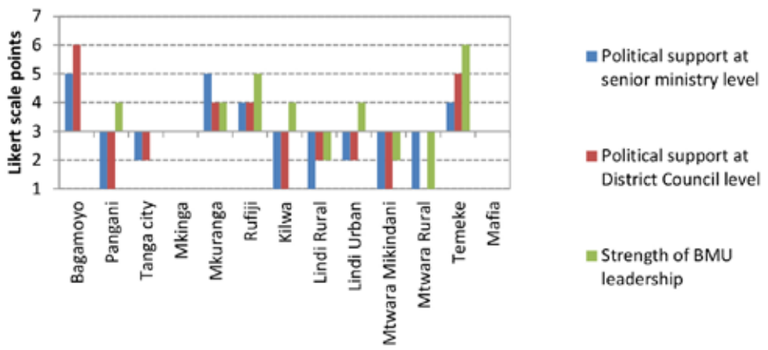


5.4.2. Leadership on BMU Development

Fisheries Officers were presented with the following question statements to understand their perceptions on the leadership on BMU development *(i) Political support at senior ministry level (ii) Political support at District Council level (iii) Strength of BMU leadership.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6. The responses were also grouped into two categories of dissatisfaction and satisfaction.

Results showed that there is generally a dissatisfaction of leadership on BMU development. There is a general lack of political support at senior level and at district council level in Pangani, Tanga city, Kilwa, Lindi urban, Lindi rural Mtwara Mikindani and Mtwara rural districts, the rest of the responses from the districts were positive. Officers from Mtwara Mikindani, Mtwara Rural and Lindi Rural districts were not satisfied with the strength of BMU leadership (Fig. 5.4.2). These results suggest lack of political support at all levels which would have helped to strengthen the BMUs.

Fig. 5.4.2. Leadership on BMU development.

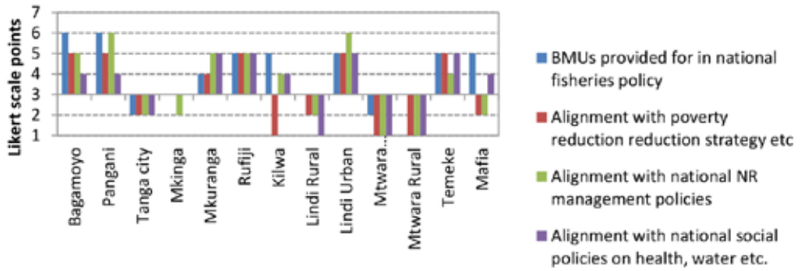


5.4.3. Alignment with national policies

Fisheries Officers were presented with the following question statements to understand their perceptions on BMU alignment with national policies *(i) BMUs provided for in national fisheries policy (ii) Alignment with poverty reduction strategy etc (iii)Alignment with national NR management policies (iv) Alignment with national social policies on health, water etc.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Policies on BMU alignment with national policies were generally perceived to be satisfactory by most fisheries officers except in Mtwara Rural, Mtwara Mikindani, Lindi Rural and Tanga City which perceived to be unsatisfactory (Fig. 5.4.3). One of the reasons that the officers pointed out was the observed direct link of BMUs to the District Fisheries Officers without a clear channel of communication to the Village government (Local Government decentralization Policy). It was noted that BMU elections did not follow the local government elections time table, in addition BMUs only send copies of their reports to the village government who they are supposed to channel all their communication outside the village. In the districts where alignment with national policies was perceived as satisfactory was because of understanding between the BMU executive officers and local government officials at various levels.

Fig. 5.4.3. Alignment with national policies.

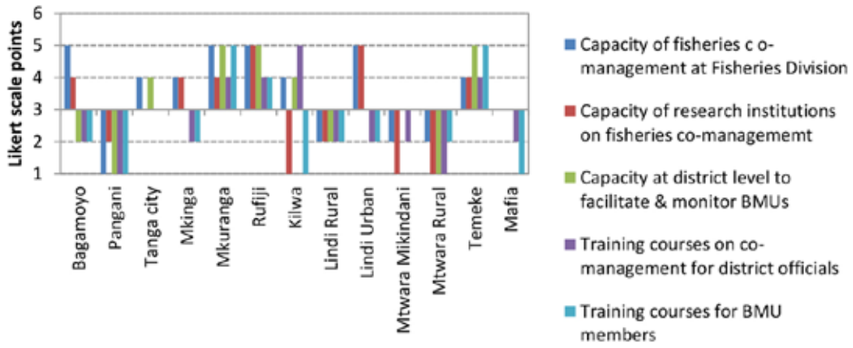


5.4.4 Institutional capacity

Institutional capacity in support of co-management was assessed by use of the following question statements *(i) Capacity of fisheries co-management at Fisheries Division (ii) Capacity of research institutions on fisheries co-management (iii) Capacity at district level to facilitate & monitor BMUs (iv) Training courses on co-management for district officials (v) Training courses for BMU members.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Institutional capacity was generally perceived to be unsatisfactory. This unsatisfactory institutional capacity was noted in Rufiji, Mkuranga and Temeke districts. Training courses on co-management for district officials and Training courses for BMU members were assessed as unsatisfactory (Fig. 5.4.4). District Officials in Pangani, Lindi Rural and Mtwara Rural were unsatisfied with all the question statements. This indicates that there is need for continuous training on BMU for district officers.

5.4.4 Institutional capacity

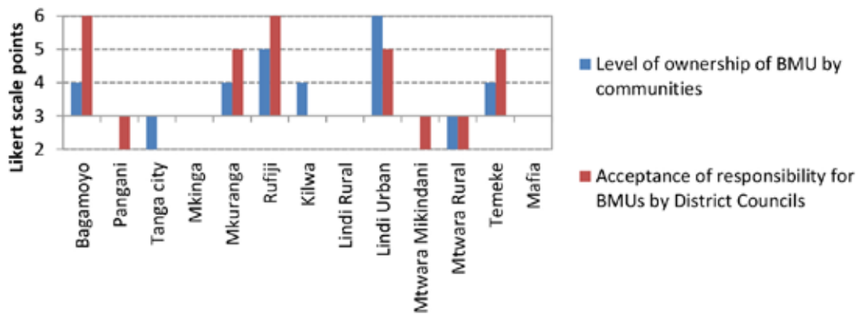


5.4.5 Empowerment of BMU

To understand Fisheries Officers perceptions on empowerment of BMUs the following question statements were presented to them *(i) Level of ownership of BMU by communities (ii) Acceptance of responsibility for BMUs by District Councils.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

The empowerment of BMU was also perceived to be unsatisfactory in Pangani, Mtwara Mikindani and Mtwara rural. This was mainly contributed by the district council"s reluctance to accept responsibility for BMUs (Fig. 5.4.5). Only Rufiji, Lindi Urban, Bagamoyo, Mkuranga and Temeke did the officials perceive empowerment of BMUs as satisfactory especially with respect to level of ownership of BMU by communities and acceptance of responsibility for BMUs by Districts Councils.

Fig. 5.4.5. Empowerment of BMU.

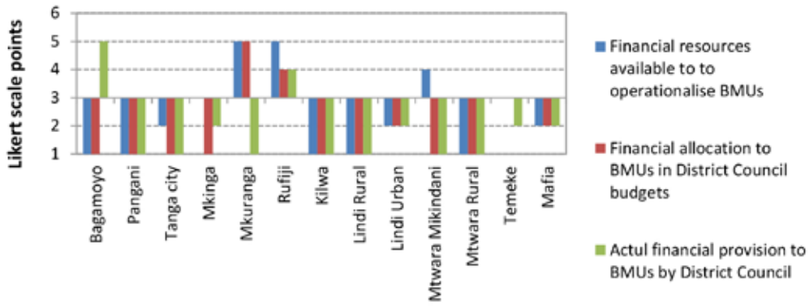


5.4.6 Financial resources

Fisheries Officers were presented with the following question statements to understand their perceptions on the Financial resources *(i) Financial resources available to operationalize BMUs (ii) Financial allocation to BMUs in District Council budgets (iii) Actual financial provision to BMUs by District Council.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Financial resources were generally perceived to be unsatisfactory by all district officers except in Rufiji (Fig. 5.4.6). Financial resources available to operationalize BMUs, Financial allocation to BMUs in District Council budgets and actual financial provision to BMUs by District Council were unsatisfactory. District officials noted that District Councils do not allocate funds for BMUs operations.

Fig. 5.4.6. Financial resources.

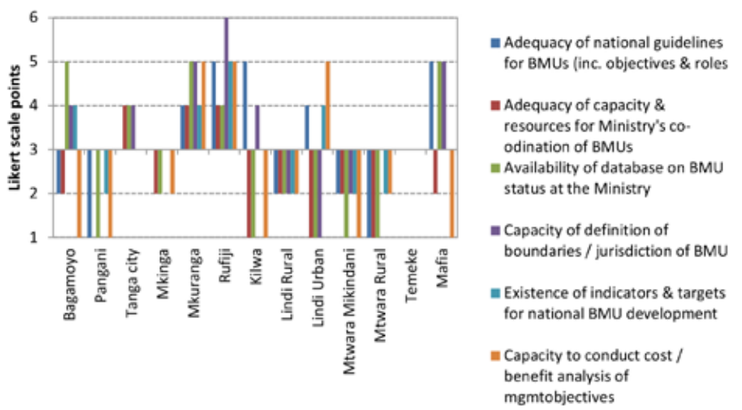


5.4.7 Capacity at national level

Five question statements were used to understand Fisheries Officials perceptions on Capacity at national level to handle BMU matters *(i) Adequacy of national guidelines for BMUs (including objectives & roles (ii) Adequacy of capacity & resources for Ministry's co- ordination of BMUs (iii) Availability of database on BMU status at the Ministry (iv) Capacity of definition of boundaries / jurisdiction of BMU (v) Existence of indicators & targets for national BMU development (vi) Capacity to conduct cost / benefit analysis of management objectives.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Capacity at national level was generally perceived to be unsatisfactory. All districts except Rufiji and Mkuranga, districts indicated a high level of dissatisfaction of capacity at national level (Fig. 5.4.7).

Fig. 5.4.7. Capacity at national level

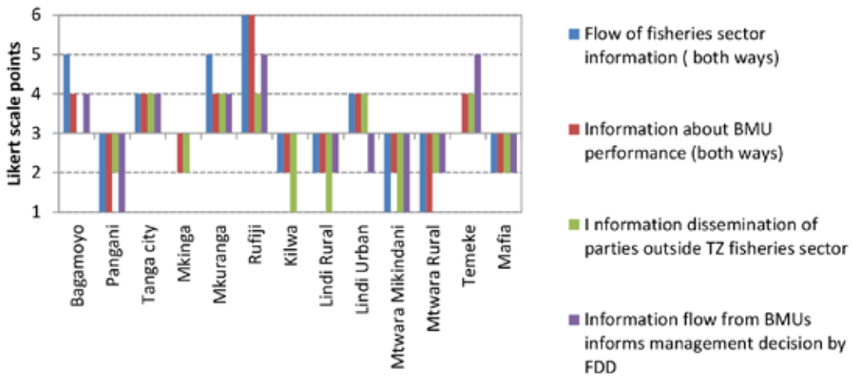


5.4.8 Knowledge of data management

Fisheries Officers were presented with the following question statements to understand their perceptions on the Knowledge of data management *(i) Flow of fisheries sector information (both ways) (ii) Information about BMU performance (both ways) (iii) Information dissemination of parties outside TZ fisheries sector (iv) Information flow from BMUs informs management decision by FDD.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Knowledge of data management was generally perceived to be unsatisfactory. Only in Rufiji, Mkuranga and Tanga City Fisheries Officials acknowledged satisfaction with the flow of fisheries sector information, information about BMU performance, information dissemination of parties outside Tanzania fisheries sector and information flow from BMUs to inform management decisions at the FDD (Fig. 5.4.8). Information flow at all levels has been a problem in most BMUs.

Fig. 5.4.8. Knowledge of data management.

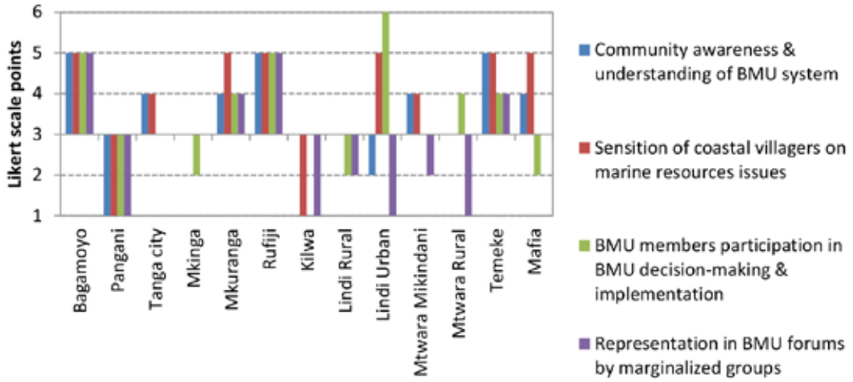


5.4.9 Stakeholder participation

Fisheries Officers were presented with the following question statements to understand their perceptions on the Stakeholder participation *(i) Community awareness & understanding of BMU system (ii) Sensitization of coastal villagers on marine resources issues (iii) BMU members participation in BMU decision-making & implementation (iv) Representation in BMU forums by marginalized groups.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Stakeholder participation was perceived to be satisfactory in all the districts except Pangani where stakeholder participation was perceived as unsatisfactory in all the question statements. Rufiji and Bagamoyo were satisfied with all the question statement partly reflecting a success in sensitization of BMU establishment in the two districts (Fig. 5.4.8). However it seems that sensitization has not had any effective impact in BMU performance in Bagamoyo district.

Fig. 5.4.9. Stakeholder participation.

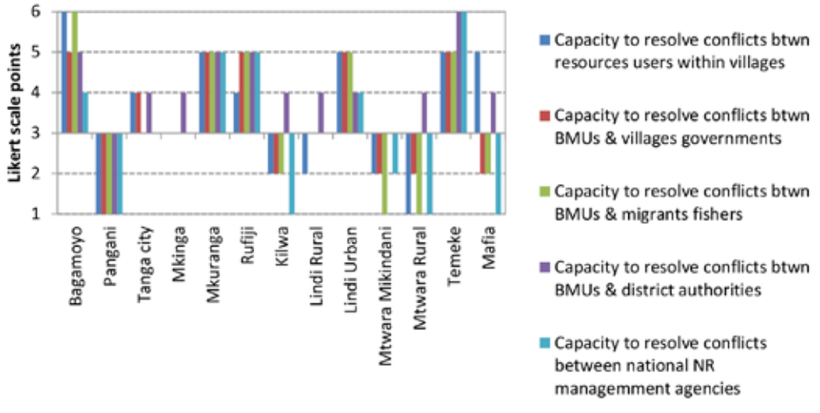


5.4.10 Conflict resolution capacity

Fisheries Officers were presented with five question statements to understand their perceptions on the Conflict resolution capacity *(i) Capacity to resolve conflicts between resources users within villages (ii) Capacity to resolve conflicts between BMUs & villages governments (iii) Capacity to resolve conflicts between BMUs & migrants fishers (iv) Capacity to resolve conflicts between BMUs & district authorities (v) Capacity to resolve conflicts between national NR management agencies.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Conflict resolution capacity was perceived to be satisfactory except in Pangani, Kilwa, Lindi Rural and Mkinga (Fig. 5.4.10). The perception indicated by officers in Pangani and Kilwa appears to be consistent to that shown by BMU members regarding the ease of resolving conflicts. These results are in line with the results from the BMUs.

Fig. 5.4.10. Conflict resolution capacity.

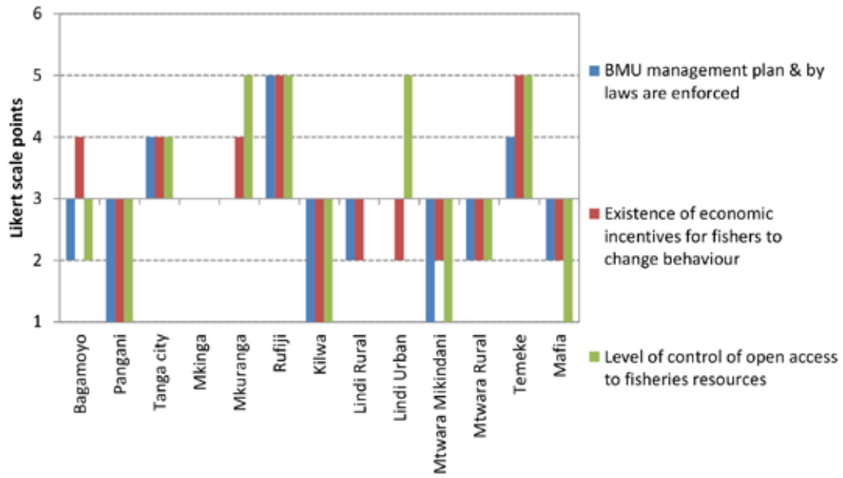


5.4.11 Fisheries management

Fisheries Officers were presented with the following question statements to understand their perceptions on the Fisheries management *(i) BMU management plan & by laws are enforced (ii) Existence of economic incentives for fishers to change behaviour (iii) Level of control of open access to fisheries resources.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Fisheries management was generally unsatisfactory. Only in Rufiji districts recorded positive responses on all aspects of fisheries management. Pangani and Kilwa perceived negatively on all aspects of fisheries management (Fig. 5.4.11).

Fig. 5.4.11. Fisheries management.

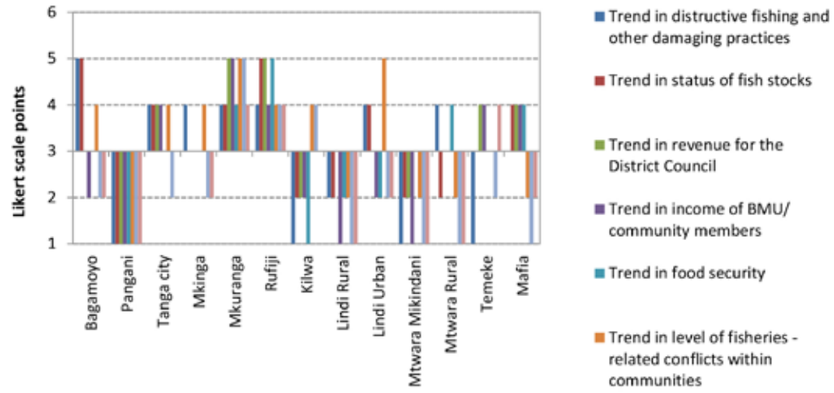


5.4.12 Trends in fisheries, income and food security

Fisheries Officers were presented with the following question statements to understand their perceptions on the Trends in fisheries, income and food security *(i) Trend in destructive fishing and other damaging practices (ii) Trend in status of fish stocks (iii) Trend in revenue for the District Council (iv) Trend in income of BMU/ community members (v) Trend in food security (vi) Trend in level of fisheries - related conflicts within communities (vii) Trend in Govt funding for fisheries infrastructure (viii)Trend in public & private investments in fisheries sectors.* Response options were decline to increase on a scale of 1 to 6.

Trends in fisheries, income and food security was generally perceived as unsatisfactory. Only Rufiji and Mkuranga satisfied with virtually all the trends in the question statements (Fig.5.4.12). District official in Pangani was dissatisfied with all the trends related to the problems of dynamite fishing, conflicts of interests among stakeholders and lack of cooperation of between the district council and BMU members.

Fig. 5.4.12. Trends in fisheries, income and food security.

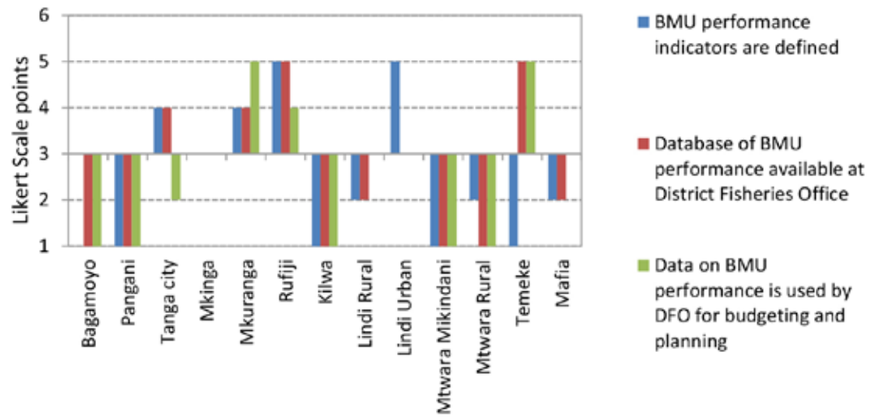


5.4.13 Monitoring and evaluation indicators

Fisheries Officers were presented with the following question statements to understand their perceptions on the Monitoring and evaluation indicators *(i) BMU performance indicators are defined (ii) Database of BMU performance available at District Fisheries Office (iii) Data on BMU performance is used by DFO for budgeting and planning.* Response options were highly unsatisfactory to highly satisfactory on a scale of 1 to 6.

Monitoring and evaluation indicators were generally perceived to be unsatisfactory in almost all districts except Rufiji and Mkuranga (Fig. 5.4.13). Most districts do not have database of BMU performance which can be available to district fisheries officers for planning and budgeting.

Fig.5.4.13. Monitoring and evaluation indicators.



6. INTERPRETATION OF RESULTS

Co-management in the districts bordering Indian Ocean has been implemented through support of two different development partners. First, is the WWF-TCO project in Rufiji, Mafia and Kilwa districts abbreviated as RUMAKI. In this area, WWF-TCO implemented a comprehensive project aimed at increasing collaborative management of coastal and marine resources. It established several BMUs in the three districts, created awareness, carried out capacity building and provided them with modest equipment for their daily operations. In the other districts, the government of Tanzania through a World Bank funded project Marine and Coastal Environment Management Project (MACEMP) established BMUs in all the marine districts in Tanzania. Some of this BMUs established during WWF-TCO under RUMAKI had a satisfactory rating in almost all the question statements posed to them than those established under MACEMP. This explains why Rufiji district got best results. Although Pangani district results show satisfactory rating, the reality could be different because during the interviews, the District Fisheries officer who accompanied the study team could have influenced BMU responses by his attendance in the focus group discussions.

6.1. FUNCTIONS AND OPERATIONS PERFORMED TO SATISFACTORY LEVEL

The BMUs need a frequent awareness raising and capacity enhancement on their roles and responsibilities as well as a clear system of handing over responsibility from one executive committee to another (Chuenpagdee and Jentoft, 2007). The absence of these, as was noted during the evaluation i.e. frequent elections vis a vis missing BMU registers that were probably held by former secretaries and or executive committee, can be attributed to the low level of performance with regards to BMU functions and operations. In addition, analysis from the evaluation indicate that most of the functions and operations that were performed to a satisfactory level are those that involves interactions among BMU members themselves (Kittinger, 2013see Evan et al 2011) (including interactions among BMU executive committee members) except for the function on existing level of cooperation which was low (See table 5.2.1 and 5.2.2). Those that were performed to unsatisfactory level required interaction with people outside their communities. This could also mean that BMUs do not exist in isolation.

In addition the results indicate that level of awareness on roles and responsibilities was not related to performance impact. The districts with high levels of performance still had an unsatisfactory rating on all the five impact areas namely state of the fishery (since BMU formation), impacts of BMU since formation (attributable to BMU), impact of BMU in terms of skills development, direct benefits attributable to BMU performance and management outcomes attributable to the BMU. Performance is dependent on what others do and how they interact with them.

One particular observation from the evaluation is that there is a correlation between adequacy of resources and impacts attributable to BMU since formation. This was the case especially in Kinondoni district, which reported less inadequate resources but is the only district in which BMUs had made an impact. Although it is quite a challenging to isolate an impact as exclusively attributable to BMU, the ratings by the BMU executive committee in this district is an indication of the correlation argued above. However it needs to be noted that it is not just having of resources which is important, but how efficient one utilizes the resources. Kinondoni district was the only district which rated their use of resources to be efficient. This implies that the level of BMU impact is explainable by adequacy of resources and not necessarily level of awareness on roles and responsibilities.

6.2. RESOURCE AVAILABILITY

As the results reveal, BMUs rated level of financial and equipment support as unsatisfactory. This implies that BMU assigned roles cannot be performed to the expected level.

6.3. IMPROVING BMU PERFORMANCE

BMUs executive committee members identified a number of activities to be undertaken in order to improve their performance. These were prioritized as contained in Table 5.6. This list indicates that the prioritized activities are those that require external intervention or interactions with people outside their communities. This is in line with the results on functions and operations. Moreover, our analysis is supported by the prioritized needs that BMUs listed as required by them to improve their performance.

It is not possible from the results to reach an overall conclusion as to whether the BMUs functions and operations are performed to a satisfactory level. However, by looking at their performance assessment in section 5.3 and relating these to the general objectives for which co-management was accepted and implemented, co-management (through BMUs) have been successful in involving fisher communities in fisheries management.

However, what could therefore explain the rating on BMU impact on the state of fishery, low skills development, low direct benefits and low management outcomes? Whereas we see a correlation between meeting objectives and adequacy and efficient use of resources, there are other factors which could have also influenced the impacts. These could be attributed to availability and implementation of management plans, by-laws, and financial resources among others. Others could be that BMUs executive committees have not had adequate preparations when they take office. It is the case that at formation the first BMU executive offices were adequately oriented, provided with training and awareness opportunities, which then enabled them to assume office fully, informed of their roles and responsibilities. However, the subsequent executive committees did not have similar experience neither did they receive full briefing at the time of handing over. They were left to find out what they needed to do or draw from the predecessors. Secondly, as the results indicate, executive committees have low awareness of their roles and responsibilities. With low awareness on what is expected of them, these committees therefore create activities, responsibilities and roles and execute them.

6.4. PERFORMANCE BY DISTRICT

Performance by district did not show any clear pattern (See table 6.1). However, one noticeable fact is that RUMAKI districts have shown tremendous performance in certain areas.

Table 6.1: Summary of performance rating

S/N	Functions and Operations	Leading Districts	Last district
1	Level of understanding on Boundaries / Jurisdiction	Pangani, Mafia and Kinondoni	Mkuranga, Kilwa
2	Representation in BMU membership	Mafia, Kinondoni and Pangani	Bagamoyo, Mkuranga
3	Representation in BMU Executive Committee	Rufiji, Pangani and Kinondoni	Mkuranga, Bagamoyo and Tanga city
4	BMU record-keeping & eporting: Registration and meetings	Kinondoni, Mafia and Rifiji only	Bagamoyo, Pangani and Mtwara rural
5	BMU record-keeping & reporting: Patrol records	Kinondoni and Rufiji	All other districts except Mafia and Mkuranga
6	BMU record-keeping & reporting: Other record-keeping & reporting	Rufiji and Mafia	Bagamoyo and Mkinga
7	Level of awareness of roles & responsibilities	Mkuranga, Rufiji and Mkinga	Bagamoyo, Pangani, Tanga city, Kinondoni and Kilwa
8	Existing level of cooperation	Mafia, Rufiji and Mkuranga	Tanga city, Kilwa, and Pangani
9	Level of trust between BMU members and Executive committee, among Executive committee members, between Executive committee and village government, and executive committee and district authorities	Bagamoyo, Mkuranga and Rufiji	Tanga city Pangani
10	BMU institutional structure	Pangani, Tanga city, Mkuranga, Lindi rural and urban	Mkinga and Mtwara rural.
11	Level of Conflicts and conflict resolution	Bagamoyo and Mtwara Mikindani	Kilwa and Mtwara rural
12	Ease with which conflicts are resolved:	Temeke, Mkuranga and Mtwara Mikindani	Pangani
13	Communication, transparency & freedom of expression:	Mtwara rural, Rufiji and Mkuranga	Tanga city, Pangani
14	Usefulness of any existing BMU network at:	Pangani, Rufiji and Lindi Urban	Kinondoni, Tanga city and Mkinga
15	Adequacy of Resources	Mkinga, Kinondoni	Temeke, Bagamoyo, Pangani, Tanga city, Mkuranga, and Kilwa
16	Level of training, technical & mentoring and support to BMU from:	Rufiji and Mkuranga	Bagamoyo and Pngani
17	Level of support on enforcement from	Mkuranga, Rufiji and Mafia	Bagamoyo, Pangani and Lindi Urban and rural
18	Level of financial & equipment support from		All the districts
19	Democratic practices in the BMU	Kinondoni, Bagamoyo and Mtwara rural	Pangani, Kilwa
20	Effect of external factors on BMU performance	Kinondoni, Temeke and Mtwara Mikindani	Pangani, Kilwa and Lindi rural
	Organizational performance (Impacts)		
1	State of the fishery (since BMU formation)	Pangani and Mafia	Mtwara Mikindani and Bagamoyo
2	Impacts of BMU since formation (attributable to BMU)	Kinondoni	Kilwa
3	Impact of BMU in terms of skills development	Rufiji, Mafia and Mkuranga	Pangani, Tanga city and Kilwa
4	Direct benefits attributable to BMU performance	None	Bagamoyo and Mtwara rural
5	Management outcomes attributable to the BMU	Rufiji	Bagamoyo, Lindi urban
	Fisheries Officers		
1	Understanding on national BMU context	Mkuranga, Tanga city and Rufiji	Pangani, Kilwa and Mtwara rural
2	Understanding on BMU leadership development	Mkuranga, Rufiji and Temeke	Mtwara Mikindani, Lindi rural
3	Understanding on BMU alignment with national policies	Bagamoyo and Pangani	Mtwara Mikindani and rural
4	Perceptions on institutional capacity in support of co-management	Mkuranga, Rufiji and Temeke	Pangani, Mtwara rural and Lindi rural
5	Perceptions on BMU empowerment	Lindi rural and Rufiji	Mtwara rural
	Knowledge of data management	Rufiji	Mtwara Mikindani
6	Perceptions on the Stakeholder participation	Rufiji, Bagamoyo	Pangani
7	Perceptions on the Conflict resolution capacity	Mkuranga, Rufiji, Bagamoyo, Lindi Urban and Temeke	Pangani, Mtwara rural
8	Perceptions on the Fisheries management	Rufiji, Temeke and Tanga city	Pangani, Kilwa, Mtwara Mikindani
9	Perceptions on the Trends in fisheries, income and food security	Mkuranga and Rufiji	Pangani, Mtwara Mikindani
10	Perceptions on the Monitoring and evaluation indicators	Mkuranga and Rufiji	Pagani, Kilwa Mtwara Mikindani

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSION

To improve performance and operations of BMUs, the critical conditions necessary has been shown to include: adequacy of resources, understanding of boundaries of jurisdiction and influence of external factors. Others are: democracy, addressing conflicts and networking.

A SWOT analysis from the ratings indicates that BMUs have the following:-

Strengths: conflict resolution skills, communication, transparency & freedom of expression, democratic practices in the BMU, BMU networks, representation in BMU membership and level of trust between BMU members and executive committee.

Weaknesses: record-keeping and reporting on registration and meetings, Patrol records, sustainable financing, adequacy of resources, awareness of roles & responsibilities and cooperation

Opportunities: existing policy and legislation environment and involvement of development partners

Threats: misunderstanding about (Co-management) BMU as a project

Are BMUs successful as an approach to decentralized management/co-management of fisheries? An answer to this question would depend on how one interprets the results above. Whereas these results present both satisfactory and unsatisfactory ratings in different areas, overall BMUs can be seen to have just started the long walk to fully play their rightful roles in their communities. This report calls for continued support in the areas which have been rated unsatisfactory but more importantly in financial support as well as awareness raising on roles and responsibilities. These two areas are key to a better performance of BMUs as well as enabling them to have more impact in their communities. The results have presented BMU functions and operations section 5.2 i.e. their roles and responsibilities and how these explain BMU performance shown in section 5.3 and 5.4.

7.2. RECOMMENDATIONS

1. Efforts should be directed at fast tracking registration of BMUs. This could be done in similar way through which the BMUs in Lake Victoria were registered.
2. Efforts should also be made to secure motor boats for BMUs to enable them perform patrols in the marine area. Indeed, during the interviews most BMUs requested to have a boat for patrols. Our results also indicate that BMUs having patrol boats such as those in the Rufiji delta performed better. It makes very little sense to have BMUs which do not have very basic items such as a book of register or Fisheries regulations, which in essence require only delivery. It should be a requirement that when a BMU is established either through assistance from the government or an Non-governmental organization that a book of register and Fisheries regulations would be part of what BMUs are provided with at that stage. This includes a BMU office, which was also found to be important during the interviews, because many BMUs which did not have offices complained and asked if they could be help to secure an office for the BMU. The reality that almost half of the BMUs do not have these three basic items should be looked into as a matter of urgency. It could also be important to set time limits for BMUs to formulate a management plan and by- laws so that the process of their approval commence.
3. It is important to establish a continuous training and education on BMU operations and functions. This can be provided by fisheries officers and or non-governmental organizations.
4. Deliberate efforts should be made to assist get district tenders in order to finance its activities.
5. BMUs should also be involved in the issuing of fishing licenses, because they know the fishers better than other authorities. For example, applications for fishing licenses could be channeled through a BMU for the preliminary assessment.
6. Boundary / Jurisdiction: Capacity building should be designed to build among others capacity of women to understand boundaries and jurisdiction even though they don“t go fishing. The satisfactory rating on understanding marine and terrestrial boundaries is an indication that understanding of BMU including women is a BMU function which can be performed well.
7. Representation in BMU membership. A rigorous awareness creation on the importance of representation in BMU membership and executive committee could be an area where either a new project could finance or the MLFD of District Council Fisheries Officers urged to give serious attention. Without paying close attention to representation, BMU committees may evolve to exclude certain fisher groups such as fish processors, service providers.
8. Record keeping is one area that BMUs are not doing very well. This is not because BMUs do not have the capacity to keep records nor is it because they do not have offices, but this has probably to do with other things that this study did not seek answers. It could be that members of BMUs do not just have a culture of keeping records or it could be that records are kept in members“ memory rather than written. To address this, it would be important to establish a permanent mentoring system at the MLDF and the District Council through monitoring of record keeping among other things can be made possible.
9. Whereas democratic principles are encouraged in BMUs through several means such as periodic elections, it is important to establish a system and or culture where new leaders learn about their roles and responsibilities as they take office. Fisheries Staff, or project officers interested in promoting BMUs and or co-management could take lead in ensuring that the change of BMU executive office bearers is backed by a comprehensive awareness raising on their roles and responsibilities. Additionally, the outgoing BMU executive officers could also during a handing over period provide the new leaders with their roles and responsibilities.

Secondly, it is important for the BMU executive office to inform its members regularly on their roles and responsibilities. It is evident that the three months Assembly meeting that BMUs are required to hold is not effective as members do not attend these meetings as required. May be a review of this period could be explored.

10. BMUs perform excellently well in handling conflicts. Moreover, BMUs find conflicts to be easier to resolve. It is strongly recommended that among the BMU roles and responsibilities, conflict resolution should be listed. It is also important to build the capacity of BMUs to handle even bigger conflicts such as those that deal with technical fishing issues and are currently handled by the courts.
11. The level of communication, transparency and freedom of expression especially between BMUs and the Fisheries Division was noted to be unsatisfactory. This study strongly recommends that a special desk at the MLFD be established to handle co-management issues including improving communication, transparency and freedom of expression.
12. BMU networks, such as CFMA, were found to be useful to the BMUs. It is therefore recommended that any new project on co-management in the Tanzania coast should among other things build these networks in areas where they do not exist so far. Similar CFMA-like networks should be used as examples.

13. In all the districts BMUs reported that they had inadequate resources to perform their tasks. In other words, BMUs cannot perform without a minimum level of resources. It is recommended that special efforts should be directed at establishing the minimum level of resources required for a BMU to operate at least optimally and special efforts directed at enabling them to get those resources.

14. As earlier recommended, a mentoring system is important to be established. Such a system should see the formulation and operationalization of a mentoring unit at the MLFD. This should be established specifically for improving co-management. Such a unit should have well trained officers with adequate knowledge on co-management and also have interest in improving the performance of BMUs. The unit should provide a link for all those interested in BMU improvement, law enforcement agencies such as the Police including Marine Police, Magistrates and Fisheries Division. The unit will also check on democratic practices and effect of other factors affecting BMU operations and functions.

15. Politics has had an effect on the performance of the BMUs. Although in some BMUs this did not clearly come out, results from the Fisheries official"s interviews indicated that generally officials are not satisfied with the political support to BMUs. It is recommended political support needs to be sought. It is important to involve political parties" right from their headquarters in addition to involving elected members representative in the constituencies and wards. The latter could be effective in the short term while the former could see a long-term political support. The idea here is to enable these political parties to make co-management an agenda in their manifestos and or operations.

16. The observed difference on BMU alignment with local government policy especially with respect to elections and communication should be addressed through harmonization of BMU regulations in the MLFD and the Prime Minister"s Office Local government.

17. Wherever possible BMUs in Mtwara region should be given priority (in terms of assistance to acquire resources) because of the current political situation. During interviews BMU members demanded actions to be taken immediately in order to improve their performance.

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9. ANNEXES

9.1. Terms of reference

Beach Management Units (BMUs) have been established in and operational in the Tanzanian fisheries resources. They constitute resource user groups and state actors to share responsibilities in resource management and conservation as an imperative to improve livelihoods of people dependent on these resources. An array of Community based organizations both formal as well informal exists since a long time in the rural coastal areas of Tanzania. However, with the amendment of the Fisheries Act 2003 and enactment of BMU Regulations 2009, the Fisheries Department within the Ministry of Livestock and Fisheries Development has intensified its efforts to promote BMU as an institutionalized fisheries co-management organization in the coastal marine fisheries. Currently there are over 170 BMUs along the Tanzanian coast.

To strengthen these BMUs, the Implementation of Regional Fisheries Strategy for ESA – IO, commonly known as SmartFish has initiated a BMU Evaluation Framework in the Tanzanian coastal marine fisheries and has already completed a similar study in Kenya. The proposed framework is compliant to international best practices related Monitoring and Evaluation of community based organizations indulged in rural development. The aim of this assignment is to implement the BMU Evaluation framework in the Tanzanian coast for marine fisheries only so as to strengthen the BMU process in the East and Southern Africa coastal and riparian countries. The study will be undertaken by consultant.

Duties to be performed by the Consultants

- To participate in the harmonization of methodology between the SmartFish evaluation framework and the proposed Fisheries Department evaluation framework;
- To take lead in the field interviews and implement a primary survey of institutional and BMU stakeholders;
- To perform data processing and Analysis with focus on main strata: such as Registered and Non Registered BMU, North Region and South Region, impact of NGOs on BMU, etc. ;
- To perform a SWOT analysis of the BMU process;
- To write a technical report on the outcomes of the primary survey;
- To liaise with Fisheries Department"s Co-management docket, District fisheries staff and BMUs for the planning of field interviews with fishers and other BMU stakeholders;
- To be in charge of all logistics involved in the study.

9.2. Fieldwork Schedule

DAY	Date	District	BMU/Activity	Accommodation
Monday	09.09.2013	Bagamoyo	Kaole	
			Mlingotini	Sleep in Bagamoyo
Tuesday	10.09.2013	Drive to Pangani from Bagamoyo and report to Tanga and Pangani District Offices		
Wednessday	11.09.2013	Pangani	Kipumbwi	
			Ushongo	Sleep in Pangani
Thursday	12.09.2013	Tanga city	Chongoleani	
			Mpirani	Sleep in Tanga
Friday	13.09.2013	Mkinga	Report to Mkinga District Office on the from Horohoro	
			Kwale	
			Kichalikani	
	14.09.2013		Mwandusi	Sleep in Horohoro
			Jasini	
		Drive back to Dar		Sleep in Dar
Monday	16.09.2013	Mkuranga	Kifumangao	
			Kisiju Pwani	Sleep in Ikwiriri
Tuesday	17.09.2013	Rufiji	Nyamisati	
			Mchungu	Sleep Ikwriri
Wednessday	18.09.2013	Drive to Muhoro take a boat to Delta		
			Pombwe	
			Mbwera Mashariki	Sleep in Delta/Muhoro???
Friday	20.09.2013	Kilwa	Somanga (Afternoon)	
			Njianne (Afternoon)	Sleep in Kilwa masoko
		Courtesy call District Fisheries Office Kilwa		
Saturday	21.09.2013		Mkwanyule	
			Mnazi mmoja	Sleep in Lindi
Sunday	22.09.2013	Lindi Rural	Ruvu	
			Shuka	
		Courtesy call District Fisheries Office Lindi Rural and urban		
Monday	23.09.2014	Lindi Urban	Mabano	

DAY	Date	District	BMU/Activity	Accommodation
			Mingoyo	
			Bank Kanisani	Sleep in Mtwara
Tuesday	24.09.2013	Mtwara Mikindani	Misete	
			Senta	
			Shangani East	
			Mtepwezi	
		Courtesy call District Fisheries Office Mtwara Mikindani		
Wednessday	25.09.2013	Mtwara Urban	Mgao	
			Majengo	
		Courtesy call District Fisheries Office Mtwara Urban		
Thursday	26.09.2013	Drive back to Dar		Sleep in Dar
Sunday	29.09.2013	Mafia	Fly to Mafia	
Monday	30.09.2013		Kilindoni	Sleep in Kilindoni/MIMP
			Dongo	
		Courtesy call District Fisheries Office Mafia		
Monday	30.09.2013	Temeke	Kizito huonjwa	
			Mbutumkwajuni	
			Mjimwema	
			Minondo	Sleep in Dar

9.3. BMU Questionnaire

BMU - EVALUATION FRAMEWORK
TANZANIA - Marine Fisheries Co-Management Assessment

	Interview ID:
Region:	
District	

Village/ Street: Urban ☐ Peri-urban ☐ Rural ☐

Person(s) interviewed :

Occupation:

Position in the BMU:

Date of Interview:

Section 1: BMU Profile

1.1 About the BMU

1.1.1	Does the BMU have an available register of members?	**YES**	**NO**
	Exist and Available		
	Exist but not Available		
	Not existing		
1.1.2.	Does the BMU have an elected Executive Committee?	**YES**	**NO**
1.1.3.	Year of formation? (ie. election of first Executive Committee):	**Year:**	
1.1.4.	What was the date of the last meeting of the Executive Committee?	**Date:**	
1.1.5.	Is the BMU registered?	**YES**	**NO**
1.1.6.	If not registered, has the BMU applied for registration?	**YES**	**NO**
1.1.7	Does the BMU have a dedicated office?	**YES**	**NO**

1.2 About the BMU's Membership

1.2.1	How many members are there in the BMU?			
1.2.2	How many members serve on the Executive Committee?	**∑:**	**M:**	**F:**
1.2.3	When was the last BMU Executive Committee elections held?			

1.3 Guidelines, management plan and by-laws

1.3.1	Does the BMU office have a copy of BMU guidelines?	**YES**	**NO**
1.3.2	Does BMU office have a (Kiswahili) copy of the Fisheries Act, 2003	**YES**	**NO**
1.3.3.	Has the BMU received training on preparation of management plans?	**YES**	**NO**
1.3.4	Does BMU office have a copy of the Fisheries Regulations, 2009	**YES**	**NO**

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1.3.5	Has a management plan been drafted? (If 'No' go to 1;3.10)	**YES**		**NO**		
1.3.6.	Has a management plan been approved by District Council?	**YES**		**NO**		
1.3.7	Does the management plan contain measures to regulate outside fishers	**YES**		**NO**		
1.3.8	Does the management plan contain permanent closed areas?	**YES**		**NO**		
1.3.9.	Does the management plan contain seasonally closed areas?	**YES**		**NO**		
1.3.10	Have by-laws been drafted?	**YES**		**NO**		
1.3.11	Have by-laws been approved by District Council?	**YES**		**NO**		
1.3.12	Do by-laws contain measures to regulate outside fishers	**YES**		**NO**		
1.3.13	Are there by-laws to enforce closed areas?	**YES**		**NO**		
1.4.	**Sustainable Financing of the BMU**					
1.4.1	Has the BMU prepared an estimate of budget requirement for current year?	**YES**		**NO**		
1.4.2	Does the BMU have a documented strategy on how to raise the required income?	**YES**		**NO**		
1.4.3	Does the BMU have financial reports available for FY12 and FY13	**FY12**		**FY13**		
	Exist and Available					
	Exist but not Available					
	Not existing					
	If so what was total income & expenditure during FY12	Income		Expend		
	If so what was total income & expenditure during FY13	Income		Expend		
1.4.4.	Has the BMU received funding from the District Council in the current year?	**YES**		**NO**		
	If so, how much during July 2012 to June 2013					
1.4.5.	Has the BMU been awarded any tender by the Village or District Council?	**YES**		**NO**		
1.4.6.	Does the BMU generate revenue from the tender?	**YES**		**NO**		
	If so, how much during July 2012 to June 2013					
1.4.7	Does the BMU receive any funding from levies on outside fishers?	**YES**		**NO**		
	If so, how much during July 2012 to June 2013					
1.4.8.	Does the BMU receive any funding from taxing fishing landings?	**YES**		**NO**		
	If so, how much during July 2012 to June 2013					

Interviewers' observations/ notes:

Use the scale for sections 2 and 3

Interpretation of Likert scale

1	: Highly Unsatisfactory / Highly Declined / Very Useless / Very Low
2	: Unsatisfactory / Decline / Useless / Low
3	: Neutral
4	: Satisfactory / Increased / Improved / High / Beneficial
5	: Highly Satisfactory / Highly Increased / Very High / Highly Improved / Highly Beneficial
6	: Don't Know / Not Applicable / No Opinion

Section 2: BMU Operations and Function

S/No.	Descriptions	1	2	3	4	5	6
2.1	**Boundaries / Jurisdiction**	Very low to very high)					
2.1.1	Is the marine area under the jurisdiction of the BMU clearly understood?						
2.1.2	Terrestrial boundaries of jurisdiction (e.g. fish landing sites) clearly understood?						
2.1.2	Are there conflicts over the boundaries of jurisdiction?						
2.2	**Representation in BMU membership**	low to high representativeness					
2.2.1	Different kinds of fishers (gears)						
2.2.2	Gender						
2.2.2	Boat- Owners						
2.2.4	Fishing gear owners						
2.2.5	Fish Traders						
2.2.6	Fish processors						
2.2.7	Service providers (restaurants & hotels)						
2.3	**Representation in BMU Executive Committee**	low to high representativeness					
2.3.1	Different kinds of fishers (gears)						
2.3.2	Gender						
2.3.3	Age groups						
2.3.4	Boat- Owners						
2.3.5	Fishing gear owners						
2.3.6	Fish Traders						
2.3.7	Fish processors						
2.3.8	Service providers (beach restaurants & Hotels)						
2.3.9	BMU ordinary members						
2.3.10	BMU Executive Committee						
2.4	**BMU record-keeping & reporting: Registration and meetings**	Unsatisfactory to Satisfactory					
2.4.1	Availability of up to date BMU members' registration record books						
2.4.2	Executive Committee: frequency of meeting in the past 12 months						
2.4.3	Availability of minutes of above meetings						

2.4.4	Attendance at Executive Committee meetings						
2.4.5	Frequency of BMU Assembly meetings in past 12 months (should be quarterly)						
2.4.6	Availability of minutes of above meetings						
2.4.7	Attendance at Assembly meetings						

2.5 **BMU record-keeping & reporting: Patrol records**

2.5.1	How many boat patrols were conducted from July12 to Jun13?		*no. for which reports available*		
2.5.2	How many land patrols were conducted from July12 to Jun13?		*no. for which reports available*		
2.5.3	How many fishing gears (what type) or boats were confiscated?	*gears (type)* _____		boats	
2.5.4	How many culprits were taken to Police for arrest?				
2.5.5	Availability of patrol reports for Jul12 to Jun13				

2.6 **BMU record-keeping & reporting: Other record-keeping & reporting**

		Unsatisfactory to Satisfactory					
2.6.1	Availability of event books/ forms for Jul12 to Jun13						
2.6.2	Perceived usefulness of maintaining event books/ MCS records						
2.6.3	Availability of catch data collection performance records (if relevant)						
2.6.4	Perceived usefulness of collecting catch data (if relevant)						
2.6.5	Number of incidents recorded during Jul12 to Jun13	Number					
2.6.6	Number of quarterly progress reports for past 12 months (ie. out of 4)	Number					

2.7. **Awareness of roles & responsibilities**

		low to high					
2.7.1	Awareness of roles & responsibilities amongst Executive Committee						
2.7.2	Awareness of roles & responsibilities amongst Assembly members						

2.8. **Existing level of cooperation**

		COOPERATION (low to high)					
2.8.1	Among user groups within the BMU						
2.8.2	Between Executive Committee and BMU members / community						
2.8.3	Between BMU members & migrant fishers						
2.8.4	Between BMU and the Village Government						
2.8.5	Between BMU and District Council						
2.8.6	Between BMU and political parties						
2.8.7	Between BMU and Fisheries Division / Ministry						
2.8.8	Between the BMU and NGOs / CSOs						
2.8.9	With neighbouring BMUs						

2.9 **Level of trust between:**

		TRUST (low to high)					
2.9.1	Executive members						
2.9.2	Executive and Ordinary Members of the BMU						
2.9.2	Executive and village government						
2.9.4	Executive and District authorities						
2.9.5	Executive and Fisheries Departmentt						

2.10 **BMU institutional structure**

		ORGANISATION (unsatisfactory to satisfactory)					
2.10.1	Is the BMU, as an institution, compatible with existing village structures?						
2.10.2	To what extent is the BMU structure appropriate to achieve its objectives?						

2.11 **Conflicts and conflict resolution**

		CONFLICT (Low to high)					
2.11.1	Level of conflicts that BMUs face?						
2.11.2	Level of conflicts between marine resource users within the village?						
2.11.3	Level of conflicts between local and migrant fishers						
2.11.4	Level of conflicts between BMU and politically affiliated parties						
2.11.5	Level of conflicts between BMU and village government						
2.11.6	Level of conflicts between village and neighbouring villages						
2.11.7	Level of conflicts between BMU and district authorities						
2.11.8	Level of conflicts between BMU and any other Government agencies (mention)						

2.12 **Ease with which conflicts are resolved:**

		CONFLCIT RESOLUTION (Very Difficult to Very Easy)					
2.12.1	Internal (within the BMU)						
2.12.2	Other community members / politically affiliated groups						
2.12.3	with migrant fishers						
2.12.4	with neighbouring BMUs						
2.12.5	with village Government						
2.12.6	Other Government agencies (eg. marine parks; Navy)						

2.13 **Communication, transparency & freedom of expression:**

		COMMUNICATION (Unsatisfactory to Satisfactory)					
2.13.1	Freedom of expression of different viewpoints by BMU members						

2.13.2	Freedom of expression of different viewpoints within BMU Exec. Committee						
2.13.3	Level of communication with neighbouring BMU						
2.13.4	Level of communication with District Fisheries Officers/DED						
2.13.5	Level of communication with District Council						
2.13.6	Level of communication ith the Fisheries Division						

2.14	**Usefulness of any existing BMU network at:**	**USEFULNESS (**useless to beneficial)					
2.14.1	Collaborative Fisheries Management Area (CFMA) level						
2.14.2	District level						
2.14.3	National level						
2.14.4	Cross-border						

2.15	**Adequacy of Resources**	**RESOURCES** (low to high)					
2.15.1	Adequacy of revenue to meet operational requirements						
2.15.2	Efficiency with which the BMU uses its financial resources						
2.15.3	Adequacy of equipment resources						
2.15.4	Adequacy of human technical resources within BMU						
2.15.5	Adequacy of information resources (eg. policies & laws)						

2.16	**Level of training, technical & mentoring support to BMU from:**	**SUPPORT** (Unsatisfactory to Satisfactory)					
2.16.1	Village government						
2.16.2	District Fisheries Office / District authorities						
2.16.3	Fisheries Division / Ministry of Livestock & Fisheries Development						
2.16.4	Other government agencies						
2.16.5	NGO or similar project (eg. RUMAKI / TCMP/ WWF etc)						

2.17	**Level of support on enforcement from:**	**SUPPORT** (Unsatisfactory to Satisfactory)					
2.17.1	Village government						
2.17.2	Neighbouring BMUs (included. other BMUs within CFMA)						
2.17.3	District authorities						
2.17.4	Police / Marine Police						
2.17.5	Magistrates						
2.17.6	Fisheries Division						

2.18	**Level of financial & equipment support from:**	**SUPPORT** (Unsatisfactory to Satisfactory)					
2.18.1	Village government						
2.18.2	District Fisheries Office / District authorities						
2.18.3	Fisheries Division						
2.18.4	Other government agencies						
2.18.5	NGOs and other external donors						

2.19	**Democratic practices in the BMU**	**DEMOCRATIC PRACTICES** (Usatisfactory to Satisfactory)					
2.19.1	Regular election of Executive members						
2.19.2	Free and fair election of executive members						
2.19.3	Level of participation (turn-out) in election of executive committee						

2.20	**External factors**	Low to high					
2.20.1	Difficulty (inc. cost) of travelling from village to District HQ						
2.20.2	Level of conflict between political parties in the village						
2.20.3	Presence of migrant fishers in BMU's fishing grounds						
2.20.4	Length of time resident fishers & families have lived in village						
2.20.5	Degree to which villagers are from common origin/ tribal group etc.						
2.20.6	Existence of traditional fisheries management before BMU						
2.20.7	Quality of infrastructure & facilities at fish landing site(s) in village						
2.20.8	List the three most important fisheries (species or gear) and rate them in terms of importance to the overall livelihood / economy of the village:	low to high importance					
	1.						
	2.						
	3.						

2.20.9	What are the three most important sources of livelihood in the village or mtaa, and estimate the relative percentage that each contributes:	% contribution to total livelihoods	(ie. total of the three must be less than 100 %)
	1.	%	
	2.	%	

3.			%

Section 3: Organization Performance Assessment

3.1.	**State of the fishery (since BMU formation)**	**TRENDS** (decline to increase)					
3.1.1	What has been the trend in quantity of fish caught per fisher (CPF)						
3.1.2	What has been the trend in the size of fish caught						
3.1.3	What has been the trend in total catches						
3.1.4	What has been the trend in populations of fish in the fishing areas						
3.1.5	What has been the trend in numbers of fishers						

3.2	**Impacts of BMU since formation (attributable to BMU)**	**OUTCOMES** (declined to improved)					
3.2.1	Safety at sea has changed						
3.2.2	Fish landing infrastructure has changed						
3.2.3	Sanitation at landing sites has changed						
3.2.4	Sanitation at public beaches has changed						
3.2.5	Post capture treatment & quality improvement of fish						
3.2.6	Marketing & distribution of fish						

3.3.	**Impact of BMU in terms of skills development**	**Skills** (declined to improved)					
3.3.1	Planning & implementation of surveillance & patrolling						
3.3.2	Financial management skills						
3.3.3	Communication & networking skills						
3.3.4	Conflict resolution skills						
3.3.5	BMU leadership skills						

3.4.	**Direct benefits attributable to BMU performance**	**BENEFITS** (declined to increased)					
3.4.1	Has fisher's income changed since BMU establishment?						
3.4.3.	Has vendors and processors income changed since BMU establishment?						
3.4.3	Fisheries development opportunities(e.g. ice making, fishing gear making) have changed						
3.4.4	Employment creation						
3.4.5	Flow of government funding on fisheries infrastructure has changed						
3.4.6	Flow of private investments in fisheries sector has changed						

3.5	**Management outcomes attributable to the BMU**	**OUTCOMES** (Unsatisfactory to Satisfactory)					
3.5.1	Incorporation of traditional management practices in management plan						
3.5.2	Effectiveness of implementation of management plan						
3.5.3	Are there emerging issues not addressed by the management plan?						
3.5.4	Implementation of by-laws						
3.5.5.	By-laws are acceptable to fishers & resources users						
3.5.6.	Is the BMU team able to enforce regulations and by-laws?						
3.5.7	Enforcement of closed fishing areas / seasons						
3.5.8	Reduction in the use illegal / destructive gears						
3.5.9	Degree to which sanctions or penalties are imposed on violators						
3.5.10	Existence of graduated penalties (ie. repeated offences = more severe)						
3.5.11	Mechanism for resolving conflicts between resource-users						
3.5.13	Level of involvement of BMU in allocation of fishing licenses						

3.6. What are the three highest priority needs for the BMU to improve performance and please rate them in terms of importance (low to high priority)

1.						
2.						
3.						

2. Fisheries Officials Questionnaire

Section 5 - Institutional Governance Performance Assessment

Target: Senior Government Officers

Ref No.

Country:

Ministry:

Department:

Location:

Person interviewed:

Position:

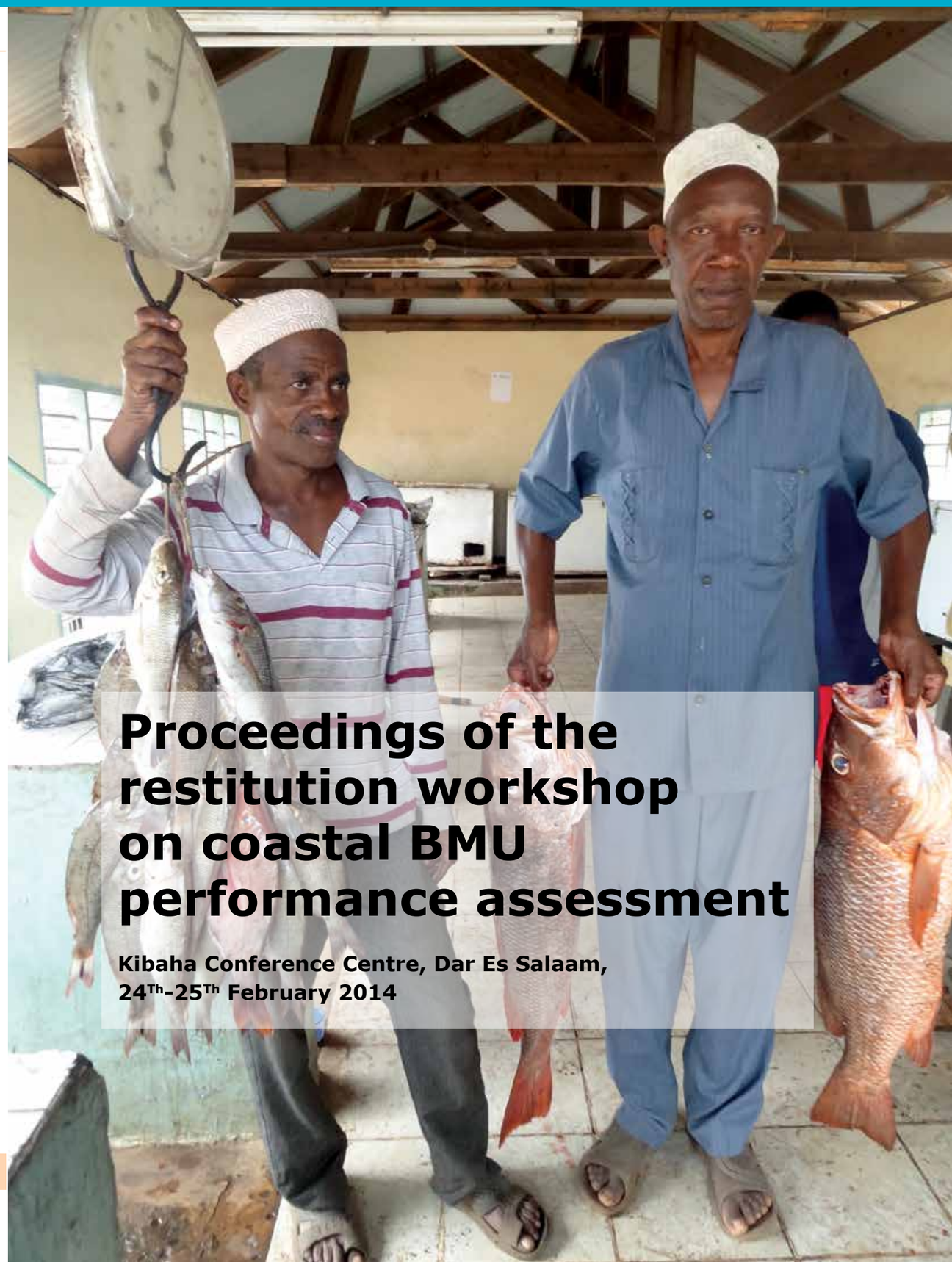
Date of Interview:

Interpretation of Likert six-point scale
1. Highly unsatisfactory
2. Unsatisfactory
3. Moderately unsatisfactory
4. Moderately satisfactory
5. Satisfactory
6. Highly Satisfactory

S/No.	Descriptions	1	2	3	4	5	6
5.1	**National BMU context**	Unsatisfactory to Satisfactory					
5.1.1	Adequacy of enabling legislation for BMUs						
5.1.2	Ministry's implementation of its roles & responsibilities with respect to BMUs						
5.1.3	Overlaps & gaps among institutional mandates						
5.1.4	Harmonization between natural resources depts.						
5.2	**Leadership on BMU development**	Unsatisfactory to satisfactory					
5.2.1	Political support at senior Ministry level						
5.2.2	Political support at District Council level						
5.2.3.	Strength of BMU leadership						
5.3	**Alignment with national policies**	Unsatisfactory to satisfactory					
5.3.1	BMUs provided for in national fisheries policy						
5.3.2	Alignment with poverty reduction strategy etc.						
5.3.3	Alignment national NR management policies						
5.3.4	Alignment with national social policies on heatlh, water etc.						
5.4	**Institutional capacity**	Unsatisfactory to satisfactory					
5.4.1	Capacity on fisheries co-management at Fisheries Division						
5.4.2	Capacity of research institutions on fisheries co-management						
5.4.3	Capacity at district level to facilitate & mentor BMUs						
5.4.4	Training courses on co-management for district officials						
5.4.5	Training courses for BMU members						
5.5	**Empowerment of BMU**	Unsatisfactory to satisfactory					
5.5.1	Level of ownership of BMU by communities						
5.5.2	Acceptance of responsibility for BMUs by District Councils						
5.6.	**Financial Resources**	Unsatisfactory to satisfactory					
5.6.1	Financial resources available to operationalise BMUs						
5.6.2	Financial allocation to BMUs in District Council budgets						
5.6.3	Actual financial provision to BMUs by District Councils						
5.7.	**Capacity at national level**	Unsatisfactory to satisfactory					
5.7.1	Adequacy of national guidelines for BMUs (including objectives & roles)						
5.7.2	Adequacy of capacity & resources for Ministry's co-ordination of BMUs						
5.7.3	Availability of database on BMU status at the Ministry						
5.7.4.	Capacity for definition of boundaries / jurisdiction of BMU						
5.7.5	Existence of indicators & targets for national BMU development						
5.7.6	Capacity to conduct cost/benefit analysis of management objectives						
5.8	**Knowledge & data management**	Unsatisfactory to satisfactory					
5.8.1	Flow of fisheries sector information (both ways)						
5.8.2	Information about BMU Performance (both ways)						
5.8.3	Information dissemination to parties outside TZ fisheries sector						
5.8.4	Information flow from BMUs informs management decision by FDD						
5.9	**Stakeholder Participation**	Unsatisfactory to satisfactory					
5.9.1	Community awareness & understanding of BMU system						
5.9.2	Sensitization of coastal villagers on marine resource issues						
5.9.3	BMU members' participation in BMU decision-making & implementation						
5.9.4	Representation in BMU forums by marginalized groups						
5.10.	**Conflict Resolution Capacity**	Unsatisfactory to satisfactory					
5.10.1	Capacity to resolve conflicts between resource users within villages						
5.10.2	Capacity to resolve conflicts between BMUs & village governments						
5.10.3	Capacity to resolve conflicts between BMUs & migrant fishers						
5.10.4	Capacity to resolve conflicts between BMUs & district authorities						
5.10.5	Capacity to resolve conflicts between national NR management agencies						
5.11	**Fisheries Management**	Unsatisfactory to satisfactory					
5.11.1	BMU management plan & by-laws are enforced						
5.11.2	Existence of economic incentives for fishers to change behaviour						

5.11.3	Level of control of open access to fisheries resources	
5.12.4	Trend in destructive fishing and other damaging practices	
5.12.5	Trend in status of fish stocks	
5.12.6	Trend in revenue for the District Council	
5.12.7	Trend in income of BMU/community members	
5.12.8	Trend in food security	
5.12.9	Trend in level of fisheries-related conflicts within communities	
5.12.10	Trend in Government funding for in fisheries infrastructure	
5.12.11	Trend in public & private investments in fisheries sector	
5.13	**Monitoring & Evaluation Indicators**	Unsatisfactory to satisfactory
5.13.1	BMU performance indicators are defined	
5.13.2	Database of BMU performance available at District Fisheries Office	
5.13.3	Data on BMU performance is used by DFO for budgeting and planning	

Comments



Proceedings of the restitution workshop on coastal BMU performance assessment

Kibaha Conference Centre, Dar Es Salaam,
24Th-25Th February 2014

EXECUTIVE SUMMARY

Following two successful Beach Management Units (BMUs) evaluation studies in Kenya and Tanzania, SmartFish organized a two days restitution workshop where the results from the two studies were presented discussed and recommendations made on how to strengthen the BMUs. The workshop brought together Ministry officials, the civil society, Local government officials and representatives of BMUs from Kenya and Tanzania. The workshop was convened specifically to present and discuss the results of the BMU assessments in Kenya and Tanzania and translates the results into specific recommendations for future work on BMU/Co-management strengthening.

The first day was dedicated to presentation of the two studies by the two consultants who were contracted to undertake the studies. These were however preceded by presentations on the status of BMUs in Kenya and Tanzania by officials from the Ministries of fisheries from the two countries. From these two presentations, it was noted that there are about 205 BMUs in Tanzania marine districts and about 64 in the Kenyan coast. The formation of the BMUs followed a more similar pattern where awareness raising was done in both countries although by different groups. In each of the country there is an existing legislation, which provides the legal framework for BMU to exist.

The presentations on BMU evaluation in Kenya and Tanzania focused on the methodology used, BMU profile, BMU functions and operations, SWOT analysis, institutional governance, conclusion and recommendations. In summary BMUs were noted to have different ratings on their performance levels. Moreover their impacts since formation have not been satisfactory.

Participants generally agreed with the results and emphasized the need to come up with implementable actions to strengthen these BMUs. There were similarities and differences in different result areas for example conflicts and ease with conflicts are resolved were one are which BMUs found to be addressed satisfactory. In addition inadequate resources was rated as unsatisfactory in BMUs across the two countries. This latter point seems to influence BMU performance as well as their impact.

Participants came up with prioritized list of what needs to be done so as to strengthen the BMUs. Among some of the recommendations were: fast tracking registration of BMUs, finding a source of a sustainable financing and development of co-management strategy plans. Participants also wanted the results of the two surveys synthesized and produced as a book.

Before ending day two, the participants listened to the initiative of the SWIOFISH project preparations. From this presentation, it was observed that SWIOFISH and SmartFish should look on areas, which they could work on without duplicating efforts and resources. One possible way suggested is that SmartFish to focus on districts, which SWIOFISH is not focusing on.

1 INTRODUCTION AND BACKGROUND TO THE MEETING

The SmartFish Project aims at contributing to an increased level of socio-economic and environmental development in the Eastern-Southern Africa and –Indian Ocean (ESA-IO) region, inter alia through improved governance and more robust approaches to fisheries management. The SmartFish Project is implemented by the Indian Ocean Commission (IOC), in collaboration with Food and Agricultural Organization (FAO) and benefit from the financial support of the European Union. The first phase of the Programme will be implemented from March 2011 until March 2014.

The expected results and outcomes of the Programme fall into the following five areas: fisheries management; fisheries governance; fisheries monitoring, control and surveillance; regional fish trade and food security. Among the activities implemented to achieve these results is to strengthen the co-management process, instituted through establishment of Beach Management Units (BMUs) that has been initiated in the ESA-IO coastal and riparian countries. BMUs in both Kenya and Tanzania are grounded under Fisheries legislations. In Kenya they are entrenched into the Fisheries Act (Cap 378) through the BMU regulations 2007 and in Tanzania under the amendment of the Fisheries Act 2003 and enactment of BMU Regulations 2009. There have been intensified efforts to promote BMUs as institutionalized fisheries co-management organizations in the coastal marine fisheries both in Kenya and Tanzania. Currently there are over 170 BMUs along the Tanzanian coast and 74 in the Kenyan coast.

In its quest to strengthen the BMU process, SmartFish initiated a BMU Evaluation Framework, which is compliant to international best practices related to Monitoring and Evaluation of community-based organizations indulged in rural development. The evaluation exercise has involved development of a tool and use of the same in a study in Kenya and in Tanzania.

This activity falls under Result 2, of the SmartFish project intended to initiate a governance framework for sustainable regional marine fisheries management and development. In particular, this assignment falls under Result 2.5: Stakeholders participation in decision making for management is promoted.

The whole process of coming up with this assessment framework that was implemented in both Kenya and Tanzania involved the following steps:

i) Designing the Evaluation Framework in Kenya
ii) Validation of the Evaluation Framework through field work on a pilot test basis
iii) Development of sampling strategies for data collection
iv) Designing of in-built data processing, compilation and analysis supports
v) Full BMU evaluation exercise in Kenya, data analysis and report writing
vi) Transfer of framework to Tanzania
vii) Full BMU evaluation exercise in Tanzania, data analysis and report writing

1.1 PURPOSE OF THE WORKSHOP

Against the above background, SmartFish project organized a feedback workshop with the theme: Evaluation of performance of BMUs as tools for decentralized management; Results of BMU assessment in Kenya and Tanzania. What next?

The aim of the workshop was to present and discuss the results of the BMU assessment in Kenya and Tanzania and translate these into specific recommendations for future work on BMU/Co-management strengthening.

2 DAY 1: FEBRUARY 24TH

The meeting started at 9:00 a.m. with introductions from participants.

2.1 OPENING OF THE MEETING AND WELCOME REMARKS FROM SMARTFISH

The SmartFish regional officer Mr. Patrick Kimani welcomed everyone to the meeting and thanked them for attending.

2.2 OPENING ADDRESS BY THE ASSISTANT DIRECTOR OF FISHERIES, TANZANIA

On behave of the Director of Fisheries, Tanzania, Ms Fatma Sobo, the assistant Director, officially welcomed everyone to the meeting. In his speech (see annex), the Assistant Director gave a brief history of BMUs in Tanzania and the reasons why they were formed. She noted that BMUs were stared in Lake Victoria, where there are about 433 existing, through a BMU Guideline. The Guideline was modified to suit the marine environment where, about 205 have so far been formed in all the marine districts. In addition to these water bodies BMUs are virtually in all other fishing water bodies such as Lake Tanganyika (23 BMUs) among others. The Director underscored the importance of the co-management. It was equally observed that reporting back on any research study is an important exercise and as such thanking SMARTFISH for this initiative is more than welcome. The efforts already started in Kenya and Tanzania can be turned into pilots for other countries in the region. She thanked the participants for sparing their time to participate in the workshop.

2.3 WORKSHOP OBJECTIVES AND PROGRAM CLARIFICATIONS

The regional SmartFish officer explained the objectives of the meeting (see introduction and background), drew participants' attention to the program and set out rules of the workshop and other housekeeping issues. He further gave a brief of the studies backgrounds and progress made thus far with particular emphasis on the following:

i. Methodology developed by a consultant, tested and implemented in Kenya wholesome

ii. Methodology modified to fit Tanzania context through further consultations with Tanzania stakeholders. This was through a workshop held in Dar es Salaam on 29th and 30th July, 2013.

iii. SWIOfish, KCDP and other development partners are potential beneficiaries of the results

The Officer gave a brief background on Smartfish and the program. He informed the participants that the Smartfish program covers 21 countries and has been extended to Sudan and Southern Sudan. He further noted that the first phase is coming to an end by March 2014 but a second phase is underway.

2.4 PRESENTATION ON STATUS AND MAJOR BMU INITIATIVES IN TANZANIA

The Assistant Director of Fisheries presented the status of BMUs in Tanzania and gave a highlight of the major BMU initiatives.

According to the Assistant Director, degradation of marine environment and rampant illegal fishing led to the formation of BMUs. However, she noted that although co-management contributes to sustainable fisheries it requires goodwill from the communities.

The following highlights were noted from her presentations:

i. So far over 700 BMUs (205 marine) have been formed in Tanzania

ii. BMUs started by awareness through change agents (Village Executive Officers and Ward Officers) from the villages in collaboration with WWF

iii. Presence of fisheries policy, guidelines and legal framework enabled collaborative fisheries management. About 67 co-management plans have been formed and 6 CFMAs.

iv. BMU functions are stipulated in the regulations (data collection, awareness, maintaining hygiene, etc.)

v. Lack of government funding has constrained BMU functions and interventions are needed from state and non-state actors

2.4.1 REACTIONS FROM THE PARTICIPANTS

Participants noted that revenue collection is a challenge for BMUs as local authorities are also collecting levies through other means.

2.5 PRESENTATION ON STATUS AND MAJOR BMU INITIATIVES IN KENYA-MAKILA

A Fisheries officer from Kenya State Department of Fisheries (SDF), Mr. Makila, assisted by fellows (Judy Amadiva and Barabara Mwaka) presented the status of BMU initiatives in Kenya. The following were highlighted from their presentation.

i. A total of 283 BMUs and Common Interest Groups (CIG), and 140 Aquaculture clusters have been established

ii. Fisheries Act and BMU regulations have been consolidated in the new version (2012) of Fisheries Act

iii. BMU mandates are stipulated in the BMU regulations, similar to Tanzania

2.5.1 BMU INITIATIVES IN KENYA

According to Mr. Makila, BMU initiatives in Kenya are grouped in categories such as capacity building, Jurisdiction, Infrastructure and improvement of fishing technology, among others.

i. Capacity building is done by the government and non-governmental organizations for government staff and exchange programs. Training for BMUs based is on Harmonised BMU training modules (developed by NGOs), assessment needs (Government initiative), Safety at Sea training, etc.

ii. Jurisdiction-major initiatives are demarcation of co-management areas and development of co-management plans and management plan guideline

iii. Infrastructure-Improvement of landing stations amenities

iv. Fishing technology-improvement of fishing technology such as gated fishing traps and installation of FADs.

2.6 PRESENTATION ON PERFORMANCE OF BMUS IN KENYA

The Kenyan consultant, Mr. Nyaga Kanyange presented performance of Kenya coastal BMUs with a detailed

discussion on the implication of the results (see attached presentation). Before his presentation, he reminded the participants that result items, though comparable, differed slightly from Tanzania due to adaptation of methodology to fit the Tanzania context. His presentation focused on the following areas: introduction, methodology, BMU profile, BMU functions and operations (satisfactory to unsatisfactory), SWOT analysis, institutional governance (Satisfactory-unsatisfactory), conclusion and recommendations.

2.6.1 REACTIONS FROM PARTICIPANTS

a) A participant from Kenya (Ms. Judy) sought clarification on exclusion of fish processors in BMU membership. The presenter clarified that few processors exist and operate through their agents who are BMU members

b) An officer from the National Government (Mr. Makila) commented that the Fisheries Act 378 has been revised (2012) to include subsidiary legislation as one document and thus should be cited as one document. However, the study was done at time when this process was in progress.

c) A clarification was sought that the 30% of constitution gender requirement refers to both sexes and not females only

d) A participant sought clarification of the Likert scale items and indicators as they were confusing

e) A participant asked to know if BMU membership in Kenya was either compulsory or voluntary. Fisheries officers responded by saying that the constitution provides for voluntary membership of organisations while the Fisheries Act compels stakeholders to become members in order to benefit fully from the resource.

f) An officer from SDF, in concurring with the results, emphasised that there is adequate political will for BMUs in Kenya as spelt out in vision 2030

g) In response to a recommendation requiring recognition of BMUs in natural resource based laws, an officer from SDF commented that doing so may bring conflict as it might contradict classification of government functions

h) A participant from Tanzania noted that presenting Likert items as means rather than frequencies biases interpretation of results. However, Kenyan participants acknowledged that the results almost entirely reflected the real situation.

i) A participant from Kenya sought to know how the interviewer balanced perception and reality. The presenter noted that expert judgement and deep knowledge of pertinent issues are important in ranking Likert scale.

j) A participant from Tanzania commented that representation of BMUs by different stakeholders (e.g. traders, fishers, etc.) affects performance as each puts their interests first

k) A participant from Tanzania enquired about registration and formation of BMUs in Kenya. SDF officer (Madam Mwaka) explained that BMUs were formed through self-initiative after seeing good examples-fisheries started with some awareness. This was followed by pilot BMUs that were later split into smaller homogenous BMUs issued with certificates of registration. Another participant from Kenya added that some groups transformed from fishing groups to BMUs after introduction of regulation

l) The issue of BMU Networks was not well understood by a Tanzania counterpart, in comparison to CFMAs and forums. Formation of BMU networks at local, county and national level was explained by SDF representative from Kenya.

m) The presenter commented that vested interest such as supporting illegal fishing within BMUs leading to poor leadership in Kenya was an integrity and accountability issue, in response to a comment from Tanzania where such individuals were intentionally brought into leadership in order to influence change.

2.7 PRESENTATION ON PERFORMANCE OF BMUS IN TANZANIA

The presenters, Dr. Paul Onyango and Dr. Prosper Mfilinge gave detailed presentations on performance of BMUs in Coastal Tanzania (see presentation attached). Presentation topics were: Introduction, methodology, BMU profile, BMU functions and operations (Satisfactory to unsatisfactory), BMU Impacts, SWOT analysis, Institutional governance (Satisfactory to unsatisfactory), conclusion and recommendations.

2.7.1 REACTIONS FROM PARTICIPANTS

a) It was clarification that Likert rating 3 in the results represents 50/50 results

b) A participant from Kilwa noted that Kilwa BMUs was rated low while Somanga BMU is one of the best in the country. It was clarified that the results were based on all sampled BMUs in the district generally rated low.

c) A participant from fisheries division commented that postponement of interviews upset BMU members. The presenter was apologetic that this was due to delay in disbursements of funds that affected the entire program.

d) A participant noted that poor communication within and without BMU members affected BMU functions and to make things worse information is not delivered promptly even when there is enough time. In response, the Assistant Director explained that majority of BMUs, especially those outside urban areas (e.g. Rufiji) are located far from Fisheries Offices and transport is a problem.

e) A participant from Kenya sought clarification on the procedure for BMU establishment in Tanzania as it seemed to differ from Kenya. It was clarified by Fisheries Officer from the Tanzanian Ministry of Livestock and Fisheries Development that BMUs are registered after meeting certain performance criteria (e.g. awareness, drawing management plans, data collection, maintenance of good hygiene, etc.) set out by the ministry before registration. This was contrary to Kenya where BMUs were registered before demonstrating performance. In addition, the FO noted that there were delays in delivering certificates after passing the criteria and the BMUs.

f) Approval of by-laws in Tanzania was another issue that needed clarification from a Kenyan participant. It was explained that by-laws were approved by District Council Assembly after checking by District Legal officer that they conform with national laws.

g) It was noted by a District FO that BMUs, majority of them started through MACEMP intervention, have not been performing well because during the formation the fishers misinterpreted giving of allowances. In addition, Coastal BMUs, the officer said, lacked ownership and there was a perception that BMUs belonged to the ministry and everyone wishing to engage with them should provide some payment. The project was also marred with misallocation of alternative livelihood projects awarded to non-targeted people. There is need for integrated effort to create awareness in order to change behaviour.

h) The presenter noted that Mtwara issues were heavy and needed special attention from the Ministry.

i) District FO in Tanzania were not providing prompt guidance to steer registration process.

j) A DFO noted that election of new BMU executive committees without prior training and awareness

affected BMU functions and operations and recommended that outgoing officials should provide critical information and files after handing over leadership.

2.8 SETTING UP OF GROUP DISCUSSION TOPICS

The facilitator gave a highlight of discussion topics collected from participants that were summarised and presented the following day for discussion. Participants were grouped according to similarity of their work in order to bring out similar concerns follows:

a) Ministries and NGOs representatives

b) BMU representatives

c) District Fisheries Officers

Day one ended at 6:20 p.m.

Participans at the workshop

3 DAY 2: 25TH FEBRUARY, 2014

Meeting started 8:39 a.m.

3.1 GROUP DISCUSSIONS

Below is a list of discussion questions and their Swahili translation useful for participants with difficulties in technical English.

3.1.1 ENGLISH SET

1. Why aren't BMUs performing better than what the studies have revealed? Or why has previous BMU support not enable them to perform better?
2. Registration
   a) How do we re-establish BMUs in districts where their objectives have been altered
   b) How should the process of BMU registration be fast tracked and recognized as legal entities?
3. What needs to be done to motivate BMUs perform their functions?
4. What capacity building, training and tools and equipment are needed in order to strengthen BMUs?
5. How can BMUs achieve sustainable financing
6. What needs to be done (in a prioritized form) in order to improve BMU performance by:
   a) Local Government/County level
   b) By Central/National Government
   c) By Development Partners
   d) By BMUs
7. What minimum requirements are needed to optimize BMU performance i.e. governance (reduce conflict between BMU and government agencies, access fishing grounds through BMUs only) and infrastructure.
8. How should different initiatives on strengthening co-management by different development partners be harmonized?

3.1.2 SWAHILI SET (MASWALI YA MAJADILIANO KATIKA VIKUNDI)

1. Kwa nini BMU hawatekelezi majukumu yao ipasavyo?
2. Usajili wa BMU
   a) Je utaratibu gani utumike kuunda upya BMU katika baadhi ya wilaya ambazo madhumuni yamebadilishwa
   b) Jinsi ya kuharakisha usajili wa BMU na kuhakikisha kuwa jamii inatambua kuwa BMU ziko kisheria
3. Je nini kifanyike ili BMU wawe na motisha ya kutekeleza majukumu yao?
4. BMU wajengewe uwezo katika maeneo gani?

5. Taja njia za mapato endelevu kwa BMU
6. Nini kifanyike ili kuboresha utekelezaji wa majukumu ya BMU na:
   a) Serikali za mtaa
   b) Serikali Kuu
   c) Wadau wa Maendeleo (Wafadhili)
   d) BMU wenyewe
7. Je BMU zinahitaji kitu gani ili kuwa na utendaji wenye tija kwenye utawala bora (kupunguza migogoro kati ya BMU na taasisi za kiserikali, uvuvi kupitia BMU) na miundombinu.

3.2 GROUP PRESENTATIONS

The following were the issues raised during group discussions:

3.2.1 BMU REPRESENTATIVES

This group presented their discussion in Kiswahili. A translation has been provided here.

1. Why aren't BMUs performing better than what the studies have revealed? Or why has previous BMU support not enable them to perform better?
2. Registration
   c) How do we re-establish BMUs in districts where their objectives have been altered
   d) How should the process of BMU registration be fast tracked and recognized as legal entities?
3. What needs to be done to motivate BMUs perform their functions?
4. What capacity building, training and tools and equipment are needed in order to strengthen BMUs?
5. How can BMUs achieve sustainable financing
6. What needs to be done (in a prioritized form) in order to improve BMU performance by:
   e) Local Government/County level
   f) By Central/National Government
   g) By Development Partners
   h) By BMUs
7. What minimum requirements are needed to optimize BMU performance i.e. governance (reduce conflict between BMU and government agencies, access fishing grounds through BMUs only) and infrastructure.

3.2.2 DISTRICT FISHERIES OFFICERS

Why are BMUs not performing better than what the studies have revealed

a) Creation of awareness on the importance of co-management
b) The believe that fisheries stock resources will never collapse and therefore do not any interventions.
c) Lack of political will
d) Lack of economic empowerment
e) BMUs are given low priority by the Local government authorities
f) The study findings have not been disseminated to the BMUs
g) Lack of regular mentoring
h) Lack of exit strategy by donors

How do we re-establish BMUs in districts where their objectives have been altered

a) Seek to establish the reason why the BMUs objectives were altered in the first place by holding open discussions with the affected stakeholders
b) Address the reasons
c) Sensitize the community and the local government on the objectives of BMUs
d) Re-establish the BMU as per the BMU regulations in each country
e) Train the entire BMU assembly
f) Include youth in the leadership

How should the process of BMU registration be fast tracked and recognized as legal entities?

Advice the ministry to reduce the many steps which registration process go through

what needs to be done to motivate BMUs to perform their duties

a) Capacity building (training, exchange visits)
b) Provision of working facilities
c) Incentives and rewards
d) BMUs members should be the first beneficiaries in fisheries focused projects

What capacity building, training and tools and equipment are needed in order to strengthen BMU?

a) Capacity building

   Records management, Financial management, Entrepreneurship, Natural resources management, Repackage extension services

b) Tools and equipment

   Patrol boat plus its accessories, Lifejackets, Binoculars, Offices, furniture, stationeries, Gumboots, Rakes, Wheel barrows, Beach cleaning facilities, Hygienic and sanitary facilities

HOW CAN BMUS ACHIEVE SUSTAINABLE FINANCING

a) Establishment of saving schemes
b) Engagement in income generating activities (entrepreneurship)

c) Training on entrepreneurship

d) Levies, fees, fines

WHAT NEEDS TO BE DONE IN ORDER TO IMPROVE BMU PERFORMANCE BY:

a) Local Government/County level

BMUs should be given priority by the local government in authority to collect their own revenues

b) Central/ National government

The central government should be prompt in registering BMUs once they have met the required conditions

Central gov't should support continuous training

c) Development partners

a. Should provide financial support to promote sustainable functioning of the BMUs

b. Can support infrastructural development in the landing sites

i. Fish handling facilities

ii. offices

d) BMUs

They should embrace the fact the fisheries resource is their own

Minimum requirements to optimize BMU performance

- **Governance**

  Hold regular meetings (executive and assembly) as regularly as required by law

  Transparency and accountability should be the principle tenet in holding the meetings

  Promote two way communication at all times between the BMUs and government

- **Accessing fishing grounds through BMUs**

  Enforce the requirement that no fisherman should get a license without being cleared by BMU

- **Infrastructure**

  Should have an office where to operate from, Weighing scales, stationeries

3.2.3 MINISTRIES AND NGOS REPRESENTATIVES

Table 1. Ideas from the group comprising of Ministry and NGO representatives

Question	Answer	Solution
1. Why are BMUs not performing as the studies have revealed	• BMUs perceive co-management as a project with a limited timeframe and therefore feel they do not have ownership. • Lack of inclusiveness and participation of local communities within the BMU • Inadequate support (limited allocation of resources) from government agencies and departments for co-management • Lack of tangible benefits for BMUs participation in co-management • Misconception by the communities in incorporation of traditional knowledge in co-management • Misuse of revenue collected by BMUs i.e. levies on fish catch and landing fees (Kenya) • Political interference	• Strengthen awareness programs within the local community to mobilize support for the BMU • Training of local trainers as change agents from within the local community • Government to allocate sufficient funds, resources and develop mechanisms to support BMUs
1b.Why has previous BMUs support not enabled them to perform better	• Limited number of trained BMU members • Lack of an exit strategy for donor funded programs targeting BMUs • Tokenism culture • Inadequate capacity of technical officers	• Conduct targeted trainings for the BMU assemblies and sub-committees • Develop exit strategy before project initiation • Raise awareness on the benefits of co-management • Conduct trainings of local government technical officers on co-management
Questions	**Answers**	
2a.Registration How do we re-establish BMUs in districts where their objectives have been altered	• Strengthen awareness programs within the local communities • Dissolve the leadership and call for new elections • Review the BMU guidelines and regulations • Enhance coordination/harmonize donor funded programs objectives with BMU objectives	

Questions	Answer
2b.How should the process of BMU registration be fast tracked and recognized as legal entities	• Identify the source of delays (bottlenecks) on BMU registration • Streamline BMU registration process • Strengthen awareness and sensitization for both local communities and District Fisheries Officers
3.What needs to be done to motivate the BMUs perform their functions?	• Local government/county government to authorize BMUs to collect levies and taxes at landing sites with a certain % allocated to support BMU operations • Engage BMUs in planning process for programs, projects etc targeting the BMUs • Allow self-regulation of the BMUs i.e. vetting in the licensing of fishers within a landing site • Mobilize support from local fisheries officers for BMU operations
4.What capacity building (training, tools & equipment) needed to strengthen BMUs?	• Develop a training curriculum for BMUs (modules in fisheries management, entrepreneurship skills, change agents/TOTs) • Develop information, education and communication materials i.e. flyers, posters, brochures, banners • Conduct experiential learning visits for BMUs • Develop landing site facilities i.e. modernization of landing site bandas, services (electricity, water) etc • Provide equipment to BMUs such as boats, engines, weigh balances, safety gears i.e. for MCS work • Employ socio-economic personnel
5.How can BMUs achieve sustainable financing?	• Local government/county government to authorize BMUs to collect levies and taxes at landing sites with a certain % allocated to support BMU operations • BMUs to form cooperatives to enhance processing, marketing and fair pricing of products for members • Enhance lobbying capacity for BMUs to mobilize funding support from the government through networking • BMUs to develop some income generating activities e.g. eco-tourism

6.What needs to be done (in a prioritized form) in order to improve BMU performance by:- a) Local government/county level	• Local government/county government to authorize BMUs to collect levies and taxes at landing sites with a certain % allocated to support BMU operations • Identify the source of delays (bottlenecks) on BMU registration • Strengthen awareness and sensitization for both local communities and government Fisheries Officers • Allow self-regulation of the BMUs i.e. vetting in the licensing of fishers within a landing site • Allocate sufficient funds, resources and develop mechanisms to support BMUs • Develop landing site facilities i.e. modernization of BMU office, services (electricity, water) etc • Provide equipment to BMUs such as boats, engines, weigh balances, safety gears i.e. for MCS work • Monitoring and evaluation of performance of co-management • Fast track approval of BMU By-laws
b) By Central/National Government	• Allocate sufficient funds, resources and develop mechanisms to support BMUs • Streamline BMU registration process • Strengthen awareness programs within the local community to mobilize support for the BMU • Training of BMUs • Monitoring and evaluation of performance of co-management • Policy and legislative review
c)By Development Partners	• Provision of technical assistance and funding support for co-management • Capacity building i.e. training on co-management at all levels • Support monitoring and evaluation
d)By BMUs	• Conduct regular meetings and maintenance of records of the meeting • Encourage diligence in revenue collection by BMUs • Mobilize support from within local communities and assembly in participation in BMU assembly meeting i.e. use local government barazas • Fast track approval of BMU By-laws • Fast track BMU registration process

7.What minimum requirements are needed to optimize BMU performance i.e. governance (reduce conflict between BMU and government agencies, access fishing grounds through BMUs only) and infrastructure	• Awareness for the BMU assembly and local government • Improvement of BMU infrastructure i.e. BMU office, services (water, electricity) etc • Provide equipment to BMUs such as boats, engines, weigh balances, safety gears, mobile phones i.e. for MCS work • Local government/county government to authorize BMUs to collect levies and taxes at landing sites with a certain % allocated to support BMU operations • Trainings of BMU Assemblies, Sub-committees and local government officials • Develop of co-management strategic plan • Develop BMU By-laws
8.How should different initiatives on strengthening co-management by different developmental partners be harmonized?	• Develop co-management strategic plan i.e. that will Identify players and actors in co-management, information sharing mechanisms and standardization/harmonization of BMU training programs and mode of conduct

A participant expressing his point during group discussion.

3.2.4 PLENARY

The facilitator asked group members to clarify a few concepts that were used in the groups but were not clear. These were:

1. Awareness Creation

Steps (material preps, field seminars, village assembly meetings, flyers, pamplets and posters in the field-BMUs and offices, media (radio, TV) and print (newspapers-Pekuzi in TZ, Taifa leo in Ke), informative calendars, participating in public meetings and informing leaders, primary schools environment clubs

2. Lack of Political Will

Failure of government to approve BMU budgets-perhaps the ministry to take further step to inform.

CCM manifesto included BMU while others did not

i. Steps to address-create awareness among unwilling parties, government sittings (halmashauri na madiwani) to include BMU agenda informed by fisheries officers-this was not possible in Temeke.

a) There is overshadowing of fisheries by livestock

b) In Mkinga-issues are well addressed by halmashauri but not implemented-to try as much as possible to invite them in sittings such as this one

c) Use provincial administrators as FO not allowed to attend all government meetings

d) The issue of sitting allowances for BMUs contributing to conflict

e) Illegal fishers, including players in the chain (bomb makers) pulling down BMUs as they are a threat to their survival

f) Conduct a meeting with leaders to inform them about BMUs including visits

g) To target political party leaders regularly–pamphlets of good governance and verbal communication

h) Kilwa leadership well informed about BMUs including exchange visits and did not provide genuine feedback

i) BMU delegate to visit politicians

j) Proper records of BMU revenue

k) There is corruption by councillors

l) FO to be pro-active in soliciting funds

m) Web and mobile integrated smart licence to reduce corruption and increase efficiency

n) Money collection and disbursement structure such that collectors of higher levies do not equally receive higher share

3.3 SOUTH WEST INDIAN OCEAN FISHERIES GOVERNANCE AND SHARED GROWTH (SWIOFISH)

The SWIOFish representative, Mr. Jason Reubens, gave an overview of SWIOFish program. The program, he said, will be implemented in two phases and the 1st phase will run for 6 years beginning end of 2014 in three countries (Tanzania, Comoros,,..) and more countries will be included in the 2nd phase. SWIOFish was entirely fisheries based with fewer and clearer objectives, thus differed from MACEMP that was broader in scope and objectives. He further outlined project structure for Tanzania mainland as follows:

i) Small pelagics, ii) Prawns, iii) Octopus, iv) Tuna, v) Reef fish, vi) Mariculture

Focus will be on the following:

i) Research (to inform management) due to unavailability of data

ii) Implementation of existing management plans and develop new ones including mariculture investment plan

iii) Strengthening fisheries co-management

iv) Strengthening Fisheries Information System (Catch Monitoring)

v) Community micro-financing programme

vi) Support Medium to large scale private sector enterprises esp in mariculture, mininising post-harvest losses and processing of small pelagics

There will also be a fisheries co-management component that will include strengthening institutional capacity of BMUs (Pilot Tanga and Bagamoyo regions), review of laws and regulations and fisheries Division strengthening, among others. Lastly, he proposed complementary between SmartFish and SWIOFish as follows:

- Smartfish-focus on lesson sharing and networking between BMUs
- Support 1 to 2 districts not covered by SWIOFish and WWF

4 WAY FORWARD/RECOMMENDATIONS

Participants then generated a list of prioritized activities, which they wanted done so as to make use of the study results. The list generated is contained in Table 2

Table 2. Prioritized list of suggested actions for BMU strengthening in Kenya and Tanzania

Action	By Who
1. Mentoring of BMUs	Ministry, Local government
2. Meetings with top management and BMUs	1. Top management
3. Periodic BMU evaluation	2. FO, Donor, Politicians
4. Training	3. Ministry, NGOs
5. Review of BMU status	4. Ministry, local govt
6. Registration and implement reports	5. Ministry, Local authorities
7. Educate stakeholders	6. Ministry
8. Funding	7. Ministries, Development partners
9. Consultations on way forward	8. Ministry/BMUs
10. Tender award	9. Ministry
11. An annual reward scheme for best BMUs	10. Ministry
12. Propagation of BMU results	11. SmartFish
13. Re-train ToTs	12. Local government
Priority Actions	
1. Registration	1. Ministries
2. Sustainable financial funding (Facilitate tendering, etc.)	2. Ministries, development partners
3. Development of co-management strategy plans	3. Ministries, development partners
4. Publication of a book based on the study results	4. Consultants and development partners (SmartFish, WIOMSA, etc.)

4.1 WHAT FUNCTIONS CAN BMUS PERFORM WITHOUT FUNDS?

Registration was identified as the sole function involving low financial requirement from the Government. However, minimal funds are still needed and can be sourced from development partners including SmartFish.

4.2 CLOSING SESSIONS

All the participants had a brief chance to say a word of appreciation to organiser, presenters and fellow participants. FOs from Tanzania promised to work within their means to increase performance of BMUs in the midst of increasing challenges such as dynamite fishing. The Kenyan delegates were equally thankful.

4.2.1 REMARKS FROM THE FACILITATOR

After thanking everyone, Dr. Onyango noted that the workshop provided a great opportunity for interaction. He specifically thanked participants very sincerely for their comments on the reports and asked them to continue as a coalition of the willing in the pursuit of strengthening BMUs.

4.2.2 REMARKS FROM STATE DEPARTMENT OF FISHERIES, KENYA

In her closing remarks, the principal Fisheries Officer, Ms Barabara Mwaka thanked everyone for attending the meeting, particularly Ministry of Tanzania, SmartFish, consultants and everyone in their various capacities.

She emphasized that cooperation between BMUs in the two countries was key in resolving similar challenges faced by BMUs especially cross cutting trans-boundary issues. While appreciating that this was the first BMU evaluation in the coast region, she was hopeful that the results will be fed back to Kenyan stakeholders.

4.2.3 REMARKS FROM SMARTFISH

SmartFish regional officer, Mr. Patrick Kimani was particularly grateful to Ms Fatma Sobo for having taken time to attend the workshop for the entire period despite her busy schedule. He also thanked the Consultants, organisers and everyone for participating in the meeting and remarked that the workshop was a chance to network in the spirit of integration.

He reiterated that SmartFish encourages regional integration and thus collaborations are needed between the two countries. Participants were also informed that SmartFish would continue supporting BMUs in the region in the next phase starting 22nd March 2014. In his reaction to the issue of publication of study results, he pointed out that it was a welcome idea and funds can be sourced from various sources including SmartFish.

4.2.4 REMARKS FROM ASSISTANT DIRECTOR OF FISHERIES, TANZANIA

The assistant director of Fisheries Ms. Fatama Sobo, thanked the Ministry, consultants, SmartFish for supporting the workshop and other programs as well and the Kenyan delegates for accepting the invitation. She noted that BMU initiatives in Tanzania have never been evaluated and this was a good opportunity to learn. She appreciated the presence of fishers in the workshop as this was important in building participation, which is key in co-management and urged them to provide feedback to BMUs members when they return to their stations. Whereas the meeting provided a great opportunity to learn from each other, in line with regional integration goal for SmartFish, and generated lots of issues, she observed that time was not adequate to discuss all of them exhaustively. Finally, she was hopeful that SWIOFish would complement co-management initiatives in Tanzania.

The workshop ended 7:30 p.m.

ANNEX 1,2

Presentations (available on demand)

ANNEX 3

Speech from the Director of Fisheries, Tanzania

OPENING REMARKS BY FATMA SOBO, ASSISTANT DIRECTOR OF FISHERIES IN A WORKSHOP ON RESULTS OF A STUDY ON PERFORMANCE OF BEACH MANAGEMENT UNITS (BMUs) IN KENYA AND TANZANIA HELD AT KIBAHA CONFERENCE CENTER, 24TH – 25TH FEBRUARY 2014

The Regional Officer, SmartFish East Africa Office,

Dr. Paul Onyango, Consultant of the Study From Tanzania,

Mr. Nyaga, Consultant of the Study from Kenya,

Fisheries Officers from Local Government,

Representatives of Civil Society,

Representatives of Beach Management Units,

Distinguished Guests,

Ladies and Gentlemen,

It is a great pleasure for me to grace the official opening of this important workshop on the dissemination of the results of a study on performance of Beach Management Units (BMUs) in Kenya and Tanzania. Your presence here is evidence of the importance you attach to this activity. I am very much encouraged and would like to thank you for your time.

Dear Participants,

I would like to take this opportunity, on behalf of the Government of the United Republic of Tanzania and on my own behalf, to welcome all the participants to Kibaha and particularly to this workshop. For those coming from Kenya, I welcome you to Tanzania as well and who came from Tazania.

Dear Participants,

Existing information reveals that some 200 million people depend on fisheries for some part of their livelihoods. An overwhelmingly proportion of these are in developing countries, where the capacity of national governments to effectively manage fisheries is challenged by insufficient human and financial resources which in turn leads to weak governance. Weak governance can often lead to overfishing and this has been shown to profoundly alter marine ecosystems consequently threatening the wellbeing of people reliant on these resources.

Dear Participants,

The idea of BMU comes about as there were a lot of media attention and public concern on issues and

challenges on fisheries management. These include inadequate, unreliable and inaccurate data, illegal fishing practices, closer of the prawn fishery, and environmental degradation. These make the government of Tanzania to think about the organizational set-up of the fisheries administration and the concept of co-management was introduced to all fishing communities. Therefore, the government, through the Fisheries Act Number 22 of 2003 (section 18) and its principal Regulations of 2009 (Regulation 133 - 136), provides for establishment of participatory resource management approach by involving local fishing communities, a system commonly known as co-management through Beach Management Units. Co-management is "an arrangement where resource users and the government share responsibility in the management of fishery resources or " a partnership arrangement in which government, the community/local resource users (fishers), external agents (non governmental organizations, academic and research institutions), and other fisheries and coastal resource stakeholders (boat owners, fish traders, money lenders, among others) share the responsibility and authority for decision making over the management of a fishery resources.

The government developed guidelines for the establishment of BMU's which is started to be used in Lake Victoria (LVEMP, 2005) in which 433 BMU's were formed. The guidelines were then modified to suit marine environment where by in collaboration with WWF, 205 BMU's were formed, they were then used in Lake Tanganyika to form 23 BMU's. The guidelines clearly elaborated the meaning, objectives, principles, formation as well as their roles and responsibilities through which data collection, information gathering are among the BMUs responsibilities.

Dear Participants,

Many governments, conservation organizations, and civil society groups are engaging resource users in collaborative arrangements in an effort to deliver better fishery outcomes for both people and the ecosystems they depend on. This decision has proved to positive attitude among fishing communities for better management results. For the Beach Management Units introduced in East Africa during the past decade, which have allowed stakeholders to develop and enforce locally-appropriate rules has in some cases indicated reasonable improvement in the management of a fishery that has historically suffered from weak management and enforcement.

Dear Participants,

In recognition of the importance of Co–management for sustainable fisheries management, SmartFish designed a project which aims at contributing to an increased level of socio-economic and environmental development in the Eastern – Southern Africa and Indian Ocean (ESA – 10) region. Tanzania and Kenya have been lucky to benefit from the project and the study that we are receiving the results today has been designed and funded by SmartFish. SmartFish has initiated the evaluation framework to evaluate the performance of the BMUs.

Dear Participants,

When managers decide on the type of appropriate fisheries management regime they have to look at the two sides of the coin, which implies the positive, and the negative impacts of either side to the resource in question. There is some evidence that co-management arrangements can help to sustain marine resources and improve fishers' livelihoods in accumulation. Nevertheless, there are also cases when co-management has facilitated overexploitation, exacerbated existing social inequalities, resulted in poor compliance, and led to undesirable social and ecological outcomes. This means therefore, that, successful co-management must have institutional, socioeconomic, and contextual attributes that need to be considered by managers and policy-makers. The policy actions necessary to make co-management improve people's livelihoods are a substantial departure from the familiar activities of many fisheries managers. Effective implementation may require forging partnerships with social scientists, donors, financial institutions, and civil society.

Dear Participants,

Tanzania and Kenya are among the coastal countries in the region that have entrenched in co-management of the fisheries resources. The focus of this move is to ensure that fisheries resources are sustainably managed at the same time benefiting the local community. In order to achieve the objectives of co-management, fisheries managers, researchers and the community must have a common tuning point where co-management issues can be addressed properly for the expected outcomes. This will only be possible through research and coordination as well as feedback to either side so that the research findings can be shared among the stakeholders in efforts to improve co-management.

Dear Participants,

Reporting back of any work done is essential for the application of the findings. It is for this reason that we are here today to receive feedback from the Study of the Performance of Beach Management Units in Kenya and Tanzania. I urge you all to actively participate in this workshop giving your comments which will help in developing strategies for improving the performance of the BMUs in our country. I am sure that when it is done in Tanzania and Kenya it will spread to other regional countries and hence make our regional fisheries management strategies implementable and more effective.

Dear Participants,

May I, also use this opportunity to thank all SmartFish who have been providing resources towards the development of BMUs in our region. Not only that, SmartFish has been playing crucial role by supporting fisheries management in our region as a whole. I, also appreciate the efforts that the consultants have put in the study, which has made it possible for us to meet here today.

With these few remarks, I declare this workshop officially opened. I wish you good deliberations.

THANK YOU VERY MUCH FOR YOUR KIND ATTENTION

ANNEX 4

List of attendants

Name	Contact
1. Judith Amadiva	Senior Social Development Officer, State Department of Fisheries, Kenya TEL: +254 722 862544, E-mail: jmamadiva@gmail.com. Nairobi, Kenya
2. Davies Makilla	Senior Fisheries Officer, State Department of Fisheries +254 714 370768, E-mail: dmmakilla@gmail.com. Nairobi, Kenya
3. Barabara Mwaka	Principal Fisheries Officer, State Department of Fisheries TE: +254 721 900340, E-mail: barabarasida@gmail.com. Mombasa, Kenya
4. Paul Maritim	Principal Fisheries Officer , State Department of Fisheries TEL: +254 723 737683, E-mail: pkmaritim@yahoo.com. Malindi, Kenya
5. Dishon Murage	Programme Officer, African Nature Organization TEL: +254 722 270298, E-mail: lionelmurage@yahoo.com. Mombasa, Kenya
6. Khalifa Omar Paragho	Chairman, Shimoni BMU, TEL: +254 723 235469. Shimoni, Kenya
7. Nyaga Kanyange	Facilitator, COMRED TEL: +254 725 139003, nyagak@gmail.com. Mombasa, Kenya
8. Dr. Paul Onyango	Facilitator, University of Dar er Salaam, Tanzania TEL: +255 784 908802, E-mail: onyango_paul@yahoo.com
9. Dr. Sware Semesi	Coordinator, Fisheries Co-management Program, Dar er Salaam, Tanzania WWF – TCO, TEL: +255 713 619284, E-mail: ssemesi@wwftz.org
10. Jason Rubens	Consultant, SWIOfish/World Bank, Dar er Salaam Tanzania TEL: +254 754 229450 E-mail: jruben@wwftz.org
11. Fatma Sobo	Assistant Director of Fisheries, Fisheries Department, (Headquarters), Dar es Salaam, Tanzania TEL: +255 655 286748, E-mail: fsoboster@gmail.com
12. Upendo Hamidu	Fisheries Officer, Fisheries Department, (Headquarters), Dar er Salaam, Tanzania TEL: +255 715 692824, E-mail: upendoh@yahoo.com
13. Valeria Mushi	Principal Fisheries Officer 1, Fisheries Department, (Headquarters), Dar es Salaam, Tanzania TEL: +255 713/784 250672, E-mail: valariamushi@yahoio.com
14. Elizabeth John	Fisheries officer, Fisheries Department (Headquarters), Dar es Salaam Tanzania TEL: +254 755 185186, E-mail: elizabethjohn49@gmail.com
15. Ezra Katete	District Fisheries Officer, Mkinga, Tanzania. TEL: +255 786 171747/ +255 718 198680, E-mail: ezrakatete@yahoo.com
16. Anton Mbega	District Fisheries Officer, Rufiji, Tanzania TEL:+255 784 403552, E-mail: lmbega25@yahoo.com
17. Ramadhani Suleiman	District Fisheries Officer, Kilwa, Tanzania TEL: +255 712 479281, E-mail: ramadhanseleman1973@gmail.com
18. Ayubu Misheli	District Fisheries Officer, Pangani, Tanzania TEL: +255 713 012117/+255 757 763284 E-mail: ayubu.misheli@gmail.com. ayubumisheli.blogspot.com
19. Edah Nelson	Assistant Fisheries Officer, Mkuranga, Tanzania TEL: +255 766 941656, E-mail: edahmwa86@gmail.com
20. Mohamed Ibrahim	Kilwa District (Lindi Region), Kilwa District BMU Representative, Tanzania
21. Ahmad Bakarai	Secretary, BMU, Mafia, Tanzania TEL: +255 716 554589
22. Madevu Athmani	Chairman, BMU TEL: +255 716 841219, Mtwara Municipal, Tanzania
23. Dr. Prosper Mfilinge	Facilitator, University of Dar er Salaam, Dar es Salaam TEL: +255 762 975036, E-mail: pmfilinge@udsm.ac.tz
24. Kudra Mohamed	Executive Secretary, Y. V. K TEL: +254 716 448278
25. Mohamed Mgeni	BMU, Somanga, Kilwa, Tanzania E-mail: +255 783 213610
26. Patrick Kimani	Regional Officer, SmartFish, Mombasa, Kenya TEL: +254 726 040499. Email: Patrick.kimani@coi-ioc.org

Evaluation Framework for coastal BMU performance assessment in Kenya

Soobaschand Sweenarain

LIST OF ACRONYMS

BMU	Beach Management Unit (RBMU = Registered ; NBMU = Non-Registered)
CBO	Community-based Management
DFID	Department For International Development
ESA	East Southern Africa
EU	European Union
FAO	Food and Allied Organisation
FiD	Fisheries Department
IFAD	International Fisheries and Agriculture Development
IO	Indian Ocean
IOC	Indian Ocean Commission
IRFS	Implementation of Regional Fisheries Strategies (SMART FISH)
KPI	Key Performance Indicator
LVFO	Lake Victoria Fisheries Organisation
MCS	Monitoring Control and Surveillance
UNDP	United Nations Development Programme

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- Mr. Patrick Kimani, Regional Officer and Mr. Nyagak, Local Consultant of Smart Fish in Mombasa;
- Mr. Nicholoas Ntheketha, Provincial Director Fisheries, Coast Province and his District Officers;
- and the Executive members of the Shimoni and Mrabmeni BMU for their excellent supports and collaboration during testing and validation phase of the BMU Evaluation Framework in Mombasa and Kwale District.

1 INTRODUCTION

This assignment[1] is sponsored by the Implementation of Regional Fisheries Strategies ESA – IO (commonly known as SMART FISH) under aegis of the Indian Ocean Commission and funded by the European Union. It aims at designing a robust Evaluation Framework to assess the performance of Beach Management Units (BMU) in the coastal marine fisheries of the Republic of Kenya. It is anticipated that the proposed system could be adopted as a Monitoring & Evaluation tool kit by institutional and BMU stakeholders in the ESA coastal and riparian states.

The proposed BMU Evaluation Framework is the outcome of an extensive literature research on participatory or cooperative management of fish resources in developing countries worldwide, with a particular emphasis on the ESA countries. The efforts have led to creating 5 modules of variables that can be applied to audit an individual BMU and its enabling environment at regular time interval and/or to assess the performance of a network of BMU at District, Provincial, National and Regional levels. This framework is also helpful for conducting diagnosis of the strengths and weaknesses of any BMU in viez to suggest remedial measures. Admittedly the BMU is not an end in itself but a process, therefore in order to respond smartly to its bio-physical and socio-economic environment the proposed evaluation framework is flexible and adaptive.

2 METHODOLOGICAL APPROACHES

2.1 DESIGNING OF AN BMU EVALUATION FRAMEWORK

Evaluation is defined as a process which determines the progress of implementing a programme in a systematic way. It consists of a range of parameters, namely:

Outcome status, which gauges the major impact[2] of the activities;

Factors that influence the performance of the system;

Contribution of the organization to the implementation of the system;

And partnership strategy.(UNDP 2007)

The proposed BMU Evaluation Framework is a combination of several approaches used to assess governance, organisation and management performance of BMU in the Kenyan coastal marine fisheries. It is partly derived from the 'Fishery Co-management – A Practical Handbook' by S Pomeroy and Rivera Guieb (2006), FAO - Theory of fisheries co-management and the Logical Framework of Project Management. It consists of tracking the changes or impacts that have resulted from the implementation of the BMU by using measurement criteria such as a) Relevance b) Effectiveness c) and Efficiency. Additional criteria such as governance, socioeconomic benefits and human resource development and sustainability have been included.

1 The Terms of Reference is given in Annexure 1 (i).

2 The term 'impact' is defined as the changes that have occurred (perceived at the time of evaluation) in the community or lives of the stakeholders, whether positive or negative, direct or indirect, intended or unintended as a result of the establishment of BMU. It leads to refer to a base-line situation prior to implementation of the co-management structure.

The 5 modules / Sections of the BMU Evaluation Framework are as follows.

Module 1: Organisation Profile

It helps to collect information on the fundamental characteristics of the surveyed organisation such type of organisation – registered and non-registered BMU[3], membership and democratic practices, main objectives / functions, external financial and technical supports. These features are necessary to perform in-depth and comparative analysis on the BMU. It is to be noted that the Fisheries Department is currently proceeding with the re-registration of de-registered BMU which were previously registered and subsequently found to be conflicting with the BMU Regulations.

Module 2: BMU (Organisation) Performance Assessment

The objective of this module is to assess the achievements of the BMU in terms of:

Material outcomes

Human resources development

Direct benefits

Management skills (Empowerment)

Milestones in co-management / auto-regulations.

This assessment has to cover a period of at least 3 to 5 years to be meaningful. Knowing that the BMU process is still at its infantile stage of development in the Kenyan coastal marine fisheries, most of the registered BMU are less than 3 years old. The KPI have to be interpreted accordingly.

Module 3: Critical factors for BMU success

This module emphasizes on the critical conditions / variables for creating a suitable or enabling environment to further the BMU process on right footing.

It comprises a set of 25 systemic variables that helps to assess the current status of an individual BMU. The top 5 indicators are:

Jurisdiction / Boundaries of BMU

Representativity of stakeholders / resource user groups

Relevance

Effectiveness

Efficiency.

Module 4: Assessment of BMU led individual achievements

The BMU process is all about empowering resource users to participate actively in the co-management of their common fish resources as an ultimate recourse to enhance their livelihoods. Therefore this module cares for evaluating the incidental individual achievements. It comprises 5 variables that encompass a

3 The term BMU is invariably used to refer to registered and non-registered BMU unless or otherwise specified.

wide range of capabilities and values contributing to the betterment of human conditions.

Involvement / Participation

Capabilities / Empowerment

Control over BMU process, resources and one's own livelihood

Access to knowledge, networks and resources

Skills development

Personal changes

Module 5: Assessment of Institutional Governance

The existing institutional framework has a direct impact on the scope of development and achievements of the BMU process. This module reviews the adequacy and effectiveness of the parent Ministry in furthering co-management in the coastal marine fisheries. It comprises 15 variables that help to scrutinize the institutional dispositions and processes associated with BMU development and include the following amongst others:

Authority

Leadership

Political vision

Institutional capacities

Resources allocation

Conflict Resolution mechanism...

A template of the BMU Evaluation framework and associated PSQ is given in Annex 2

2.2 DATA COLLECTION

A Likert six-point scale[4] has been used for data collection and processing. Each variable or question contains several pertinent inputs / information that help to refine the quality of collected data during interviews and group discussions. The table below shows the interpretation of the Likert 6 point scale.

4 It is a widely used non-parametric statistical tool to assess the perception of stakeholder with higher degree of accuracy and reliability.

Score	Interpretation (1)	Interpretation (2)	Interpretation (3)
5 ≥6	Highly satisfactory	Very good	Very Strong
4 ≥5	Satisfactory	Good	Strong
3 ≥4	Moderately Satisfactory	Moderately good	Moderately Strong
2 ≥3	Moderately Unsatisfactory	Moderately bad	Moderately weak
1 ≥ 2	Unsatisfactory	Bad	Weak
0 ≥ 1	Inexistent / Highly Unsatisfactory	Very bad	Very weak – Inexistent

2.3. SAMPLING METHOD

For the purpose the primary survey of BMU in the Kenyan coastal marine fisheries, the coastal province has been divided into 2 regions namely the northern and southern regions. Each region comprises 3 coastal districts. Actually there are 67 BMU[5] in the coastal marine fisheries and 25 of them are registered and operational while the remaining 42 are in process of registration. This is also a relative even distribution of BMU between the northern and the southern regions. It is proposed to survey a total number of 24 BMU comprising 18 registered BMU (RBMU) and 6 non-registered BMU (NBMU). Therefore 12 BMU (9 RBMU and 3 NBMU) will be surveyed per geographical region[6].

The Kenyan coastal marine fisheries are administered by an Assistant Director of Fisheries (Coastal Province) and 6 Fisheries Officers at district levels. To assess the BMU Institutional Governance performance it is proposed to interview these senior fisheries officers.

Altogether the proposed primary survey will deal with 31 respondents (24 BMU and 7 Fisheries Officers) as shown in the table below.

1. Institutional Respondents							Total
Sampling							
Coast Province	Assistant Director Fisheries – (1)						1
Region	Southern Region			Northern Region			
Districts	Kwale	Mombasa	Kilifi	Malindi	Tana River	Lamu	
Total Respondents	1	1	1	1	1	1	6
2. BMU (Total)	20	7	5	6	2	27	67
RBMU	*	*	*	*	*	*	25
NBMU	*	*	*	*	*	*	42
Sampling							
RBMU	3	3	3	3	3	3	18
NBMU	1	1	1	1	1	1	6
Total Respondents	4	4	4	4	4	4	24

(*) Detailed data has to be acquired from the Provincial Fisheries Office.

5 According to the Deputy Assistant Director of Fisheries, Coastal Province (Mombasa)

6 Refer to the Kenyan Coastal Province map in Annex 3

3 IMPLEMENTATION PROCESS

The present assignment that consists of designing and validation of the BMU Evaluation Framework has been implemented in 2 successive phases. It is convened that the data collection, processing and analysis and report writing would be entrusted to a local consultant through the Smart Fish regional office in Mombasa.

3.1. VALIDATION OF THE BMU FRAMEWORK AND PRIMARY SURVEY QUESTION-NAIRES

Designing of an evaluation framework for co-management organisation in the coastal marine fisheries in ESA has been an innovative and challenging assignment. A situation analysis of the coastal marine fisheries and a first draft of the BMU Evaluation Framework have been presented to Smart Fish on the 28th March 2012.

Kwale district in the southern regional of the coastal province of Kenya was targeted to test, review and validate the BMU Evaluation Framework. The following entities were during the field visit.

- District Fisheries Officer of Kwale District
- Registered BMU at Shimoni
- Non-Registered BMU at Mrambmeni

The mission Time Sheet is given in Annex 1 (ii)

3.2. DATA PROCESSING AND ANALYSIS

Simple arithmetic mean is used to calculate the mean score/marks of each variable, module and overall BMU performance index. The same approach is used to assess KPI at District, Provincial, National and eventually, Regional levels. The threshold or break-even score is 3.5 and a score below this level represents an unsatisfactory, bad or weak performance. Please refer to section 2.2 above for details on the Likert 6 point-scale board.

The KPI of the RBMU and NBMU are presented in Annex 4.

4 CONCLUSION

The BMU Evaluation Framework has been reviewed, validated and ready for implementation in the Kenyan coastal marine fisheries. The Kenyan Ministry of Fisheries Development has a keen interest in the system and is willing to institutionalize it as Monitoring and Evaluation tool kit for the BMU process.

The BMU process is still at its infancy stage in the Kenyan coastal marine fisheries and will have to struggle harder to establish itself as a viable co-management organisation. While the response from various resource user groups is quite good, lack of resources and technical supports are the major impediment to the process.

BMU is also systemic and integrated approach for fisheries management. It encompasses the 3 main objectives of Smart Fish namely Fisheries management, MCS and Fish Market & Trade. It is an opportunity for Smart Fish to promote a model BMU project in the Kenyan coastal marine fisheries to show case / demonstrates its attributes and benefits to create spin-off effects.

5 ANNEXES

ANNEX 1 (I)

TERMS OF REFERENCE

Kenyan coastal marine fisheries

BMU – Evaluation Framework

Kenyan marine fisheries dependent people are poor, and fishing households are particularly vulnerable to loss or mismanagement of the resources. Opportunities to move out of fishing are often very scarce in the coastal regions. The centralized fisheries management approach has failed so far due to the lack of enforcement capacity, poor resources, and a lack of coordination between institutions involved.

Beach Management Units (BMUs) are the foundation of fisheries co-management that bring together everyone indulged in fisheries at a beach – boat owners, boat crew, traders, processors, boat builders and repairers, net repairers and others – to work with government and other stakeholders in managing fisheries resources and improving the livelihoods of the community members. Numerous traditional and informal community-based structures have existed for long time marine coast communities. Since enactment of BMU Regulations 402 of the Fisheries laws 2007, the Fisheries Department has been intensifying its efforts to institutionalize informal co-management organizations and to promote new BMU through awareness raising and capacity building programmes

The proposed assignment aims at creating an Evaluation Framework that will help to acquire an in-depth understanding of the operationalization of BMU in the coastal marine fisheries and to assess their performance against to marine resources management goals and improved livelihoods of stakeholders dependent on these resources.

The study will be entrusted to a senior fisheries expert to carry out the following tasks:

- To design an Evaluation Framework with relevant Key performance indicators
- To prepare supporting survey questionnaires for data collection
- To validate these survey questionnaires through field works (interviews of Institutional actors, stakeholders and focus group discussion with resource user groups,
- To discuss and finalize sampling and data collection strategies with the regional project Officer at Mombasa and
- To set guidelines for data collection, processing and analysis

ANNEX 1 (II)

CONSULTANT MISSION TIME SHEET

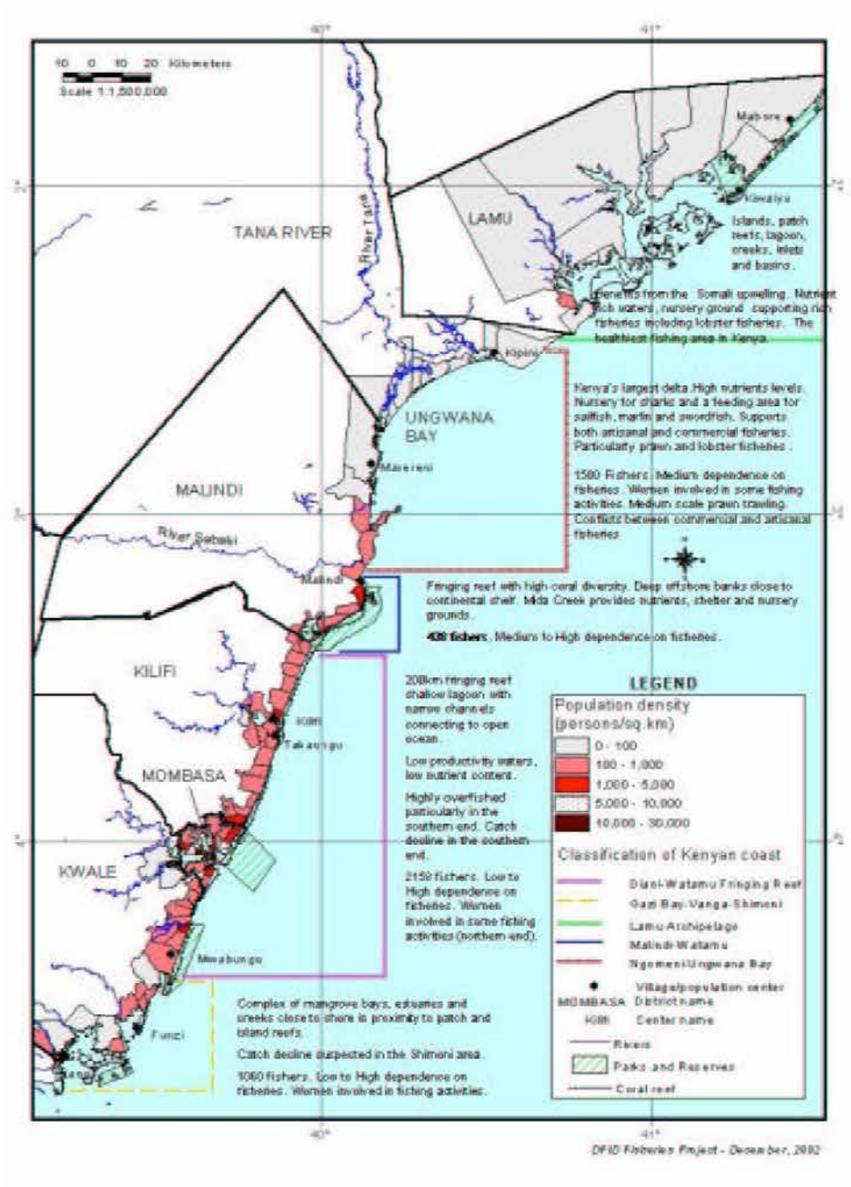
Kenyan coastal marine fisheries

BMU – Evaluation Framework

Date		Activities
16/04/2012	Morning	8-40 hrs Departed from Mauritius to Mombasa via Nairobi
	Afternoon	18-00 hrs Arrived in Mombasa
17/04/2012	Morning	Meeting with the Regional officer of Smart Fish in Mombasa, Mr P Kimani
	Afternoon	Taking stock of the Kenyan Coast Marine fisheries and current status of the BMU. Presentation of the proposed BMU Evaluation Framework
18/04/2012	Morning	Presentation of the BMU Evaluation Frame work to the local Consultant, Mr. Nyagak
	Afternoon	Review and customization of the Primary Survey Questionnaires in collaboration with Mr Nyagak.
19/042012	Morning	Courtesy visit t the Assistant Director and Deputy Assistant Director of Fisheries in Mombasa, Coast Province.
	Afternoon	Travel to Kwale District (Stayed overnight in Diani)
		Interview of the Executive members of Mrabmeni BMU
		Interview of Assistant Distict Fisheries Officer; Mr.Suleiman Mangale
20/042012	Morning	Travel to Shimoni ; Courtesy visit to Asst District Fisheries Officer
	Afternoon	Interview of Executive members of Shimoni BMU. Return to Mombasa
21/04/2012	Morning	Review of the Survey Questionnaires in light of the local knowledge and field experience. Determination of the sampling strategy.
	Afternoon	Preparation and printing of the final version of the BMU Survey questionnaires
22/04/2012	Morning	Briefing the Local Consultant on the Data Collection, processing, analysis and interpretation related to the implementation of the BMU Evaluation Framework
	Afternoon	OFF
23/04/2012	Morning	Left Mombasa at 7-40 hours
	Afternoon	Arrived in Mauritius via Nairobi at 18 hrs.

Note: The Consultant was accompanied By Mr. Patrick Kimani and Mr. Nyagak during the field works.

5.1. ANNEX 2
KENYAN COASTAL PROVINCE CHART



5.2. ANNEX 3
REVISED BMU PRIMARY SURVEY QUESTIONNAIRES

KENYAN COASTAL MARINE FISHERIES

BMU –EVALUATION FRAMEWORK

(Target: BMU Leader/Executive/Member)

Ref:

Country / Province:……

District:……

Locality:……

Name of Organisation:……..

Person interviewed :……..

Occupation:……..

Position in the Organisation: ……..

Date of Interview: ……..

Section 1 - Organisation Profile

1.1	Type of Organisation		
1.1.1	Registered BMU	RBMU	1
1.1.2	Non Registered BMU	NBMU	2
1.1.3	Date of formation :	Years:	
1.1.4	Is it active throughout the year ?	YES	NO
1.1.5	In case of NBMU, it is process of being registered BMU?	YES	NO

1.2	Membership	
1.2.1	How many members are there in the BMU ?	
1.2.2	How many serve as Executive Membership	
1.2.3	The executives are they elected regularly (* Refer to their constitution)	YES / NO
1.2.4	How many statutory meetings are held in a year? (*relating to decision making & ratification)	
1.3	Functions/Objectives	
1.3.1	Fisheries management / MCS activities	YES / NO
1.3.2	Enabling environment for fisheries development	YES / NO
1.3.3	Improved resource user livelihoods…	YES / NO
1.4	External funding sources (if any)	
1.4.1	From Government?	YES / NO
1.4.2	From International NGOs/ Agencies	YES / NO
1.4.3	Others (Donations…)	YES / NO
1.5.	External technical supports	
1.5.1	From Government ?	YES / NO
1.5.2	From International NGOs/ Agencies	YES / NO
1.5.3	Others (Donations…)	YES / NO

OBSERVATIONS

Section 2 – BMU Organisation Performance Assessment

Interpretation of Likert six-point scale

0-1	Inexistent or Highly Unsatisfactory / Very Weak / Very Bad
2	Unsatisfactory / Weak / Bad
3	Moderately unsatisfactory/ Moderately Weak / Moderately Bad
4	Moderately satisfactory/ Moderately Strong/ Moderately Good
5	Satisfactory/ Strong / Good
6	Highly Satisfactory / Very Strong / Very Good

S/No.	Descriptions	1	2	3	4	5	6
2.1	Achievements in terms of: (since formation)	MATERIAL OUTCOMES					
2.1.1	Increase in total catch						
2.1.2	Increase Quantity of fish caught per fisher (CPFD)						
2.1.3	Increase in the size of fish caught						
2.1.4	Increase in the population of fish the fishing areas						
2.1.5	Increase in the fishing areas						
2.1.6	Improved Safety at sea						
2.1.7	Improved fish landing infrastructure						
2.1.8	Improved access to credit						
2.1.9	Improved sanitation of public beaches						
2.2	Achievements in terms of HR Development	HUMAN RESOURCE DEVPMT					
2.2.1	Entrepreneurial skills						
2.2.2	Day to day management						
2.2.3	Post Capture treatment & Quality inprovement of fish….						
2.2.4	Marketing & Distribution						
2.2.5	Communication & networking						
2.2.6	Conflict resolution						
2.2.7	Succession planning						
2.3.	Achievements in terms of direct benefits to:	DIRECT BENEFITS					
2.3.1	Increased income of stakeholders						
2.3.2	Creating more fisheries development opportunities						
2.3.3	Employment creation						

2.3.4	Increased flow govt funding on fisheries infrastructure						
2.3.5	Increased flow of private investments in fisheries sector						
S/No.	Descriptions	1	2	3	4	5	6
2.4	Achievements in terms management skills	MANAGEMENT SKILLS					
2.4.1	Preparation of the by-laws (mgmt plans)						
2.4.2	Implementation of the by-laws						
2.4.3	Implementation of Enforcement structure						
2.4.4	Conflict solving mechanism						
2.4.5	Leadership enhancement						
2.5.	Achievements in terms of co-management	AUTO REGULATIONS					
2.5.1	Prohibition of fishing during closed season or area						
2.5.2	Reduction in the use illegal / destructive gears						
2.5.3	MCS of fisheries resource						
2.5.4	Sanction or penalty imposed on violators						
2.5.5	Community participation (time,money and effort)						
2.5.6	Benefits invested in community development						

Section 3 – BMU Critical conditions for BMU success.

3.1	Definition of Boundaries / Jurisdiction	JURISDICTION					
3.1.1	Spatial delimitation of fishing areas						
3.1.2	Community based (Fish landing sites)						
3.2	Stakeholders representativity	REPRESENTATIVITY					
3.2.1	Fishers						
3.2.2	Boat- Owners						
3.2.3	Fishing gear owners						
3.2.4	Fish Traders						
3.2.5	Fish processors						
3.2.6	Service providers (beach restaurants & Hotels)						
3.2.7	Are women adequately represented						
3.3	Set goals /objectives of the BMU	RELEVANCE					
3.3.1	Gain access to fisheries resources						
3.3.2	Improved management of fisheries resources						
3.3.3	Participate in decision making (mgmt by-laws)						
3.3.4	Monitoring Control and Surveillance (Enforcement)						
3.3.5	Improve Revenue & livelihoods of stakeholders						
3.3.6	Stimulate local economic development						
3.3.7	Credit Support						
3.4	Compatibility between BMU mgmt objectives and stakeholders' priorities (common problems or interest)	EFFECTIVENESS					
3.5	Proportionality between size of fish resources and BMU structure	EFFICIENCY					
3.6	Flexibility of by-laws / mgmt plan to adapt to changes ocurring in the coast marine fisheries	ADAPTABILITY					
3.7	Level of cooperation	COOPERATION					
3.7.1	Among stakeholders / user groups of the BMU						
3.7.2	Excecutive and members of the BMU						
3.7.3	Between BMU and Fisheries Dept						
3.7.4	Between BMU and Other Govt. agencies						
3.7.5	Between the BMU and NGOs						
3.7.6	With neighbouring BMU						
3.7.7	Between BMU & local communities /CBO						
S/No.	Descriptions	1	2	3	4	5	6
3.8	Leadership at various levels -	LEADERSHIP					
3.8.1	Resource user / stakeholder level?						
3.8.2	BMU - Executive						
3.8.3	District Fisheries Officer						
3.9	Group Cohesion within the BMU (various user groups)	COHESION					
3.10	BMU conflict resolving capacity	CONFLICT RESOL.					
3.10.1	Internal (within the BMU)						
3.10.2	External (Neighbouring BMU & Local communties)						
3.10.3	Fisheries Dept..						
3.10.4	Other Government agencies (e.g KWS,KMA, KPA..)						
3.11	BMU existing communication flow:	COMMUNICATION					
3.11.1	Expression of different viewpoints						
3.11.2	Expression of open disagreement						

3.11.3	With neighbouring BMU						
3.11.4	With local government agencies (e.g KWS,KMA, KPA..)						
3.11.5	With the Fisheries Dept.						
3.11.9	Research Institutions						
3.12	BMU networking at:	NETWORKING					
3.12.1	Local level						
3.12.2	District level						
3.12.3	Provincial level						
3.12.4	National level						
3.13	Level of participation	PARTICIPATION					
3.13.1	BMU ordinary members						
3.13.2	Executive Members						
3.13.3	Local communities						
3.14	Level of mutual trust & Self Respect	MUTUAL TRUST & S/ RESPECT					
3.14.1	Executive members						
3.14.2	Executive and Ordinary Members of the BMU						
3.14.3	Executive and other government agencies						
3.14.4	Executive and Fisheries Dept						
S/No.	Descriptions	1	2	3	4	5	6
3.15	BMU Organisational Adequacy	ORGANISATION					
3.15.1	In term of Legislation / Institutonal framework						
3.15.2	Organisational Structure						
3.16	BMU adequacy in term of resources (inputs)	RESOURCES					
3.16.1	Financial (to cope with fin commitments)						
3.16.2	Physical / Technical Resources						
3.16.3	Human (capacities)						
3.16.4	Information / Communication						
3.17	Level of collaboration with:	COLLABORATION					
3.17.1	Fisheries Dept.						
3.17.2	Other government agencies						
3.17.3	Local communities at large						
3.17.4	NGO and other community based organisations						
3.17.5	Neighbouring BMU						

3.18	BMU cost / Benefits analysis for	TRANSACTION COST / BENEFITS					
3.18.1	the BMU						
3.18.2	the Major user group/s:						
3.18.2	the marginalized user groups (fishers…)						
3.19	BMU inclusiveness approach	INCLUSIVENESS					
3.19.1	Loose groups of resource users ? (smaller gears)						
3.19.2	Women ?						
3.20	Level of fisheries enforcement activities	ENFORCEMENT					
3.20.1	at the BMU level						
3.20.2	at the Fisheries Dept level						
3.20.3	at the resource user groups level						
3.21	Local knowledge and socio-cultural dimensions	SOCIO-CULTURAL					
3.21.1	Local Knowledge						
3.21.2	Socio-cultural characteristics						
3.25	BMU Democratic practices	DEMOCRATIC PRACTICES					
3.25.1	Free and fair election of executive members						
3.25.2	Regular election of Executive members						
3.25.3	Statutory meeting were held regularly						
3.25.4	Women serving as Executive members						
3.25.5	Describe the rate of attendance at meetings						

SECTION 4 – BMU LED INDIVIDUAL ACHIEVEMENTS

4.1	Stakeholders' involvement in	INVOLVEMENT					
4.1.1	BMU formation; By-laws, definition of boundaries…)						
4.1.2	BMU implementation (set up)						
4.1.3	as Executive member						
4.2. 0	Stakeholders' empowerment in terms of -	EMPOWERMENT					
4.2.1	Express an opinion						
4.2.2	Participate in decision making						
4.2.3	Prioritize issues						
4.2.4	Participate in BMU meetings						
4.2.5	Develop a proposal						
4.2.6	Speak in public						
4.2.7	Work in committee						

		CONTROL
4.3. 0	Stakeholder's level of control over:	
4.3.1	BMU process and operations	
4.3.2	BMU resources	
4.3.3	Their own livelihood	

		ACCESSIBILITY
4.4. 0	Stakeholder's access to:	
4.4.1	Knowledge / Information	
4.4.2	networking and meetings	
4.4.3	Resources (Physical, Technical , Financial)	

		SKILLS
4.5. 0	Stakeholders' skills in :	
4.5.1	fishery activities	
4.5.2	project activities / initiatives	
4.5.3	Solve problems	

		PERSONAL CHANGES
4.6. 0	Stakeholders' level of personal changes in term of -	
4.6.1	Awareness	
4.6.2	Sense of responsibility	
4.6.3	Self confidence	
4.6.4	Initiative	
4.6.5	Self respect	
4.6.6	Generating new ideas	
4.6.7	Willingness to take risks	
4.6.8	The impact on your customs and community values	

SECTION 5 - INSTITUTIONAL GOVERNANCE PERFORMANCE ASSESSMENT

Target: Senior Government Officers

Ref No.

Country:
Ministry:
Department:
Location:
Person interviewed:
Position:
Date of Interview:

Interpretation of Likert six-point scale

1	: Inexistent or Highly Unsatisfactory / Very Weak / Very Bad
2	: Unsatisfactory / Weak / Bad
3	: Moderately unsatisfactory/ Moderately Weak / Moderately Bad
4	: Moderately satisfactory/ Moderately Strong/ Moderately Good
5	: Satisfactory/ Strong / Good
6	: Highly Satisfactory / Very Strong / Very Good

S/No.	Descriptions	1	2	3	4	5	6
5.1	Authority / Jurisdiction	AUTHORITY					
5.1.1	Enabling legislation						
5.1.2	Roles & Responsibilities of Government for BMU						
5.1.3	Complementary legal instruments						
5.1.4	Overlaps & gaps among institutional mandates						
5.2	Leadership at institutional levels :	LEADERSHIP					
5.2.1	Political support						
5.2.2	Agency (Fisheries Dept) leadership						
5.2.3	Leadership development in BMU						
5.3	Political vision related BMU :	POLITICAL VISION					
5.3	Consensus built for common vision						
5.3.1	Linkage with national social policies						
5.3.2	Linkage with national economic policies						
5.3.3	Linkage national environmental policies / goals						

S/No.	Descriptions	1	2	3	4	5	6
5.4	Institutional capacity to implement BMU :	INSTITUTIONAL CAPACITIES					
5.4.2	Interagency partnership						
5.4.3	Fisheries Reserch Institutions						
5.4.4	Extension Centres for promoting BMU						
5.4.5	Training courses for public officials						
5.4.6	Training courses for Stakeholders						
5.4.7	Process and authority between Govt. agencies						
5.4.8	Coordination among BMU projects and Govt funding						

5.5	HRD in Government Agencies to drive BMU:	HRD
4.5.1	Capacity to plan, implement, monitor & evaluate BMU	
4.5.2	Leadership skills / Capabilities to drive BMU process.	
5.6	Empowerment of BMU	EMPOWERMENT
5.6.1	Level of Ownership of BMU by stakeholders	
4.7	Financial Resources	FINANCIAL RESOURCES
4.7.1	Financial resources to implement BMU process	
4.7.2	Financial contribution for operationalization of BMU	
5.8	Planning Capacity related to BMU development	PLANNING
5.8.1	Adequacy of resources for planning	
5.8.3	Base line studies status	
5.8.4	Situational analysis status	
5.8.5	Definition of boundaries / jurisdiction of BMU	
5.8.6	Setting up of clear and realistic goals for BMU	
5.8.7	Objective indicator for management objectives	
5.8.8	Cost/benefits of mgmt objectives	
5.8.9	Participation of Stakeholders in BMU	
5.8.10	Controlled access to coastal marine resources	
5.9	Information Management Capacity	INFORMATION FLOW
5.9.1	Status of Information flow	
5.9.2	Information about Performance	
5.9.3	Information dissemination	
5.9.4	Public access to information	
5.9.5	Mgmt decisions backed by verifiable information	

S/No.	Descriptions	1	2	3	4	5	6

5.10	Stakeholder Participation	PARTICIPATION
5.10.1	Public / Stakeholder awareness programme	
5.10.2	Sensitization of coastal marine resource issues	
5.10.3	Stakeholder participation in BMU	
5.10.4	Stakeholders have access to BMU related info.	
5.10.5	Representation for unheard voices / marginalized groups	
5.11	Formalization of BMU process	FORMALIZATION
4.11.2	Integration of BMU in national fisheries mgmt policies	
4.11.4	Implementation of the BMU process by resource users	
4.11.5	Monitoring and Evaluation of BMU	

5.12	Implementation Capacity	IMPLEMENTATION
5.12.1	BMU Regulations enforced	
5.12.2	Economic incentives to change behaviour	
5.12.3	Appropriate funding available for implementation	
5.12.4	Socially beneficial changes in resource users	
5.12.5	Socially beneficial changes in Fisheries Dept.	
5.12.6	Coordination of activities among institutions and BMU	
5.13.	Conflict Resolution Capacity	CONFLICT RESOLUTION
5.13.1	Mechanism for interagencies conflict resolution	
5.13.2	Conflict among resource users resolved / mitigated	
5.13.3	Future uses and conflicts anticipated	
5.14	Fisheries Management	FISHERIES MANAGEMENT
5.14.1	Reduction of damaging practices	
5.14.2	Recovery of fish stocks	
5.14.3	Increase in fish productivity	
5.14.4	Increase in revenue for the Govt.	
5.14.5	Increase in income of stakeholders	
5.14.6	Increase in public & private investments	
4.14.7	Socioeconomic benefits from sustainable fisheries	
5.15	Monitoring & Evaluation Indicators	
5.15.1	Performance indicators defined	
5.15.2	Evaluate success / failure of mgmt actions	

Harmonization of the Methodology and Implementation of Evaluation Framework in Tanzania

Nyaga Kanyange

1 BACKGROUND AND INTRODUCTION

Beach Management Units (BMUs) are the fisheries co-management units envisaged and operational in the Tanzanian fisheries resources. It brings altogether resource user groups and state actors to share responsibilities in resource management and conservation as an imperative to improve livelihoods of people dependent on these resources. An array of Community based organizations both formal as well informal exists since a long time in the rural coastal areas of Tanzania. However, with the amendment of the Fisheries Act 2003 and enactment of BMU Regulations 2009, the Fisheries Department within the Ministry of Livestock and Fisheries Development has intensified its efforts to promote BMU as an institutionalized fisheries co-management organization in the coastal marine fisheries. Currently there are over 170 BMUs along the Tanzanian coast.

In its quest to strengthen the BMU process in the East and Southern Africa coastal and riparian countries, the Implementation of Regional Fisheries Strategy for ESA – IO, commonly known as SmartFish has initiated a BMU Evaluation Framework, which is compliant to international best practices related to Monitoring and Evaluation of community based organizations indulged in rural development, in the Tanzanian coastal marine fisheries and has already completed a similar study in Kenya. The Kenya study included the following steps:

- Designing of the Evaluation Framework;
- Validation of the Evaluation Framework through field work on a pilot test basis;
- Development of sampling strategies for data collection;
- Designing of in-built data processing, compilation and analysis supports;
- Full BMU evaluation exercise in Kenya, data analysis and report writing.

This assignment falls under Result 2, intended to initiate a governance framework for sustainable regional marine fisheries management and development. In particular, this assignment falls under Result 2.5: Stakeholders participation in decision making for management is promoted.

The assignment was guided by the following tasks:

i. To Share briefly insights, including shortfalls from the Kenyan study, during the methodology harmonisation workshop in Tanzania;

ii. Together with Tanzanian consultant, revise and harmonise both the questionnaire and methodologies to meet SmartFish and Government of Tanzania's objectives;

iii. Together with Tanzanian consultant, test and finalise the harmonised draft questionnaire in the field;

iv. Advise on data collection process in tandem with Kenya's data collection approach for the purposes of comparison of results.

To actualise these tasks, a two day workshop was held in Dar es Salaam on 29th to 30th July 2013 that aimed at reviewing the existing SMARTFISH BMU assessment methodology for application in the Tanzanian marine coast, whilst addressing priority information needs in Tanzania, including informing the design of a new 5-year fisheries co-management initiative currently under preparation. Participants of the workshop were drawn from the University of Dar es Salaam, Tanzanian Fisheries Development Division, WWF Tanzania, WWF Tanzania and SWIOfish. The workshop was followed by testing, fine tuning of the questionnaire and eventual data collection.

2 METHODOLOGY

The approach to this exercise involved discussions, questionnaire testing and fine tuning and data collection. During the workshop, a presentation (see separate file) was done on the Kenya methodology highlighting major challenges and areas for improvement. After presentation of the Smartfish methodology as applied in Kenya, expert participants were invited through a lengthy discussion to make their contributions. Suggested changes were incorporated for application in the Tanzanian study.

The workshop was followed by further discussions and review, led by the Tanzanian lead expert after which the questionnaire was subjected to field testing and fine tuning. The Kenyan expert participated in data collection at a later stage and shared his insights.

3 FINDINGS

3.1 HARMONISED METHODOLOGY

Sampling methodology for Tanzania differed slightly from the one applied in Kenya (refer to Kenya and Tanzania (in prep) reports). Due to a relatively higher number of BMUs in Tanzania, sample selection was largely random, with purposive sampling applied where random sampling was not appropriate. BMU selection also ensured fair representation of administrative boundaries (District Councils).

Respondents, separated into sexes, were drawn from BMU leaders and individual members. Using the same set of questionnaire, BMU leaders and individual member men were interviewed together as one group while individual member women were interviewed separately. This differed from the Kenya study where two separate questionnaires, each targeting leaders and members respectively with no separation of sexes were used. Therefore, the Tanzania methodology, in harmony with Kenyan, employed a combination of random and purposive sampling in selection of BMUs and purposive sampling in selection of respondents.

3.2 ANALYSIS OF QUESTIONNAIRES FOR TANZANIA

Similar to Kenyan study, two questionnaire sets, one targeting BMU and the other senior government officials were used. The one targeting senior government officials was adopted with minor insignificant changes and therefore not presented here. However, several changes were made to the BMU questionnaire that involved substitutions, additions, subtractions and alteration of the Likert items. The changes are highlighted in the table 1.

Table 1. Changes in key performance indicators for Tanzania BMU questionnaire (annexed) and comments

Key performance Indicator (PI)	Comments
Cohesion	Merged with External factors PI
Conflict Resolution	Split into conflicts and conflict resolution and ease of conflict resolution
Conflicts and conflict resolution	PI categories retained
Ease of conflict resolution	PI categories retained
Effectiveness	Merged with outcomes performance indicator
Enforcement	PI categories retained
Inclusiveness	Dropped
Leadership	Dropped
Mutual Trust	PI categories retained
Networking	PI categories retained
Participation	Dropped
Level of financial & equipment support	PI categories retained
Resources	PI categories retained
Adaptability	Dropped
Level of training, technical & mentoring support to BMU	PI categories retained
Collaboration	Dropped-thought to be represented in cooperation
Communication	Rephrased to include transparency & freedom of expression
Communication, transparency & freedom of expression	PI categories retained
Cooperation	PI categories retained
Democratic Practices	PI categories retained
Jurisdiction	PI categories retained
Social-cultural	Merged with outcomes
Organisation	PI categories retained
Representativity	PI categories retained
Cost/Benefits	Dropped
Efficiency	Merged with resources
Relevance	Dropped
Fisheries Mgmt Skills	Merged with skills development.
Skills development (new)	PI categories retained
HRD / Capacity Bldg.	Merged with resources
Auto - Regulations	Merged with resources
Direct Benefits	PI categories retained
Management outcomes	PI categories retained
Material Outcome	Split into Material outcomes and Trends. PI categories retained
Trends	PI categories retained
Accessibility	Merged with skills and resources
Awareness of roles & responsibilities	New Performance Indicator
External Factors	New Performance Indicator
Additional statements	New Performance Indicator
Control (Individual member)	Dropped
Empowerment (Individual member)	Dropped
Involvement (Individual member)	Dropped
Skill Development (Individual member)	Dropped
Personal Changes (Individual member)	Dropped

3.2.1 Likert Scaling

Another key difference in the questionnaire was the Likert scale. There was a change of scaling of Likert items from six-point to five-point, though the sixth item was retained to represent no opinion option. Details are shown in the table below (table 2). The contracted version for Tanzania provided for collection of additional information (neutral and no opinion) that were not available in the Kenyan Study. This change occurred later after the expert workshop meeting, led by the Tanzanian Expert.

Table 2. Scaling options as used in Kenya and Tanzania

	Scaling applied in Kenya	**Scaling applied in Tanzania**
1	Inexistent or Highly Unsatisfactory/ Very Weak/Very Bad	Highly Unsatisfactory/Highly Declined/Very Useless/Very Low
2	Unsatisfactory/Weak/Bad	Unsatisfactory/Decline/Useless/Low
3	Moderately unsatisfactory/Moderately Weak/Moderately Bad	Neutral
4	Moderately satisfactory/Moderately Strong/Moderately Good	Satisfactory/Increased/Improved/High/Beneficial
5	Satisfactory/Strong/Good	Highly Satisfactory/Highly Increased/Very High/ Highly Improved/Highly Beneficial
6	Highly Satisfactory/Very Strong/Very Good	Don't Know/Not Applicable/No Opinion

3.3 DATA COLLECTION

Participation in data collection took place during the last 12 days when field testing and fine-tuning of the questionnaire had already been finalised by the Tanzanian team. During this time of data collection, the Kenyan expert, using the methodology for Tanzania described above, participated in interviewing eight BMUs in the southern Tanzania namely; Ruvu, Shuka, Bank Kanisani, Mingoyo, Namtibwili, Madaba, Mgao and Kilindoni.

3.3.1 Methodological challenges during data collection

Data collection was successful except a few challenges related to sampling design and adequacy of the questionnaire. Whereas interviewing women separately added value to the data, their perceptions could not be captured comprehensively since the questionnaire targeting executive members (BMU leaders) was used instead of the individual member questionnaire. Further, this separation created an orphan group of individual men members who joined the executive group, leaving their independent opinion unheard. During the interviews, it was observed that individual women members lacked basic information related to BMU leadership and also seemed to have little knowledge on the larger part of the questionnaire. This could be explained by the fact that women often play a peripheral role in the fishery and hardly or rarely participate in fishing. The individual assessment questionnaire designed for individual members was seen as irrelevant by the Tanzanian team and therefore omitted it in the study. A perfect improvement from the Kenya methodology would have been interviewing a set of three groups using two sets of questionnaire; one set for the executive and the other set for both individual member sexes. This variation however, will not preclude comparison of results.

4 CONCLUSION

Participatory harmonisation/customisation of methodology ensured that contextual differences and priority needs of Tanzania were taken into account. While addressing these needs and priorities, it was essential to harmonise the methodology and customise the questionnaires. Although several changes were made to the BMU assessment questionnaire that involved reordering, regrouping, additions and omissions, majority of performance indicator categories were retained in a manner that would allow comparison of results between the two countries.

5 RECOMMENDATIONS

- Discuss with Tanzanian lead on main themes for comparison after exploration and preliminary analysis of the data
- To consider re-arrangement and re-analysis of the Kenyan data to allow statistical comparisons if thematic descriptive comparisons are inadequate
- Periodical review of methodologies is necessary to accommodate emerging sectorial, socio-economic and political changes

ANNEXES

Customised Questionnaire for Tanzania

BMU - EVALUATION FRAMEWORK

TANZANIA - Marine Fisheries Co-Management Assessment

Interview ID:	

Region:.....

District...

Village/ Street:..... Urban ☐ Peri-urban ☐ Rural ☐

Person(s) interviewed :.....

Occupation:.....

Position in the BMU:.....

Date of Interview:.....

Section 1: BMU Profile

1.1 About the BMU

1.1.1	Does the BMU have an available register of members?	YES	NO
	Exist and Available		
	Exist but not Available		
	Not existing		
1.1.2.	Does the BMU have an elected Executive Committee?	YES	NO
1.1.3.	Year of formation? (ie. election of first Executive Committee):	Year:	
1.1.4.	What was the date of the last meeting of the Executive Committee?	Date:	
1.1.5.	Is the BMU registered?	YES	NO
1.1.6.	If not registered, has the BMU applied for registration?	YES	NO
1.1.7	Does the BMU have a dedicated office?	YES	NO

1.2 About the BMU's Membership

1.2.1	How many members are there in the BMU?			
1.2.2	How many members serve on the Executive Committee?	Σ:	M:	F:
1.2.3	When was the last BMU Executive Committee elections held?			

1.3 Guidelines, management plan and by-laws

1.3.1	Does the BMU office have a copy of BMU guidelines?	YES	NO
1.3.2	Does BMU office have a (Kiswahili) copy of the Fisheries Act, 2003	YES	NO
1.3.3.	Has the BMU received training on preparation of management plans?	YES	NO
1.3.4	Does BMU office have a copy of the Fisheries Regulations, 2009	YES	NO
1.3.5	Has a management plan been drafted? (If 'No' go to 1;3.10)	YES	NO
1.3.6.	Has a management plan been approved by District Council?	YES	NO
1.3.7	Does the management plan contain measures to regulate outside fishers	YES	NO
1.3.8	Does the management plan contain permanent closed areas?	YES	NO
1.3.9.	Does the management plan contain seasonally closed areas?	YES	NO
1.3.10	Have by-laws been drafted?	YES	NO
1.3.11	Have by-laws been approved by District Council?	YES	NO
1.3.12	Do by-laws contain measures to regulate outside fishers	YES	NO
1.3.13	Are there by-laws to enforce closed areas?	YES	NO

1.4. Sustainable Financing of the BMU

1.4.1	Has the BMU prepared an estimate of budget requirement for current year?	YES		NO		
1.4.2	Does the BMU have a documented strategy on how to raise the required income?	YES		NO		
1.4.3	Does the BMU have financial reports available for FY12 and FY13	FY12		FY13		
		Exist and Available				
		Exist but not Available				
		Not existing				
	If so what was total income & expenditure during FY12	Income		Expend		
	If so what was total income & expenditure during FY13	Income		Expend		
1.4.4.	Has the BMU received funding from the District Council in the current year?	YES		NO		
	If so, how much during July 2012 to June 2013					
1.4.5.	Has the BMU been awarded any tender by the Village or District Council?	YES		NO		
1.4.6.	Does the BMU generate revenue from the tender?	YES		NO		
	If so, how much during July 2012 to June 2013					
1.4.7	Does the BMU receive any funding from levies on outside fishers?	YES		NO		
	If so, how much during July 2012 to June 2013					
1.4.8.	Does the BMU receive any funding from taxing fishing landings?	YES		NO		
	If so, how much during July 2012 to June 2013					

2.1	Boundaries / Jurisdiction	Very low to very high)				
2.1.1	Is the marine area under the jurisdiction of the BMU clearly understood?					
2.1.2	Terrestrial boundaries of jurisdiction (e.g. fish landing sites) clearly understood?					
2.1.2	Are there conflicts over the boundaries of jurisdiction?					

Interviewers' observations/ notes:

Use the scale for sections 2 and 3

Interpretation of Likert scale

1	: Highly Unsatisfactory / Highly Declined / Very Useless / Very Low
2	: Unsatisfactory / Decline / Useless / Low
3	: Neutral
4	: Satisfactory / Increased / Improved / High / Beneficial
5	: Highly Satisfactory / Highly Increased / Very High / Highly Improved / Highly Beneficial
6	: Don't Know / Not Applicable / No Opinion

2.2	Representation in BMU membership	low to high representativeness				
2.2.1	Different kinds of fishers (gears)					
2.2.2	Gender					
2.2.2	Boat- Owners					
2.2.4	Fishing gear owners					
2.2.5	Fish Traders					
2.2.6	Fish processors					
2.2.7	Service providers (restaurants & hotels)					

2.3	Representation in BMU Executive Committee	low to high representativeness				
2.3.1	Different kinds of fishers (gears)					
2.3.2	Gender					
2.3.3	Age groups					
2.3.4	Boat- Owners					
2.3.5	Fishing gear owners					
2.3.6	Fish Traders					
2.3.7	Fish processors					
2.3.8	Service providers (beach restaurants & Hotels)					
2.3.9	BMU ordinary members					
2.3.10	BMU Executive Committee					

2.4	BMU record-keeping & reporting: Registration and meetings	-	Unsatisfactory to Satisfactory			
2.4.1	Availability of up to date BMU members' registration record books					

2.4.2	Executive Committee: frequency of meeting in the past 12 months						
2.4.3	Availability of minutes of above meetings						
2.4.4	Attendance at Executive Committee meetings						
2.4.5	Frequency of BMU Assembly meetings in past 12 months (shld be quarterly)						
2.4.6	Availability of minutes of above meetings						
2.4.7	Attendance at Assembly meetings						

2.5 BMU record-keeping & reporting: Patrol records

2.5.1	How many boat patrols were conducted from July12 to Jun13?		no. for which reports available	
2.5.2	How many land patrols were conducted from July12 to Jun13?		no. for which reports available	
2.5.3	How many fishing gears (what type) or boats were confiscated?	gears (type) _____	boats	
2.5.4	How many culprits were taken to Police for arrest?			
2.5.5	Availability of patrol reports for Jul12 to Jun13			

2.6 BMU record-keeping & reporting: Other record-keeping & reporting — Unsatisfactory to Satisfactory

2.6.1	Availability of event books/ forms for Jul12 to Jun13						
2.6.2	Perceived usefulness of maintaining event books/ MCS records						
2.6.3	Availability of catch data collection performance records (if relevant)						
2.6.4	Perceived usefulness of collecting catch data (if relevant)						

2.6.5	Number of incidents recorded during Jul12 to Jun13	Number	
2.6.6	Number of quarterly progress reports for past 12 months (ie. out of 4)	Number	

2.7. Awareness of roles & responsibilities — low to high

2.7.1	Awareness of roles & responsibilities amongst Executive Committee						
2.7.2	Awareness of roles & responsibilities amongst Assembly members						

2.8. Existing level of cooperation — COOPERATION (low to high)

2.8.1	Among user groups within the BMU						
2.8.2	Between Executive Committee and BMU members / community						
2.8.3	Between BMU members & migrant fishers						
2.8.4	Between BMU and the Village Government						
2.8.5	Between BMU and District Council						
2.8.6	Between BMU and political parties						
2.8.7	Between BMU and Fisheries Division / Ministry						
2.8.8	Between the BMU and NGOs / CSOs						
2.8.9	With neighbouring BMUs						

2.9 Level of trust between: — TRUST (low to high)

2.9.1	Executive members						
2.9.2	Executive and Ordinary Members of the BMU						
2.9.2	Executive and village government						
2.9.4	Executive and District authorities						
2.9.5	Executive and Fisheries Dept						

2.10 BMU institutional structure — ORGANISATION (unsatisfactory to satisfactory)

2.10.1	Is the BMU, as an institution, compatible with existing village structures?						
2.10.2	To what extent is the BMU structure appropriate to achieve its objectives?						

2.11 Conflicts and conflict resolution — CONFLICT (Low to high)

2.11.1	Level of conflicts that BMUs face?						
2.11.2	Level of conflicts between marine resource users within the village?						
2.11.3	Level of conflicts btwn local and migrant fishers						
2.11.4	Level of conflicts btwn BMU and politically affiliated parties						
2.11.5	Level of conflicts btwn BMU and village government						
2.11.6	Level of conflicts btwn village and neighbouring villages						
2.11.7	Level of conflicts btwn BMU and district authorities						
2.11.8	Level of conflicts btwn BMU and any other Govt agencies (mention)						

2.12 Ease with which conflicts are resolved: — CONFLCIT RESOLUTION (Very Difficult to Very Easy)

2.12.1	Internal (within the BMU)						
2.12.2	Other community members / politically affiliated groups						

2.12.3	with migrant fishers						
2.12.4	with neighbouring BMUs						
2.12.5	with village Government						
2.12.6	Other Government agencies (eg. marine parks; Navy)						

2.13	Communication, transparency & freedom of expression:	COMMUNICATION (Unsatisfactory to Satisfactory)
2.13.1	Freedom of expression of different viewpoints by BMU members	
2.13.2	Freedom of expression of different viewpoints within BMU Exec. Committee	
2.13.3	Level of communication with neighbouring BMU	
2.13.4	Level of communication with District Fisheries Officers/DED	
2.13.5	Level of communication with District Council	
2.13.6	Level of communication ith the Fisheries Division	

2.14	Usefulness of any existing BMU network at:	USEFULNESS (useless to beneficial)
2.14.1	Collaborative Fisheries Management Area (CFMA) level	
2.14.2	District level	
2.14.3	National level	
2.14.4	Cross-border	

2.15	Adequacy of Resources	RESOURCES (low to high)
2.15.1	Adequacy of revenue to meet operational requirements	
2.15.2	Efficiency with which the BMU uses its financial resources	
2.15.3	Adequacy of equipment resources	
2.15.4	Adequacy of human technical rescources within BMU	
2.15.5	Adequacy of information resources (eg. policies & laws)	

2.16	Level of training, technical & mentoring support to BMU from:	SUPPORT (Unsatisfactory to Satisfactory)
2.16.1	Village government	
2.16.2	District Fisheries Office / District authorities	
2.16.3	Fisheries Division / Ministry of Livestock & Fisheries Development	
2.16.4	Other government agencies	
2.16.5	NGO or similar project (eg. RUMAKI / TCMP/ WWF etc)	

2.17	Level of support on enforcement from:	SUPPORT (Unsatisfactory to Satisfactory)
2.17.1	Village government	
2.17.2	Neighbouring BMUs (inc. other BMUs within CFMA)	
2.17.3	District authorities	
2.17.4	Police / Marine Police	
2.17.5	Magistrates	
2.17.6	Fisheries Division	

2.18	Level of financial & equipment support from:	SUPPORT (Unsatisfactory to Satisfactory)
2.18.1	Village government	
2.18.2	District Fisheries Office / District authorities	
2.18.3	Fisheries Division	
2.18.4	Other government agencies	
2.18.5	NGOs and other external donors	

2.19	Democratic practices in the BMU	DEMOCRATIC PRACTICES (Usatisfactory to Satisfactory)
2.19.1	Regular election of Executive members	
2.19.2	Free and fair election of executive members	
2.19.3	Level of participation (turn-out) in election of executive committee	

2.20	External factors	Low to high
2.20.1	Difficulty (inc. cost) of travelling from village to District HQ	
2.20.2	Level of conflict between political parties in the village	
2.20.3	Presence of migrant fishers in BMU's fishing grounds	
2.20.4	Length of time resident fishers & families have lived in village	
2.20.5	Degree to which villagers are from common origin/ tribal group etc.	
2.20.6	Existence of traditional fisheries management before BMU	
2.20.7	Quality of infrastructure & facilities at fish landing site(s) in village	

2.20.8 List the three most important fisheries (species or gear) and rate them in terms of importance to the overall livelihood / economy of the village:

	low to high importance
1.	
2.	
3.	

2.20.9 What are the three most important sources of livelihood in the village or mtaa, and estimate the relative percentage that each contributes:

		% contribution to total livelihoods
1.		% (ie. total of the three must be less than 100 %)
2.		%
3.		%

Section 3: Organisation Performance Assessment

S/No.	Descriptions	1	2	3	4	5	6
3.1.	State of the fishery (since BMU formation)	TRENDS (decline to increase)					
3.1.1	What has been the trend in quantity of fish caught per fisher (CPFD)						
3.1.2	What has been the trend in the size of fish caught						
3.1.3	What has been the trend in total catches						
3.1.4	What has been the trend in populations of fish in the fishing areas						
3.1.5	What has been the trend in numbers of fishers						
3.2	Impacts of BMU since formation (attributable to BMU)	OUTCOMES (declined to improved)					
3.2.1	Safety at sea has changed						
3.2.2	Fish landing infrastructure has changed						
3.2.3	Sanitation at landing sites has changed						
3.2.4	Sanitation at public beaches has changed						
3.2.5	Post capture treatment & quality improvement of fish						
3.2.6	Marketing & distribution of fish						
3.3.	Impact of BMU in terms of skills development	Skills (declined to improved)					
3.3.1	Planning & implementation of surveillance & patrolling						
3.3.2	Financial management skills						
3.3.3	Communication & networking skills						
3.3.4	Conflict resolution skills						
3.3.5	BMU leadership skills						

		BENEFITS (declined to increased)					
3.4.	Direct benefits attributable to BMU performance						
3.4.1	Has fishers income changed since BMU establishment?						
3.4.3.	Has vendors and processors income changed since BMU establishment?						
3.4.3	Fisheries development opportunities(e.g.ice making, fishing gear making) have changed						
3.4.4	Employment creation						
3.4.5	Flow of govt funding on fisheries infrastructure has changed						
3.4.6	Flow of private investments in fisheries sector has changed						
3.5	Management outcomes attributable to the BMU	OUTCOMES (Unsatisfactory to Satisfactory)					
3.5.1	Incorporation of traditional mangement practices in management plan						
3.5.2	Effectiveness of implementation of management plan						
3.5.3	Are there emerging issues not addressed by the management plan?						
3.5.4	Implementation of by-laws						
3.5.5.	By-laws are acceptable to fishers & resources users						
3.5.6.	Is the BMU team able to enforce regulations and by-laws?						
3.5.7	Enforcement of closed fishing areas / seasons						
3.5.8	Reduction in the use illegal / destructive gears						
3.5.9	Degree to which sanctions or penalties are imposed on violators						
3.5.10	Existence of graduated penalties (ie. repeated offences = more severe)						
3.5.11	Mechanism for resolving conflicts btwn resource-users						
3.5.13	Level of involvement of BMU in allocation of fishing licenses						

3.6. What are the three highest priority needs for the BMU to improve performance and please rate them in terms of importance

	low to high priority					
1.						
2.						
3.						

BMU QUESTIONNAIRE FOR KENYA

BMU - EVALUATION FRAMEWORK

KENYA - COAST MARINE FISHERIES CO-MANAGEMENT ORGANISATION

(TARGET: BMU LEADER/EXECUTIVE/MEMBER)

Country / Province	Ref:
District	
Locality:	
Name of Organisation:	
Person interviewed :	
Occupation:	
Position in the Organisation:	
Date of Interview:	

Section 1 - Organisation Profile

1.1	About the Organisation		
1.1.1	Registered BMU	RBMU	1
1.1.2	Non Registered BMU	NBMU	2
1.1.3	Date of formation :		Years:
1.1.4	Is it active through the year ?		YES / NO
1.1.5	In case of NBMU, it is process of being registered BMU ?		YES / NO
1.2	About its Membership		
1.2.1	How many members are there in the BMU ?		
1.2.2	How many serve as Executive Membership		
1.2.3	The executives are they elected regularly (* Refer to their constitution)		YES / NO
1.2.4	How many statutory meetings are held in a year? (*relating to decision making & ratification)		
1.3	About its functions (effective)		
1.3.1	Fisheries management / MCS activities		YES / NO
1.3.2	Enabling environment for fisheries development		YES / NO
1.4.3	Improved resource user livelihoods…		YES / NO
1.4	About its external funding sources (if any)		
1.4.1	From Government ?		YES / NO
1.4.2	From International NGOs/ Agencies		YES / NO
1.4.3	Others (Donations…)		YES / NO
1.5.	About its external technical supports		
1.5.1	From Government ?		YES / NO
1.5.2	From International NGOs/ Agencies		YES / NO
1.5.3	Others (Donations…)		YES / NO

Observations

Section 2 - Organisation Performance Assessment

Interpretation of Likert six-point scale

0-1	: Inexistent or Highly Unsatisfactory / Very Weak / Very Bad
2	: Unsatisfactory / Weak / Bad
3	: Moderately unsatisfactory/ Moderately Weak / Moderately Bad
4	: Moderately satisfactory/ Moderately Strong/ Moderately Good
5	: Satisfactory/ Strong / Good
6	: Highly Satisfactory / Very Strong / Very Good

S/No.	Descriptions	1	2	3	4	5	6
2.1	BMU Achievements in terms of (since formation)	OUTCOMES					
2.1.1	Increase in total catch						
2.1.2	Increase Quantity of fish caught per fisher (CPFD)						
2.1.3	Increase in the size of fish caught						
2.1.4	Increase in the population of fish the fishing areas						
2.1.5	Increase in the fishing areas						
2.1.6	Improved Safety at sea						
2.1.7	Improved fish landing infrastructure						
2.1.8	Improved access to credit						
2.1.9	Improved sanitation of public beaches						
2.2	BMU Achievements in terms of HR Development	HRD					
2.2.1	Entrepreneurial skills						

2.2.2	Day to day management	
2.2.3	Post Capture treatment & Quality inprovement of fish….	
2.2.4	Marketing & Distribution	
2.2.5	Communication & networking	
2.2.6	Conflict resolution	
2.2.7	Succession planning	
2.3.	BMU Achievements in terms of direct benefits to:	BENEFITS
2.3.1	Increased income of stakeholders	
2.3.2	Creating more fisheries development opportunities	
2.3.3	Employment creation	
2.3.4	Increased flow govt funding on fisheries infrastructure	
2.3.5	Increased flow of private investments in fisheries sector	
2.4	BMU Achievements in terms management skills	MANAGEMENT SKILLS
2.4.1	Preparation of the by-laws (mgmt plans)	
2.4.2	Implementaton of the by-laws	
2.4.3	Implementation of Enforcement structure	
2.4.4	Conflict solving mechanism	
2.4.5	Leadership enhancement	
2.5.	BMU Achievements in terms of auto-regulations	AUTO REGULATIONS
2.5.1	Prohibition of fishing during closed season or area	
2.5.2	Reduction in the use illegal / destructive gears	
2.5.3	MCS of fisheries resource	
2.5.4	Sanction or penalty imposed on violators	
2.5.5	Community participation (time,money and effort)	
2.5.6	Benefits invested in community development	

Section 3 - Critical conditions for BMU success.

3.1	About definition of Boundaries / Jurisdiction	JURISDICTION
3.1.1	Spatial delimitation of fishing areas	
3.1.2	Community based (Fish landing sites)	
3.2	About BMU stakeholders representativity	REPRESENTATIVITY
3.2.1	Fishers	
3.2.2	Boat- Owners	
3.2.3	Fishing gear owners	
3.2.4	Fish Traders	
3.2.5	Fish processors	
3.2.6	Service providers (beach restaurants & Hotels)	
3.2.7	Are women adequated represented	
3.3	About the goals /objectives of the BMU	RELEVANCE
3.3.1	Gain access to fisheries resources	
3.3.2	Improved management of fisheries resources	
3.3.3	Participate in decision making (mgmt by-laws)	
3.3.4	Monitoring Control and Surveillance (Enforcement)	
3.3.5	Improve Revenue & livelihoods of stakeholders	
3.3.6	Stimulate local economic development	
3.3.7	Credit Support	
3.4	Compatibility between BMU mgmt objectives and stakehonders' priorities (common problems or interest)	EFFECTIVENESS
3.5	Proprotionality between size of fish resources and BMU structure	EFFICIENCY
3.60	Is mgmt plan flexible enough to adapt to changes ocurring in the fisheries sector ?	ADAPTABILITY
3.70	Existing level of cooperation	COOPERATION
3.7.1	Among stakeholders / user groups of the BMU	
3.7.2	Excecutive and members of the BMU	
3.7.3	Between BMU and Fisheries Dept	
3.7.4	Between BMU and Other Govt. agencies	
3.7.5	Between the BMU and NGOs	
3.7.6	With neighbouring BMU	
3.7.7	Between BMU & local communities /CBO	

S/No.	Descriptions	1	2	3	4	5	6
3.8	Leadership at various levels -	LEADERSHIP					
3.8.1	Resource user / stakeholder level?						
3.8.2	BMU - Executive						
3.8.3	District Fisheries Officer						
3.9	Appraise Group Cohesion within the BMU (various user groups)	COHESION					
3.10	Appraise the BMU conflict resolving capacity	CONFLICT RESOL.					
3.10.1	Internal (within the BMU)						
3.10.2	External (Neighbouring BMU & Local communties)						
3.10.3	Fisheries Dept..						
3.10.4	Other Government agencies (e.g KWS,KMA, KPA..)						
3.11	Appraise BMU existing communication flow:	COMMUNICATION					
3.11.1	Expression of different viewpoints						
3.11.2	Expression of open disagreement						
3.11.3	With neighbouring BMU						

3.11.4	With local government agencies (e.g KWS,KMA, KPA..)	
3.11.5	With the Fisheries Dept.	
3.11.9	Research Institutions	
3.12	Appraise the existing BMU network at:	NETWORKING
3.12.1	Local level	
3.12.2	District level	
3.12.3	Provincial level	
3.12.4	National level	
3.13	Describe the level of participation	PARTICIPATION
3.13.1	BMU ordinary members	
3.13.2	Executive Members	
3.13.3	Local communities	
3.14	Describe the level of trust among :	MUTUAL TRUST & RESPECT
3.14.1	Executive members	
3.14.2	Executive and Ordinary Members of the BMU	
3.14.3	Executive and other government agencies	
3.14.4	Executive and Fisheries Dept	
3.15	Appraise the BMU ORGANISATIONAL ADEQUACY	ORGANISATION
3.15.1	In term of Legislation / Institutonal framework	
3.15.2	Organisational Structure	
3.16	Appraise the BMU adequacy in term of (inputs)	RESOURCES
3.16.1	Financial (to cope with fin commitments)	
3.16.2	Physical / Technical Resources	
3.16.3	Human (capacities)	
3.16.4	Information / Communication	
3.17	Describe the level of collaboration with:	COLLABORATION
3.17.1	Fisheries Dept.	
3.17.2	Other government agencies	
3.17.3	Local communities at large	
3.17.4	NGO and other community based organisations	
3.17.5	Neighbouring BMU	
3.18	Describe the cost / Benefits analysis for	COST / BENEFITS
3.18.1	the BMU	
3.18.2	the Major user group/s:	
3.18.2	the marginalized user groups (fishers…)	
3.19	Appraise the inclusiveness approach of BMU	INCLUSIVENESS
3.19.1	Loose groups of resource users ? (smaller gears)	
3.19.2	Women ?	
3.20	Appraise the level of fisheries enforcement activities	ENFORCEMENT
3.20.1	at the BMU level	
3.20.2	at the Fisheries Dept level	
3.20.3	at the resource user groups level	
3.21	To what extent local conditions included in the BMU	SOCIO-CULTURAL
3.21.1	Local Knowledge	
3.21.2	Socio-cultural characteristics	
3.25	Describe the democratic practices in the BMU ..	DEMOCRATIC PRACTICES
3.25.1	Free and fair election of executive members	
3.25.2	Regular election of Executive members	
3.25.3	Statutory meeting were held regularly	
3.25.4	Women serving as Executive members	
3.25.5	Describe the rate of attendance at meetings	

Section 4 - Assessment to individual achievements (Strong…Weak)

4.1	Describe the level of your members' involvement	INVOLVEMENT
4.1.1	BMU formation; By-laws, definition of boundaries…)	
4.1.2	BMU implemtation (set up)	
4.1.3	as Executive member	
4.2. 0	Describe capability of your members' in terms of -	EMPOWERMENT
4.2.1	Express an opinion	
4.2.2	Participate in decision making	
4.2.3	Prioritize issues	
4.2.4	Participate in BMU meetings	
4.2.5	Develop a proposal	
4.2.6	Speak in public	
4.2.7	Work in committee	
4.3. 0	Do your members' have control over -	CONTROL
4.3.1	The BMU operations	
4.3.2	The Resources	
4.3.3	Their own livelihood	
4.4. 0	Do your members' have access to -	ACCESSIBILITY
4.4.1	Knowledge / Information	
4.4.2	networking and meetings	
4.4.3	Resources (Physical, Technical , Financial)	
4.5. 0	Describe your members' skills in terms of -	SKILLS
4.5.1	fishery activities	

4.5.2	project activities / initiatives					
4.5.3	Solve problems					

		PERSONAL CHANGES				
4.6. 0	BMU led personal changes in term of -					
4.6.1	Awareness					
4.6.2	Sense of responsibility					
4.6.3	Self confidence					
4.6.4	Initiative					
4.6.5	Self respect					
4.6.6	Generating new ideas					
4.6.7	Willingness to take risks					
4.6.8	The impact on your customs and community values					

Observations

LIST OF PUBLICATIONS – LISTE DES PUBLICATIONS

1. Report of the Inception / Focal Point Meeting of the SmartFish Programme – Flic en Flac, Mauritius,15th-16th June 2011. REPORT/RAPPORT: SF/2011/01. August/Août 2011. SmartFish Programme. Indian Ocean Commission. (55 pages)

2. Report of the First Steering Committee Meeting of the SmartFish Programme – Flic en Flac,Mauritius,17th June 2011. REPORT/RAPPORT: SF/2011/02. August/Août 2011. SmartFish Programme Indian Ocean Commission. (51 pages)

3. Rapport de la réunion de présentation du programme SmartFish aux points focaux – Flic en Flac,Ile Maurice, 15-16 juin 2011. REPORT/RAPPORT: SF/2011/03. August/Août 2011. SmartFish Programme. Indian Ocean Commission. (55 pages)

4. Eco-Certification for the Tuna Industry, Technical Assistance for Implementation of a Regional Fisheries Strategy for ESA-IO (IRFS). REPORT/RAPPORT: SF/2011/04. May 2011. SmartFish Programme. Indian Ocean Commission. (40 pages)

5. Regional Market Assessment (Supply and Demand). REPORT/RAPPORT: SF/2012/05. March/Mars 2012. SmartFish Programme. Indian Ocean Commission. (264 pages)

6. Trade Assessment Study. REPORT/RAPPORT: SF/2012/06. March/Mars 2012. SmartFish Programme. Indian Ocean Commission. (120 pages)

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8. Value Chain Assessment of the Artisanal Fisheries – Mauritius. REPORT/RAPPORT: SF/2012/08.June/Juin 2012. SmartFish Programme. Indian Ocean Commission. (85 pages)

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*11. A Review of Somalia's & (Semi-Autonomous Regions) Fisheries Legislation and Management.*REPORT RAPPORT: SF/2012/11. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (49 pages)

12. Assessment of IUU Activities On Lake Victoria. REPORT/RAPPORT: SF/2012/12. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (130 pages)

13. Review Of The Legal Framework for the ESA-IO Region. REPORT/RAPPORT: SF/2012/13. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (149 pages)

14. Comprehensive capacity review to implement effective MCS in the ESA-IO Region. REPORT/ RAPPORT: SF/2012/14. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (101 pages)

15. Assessment of IUU Fishing in Lake Tanganyika. REPORT/RAPPORT: SF/2012/15. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (58 pages)

16. Spirulina – A Livelihood and a Business Venture. REPORT/RAPPORT: SF/2012/16. SmartFish Programme. June/Juin 2012 Indian Ocean Commission. (45 pages)

17. Diversification Study (Eco-Tourism and Recreational Fisheries). REPORT/RAPPORT: SF/2012/17.June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (71 pages)

18. Value Chain Analysis of Fisheries Sector for Rodrigues. REPORT/RAPPORT: SF/2012/18. June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (85 pages)

19. Dagaa Value Chain Analysis and Proposal for Trade Development. REPORT/RAPPORT: SF/2012/19.June/Juin 2012 SmartFish Programme. Indian Ocean Commission. (51 pages)

20. Operationalization of Fish Auction Market. (Feasibility Study). REPORT/RAPPORT: SF/2011/20. December/Décembre 2011 SmartFish Programme. Indian Ocean Commission. (53 pages)

21. Options to Reduce IUU Fishing in Kenya, Tanzania, Uganda and Zanzibar: REPORT/ RAPPORT:SF/2012/21. August/Août 2012 SmartFish Programme. Indian Ocean Commission. (99 pages)

22. Revitalization of Fisheries Research in Mauritius. REPORT/RAPPORT: SF/2012/22. August/Août 2012 SmartFish Programme. Indian Ocean Commission. (63 pages)

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24. Une Analyse Globale de la Chaîne D'approvisionnement de la Pêcherie du Crabe de Mangrove (Scylla serrate) à Madagasar. REPORT/RAPPORT: SF/2012/24. August/Août 2012 SmartFish Programme. Indian Ocean Commission. (81 pages)

25. Analyse Globale de la Gouvernance et de la chaîne D'approvisionnement de la Pêcherie du concombre de mer à Madagasar. REPORT/RAPPORT: SF/2012/25. August/Août 2012 SmartFish Programme. Indian Ocean Commission. (98 pages)

26. Processing and Marketing of Small-Sized Pelagics in Eastern and Southern Africa. REPORT/RAPPORT: SF/2012/26. August/Août 2012 SmartFish Programme. Indian Ocean Commission. (42 pages)

27. Report of the Second Steering Committee Meeting of the SmartFish Programme. REPORT/RAPPORT: SF/2011/27. August/Août 2012. SmartFish Programme Indian Ocean Commission. (29 pages)

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33. The Feasibility of Aquaponics in Mauritius. REPORT/RAPPORT: SF/2013/33. August/ Août 2012 SmartFish Programme. Indian Ocean Commission. (63 pages)

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35. Partners Meeting on Fisheries Strategy for the Esa-Io Region. REPORT/RAPPORT: SF/2012/35.July/Julliet 2013 SmartFish Programme. Indian Ocean Commission. (93 pages)

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41. *Auto-évaluation des pêches comoriennes par les pêcheurs.* REPORT/RAPPORT : SF/2013/41. April/Avril 2012 SmartFish Programme. Indian Ocean Commission. (78 pages)

42. *Report of the third steering commitee.* REPORT/RAPPORT : SF/2013/42. April/ Avril 2012 SmartFish Programme. Indian Ocean Commission. (23 pages)

43. *Third national focal point meeting.* REPORT/RAPPORT : SF/2013/43. April/Avril 2012 SmartFish Programme. Indian Ocean Commission. (25 pages)

44. *Inventaire et évaluation des capacités des organisations professionnelles de pêcheurs des pays de la COI*. REPORT/RAPPORT : SF/2013/44. April/Avril 2012 SmartFish Programme. Indian Ocean Commission. (77 pages)

SmartFish is a regional fisheries programme managed by the Indian Ocean Commission, funded by the European Union and co-implemented by the Food and Agriculture Organization of the United Nations. SmartFish, which operates in twenty countries throughout the Indian Ocean Region, Southern and Eastern Africa, focuses on fisheries governance, management, monitoring control and surveillance, trade, and food security.

Blue Tower, 5th floor, Rue de l'Institut
Ebene, Mauritius
Tel: (+230) 402 61 00
Fax: (+230) 466 01 60
www.coi-ioc.org
www.smartfish-coi.org