

NEPSUS Working Paper 2019/2

**Governance of Coastal Resources in Southern Tanzania:
Comparing Beach Management Units and the Mnazi Bay
Ruvuma Estuary Marine Park**

Opportuna L. Kweka, Robert E. Katikiro, Rasul A. Minja, Faraja D. Namkesa

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Governance of coastal resources in Southern Tanzania: Comparing Beach Management Units and the Mnazi Bay Ruvuma Estuary Marine Park

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Abstract

This paper compares two type of partnerships for management of coastal resources in Tanzania: Beach Management Units (BMUs) and the Mnazi Bay Ruvuma Estuary Marine Park (MBREMP). It examines their configuration of actors, governance systems and sustainability outcomes. Drawing from a triangulated analysis of interviews, focus groups, surveys, oral histories, participant observation and secondary data, the paper provides a mapping of the actors involved in these partnerships and their networks; and examines their legitimacy in terms of input, process, output and social and ecological outcomes as perceived by local communities living.

Preliminary findings suggest that neither partnership seem to have yielded the expected socio-economic and ecological outcomes. Both face governance challenges related to structural, financial and participatory failures. Both are poorly equipped and the funds accrued from fines and fees are not enough to support alternative livelihood activities or provide alternative fishing gear. Communities see these partnerships as focusing on conservation and as having failed to address major social and economic needs. The structures of the BMUs and MBREMP need to be revised thoroughly to improve the actual role of communities and fishers in the governance of coastal resources. This would improve a sense of ownership and increase cooperation and trust. The benefits accrued from the income resulting from fees or fines must be transparent and shared broadly, no matter how small, as it would improve stewardship. Another important way to support fishers and limit pressure on resources near to shore would be to facilitate access to boats and gear to allow them to fish in the deep sea.

List of Acronyms

BMU	Beach Management Unit
CFMA	Collaborative Fisheries Management Area
DMRS	Dar es Salaam Marine Reserves System
FGD	Focus Group Discussion
GMP	General Management Plan
KII	Key Informant Interview
MATT	Multi-Agency Task Team
MACEMP	Marine and Coastal Environment Management Program
MBREMP	Mnazi Bay-Ruvuma Estuary Marine Park
MIMP	Mafia Island Marine Park
MP	Marine Park
MPA	Marine Protected Area
MPRU	Marine Parks and Reserves Unit
NEMC	National Environment Management Council
NEPSUS	New Partnership for Sustainability
NGOs	Non-Governmental Organizations
RIPS	Rural Integrated Project Support Programme
TACMP	Tanga Coelacanth Marine Park
TASAF	Tanzania Social Action Fund
URT	United Republic of Tanzania
VLC	Village Liaison Committee
VICOBA	Village Community Banking
WWF	World Wildlife Fund

Table of Contents

1. Introduction	8
2. Methodology.....	8
2.1. Characteristics of the Study Site	8
2.2. Selection of the Study Sites	9
2.3. Data Collection Methods	10
2.4. Data Analysis Methods	11
2.5. Scoring Complexity.....	12
3. Actors and Networks in Simpler Partnerships – the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP).....	16
3.1. Brief Background.....	16
3.2. Actors and History of Establishment of MBREMP	17
3.3. Current Operation of MBREMP and Relations Between Actors.....	21
3.4. Actors and Networks in More Complex Partnerships: Beach Management Units	24
3.4.1. History of BMUs in Tanzania and Collaborative Fisheries Management Areas	24
3.4.2. Structure of BMUs in Tanzania	25
3.4.3. BMU Actors, Roles and Networks	27
4. The Legitimacy of Partnerships: A Comparative Analysis.....	29
4.1. Input Legitimacy.....	30
4.2 Process Legitimacy	38
4.3 Output Legitimacy.....	39
4.4. Outcome Legitimacy	43
4.4.1. Perceived Costs and Benefits of Partnerships	43
4.4.2. Perceptions on Changes in Livelihoods.....	44
4.4.3. Perceptions of Changes in the Ecology	48
5. Conclusion	52

List of Figures

Figure 1. Organizations Involved in Management of Coastal and Marine Resources.....	12
Figure 2. Connections to Members of Village Natural Resource Committees.....	13
Figure 3. Distribution of Network Complexity by Governance Type.	15
Figure 4. Actors and Their Networks in Four Selected Villages in MBREMP (1995-2018)..	2020
Figure 5. Actors in BMUs and Their Networks.....	28
Figure 6. Knowledge on Conservation.	31
Figure 7. Knowledge on the Objectives of the Partnership.	32
Figure 8. Perceptions on Fairness, Clarity and Acceptance of Rules.	40
Figure 9. Rules Considered to Be Unfair.....	41
Figure 10. Costs and Benefits of Partnerships to Individuals.	43
Figure 11. Perceptions on Changes in Livelihood Conditions in The Past 5 Years.	45
Figure 12. Perceptions on Causes for Decline in Livelihoods.	45
Figure 13. Perceptions on Causes for Improvement in Livelihoods.	46
Figure 14. Relationship Between Respondents Primary and Secondary Livelihood Activities.	47
Figure 15. Household Assets.	48
Figure 16. Causes of Fish Stock Increase/Decrease.	49
Figure 17. Changes in Mangrove Forest for the Past Five Years.	50
Figure 18. Changes in the Coral Conditions in the Past 5 Years.	51

List of Tables

Table 1. Registered Fishers and Equipment in Mtwara Rural District.....	9
Table 2. Ex-Ante Selection of Villages and Their Categories.	10
Table 3. Number of KIIs, FGDs and Household Questionnaires.	11
Table 4. Number of Actor Categories in MBREMP and BMUs.....	13
Table 5. Complexity Scoring for Institutional Setup.	14
Table 6. Marine Protected Areas of Mainland Tanzania.	16
Table 7. Main Actors in MBREMP and Their Interests and Obligations.	18
Table 8. Actors in BMUs and Their Roles and Interests.	27
Table 9. Compliance with Partnership Rules and Regulations.	37
Table 10. Attendance in Village and Partnership Meetings.	38
Table 11. Selected Reasons for Attending or Not Attending Partnership Meetings.....	39

1. Introduction

This paper is part of the research output of a larger project (New Partnerships for Sustainability, NEPSUS). It is informed by NEPSUS Working paper 1, 4 and 5 on conceptual framework, literature review and background respectively.¹ The aim of the current working paper is to present descriptive findings on the governance of two forms of management of coastal resources: Beach Management Units (BMUs) and the Mnazi Bay Ruvuma Estuary Marine Park (MBREMP).

We will show that MBREMP can be considered a ‘simpler partnership’, with the central government is the main driving actor and local communities are involved as partners. It is dominated by a top-down approach to the governance of marine resources with limited space for accommodating various ways of organizing and perceiving social relations in the management plan. We will also argue that BMUs are ‘more complex’ partnerships, with a community-based co-management system that is under the supervision of the local government fisheries office and is supported by non-governmental organizations (NGOs) and other partners.

This paper is structured as follows. The introduction and the methodology sections are followed by a section discussing the conceptual framework, which includes an explanation of how complexity is defined and measured. The next section examines the legitimacy of these partnerships, focusing on input, process, output and outcome legitimacy. A brief conclusion summarizes the provisional findings of the NEPSUS case study on coastal resources governance.

2. Methodology

2.1. Characteristics of the Study Site

This study was conducted in the Mtwara rural district, located in southern part of Tanzania. The district has a population of 228,000 inhabitants (NBS, 2012), a population density of 57 people per km² (NBS, 2012) and covers an area of approximately 4000 km². Our research focuses on three coastal resources – fish, mangrove and corals - which often co-exist and influence each other. We are aware that there are other relevant coastal resources, but these three are the most important for the livelihoods of coastal communities in this district, where fishing accounts for 12% of economic activity (MLFD, 2018). These communities face several challenges associated with fishing activities, including illegal fishing practices such as dynamite fishing and the use of beach seines, both of which destroy corals and the seabed. At the time of our fieldwork in 2017 and 2018, Mtwara region was the main centre of

¹ See www.NEPSUS.info

dynamite fishing, which led the government to establish a multiagency task team (MATT²). One of its roles is to target individuals and networks that control and support dynamite fishing activities. The operation of this team was on-going at the time of fieldwork.

When we started the fieldwork in 2017, respondents were reporting a decrease in fish catches and that they had used mangrove and corals for building purposes and for livelihood activities in the past. However, they also reported that the use of mangrove and corals for building purposes was decreasing due to improved availability of relatively cheap cement thanks to improved road networks in southern Tanzania and the recent construction of the largest cement factory in the country by Dangote Industries Tanzania Limited³ in Mtwara town. Other factors mentioned in relation to pressure over coastal resources are climate change, population growth, low levels of education and lack of employment. Several efforts to replant mangroves were taking place with the support of WWF and the Tanzania Social Action Fund (TASAF).

In Mtwara rural district, fishing is one of the top three reported livelihood activities, after farming and business. Table 1 shows the total number of registered fishers in the six coastal villages of the eight selected in our project, as reported in the 2018 Frame Survey.

Table 1. Registered Fishers and Equipment in Mtwara Rural District.

Village	Number of fishers	Traps	Hook and line	Nets	Spears	BS	L/L	FN
Msimbati	171	94	9	-	-	39	-	13
Namela	113		42	266	2			
Msangamkuu	239	26	-	256	10	-	13	
Mgao	200	5	32	23	21	-	-	-
Mkubiru	236	7	8	392	37	-	-	-
Kisiwa	62	6	60	-	-	9	1	-

Source: Mtwara rural district frame survey, 2018

2.2. Selection of the Study Sites

A total of eight villages were selected for this study of which four were from the Marine Park (MP) area and four from the BMUs (Table 2). Within the MP area, two villages (Msimbati and

² The Task Team is led by the Tanzania Police Force and includes the Tanzania Forest Services, the Wildlife Division, Fisheries Division, Tanzania Intelligence and Security Services as well as seeking engagement with the criminal justice system [<http://www.imcsnet.org/wp-content/uploads/2016/07/Stop-IUU-Fishing-Award-IOC-Multi-agency-Task-Force-MATT-against-blast-fishing.pdf>]

³ A subsidiary of Dangote Cement, Africa's leading cement producer with operations in 10 African countries.

Mkubiru) were selected from the coastal area and two (Namindondi and Mahurunga) were selected from the inland area. These villages are part of the park but are more focused on farming than fishing. Mkubiru was originally part of Nalingu village, which is known for being one of the villages that opposed the establishment of the MP and still does not support its activities fully. As for BMU areas, two villages were selected among those which had established a BMU earlier (Mgao and Msanga Mkuu) and two which established it more recently (Namela, which was formerly part of Msanga Mkuu village, and Kisiwa which, which was part of Namgogoli village). Given that these villages were formed later in time, the BMUs were established later as well. The late formation of these villages has a key relevance due to the impact that it has had on the way BMUs governance has been formed. There were no control sites for the coastal resource sector because all registered coastal villages need to be part of a BMU per regulation.

Table 2. Ex-Ante Selection of Villages and Their Categories.

	MBREMP	BMUs
Early entry	Msimbati (coastal)	Mgao, Msanga Mkuu (coastal)
	Mahurunga (inland)	N/A
Late entry	Mkubiru (coastal)	Namela, Kisiwa (coastal)
	Namidondi (inland)	N/A

Source: NEPSUS fieldwork, 2017/8.

2.3. Data Collection Methods

We collected data using a number of methods. Individual interviews (KII), a survey and focus group discussions (FGDs) were the main methods, but were complemented by participant observation, oral histories, and a review of secondary data. The study began with key informant interviews and FGDs, followed by a systematic random sample of 40 heads of households in each of the eight selected villages for the survey. Separate FGDs were carried out with village leaders and regular villagers. Information was also collected through oral histories provided by individuals with vast knowledge and previous experience, such as divers and elders. Table 3 shows the number of KII, FGDs and questionnaires conducted. A total of 502 respondents were involved in the study.

Table 3. Number of KIIs, FGDs and Household Questionnaires.

Type of partnership	No of KIIs	No of FGDs	No of household questionnaires
BMUs	71	7	179
MBREMP	62	8	175
Total	133	15	354

Source: NEPSUS fieldwork, 2017-2018.

To compute complexity scores based on the governance networks in which villages are involved (see below), the research team collected social network data at the village level. The team used three sources of information on village resource management networks.

First, the research team consulted the village guestbooks as far back in time as they were available. All village visitors are obliged to sign the village guestbook, which record visits from corporations, NGOs, donors and government officials. This information helped the team construct initial lists of potential village collaborators.

Second, the team interviewed Village Councils and Village Natural Resource Committees, asking mandated members of the councils and committees about the organizational partners with whom they were collaborating on issues of sustainable resource management. Lists of organizations from the guestbooks informed interview questions about village partners. Third, the team consulted policy and conservation project documents. During the interviews and document coding, the team developed a coding scheme distinguishing three forms of collaboration: governance, technical and financial. Informants were asked about the timing of collaborations for five-year increments, starting from 2000. These sources provided information on the direct ties (including collaboration form) between villages and what we called their 'natural resource management partners'.

The next step consisted in conducting interviews with the partners about their collaborations with the villages. These interviews represented not only a source of triangulation to establish with more certainty whether the collaboration was mutual, but also provided an opportunity to investigate whether the partners had any ties with other partners. As a matter of fact, the data set contains village-level ego nets, including both the actors that the village is connected to (village alters) and the connections among those actors.

2.4. Data Analysis Methods

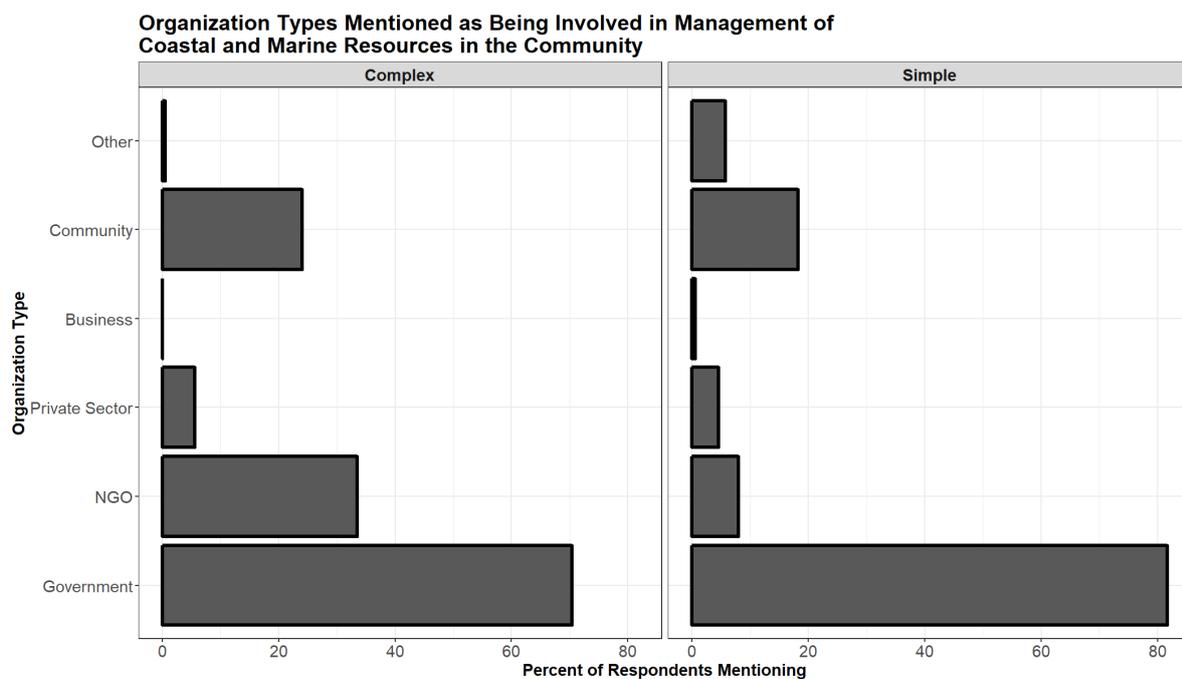
Social network analysis software was used to map actors and to assess centrality measures in networks. Analysis of the qualitative data with NVivo12 was done in groups first using a

common set of agreed nodes. Multiple coding by different individuals of the NEPSUS team of researchers was done later to minimize the bias that might have risen in the coding. The survey data was analyzed with SPSS and R. The survey was mainly used to measure perceptions of villagers on a variety of measures related to the partnerships.

2.5. Scoring Complexity

The task of scoring complexity was done in two stages: before fieldwork to select locations (see above) and after fieldwork to test our hypothesis that there was substantial difference in complexity between BMUs and MBREMP. Figure 1 shows the number of actors involved in the respective partnerships as reported by respondents who are involved in the management of the coastal resources. The difference between the two is mainly attributable to the clearer engagement of NGOs in BMUs.

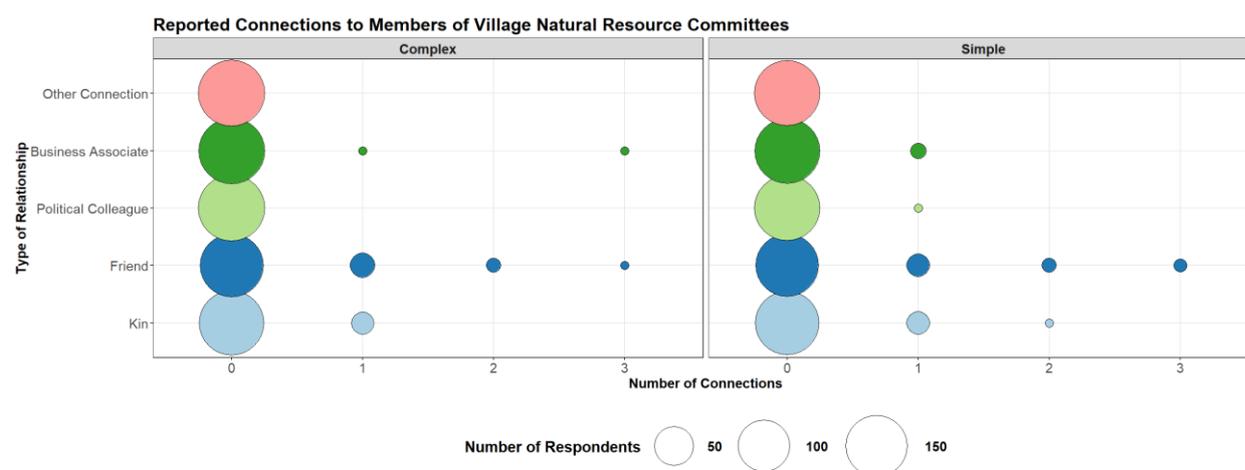
Figure 1. Organizations Involved in Management of Coastal and Marine Resources.



Source: NEPSUS survey

Since partnership entails working together in an interconnected manner, we also applied Social Network Analysis to measure if the respondents are connected to the actors mentioned above. Figure 2 shows the respondents' ties with the identified partners. The figure reveals that in both the simpler (MBPREMP) and more complex (BMUs) partnerships communities have more connections to each other (with friends or next of kin) than to other actors. This can represent one of the challenges in the management of both since a kinship-based system may be leading to poorer governance (Kearney, Berkes, Charles, Pinkerton, & Wiber, 2007).

Figure 2. Connections to Members of Village Natural Resource Committees.



Source: NEPSUS survey

Table 4. Number of Actor Categories in MBREMP and BMUs4.

	Partnership characteristics	
	Simpler (MBREMP)	More Complex (BMUs)
<i>Categories</i>		
Central government and/or other government agencies and parastatal agencies	1	1
Villages/Local communities	1	1
Private/Business	1	1
CSOs (local)	0	1
CSOs (international)	1	1
CBOs (CFMA/BMU)	0	1
Local government	0	1
Other groups	0	1
<i>Total score (out of 10)</i>	<i>4</i>	<i>10</i>

Source: Authors, 2019.

Table 4 shows how complexity in terms of actor participation was scored in the two types of partnerships. MBREMP is regarded in this study as a simpler partnership, with a score of 4, whilst BMUs as more complex forms of partnerships, with a score of 10.

⁴ 1 means applicable.

A second way of measuring complexity is related to the institutional set-up of the partnerships: this is based on information generated in the survey and through the qualitative data analysed with NVivo. The institutional mapping was done drawing on the review of literature (Kweka, Katikiro, Minja, & Namkesa, 2017) with the aim of reflecting a number of important attributes that the literature suggests may have important influence on the configuration of different partnerships. In this case, the scoring systems uses a ‘simpler’ partnership benchmark (where maximum two actors are the main partners) and proceeds with the logic that the governance of partnership which involves more than two actors is ‘more complex’. In this context, governance is assessed using four criteria: ownership, management, benefit sharing and distribution of revenue. Table 5 shows the complexity of governance in the two partnerships with a total score of one being perfect complex.

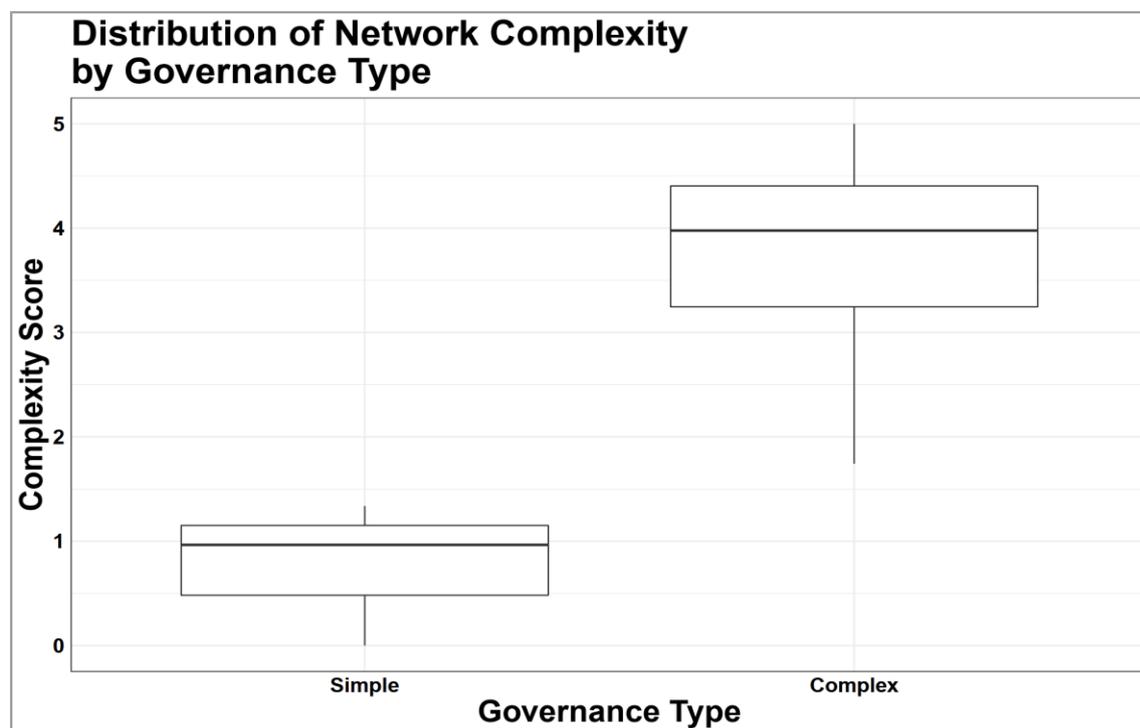
Table 5. Complexity Scoring for Institutional Setup.

Complexity of the institutional setup	Simpler (MBREMP)	More Complex (BMU)
Ownership more than 2)	0	1
Management (more than 2)	1	1
Benefit shared to more than two actors	0	1
Distribution of revenue goes to more than two actors	0	1
<i>Total score (out of 4)</i>	1	4

Source: Authors, 2019.

The actors’ categories networks are discussed to a greater extent in a forthcoming NEPSUS paper dedicated to social networks analysis. The underlying assumption is that the more the complex a partnership is, the more likely it will include more actors and hence it will be regarded as being more legitimate. What we are interested in testing is whether sustainability outcomes are better in more complex partnership that have better legitimacy, as much of the literature assumes.

Figure 3. Distribution of Network Complexity by Governance Type.



Source: NEPSUS survey

A third measure of complexity was approached by using social network data.⁵ We extracted individual networks for each village to measure: (1) we measured the diversity of activity in each village's individual networks, in terms of diversity of both actor and edge types. To measure the concentration of network power, we also computed the measure using different actor types' share of edges in each village's individual networks; (2) to measure connectivity in the network, we calculated the average number of edges for a typical network node; (3) to measure cross-sector connections, we computed the average degree measure considering only edges connecting organizations of different types, and by weighing the edges by the number of edge types involved in order to capture diversity in the types of connections across sectors; and (4) we presumed that larger networks imply greater complexity, so we calculated the total number of organizations in each village's individual networks.

In order to be able to compare these measures across different sectors and networks, we first converted each of the above measures to standard deviations – computations were carried out separately for villages in each resource group (forestry, coastal and wildlife). We then summed up these scores and rescaled the summed value to range between 0 and 5 with the aim of generating the final network complexity index. As Figure 3 shows, there is substantial

⁵ This analysis was carried out by Lasse Folke Henriksen and Caleb Gallemore.

difference between the scores of BMUs (labelled as more complex) and MBREMP (labelled as simpler) – which confirms the solidity of our selection.

3. Actors and Networks in Simpler Partnerships – the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP)

3.1. Brief Background

In Tanzania, marine protected areas (MPAs) are classified into two types: marine parks (where extractive and non-extractive activities are allowed) and marine reserves (no-take areas where extractive activities and disturbance are strictly prohibited). Currently, there are three marine parks in Tanzania – Mafia Island Marine Park (MIMP), Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) and Tanga Coelacanth Marine Park (TACMP) – and 15 marine reserves, all operating under the Marine Parks and Reserves Unit (MPRU) which is a semi-autonomous body under the Ministry of Livestock and Fisheries Development. MPRU is responsible for the overall management of MPAs in mainland Tanzania. A summary of the main characteristics of MPAs in mainland Tanzania is provided in Table 6.

Despite having a territorial sea of 32,000 km², only 2,173 km² of it is gazetted as MPAs. This is relatively low when compared with 40% of the terrestrial area that has been declared as wildlife and/or forest protected area (URT, 2014). Plans are already underway to increase coverage of MPAs from 6.5% in 2011 to 10% by 2020. However, these plans do not guarantee the achievement of the target given the remaining time and the current limitations in the implementation of marine conservation activities in Tanzania.

Table 6. Marine Protected Areas of Mainland Tanzania.

Type	Name	Location	Size (km ²)	Year est.
Marine Parks	Mafia Island Marine Park (MIMP)	Mafia district	822	1995
	Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP)	Mtwara district	650	2000
	Tanga Coelacanth Marine Park (TACMP)	Tanga and Muheza districts	554	2009
Marine Reserves	Dar es Salaam Marine Reserve System (DMRS)-North: Bongoyo, Mbudya, Pangavini, Funduyasini	Dar es Salaam region	350	1975
	South: Kendwa, Inner and Outer , Inner and Outer Sinda		58	2007

	Mafia Marine Reserves System- Nyororo, Shungimbili, and Mbarakuni	Pwani region	21	2007
	Tanga Marine Reserves System- Ulenge, Kwale, Mwewe, and Kirui	Tanga municipal council and Mkinga district	52	2010
	Maziwe Marine Reserve	Pangani district	2.6	1975

Source: Authors, 2019, compilation from various reports.

Protection of marine biodiversity in Tanzania is of great significance because the ecosystems found therein are of high natural and socio-economic value and are currently facing a range of threats. Many people along the coast and in the interland areas are highly dependent on the goods and services provided by marine ecosystems such as fisheries, tourism and coastal protection from storms. These ensure livelihoods, food security, well-being and cultural values. Increasing human activities, including recent ongoing exploration of natural gas and oil in offshore fields, are putting the ecosystems at significant risks. As natural gas exploration started to expand, communities within MP villages felt that the presence of such giant economic activities has not yielded the expected benefits. One key informant blatantly echoed that all along they were observing the dominance of people coming from outside their villages.⁶ Key informants also mentioned the lack of compliance with conservation regulations by gas companies such as companies discharging waste water into the sea on several occasions.⁷ While the conservation and extraction was expected to take the model referred to as co-existence (interview with Machumu), the model was never operationalized. The lack of implementation of the model constituted a threat to the marine biodiversity. Besides gas exploration activities, marine ecosystem in Tanzania, like in many regions of the world, face a myriad of stressors including destructive fishing practices, over-fishing, rapid population growth, growing markets and increasing coastal development (Berdej, Andrachuk, & Armitage, 2015).

3.2. Actors and History of Establishment of MBREMP

Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) is the second marine park that was established in Tanzania, after MIMP. It covers an area of 650 km² of which 450 km² is land area. The rest 200 km² are marine areas, including mangroves, coral reefs, sand dunes, seagrass and pristine sand beaches. MBREMP was established in 2000 through what was supposed to be a consultative process that involved several stakeholders, including representative of local communities, district authorities, the Ministry responsible for natural resources, scientists and NGOs. This process began in 1998, but already in 1995 initiatives had already started in view of protecting biodiversity in the area currently occupied by MBREMP.

⁶ CRKII12032018

⁷ CRKKII137

These initiatives also led to the production of a report with recommendations to the government of Tanzania to consider the area as a priority for the designation of a marine park (Gawler & Muhando, 2004).

Prior to the establishment of MBREMP, preliminary ecological and social assessments were carried out to gather data on existing conditions of biodiversity and the socio-economic profiles of communities in this area. Most of these surveys took place between 1996 and 2000. The surveys offered baseline information that could be used to develop a management plan of the park (Tortell & Ngatunga, 2007). The appraisals of the surveys showed that the area supports a complex and diverse system of coral reefs, mangroves and sea grass beds. The assessments also indicated a high degree of dependence on marine resources for the local communities living in the area and that a majority of those communities were economically poor, with limited livelihood options besides fishing (Malleret, 2004).

Table 7. Main Actors in MBREMP and Their Interests and Obligations.

Types	List	Interests and obligations
Main actor	Park (MBREMP) authorities	Conservation of marine biodiversity and enhancement of local livelihoods; Governance of MBREMP;
Secondary actor	Villages in the marine park	Right to access and use the resources, VLC works with marine park to protect the resource, benefit from them
Partners	NGOs	Work with marine parks or communities or other partners in the marine park Keep community involved in marine conservation activities; Lobbying and advocacy; financing, education awareness
	Tourism business and other private companies	Extraction, profit, CSR, comply with marine park rules
	Local government	Have the people in the marine park, and village governments, Issue fishing licenses; Collect revenue from fishing and other resources

Source: NEPSUS fieldwork 2017-2018.

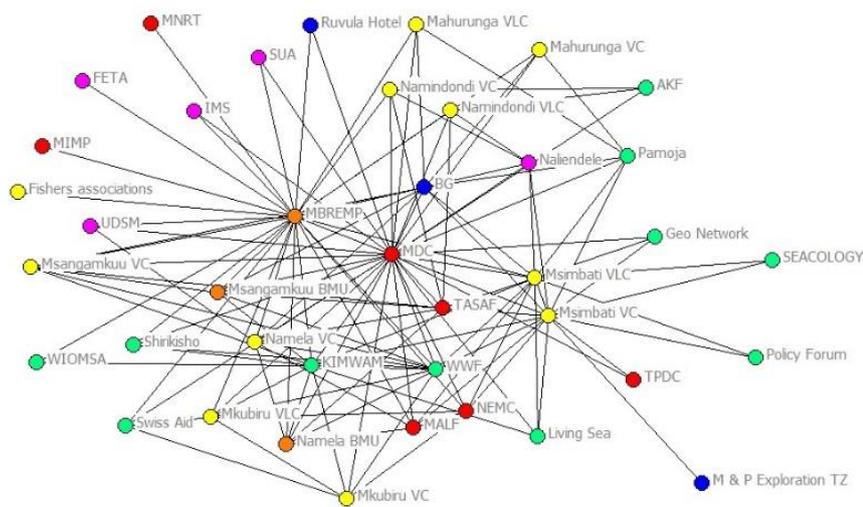
MBREMP is a state-controlled MP, just like all other MPs in Tanzania. The main implementing entity is the park management under the supervision of warden-in-charge. The team for implementing the operational activities of MBREMP includes wardens and park rangers that execute various duties ranging from enforcement, livelihood enhancement, research and monitoring, and environmental education. They are also responsible for day to day administrative tasks, including human resource management and accounting. Although the philosophy of the MP is that it should be community-driven (URT, 2005), the reality is quite different. Local community members are supposed to be represented in MP activities through Village Liaison Committee (VLCs) and the MBREMP advisory board. Nonetheless, the mechanisms of community representation remain vague and not functional. As a result, power seems to reside mostly in the park authority. In our survey, 57% of respondents said that the government, which in this case has invested in the park authority, is the only stakeholder with the sole responsibility of managing coastal and marine resources. Ninety-two percent of survey respondents explained that they were not involved directly in any activity or committee related to natural resource management.⁸

Different actors from each sector with a stake in the MP are known to have brought their own specific sets of power positions, roles and responsibilities as determined by values, skills and resources into the governance of marine resources. The governance of the MP is hierarchical – with the park administration at the top, followed by diverse groups of stakeholders and resource users.

Figure 4 shows the changes in the network of actors involved in MBREMP in four periods (1995 –1999, 2000 –2004 and 2005 –2009 and 2010 –2014). The number of actors has increased and new actors with different interests have emerged. While the Rural Integrated Project Support (RIPS) program was the main actor in the period 1995–1999, in 2000–2004 a number of local and international NGOs and academics got involved, mainly with the aim of providing technical expertise. In 2005–10, a larger number of business actors entered the network.

⁸ Survey question Q4.8.2

2015-2018 (MBREM, MDC, WWF, KIMWAM, Msimbati)



Source: Village and office visitors' books and interviews

The relationship among actors and how these have influenced the objectives of MBREMP has not been well documented so far in the literature. This mapping exercise tells a story of lack of stability of MBREMP's management as it depends on the funding from different, short-term sources. We also observe that there is a lack of structure in the working relationships between key actors. For example, there are no regular meetings between and among resource users (local communities) and tourist/hotel operators. The way VLCs and other voluntary groups such as honorary rangers interact with the MP is on ad hoc basis. Each group tends to work on their own. In the past however, it was thought that they could be meeting regularly for feedback and planning as remarked in one of the FGD:

*“Residents were invited to attend several meetings organized by the park management. The initial arrangement was that our Liaison Committee, which started with eight members (they are now 12), would meet with MBREMP after every four months. The last time we met was 2015 and there was only one meeting”.*⁹

3.3. Current Operation of MBREMP and Relations Between Actors

The operation of MBREMP continues in line with Tanzania's commitment to meet Aichi¹⁰ Target 11 which calls for the protection of at least 10% of coastal zone by 2020 (Thomas et al., 2014). Currently, MBREMP is implementing its action plan, which entails preserving

⁹ FGD1

¹⁰ In 2010 Parties to the United Nations (UN) Convention on Biological Diversity (CBD) agreed to reduce the rate of biodiversity loss within a decade by achieving 20 objectives that are commonly known as the Aichi Targets. Target 11 requires that biodiversity conservation be based on measures of ecological integrity that result from an ecosystem approach to management (Source: <https://www.cbd.int/doc/decisions/cop-10/cop-10-dec-02-en.doc>)

marine and coastal biodiversity as well as ensuring the sustainable development of fisheries in line with its general management plan. Through the MPRU, the government is responsible for financial and institutional support. This, however, does not curtail MBREMP from seeking financial assistance from other agencies, including international conservation organizations and the UNDP. Since the end of donor funding for MBREMP, a lack of adequate funding has been restricting the proper implementation of its activities. Much of the management strategy outlined in the general management plan has not been effectively implemented (NAO, 2018). Moreover, the GMP itself has not been reviewed despite the fact that there should be stakeholder consultative meetings to review and update it every ten years.

In the context of limited financial capacity and a limited budget from the government, some activities such as regular patrols to ensure compliance on resource user extraction activities, as well as awareness raising activities and environmental education, have decreased. This in turn has consequences on previous efforts undertaken to ensure that MBREMP meets its conservation and livelihood enhancement goals. A recent institutional performance audit carried out for the MPRU indicated the lack of safeguard as an indicator of poor performance (NAO, 2018), irrespectively of financial constraints. Moreover, such lack has led to the resurgence of illegal activities, conflict and lack of trust between MBREMP and various stakeholder groups. These challenges are increasing as MBREMP lacks funds to conduct regular meetings with the communities to iron out misunderstandings, conflicts and to work for a mutual cooperation. Given this situation, many villagers are complaining that the MBREMP has not performed according to their expectations.

Several other tensions characterise the relations between the MP and its stakeholders. One of these tensions is between the MP and gas companies since the latter operate through NGOs rather than government to achieve their corporate social responsibility goals. This has led to little involvement or direct support for MBREMP, although other companies such as Maurel and Prom (M and P) and Tanzania Petroleum Development Company (TPDC) work in direct contact with the communities in Msimbati and Madimba providing support in terms of social services (Kweka et al. 2018).

The MBREMP and NEMC are required to monitor the activities of the companies in relation to pollution. During a participant observation during a meeting of councils attended by one of our colleagues, it was very clear that there is also a tension between MBREMP and the district. While the district issues licenses to fishers and collects taxes, MBREMP tries to limit the number of fishers in order to restore the fish stock. The presence of these contrasting objectives – on the one hand the district's efforts to support livelihood and income activities, and on the other hand MBREMP's goal of promoting conservation – has an antagonistic effect to the goals of the partnership. While the communities struggle for their livelihoods and MBREMP works on the management of the resources, other actors also work to meet their own objectives. Overall, the three key actors - MBREMP, Mtwara District Council (MDC) and the community – tend to capitalize their own benefits instead of serving a common goal.

In a broad sense, a lack of appropriate strategies for information sharing, coupled with little trust has resulted in a poorly cooperative environment among actors. For instance, field research and interviews with key informants have often indicated information mismatch and leakages on patrol as well as on enforcement activities between MBREMP and other actors. Moreover, community members complain that the MBREMP often violates the agreement to include VLC members in patrol activities. On the other hand, MBREMP officials often complained about a lack of trust due to the perception that the police seem to circumvent the community and side with the culprits of illegal fishing. Marine police are also blamed by the park warden for their reckless handling of culprits, including instituting charges in a way that are eventually quashed during court hearings, as highlighted in a statement by one of the MBREMP officers:

“For example, villagers will seize illegal fishers and take them to police but in a couple of days they will see these people walking free after paying a peanut fine. This is the reason villagers decided to take action themselves”.¹¹

While it is clear that the MBREMP holds the sole power for the governance of the MP, in reality it is also evident that other actors have had a significant influence, especially during the establishment of the marine park. For example, NGOs - especially SHIRIKISHO (Southern Zone Confederation for the Conservation of the Marine Environment) - played a major role in sensitizing community members on the importance of conservation of marine biodiversity. The role of SHIRIKISHO in stopping dynamite fishing is undisputable (Katikiro & Mahenge, 2016). This organization is also reported to have played a key role in enhancing mutual understanding and in conflict resolution, particularly for villages such as Mkubiru, Nalingu and some parts of Msimbati, which had been harshly resisting the operations of MBREMP.

“GEF/UNDP gave the MPRU money to start the Mnazi bay marine park, IUCN – was the management agency -. In Mtwara they used local NGOs (SHIRIKISHO), which currently is not active.”¹²

In past, KIMWAM and SHIRIKISHO NGOs worked with MBREMP even though the terms of the collaboration were not clear, since they had been based on non-binding agreements. Some of these agreements are reported to be often violated, leading to misunderstandings that break trust and foster conflict. Interactions between the park authority and community members are also known to have been weak due to past failures in meeting the promises made during the early process of establishing the park.

The lack of formal collaborative mechanisms between MBREMP and relevant actors is, therefore, an important factor in explaining its troublesome operation. It spearheads conflicts of interest and causes unnecessarily strained relationships. In the past, working relations were

¹¹ CRKII137160318

¹² CRKII1470217

still reasonable as they were largely built on incentives. For example, MBREMP could shoulder costs for patrols, and thus officials from other agencies could join and get rewarded in the form of allowances. A lack of benefit sharing, particularly the supposed proportional distribution of gate-user fees with local communities, remains a problem in the current operation of MBREMP. MPRU regulations require that each park allocate 20% of their revenues to local communities. Collections at the MBREMP gates located at Msimbati and Kilambo have been low, also due to lack of tourist infrastructure that could attract visitors to the park. Despite low collections, community members are demanding that the funds are given to their villages. The marine park, however, collects all user fees in a common basket that is then disbursed by the MPRU to local communities and local government agencies.

3.4. Actors and Networks in More Complex Partnerships: Beach Management Units

3.4.1. History of BMUs in Tanzania and Collaborative Fisheries Management Areas

The requirements for the establishment of BMUs by local authorities as a tool to support fisheries management was stipulated by the Fisheries Act number 22 of 2003 (URT, 2003). BMUs are established under the administrative structure of fisheries department at the district level. According to URT (2003), a BMU is a group of devoted stakeholders in a fishing community whose main functions are the management, conservation and protection of fish in their locality in collaboration with the government. BMUs in Tanzania started to be established in late 1990s following the decline of fish catch and fisheries conditions in Lake Victoria. In the 2000s, the government then introduced BMUs nationwide. According to Kanyange, Kimani, Onyango, Sweenarain and Yvergniaux (2014), about 204 BMUs have been established along the coast of Tanzania.

The establishment of BMUs is also supported by the Fisheries regulations of 2009 which provide guidelines on the type of activities that BMUs should perform, as well as on how the structure of BMUs should look like. BMUs are formed at the village level and can establish Collaborative Fisheries Management Areas (CFMAs) with other BMUs in the same ward. The regulations¹³ require that a BMU should be composed of representatives of resident communities. Essentially, BMUs are supposed to represent fishing communities in a co-management arrangement where different actors are brought together to share responsibilities in resource management (Kanyange et al., 2014).

BMUs are considered to be decentralized units for management of fisheries resources (Ogwang, Nyeko, & Mbilinyi, 2009). The establishment of BMUs was conceived as the best solution to tackle problems behind the decline in fish catch in coastal Tanzania, since it allows

¹³ To qualify as a member of BMU, a person should possess the following characteristics: be a Tanzanian; be a fisher, a fish trader, a fish processor and/or any fisheries stakeholder; have been a resident of the coastal village/fish landing site for at least one year; be “ardent conservator” of the fishery resources; be of 18 years of age and above.

local communities to participate in resource management (Eggert & Lokina, 2010) and tackle some of the major factors for the decline of fish catch, including illegal fishing practices (Jentoft & Chuenpagdee, 2015).

In Mtwara, BMUs were first established by the government through the support of MACEMP¹⁴ in 2009. In 2013, WWF started a project to strengthen the existing BMUs and introduced new BMUs in villages which did not have it – as a way to show support for Mtwara district. In order to strengthen the existing BMUs, WWF provided training on awareness and capacity building to BMUs leaders, assisted them in establishing the BMUs (election, data, meeting, records keeping) and provided funds for different activities. They also supported the creation of CFMAs. In the four BMUs selected by NEPSUS for research, two CFMAs were formed: MKINAI (involving Mgao, Kisiwa and Namgogoli villages) and MNASI (involving Msanga Mkuu, Namela and Sinde villages).

3.4.2. Structure of BMUs in Tanzania

The structure of the BMU comprises the BMU General Assembly, the BMU Committee and three sub-committees. The General Assembly includes all registered members of a BMU and elects the BMU committee. As part of this process, a chairperson, vice chairperson, secretary, treasurer and any other position that is identified by the BMU guidelines are supposed to be elected. The committee includes members that represent boat owners, fishing laborers, fish processors, gear makers, fish mongers and traders (Ogwang, Odende, & Okwach, 2005). 30% of BMU executive committee should be women. However, we noted during fieldwork that there have been serious delays in conducting BMU general meetings due to poor attendance or lack of quorum. As a result, BMU committees are either elected by relatively few members or through members re-electing themselves. IN one of the BMUs we researched, the incumbent leadership decided to take over the responsibility of running the BMU after several unsuccessful attempts to hold a meeting for the election of new office bearers. Moreover, some of BMUs leaders have been suspected to be involved in illegal fishing business:

“BMUs supervision is not good. The BMUs’ leaders can’t educate me because they are also not perfect leaders. The BMUs’ leaders need to be close to the people. They need to be educated to leave the dynamite fishing. We should remove the difference in the BMUs. There are few in the BMUs who do what they want.”¹⁵

¹⁴ Marine and Coastal Environment Management Programme (MACEMP) was a six-year project which commenced on July 2005 under the support of the World Bank.

¹⁵ CRKII2K2408.

Sub-committees are given the task of implementing various activities under the BMU committee. They include a patrolling committee, a finance committee, a planning committee and a statistics committee. Some of their roles include: developing BMU management and development plans; prepare budgets; collect data on fish catch, value and gears; monitor, control and surveillance of possible illegal practices; cleaning of the landing sites; conflict resolution; authorization of fishing licenses to BMU members within their jurisdictional areas; and collection of membership subscriptions (URT, 2003).

In every BMUs, a statistic committee is responsible for data collection. Entrusted BMU members record data on fish weight, type of fish and where it was fished, as well as on gears used in fishing. These sub-committees are in reality active only in BMUs where data collection is supported by conservation NGOs. In other BMUs, their operations are hampered by limited resources, and particularly a lack of weighing/measuring equipment.

Another role of BMUs is that of monitoring, control and surveillance. BMUs undertake patrols to control illegal fishing activities. However, patrols are normally carried out along the coastline and not in deep water. This is due to the fact that patrolling teams lack modern boats to execute their tasks. Moreover, BMUs are not supported by the majority of village members, which raises concern on the safety and security of patrolling teams. As a result, patrols are not conducted regularly.

BMUs are entrusted to keep beach and landing site clean. Fisheries regulations require landing site to live up to specific hygiene standards. BMUs are also responsible for the collection of fees from fishers. In the areas studied, membership fees and license fees were actually collected. In fact, in order to obtain a fishing license, the fisher must get an authorization from the BMU leader and pay a fee. Fees that are collected are supposed to be used for BMUs activities. The BMU fee of TSh 2000 was seen by many fishers as an additional and unnecessary cost to bear.

"I do not have license because they [fisheries officers] normally come from January to April. Now, I need to go to the district office, the fare is 4,500 in addition to paying at the BMU the 2,000 and the license is 15,000. The we have to wait until the officer comes to the landing site. We need a letter from the BMU to get the license and this is increasing again the cost. BMU is just an institution for certain people who organize themselves. We think we do not need it here. We can organize ourselves and protect from illegal fishing." ¹⁶

¹⁶CRKII3M10March2018OK.

While the BMU is expected to support fishers' livelihoods, it is considered by many fishers as an entity placing an additional financial burden on them. Fishers also complain that the training is only done with the leaders and in urban areas and would like to see all villagers be trained.

3.4.3. BMU Actors, Roles and Networks

Table 8 list the actors, and their roles and interests, in each BMU in our study area. Actors include local NGOs, such as KIMWAM and SHIRIKISHO. KIMWAM has been mainly supporting fishers to form an association and helps to access loans for buying boats and other fishing gear. SHIRIKISHO has been pioneering the fight against dynamite fishing in the Mtwara region. Other actors include the Agha Khan Foundation, SWISSAID and Africare, which have supported various livelihood diversification efforts, such as fish farming and poultry rearing. Some of these actors are no longer working on the ground, but they may have influenced the livelihood outcomes in these areas.

A historical account of the actors and their interests reveals first a switch from the presence of development partners such as RIPS to an increasing role of non-state actors, such as NGOs, business and other civil society actors, and then a movement back to central state intervention (see Figure 5). In general, it is clear that the number of actors has increased, and that actors of different nature have become connected with the BMUs.

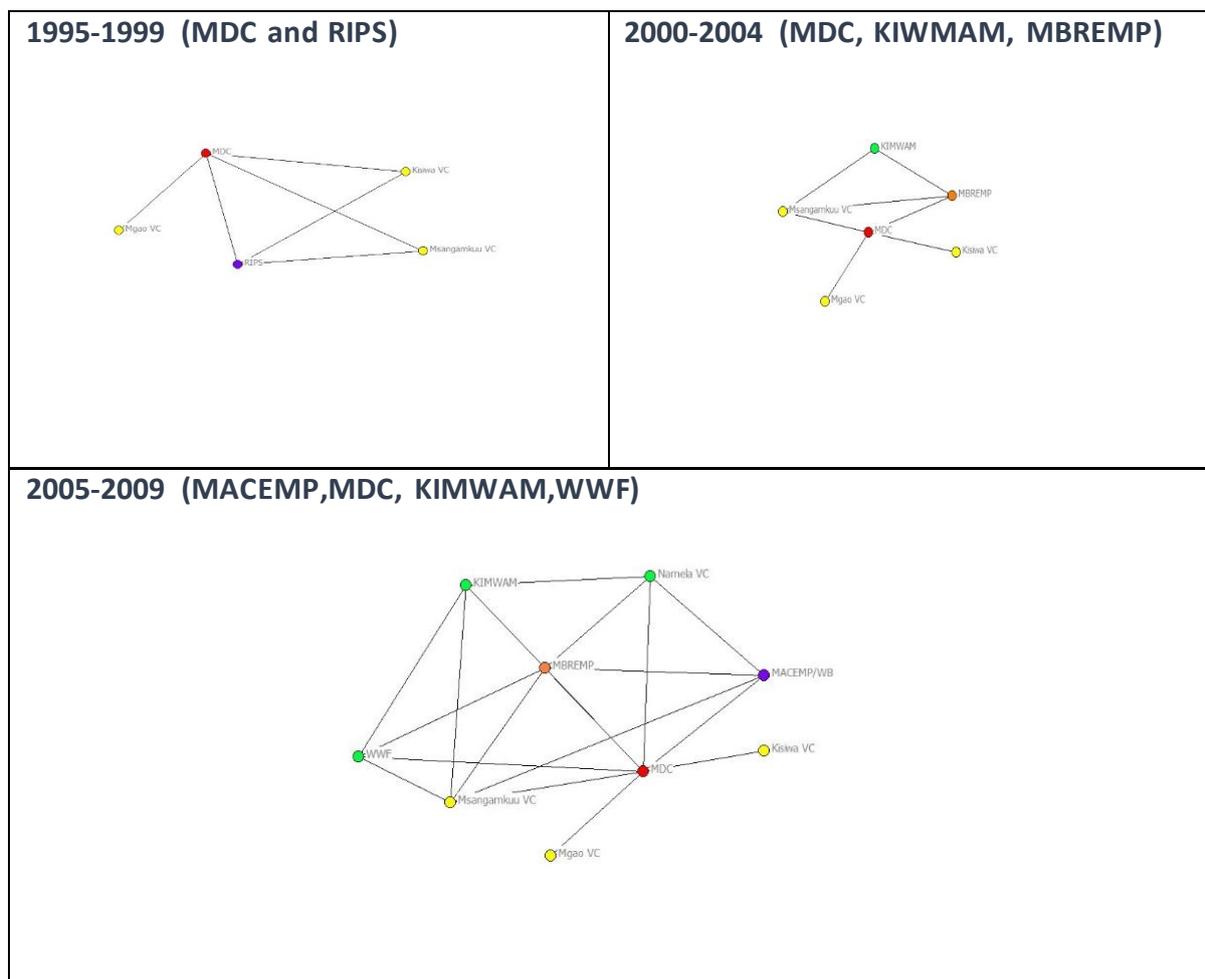
Table 8. Actors in BMUs and Their Roles and Interests.

Type of actors	List of actors	Interests and obligations
Main actor	Local communities (fishers, fish traders, mangrove cutters, gleaners,)	Extraction and protection of marine resources; Fishing activities; Habitat protection Location and physical access to resources; conservation
	Recreational users (site visitors, divers, snorkels, boat cruisers, water sports etc.)	Non-extractive use of marine resources; Contribute to the well-being and conservation efforts; Habitat protection;
	Fish traders	Fish trade
	Farmers	Crop cultivation and agro-forestry
	Curio sellers	Direct sales to tourists

	Seaweed farmers	Income generation from sales of seaweed
	Fish farmers	Production and sales of farmed fish
Secondary actor	Local government	Licensing fishing and fishing trade
Partners	NGOs (KIMWAM, SHIRIKISHO)	Sustainability of marine resources; capacity building and environmental education, loans.
	Central Government	Regulations and technical issues
Other actors	International NGOs (WWF, AghaKhan Foundation, SWISS AID, TASAF)	Livelihood support, poverty reduction, Capacity building/trainings

Source: NEPSUS fieldwork 2017-2018.

Figure 5. Actors in BMUs and Their Networks.



achieved)¹⁷ and outcome legitimacy (long-term benefits in terms of social and ecological sustainability). In relation to social sustainability, we assess perceptions of the communities as to whether their livelihoods have improved. In relation to ecological sustainability, we assess perceptions on the status of three resources – fish, mangrove and corals. We compare and contrast local perceptions on satisfaction with community involvement in the partnerships as well as performance of the partnerships' leadership, perceptions on fairness, clarity and acceptability of rules, participation in village assembly and partnership meetings, losses and benefits and the sustainability.

4.1. Input Legitimacy

In this sub-section, we assess the input legitimacy of MBREMP and BMUs, focusing specifically on the initial responses to the establishment of the two partnerships, and on whether and how partnerships gained recognition and became accepted as relevant alternative frameworks or supplementary collaborative arrangements to government initiatives. We measure input legitimacy in relation to knowledge and awareness of these partnerships.

Figure 6 compares knowledge on conservation issues in MBREMP (simpler partnership) and BMUs (more complex partnership). It shows that most communities correctly understood the majority of the conservation issues involved, with the exception of the perception that the government is the sole manager of coastal resources. When asked why they thought so (during our preliminary dissemination event), different interpretations arose. Some people held this perception because they need to call the police when illegal fishers are caught, others because they see the government intervening in what were supposed to be community tasks due to lack of trust to the community. Also compounding these views is that the President's office is now actually in charge of local government and regional authorities – instead of the Prime Minister's office as in the recent past.

¹⁷ NEPSUS Working Paper No. 1, 2017.

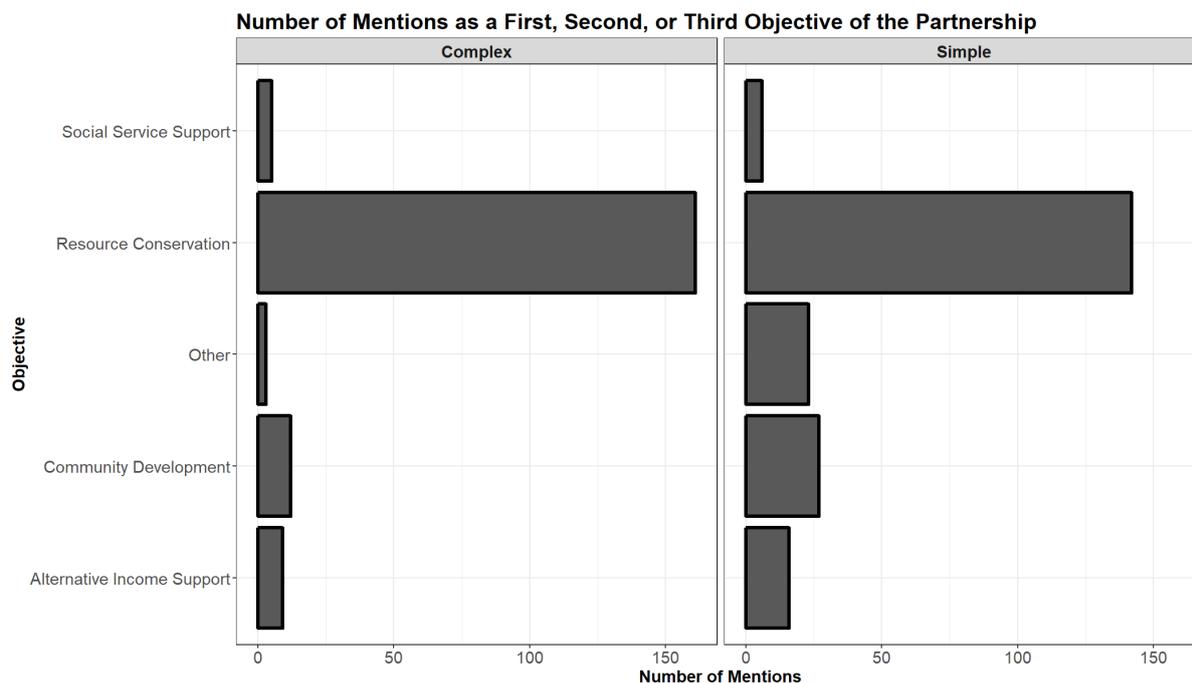
Figure 6. Knowledge on Conservation.



Source: NEPSUS survey

Two of the key features of input legitimacy are knowledge and awareness. We examined these in relation to the objectives of the partnership (see Figure 7). Being aware of the objective is conceptualized here as a first-hand measure of how villagers feel about being part of the partnership. Communities were also asked to mention what they thought were the first, second and the third objectives of the partnerships. Figure 7 shows that in both MBREMP and BMUs, the community understood conservation as the main objective of the partnership. Community development and alternative income objectives were also mentioned by many of the respondents in both kinds of partnerships.

Figure 7. Knowledge on the Objectives of the Partnership.



Source: NEPSUS survey

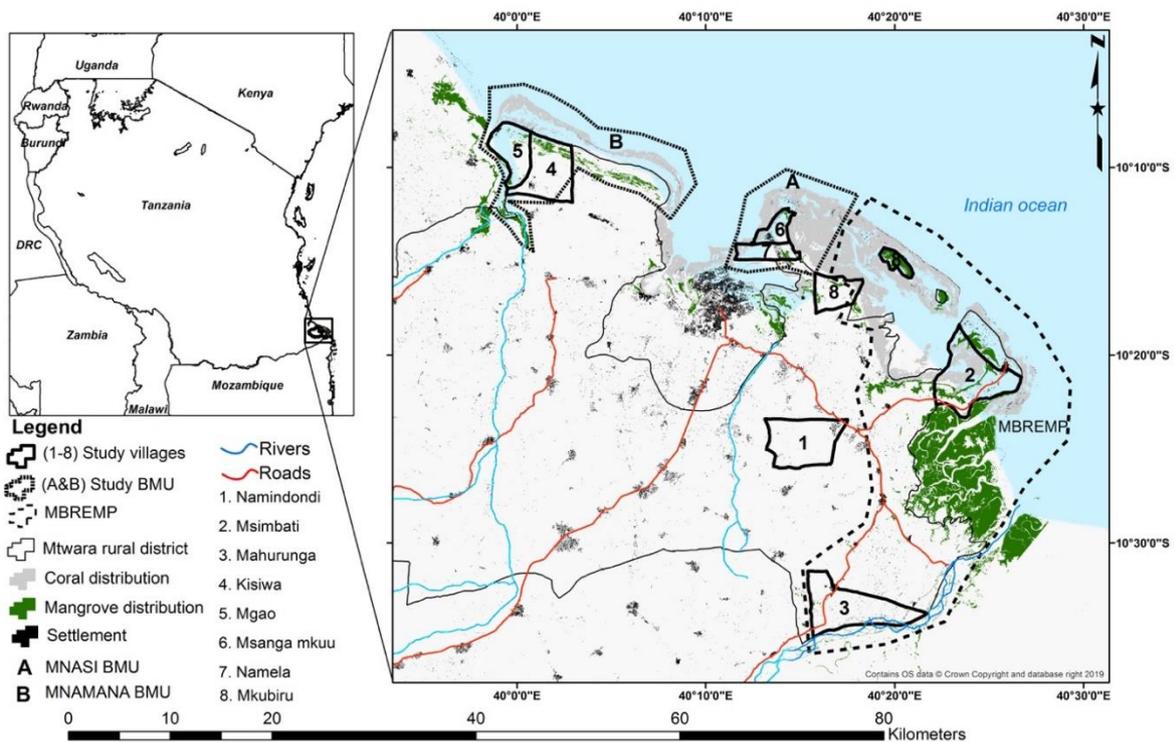
A series of events paved the way for the establishment of MBREMP, which is detailed in Ponte et al. (2017). After a series of consultation processes, community members from 10 villages and 7 sub-villages in the proposed park area adopted the Mtwara Resolution on MBREMP in April 1999. This was an important milestone towards establishment of MBREMP and signals some level of participation of various stakeholders in the designation of the MP. MBREMP started to operate in 2002, initially with 11 villages and 2 sub-villages.¹⁸ A few years later, growing resistance from Mkubiru and Nalingu villages escalated to the extent that these two villages wanted to abandon the MP. The reasons for rejecting the activities of MP varied from fear of access restrictions to fishing grounds, to stories that people heard from other marine parks when they were taken for a study visit to MIMP,¹⁹ to unfulfilled promises and lack of trust by some key community members.²⁰ Interestingly, interviews also revealed that the community perceived that they had not been informed clearly on the goals of the MP.

¹⁸ These were Msimbati, Mngoji, Madimba, Mitambo, Tangazo, Kilambo, Kihimika, Kitunguli, Mahurunga and Nalingu. The two sub-villages were Mkubiru and Mnazi. Currently both Mkubiru and Mnazi are full-fledged villages

¹⁹ CRFGD09

²⁰ CRFGD12160818

Map 1. Study Area and Selected Sites in Mtwara Rural District.



The process to establish MBREMP began with several consultative meetings with representatives of local communities. It is not clear how some of these representatives were appointed. While the borders of the marine park were supposed to be set with community participation to result in better compliance, the communities felt that the regulations of the marine park did not apply to them. There was also a widespread view that the marine park had a hidden agenda, as commented in one of the FGDs:

“When MBREMP came, they were not open to us. They didn’t tell us what they want to do and what communities should do. They were supposed to involve us and agree together. Initially, we collaborated well with them and the MBREMP provided training on living things (elimu viumbe). However, what annoyed us is when they suggested that we seek an alternative livelihood by fishing in deep waters.”²¹

Although the marine park structure was to be embedded in a participatory approach, there was a perception from some members of the community that the MP was set up as an imposition (i.e., a top-down approach). To date, the communities show a considerable lack of trust towards MP officials, as they were suspected of complicity with illegal fishers:

²¹ CRFGD13020817

“MP (officers) are not good because they are liars. They are only focusing on money as they notify illegal fishers via telephone calls about planned patrols; they tell them when they will be conducted so the fishers would not go fishing during scheduled patrols.”²²

The initial set-up of MBREMP was a two-phase 54 months project divided into a participatory planning phase of 24 months (2002-2004) and an implementation phase expected to last 30 months from 2005 to 2008 (Gawler and Muhando, 2004). The set-up phase was under the technical implementation of IUCN-EARO, which was required to report to UNDP and the government of Tanzania. The second phase was developed under direct government control (Tortell and Ngatunga, 2007). The transition between the two phases faced a number of problems including lack of agreement on what would be the role of IUCN in the second phase. This contributed to challenges in project implementation, including delays in implementing the management plan of the park. Furthermore, a lack of exit strategy from the funding agencies (UNDP/GEF and FFEM) led to an inefficient transition when MPRU took control of MBREMP activities (ibid). In both phases, staff, including wardens, were paid by the MPRU, and were considered government officials (ibid). Only the project technical advisor and the community conservation advisor were recruited by IUCN and paid by the project finances.

Through its livelihood enhancement program that began in 2005, the MP introduced several alternative livelihood projects, including providing fishing gear to various groups (Tortell and Ngatunga, 2007). Among the beneficiaries of this livelihood scheme were two fishing groups from Nalingu, which are alleged to have been practicing dynamite fishing. They were awarded with the intention to enable them to stop dynamite fishing, but the effort was taken with mixed feelings by the rest of the community as in their eyes it signaled the MP actually rewarding the wrongdoers.

The number of villages within the MP jurisdiction increased from 11 in 2000 to 22 in 2018. In some cases, this rise is attributable to the establishment of new villages, most of which were sub-villages of the original MP villages. In other cases, such as in Namidondi and Mtendachi, villages expressed interest in joining the MP with the expectation of benefiting from alternative livelihood projects and as a result of fears of not being allowed to access their fishing areas. In fact, the livelihood projects of UNDP benefitted those in the buffer zone more than those residing in the coastal villages, since these projects were awarded at the time when some of the coastal villages were fighting against the MP.

In our quest to establish how various actors and especially communities responded to partnership configurations related to governance and management of coastal and marine resources, we asked them to describe their reactions to their formation. From field experience, interviews and FGDs, we noted that the initial reactions to these forms of

²² CRFGD12160818

partnerships were at best mixed. Some communities accepted the MP and BMUs right away whilst others expressed their opposition but later changed their minds and welcomed them.

In MBREMP, besides members of communities who supported its establishment, there were also pockets of resistance, which in some instances were expressed in a form of a protest march by some villagers, e.g. the one that took place from Nalingu to Mtwara police station on 27 March 2003. As mentioned in one of the FGDs:

“They came after they heard the report that we marched to the central police station in the Municipality. They, henceforth, came to inquire what led a group of villagers (about 300) to stage a protest demonstration all the way to the central police station.”²³

Three reasons were given for opposing the idea of the MP. Firstly, there was a fear of an imminent restriction on fishing areas resulting from the creation of protected areas. For some local residents, the creation of the MP would lead to a delineation of protected zones over the ocean thus limiting their long enjoyed free access to fishing areas. There was fear that MP activities would severely affect their main source of livelihood, which is fishing. Some villages reported on how they refused to accept the MP and describe their “bitter relationships”:

“The relationship between MBREMP and local people was good in the early days. After a few years, people started to challenge the MBREMP including resisting their activities. This bitter relationship emerged due to the fact that people felt that they were going to lose access to fishing resources and that MBREMP was imposing rules and restrictions that affected their livelihoods. For example, MBREMP was enforcing and controlling the use of fishing gear but without providing alternatives, and people didn’t like this idea. The current situation is somewhat calm, but this does not mean people are supporting the MBREMP fully.”²⁴

Secondly, some communities particularly drew on past negative experiences from other areas, like Mafia, where the creation of partnerships was met with resistance. In an FGD discussion in Mkubiru, a participant stated that “if you ask a person here in the village whether he or she likes the MP, they will tell you they don’t like it. We noted from Mafia that when it [the marine park there] was established, there were some resistance from the residents.”²⁵ In a 2008 study report, it was noted that there were disagreements among community members on whether to consent to the Mafia Island Marine Park (MIMP) regulations, and in particular the creation of core zones (‘exclusive areas’), which led to resentment (Mwaipopo, 2008). In fact, the report concluded that “none of the community members interviewed for this study agreed to restricted resource exploitation in the core zones” (Mwaipopo, 2008: 19). It ought to be noted that there is a lot of interaction between fishing communities along the

²³ CRFGD13NLL020817

²⁴ KIIM120318

²⁵ CRFGD12MK160817

Indian Ocean coastline²⁶. Hence, as the MP was trying to raise awareness on conservation, the information provided by migrant fishers led to actual resistance:

*“We have also heard from people in other areas. For instance, in Jibondo near Mafia they restrict people to fish in zones where fish stocks are abundant.”*²⁷

Another FGD participant had this to say:

*“We have visited different places some of us have been to Mafia so we came and told our fellow villagers about what will happen to them if they accept the Marine Park.”*²⁸

Opponents of the idea of creating MPs capitalized thus on negative messages and used experiences from places like Mafia and Kilwa to create and spread a misconception that MPs are meant to ban fishing altogether. As the experience from Mafia shows, “in spite of the participatory intentions stated in the formation of MIMP, and the popularity of the initial successes in collaborating with local communities to halt the destructive and unpopular practice of dynamite fishing, MIMP subsequently became more centralized, and they de-emphasized consultation with and participation by villagers” (Benjaminsen & Bryceson, 2012:346).²⁹ The MIMP’s departure from its initial participatory aspirations sent warning signals to other fishing communities along the Indian coastline.

Thirdly, there were feelings that communities that were supposed to benefit from the MP had been excluded since the very initial set-up. As also mentioned above, even though MPs were conceived to be a community-driven process from the formation to implementation of set activities, some communities strongly felt that the idea of MP was being imposed on them. They were not pleased by the level of involvement in the creation of the MP. Feelings of bitterness towards the MP disappeared when villagers came to understand and realize the actual goals of the MP. In other cases, those who led resistance just became afflicted by ‘resistance fatigue’ and decided to let go. In one of our interviews, a participant remarked that “people have slowly accepted that there is a marine park and it is here to stay whether we like it or not”.³⁰ Interestingly, in Namindondi village, it was the village leadership which approached the MP after realizing potential benefits of its operations. At the same time, a group of villagers that did not engage in fishing activities was opposed to the MP.

²⁶ The close interactions and movements of fishers along the Tanzania coastline, especially between Mtwara and Mafia, were mentioned in focus group discussions in various MBREMP villages. See also Robert Katikiro, Edison Macusi and K.H.M. Ashoka Deepananda, 2013, “Changes in Fisheries and Social Dynamics in Tanzanian Coastal Fishing Communities”, *Western Indian Ocean Journal*, Vol. 12, No. 2, pp. 95-110.

²⁷ CR26KII080317

²⁸ CRFGD09

²⁹ See also Victoria H. Moshy, Ian Bryceson & Rosemarie Mwaipopo (2015) “Social-ecological Changes, Livelihoods and Resilience among Fishing Communities in Mafia Island Marine Park, Tanzania”, *Forum for Development Studies*, 42:3, 529-553, DOI: 10.1080/08039410.2015.1065906 for detailed analysis of the impacts neo-liberal economic conservation on livelihoods of fishing communities in MIMP.

³⁰ KIIN130317.

Table 9. Compliance with Partnership Rules and Regulations.

Type of Partnership	Villages	Compliance
Simpler (MP)	Msimbati	Accepted initially now reject it as they feel that there is lack of ownership and sharing of the benefits from the gate. They claimed to be the pioneers of the idea then it was taken.
	Mahurunga	Well received when it was introduced to the villagers. Some feelings that it is not very relevant to their livelihood which is based on river fishing but want to be part of it for benefits.
	Mkubiru	Was part of Nalingu during the formation of the MBREMP so among those who refused MP and still refusing them to close the fishing breeding grounds in the area. They do not abide to some of the regulations.
	Namindondi	There are not many fishers hence not much affected but expected to benefit. Now they question that MP not seen in the village.
Complex (BMUs)	Msangamkuu	Not well received initially. Residents were worried that the BMUs would restrict fishing activities just like in the MP. Now understood and have been ranked the best in Mtwara by WWF but had to fight the dynamite fishing.
	Namela	Similar to Msangamkuu considered the best but had to fight illegal fishing.
	Kisiwa	Initially a member of BMU via Namgogoli village. Some leaders to their relatives have been part of the illegal fishing.
	Mgao	Not well received especially by those who were indulged in destructive fishing practices. Some leaders or their relatives have been part of the illegal fishing.

Source: KIIs and FGDs, 2017-2018.

The case of BMUs is somewhat similar. Some villagers accepted the idea of creating BMUs yet they are still not complying with all the regulations involved. The idea of introducing BMUs was met with a lot of apprehension and skepticism. The skeptics initially thought that BMUs

would operate like an MP. Relatedly, opposition to creation and subsequent operations of BMUs came from those who were allegedly involved in illegal fishing practices, particularly dynamite fishing. BMU interventions to combat illegal fishing practices created tensions between the BMU leadership and some community members. In this case, we see a community divided into those who support the BMU, mostly non-fishers doing patrols and having other economic interests, and those who are fishers but have no time for these other activities or using illegal fishing methods (see summary in Table 8).

4.2 Process Legitimacy

One of the ways of measuring participation in decision making by villagers is their attendance of village and partnership meetings. In some of the villages researched, no partnership meetings are held. As a consequence, we first asked about whether the village meetings are held, then measured the attendance in normal village meetings and compared these with meetings to discuss partnership issues. The assumption is that if the village meetings are held and the villagers attend in large numbers under normal circumstances, they should also be able to attend the partnership meetings in large numbers, air their views or simply get information about partnership issues. Table 9 compares the results of these two sets of questions by type of partnership.

Table 10. Attendance in Village and Partnership Meetings.

Partnership type	VHM (%)	AVM (%)	AMPI (%)
More complex (BMUs)	75	20	57
Simpler (MBREMP)	81	24	41

Source: NEPSUS 2019.

VHM – village holding meetings?

AVM – attendance in village meetings?

AMPI – attendance in meeting to discuss partnership issues?

Table 9 shows that while respondents reported that the villages hold regular meetings, attendance is relatively low. Attendance in partnership meetings is actually higher than in regular meetings, and it is higher in BMUs than for MBREMP. Table 10 below illustrates the perceived reasons for attending or not attending a partnership meeting, as gathered in interviews and focus groups. In MBREMP, the reason for attending was associated mainly with curiosity about the evolution of the MP, since they have contact with the MP authorities very rarely. The main reason for not attending was related to lack of acceptance of the MP and the promises they had made to villagers:

“If you introduce an issue concerning the MP in a village meeting, it may end right there. If you talk about MP, you add salt to an injury. The MP has not held any meeting with the community here who are important stakeholders.

That much I know. If you want meetings not to be conducted smoothly just introduce the issue of MP. They [MBREMP] have not been close to the people.”³¹

Table 10 also shows that attendance in BMUs meetings is mostly influenced by timing of the meetings, and whether they are suitable for fishers.

Table 11. Selected Reasons for Attending or Not Attending Partnership Meetings.

Reasons for attending partnership meetings	Reasons for not attending partnership meetings
Curiosity, not seen in the village for long	MP lied to them, do not want the MP
Available at that time	Clashes with fishing activities
Attendees expecting to receive some token allowance	Do not see any significant change in matters that concern their wellbeing.
Attracted by the agenda of the day, for e.g. Reports on income and expenditure.	Demoralized as they view the partnership benefiting only its leaders.

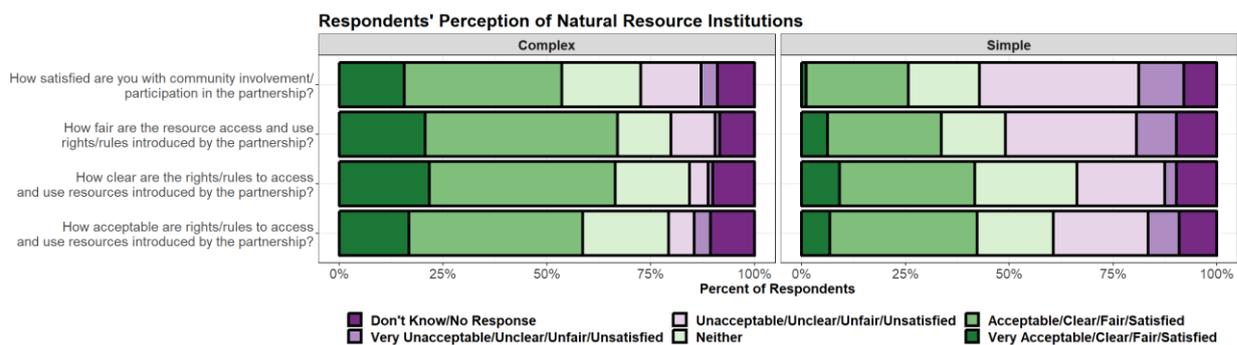
Source: NEPSUS fieldwork.

4.3 Output Legitimacy

Findings from survey data provides important insights on local perceptions regarding the fairness of rules to access and use of coastal resources, one of the ways of assessing output legitimacy. Figure 8 shows that rules are generally seen as acceptable, clear, and fair by almost half of the respondents in the more complex partnership (BMUs) while in the simpler partnership (MBPREMP), these rules are seen as unacceptable. Again, interesting perceptions of unfairness of rules are more noticeable in the MP villages of Msimbati and Mkubiru. In sharp contrast, the relatively few percentages of respondents who found the rules to be fair in these two villages could be partly attributed to their close proximity to MBREMP. It appears that majority of those who perceive the partnership to be unfair are from the simpler ones.

³¹CRKII085120318.

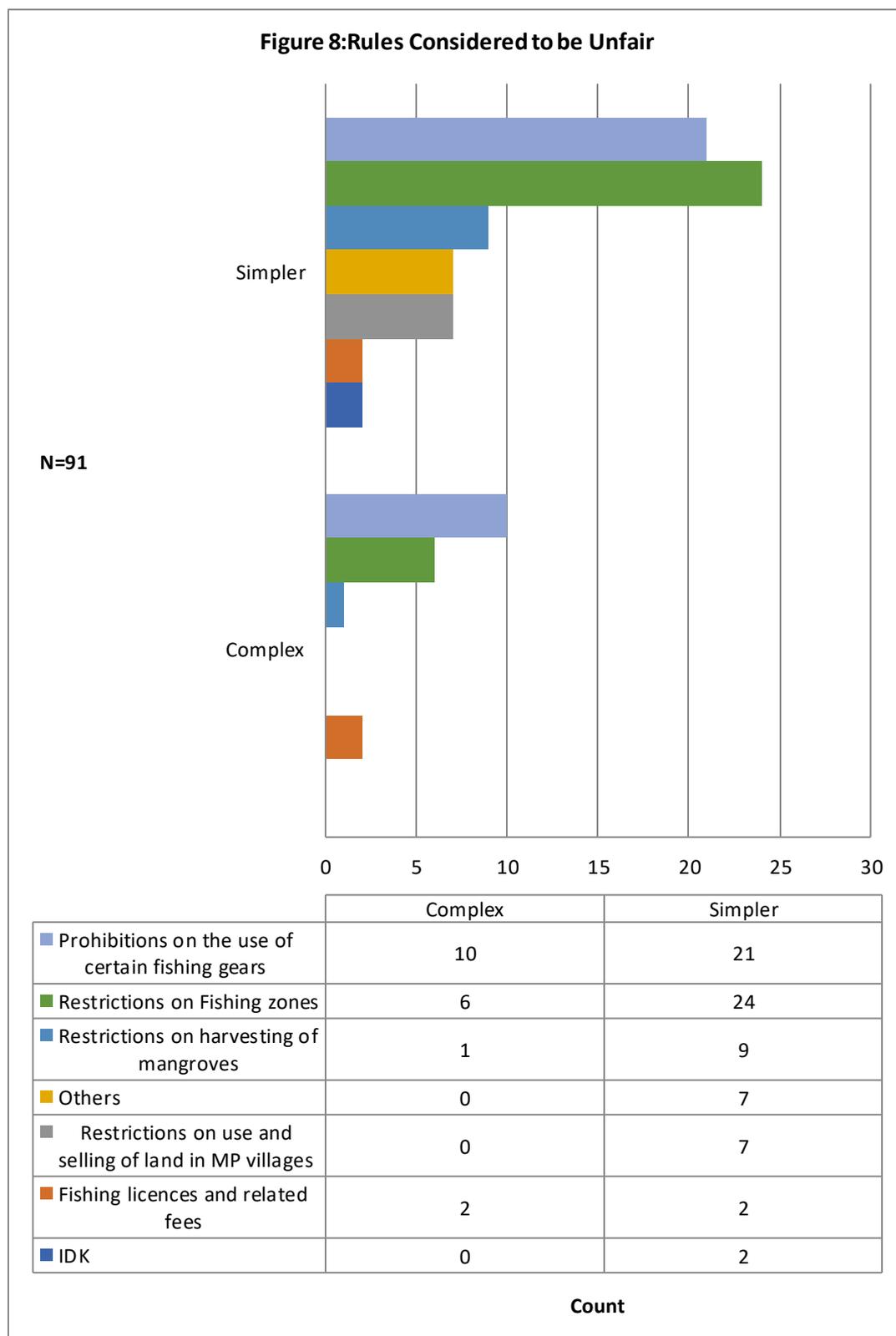
Figure 8. Perceptions on Fairness, Clarity and Acceptance of Rules.



Source: NEPSUS survey

More or less a similar picture arises when respondents were asked to state how clear the rules in terms of access and use of resources are. A relatively higher proportion of respondents (47%) from BMU areas found the rules to be clear compared to those in the MBREMP area (36%). In theory, rules may be perceived to be fair and clear but still may not be acceptable in the hearts and minds of a local community. The results summarized in Table 8 suggest that this does not seem the case. Another important observation from the results presented in Figure 8 is that there were more respondents who said they were satisfied with community involvement in BMUs (about 40%) than in MBPREMP (about 27%).

Figure 9. Rules Considered to Be Unfair.



Source: NEPSUS survey

From the survey data, we also noted that restrictions on the use of certain fishing gears, such as small-mesh nets (beach seines), and zoning of fishing areas, are the two most unpopular rules. As depicted in Figure 9, many respondents hold the view that restrictions on fishing gears and fishing zones are unfair. Other rules considered to be unfair are restrictions on harvesting of mangroves, restrictions on disposing personal plots of land without a special permit from the Marine Park,³² and fishing licenses.

The requirement to secure a fishing license also featured in interviews as problematic. Respondents admitted that there are fishermen who operate without having valid fishing licenses which are renewable annually. Additionally, defaulters are common because some fishermen struggle to make ends meet from small scale fishing which is mainly for subsistence. One respondent had this to say:

“We renew the license every year. Some people fish without having a license, but this does not mean that they don’t want a license. It is because of the lack of money to pay for it. You know what, when we get money from fish, we use them for family needs such as food, school needs, and clothes. Therefore, when it reaches a time to renew a license you find yourself without money.”

³³

Others could just not afford to pay as noted by this respondent:

“Fishers are required to have a license for fishing and fishing gears. And you have to pay for the license. This is one of the reasons I decided to stop fishing because I found it is very demanding and expensive.”³⁴

Another issue that was raised as a concern by the fishers is the requirement for migrant fishers to secure fishing licenses for different district councils. Each district council requires local fishers to pay for a fishing license within its area of jurisdiction. The BMUs introduced a TSh 2000 fee on top of the cost of the license (TSh 15,000) that is used to certify legal fishers. Some local residents expressed the desire that fishing licenses operate like motor vehicle licenses, that is with the payment of a yearly fee that allows to drive anywhere in the country except for restricted areas for security reasons. A migrant fisherman who conducts fishing in Mtwara and Lindi regions remarked:

³² One of the responses in the survey questionnaire from a respondent stated: “Ukitaka kuuza eneo lako lazima uwashirikishe watu wa marine park, jambo ambalo linatunyima haki” (literally meaning ‘if you want to sell your plot you have to involve the marine park people, something that denies our rights).

³³ CRKII017080316

³⁴ CRKII134130318NMD

“Currently, I have three separate pieces of licenses. For Mtwara I paid 15,000, for the Kilwa license I parted with TSh 7,000, and for Mafia I had to pay T. Shs. 25,000.”³⁵

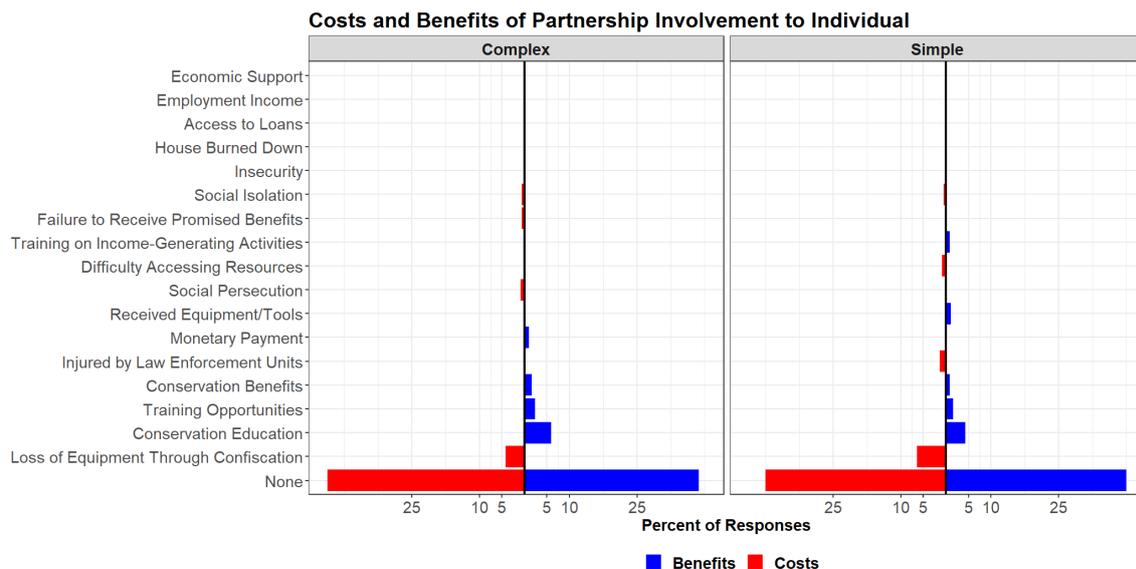
4.4. Outcome Legitimacy

In this section, we analyse outcome legitimacy in relation to three main areas: (1) outcomes related to the perceived costs and benefits of partnerships for individuals; (2) perceptions on outcomes related to changes in livelihoods in aggregate in a community; and (3) outcomes in relation to the ecological status of fish, mangrove and corals. In this section, we focus on perception data arising from the NEPSUS survey.

4.4.1. Perceived Costs and Benefits of Partnerships

Respondents were asked what they perceive as costs and benefits at the individual level that may be related to partnership activities. The results are displayed in Figure 10. The figure shows that most respondents reported neither benefits nor losses in both BMUs (more complex) and MBREMP (simpler). The few benefits mentioned included conservation, training opportunities, monetary benefits, and receiving equipment and training related to alternative income generating activities. The losses mentioned include loss of fishing equipment, injuries by law enforcement, difficulty in accessing resources (in MBREMP) and social persecution (in BMUs).

Figure 10. Costs and Benefits of Partnerships to Individuals.



Source: NEPSUS survey

³⁵ CRKII082080317MS

Some of the benefits listed by BMU respondents suggest that they are doing relatively better than respondents in the MP.³⁶ For example, they mentioned:

- (i) Increase value of the fish and the trade by compelling fishers to sell at the land sites;
- (ii) Establishment of fishing groups and provision of loans to enable the purchase fishing nets;
- (iii) Offering community services;
- (iv) Increased trade;³⁷
- (v) Increased co-operation;³⁸

At the same time, they also mentioned:

- (i) Lack of trust on how funds raised by issuing fishing license;³⁹
- (ii) Lack of cooperation between Village Environment Committee (VEC) and the BMU committee, with the former being more powerful;⁴⁰
- (iii) Lack of prioritization of fishers in the BMUs;⁴¹
- (iv) Lack of harmonization of laws, leading to conflict;⁴²

During our preliminary dissemination activities, it became clear that fishers do not play a major role in BMUs. They are not adequately represented in the development budget of the district council and thus they lack access to loans. Currently, loans disbursed by district council targets women and youth as beneficiaries. These loans, however, are useful in contributing to welfare of communities due to their significant impact on income, asset ownership and nutrition.

4.4.2. Perceptions on Changes in Livelihoods

Figure 11 below shows the perceptions on changes in livelihoods in aggregate terms. In general, respondents reported that livelihoods have decreased in quality to a greater extent in the MBREMP area than in BMU areas. However, the reasons behind changes in livelihoods do not seem to be related to the partnerships themselves. As shown in Figure 12, they are associated with broader social, economic and political changes occurring in Mtwara and in Tanzania.

³⁶ CR37KIICFMA090318RM

³⁷ KII5VRM

³⁸ KII090318FN

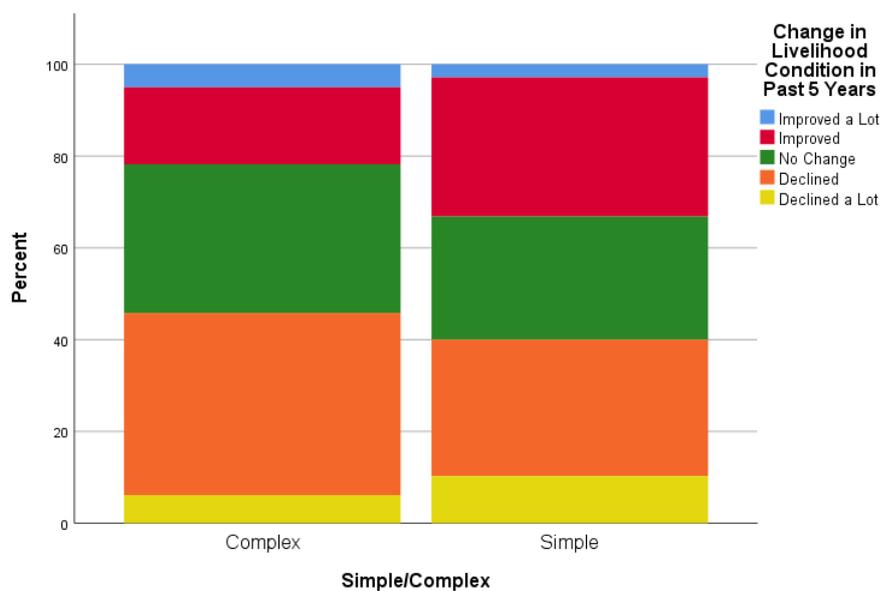
³⁹ CR10KII050317FN

⁴⁰ FGDMS

⁴¹ CRKII150institutionsFebr17

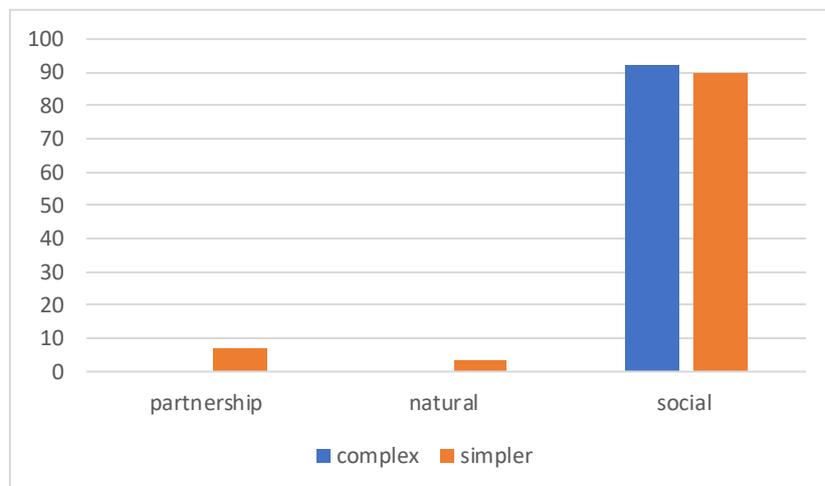
⁴² CRKII144institutionFebr17

Figure 11. Perceptions on Changes in Livelihood Conditions in The Past 5 Years.



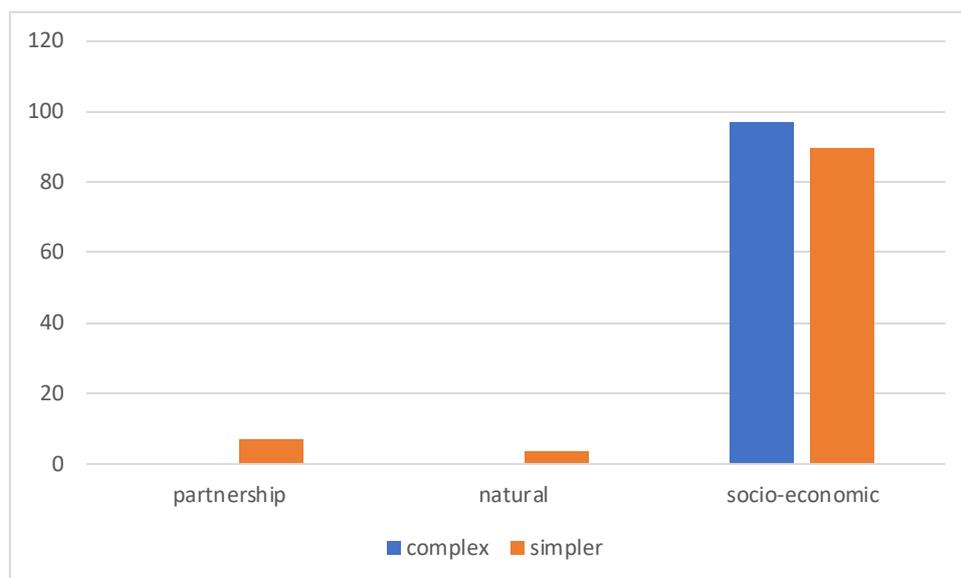
Source: NEPSUS survey

Figure 12. Perceptions on Causes for Decline in Livelihoods.



Source: NEPSUS survey

Figure 13. Perceptions on Causes for Improvement in Livelihoods.

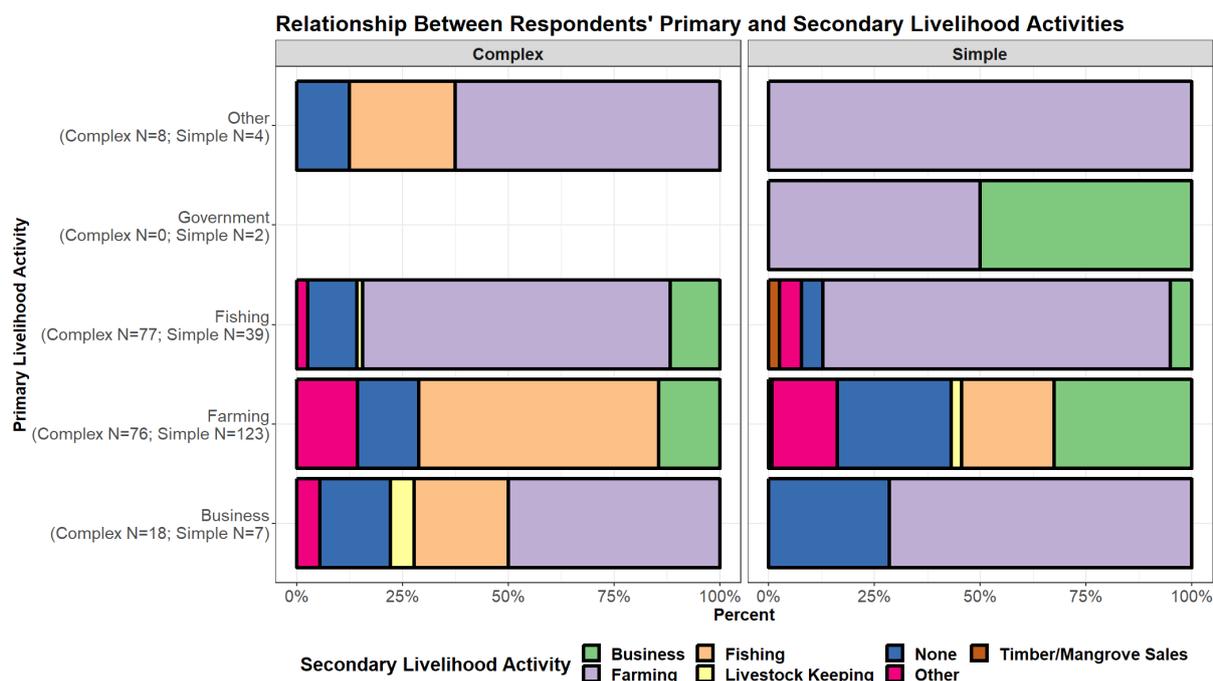


Source: NEPSUS survey

The lack of support to livelihoods in both types of partnerships and the fact that some fishers are used to dynamite fishing and do not have access to alternative fishing gears are mentioned as the main factors limiting sustainability. Both partnerships depend on fines and fees from the fishers to support their financial needs. In the case of MBREMP, the MP is also supposed to collect user fees from tourists at the gate. At the time of this research, two gates were present: Msimbati and Kilambo. However, very few tourists visit the area and this situation is unlikely to change due to the presence of gas extraction in the area. In both partnerships, communities expected to benefit from livelihood diversification projects. In BMU areas, villagers reported that they were ready to form groups of village community banking (VICOBA) and waited for further guidance from BMUs and their support from the NGOS, but this never happened. At the MP gate, communities expect to receive some income as a result of the distribution of user fees, but this also remains to be an unfulfilled promise.

Figure 14 shows the portfolio of livelihood activities of the respondents. The figure shows the overlay of the first and second main economic activities. These findings suggest that farming, when not the main activity, is the main secondary activity. Farming was reported as primary activity mainly in MBREMP than in BMUs, because of the inclusion of Namidondi and Mahurunga in the study area (which are hinterland villages relying to a higher degree on agriculture). Further analysis of the field information shows that farming is commonly practiced along with other livelihood activities.

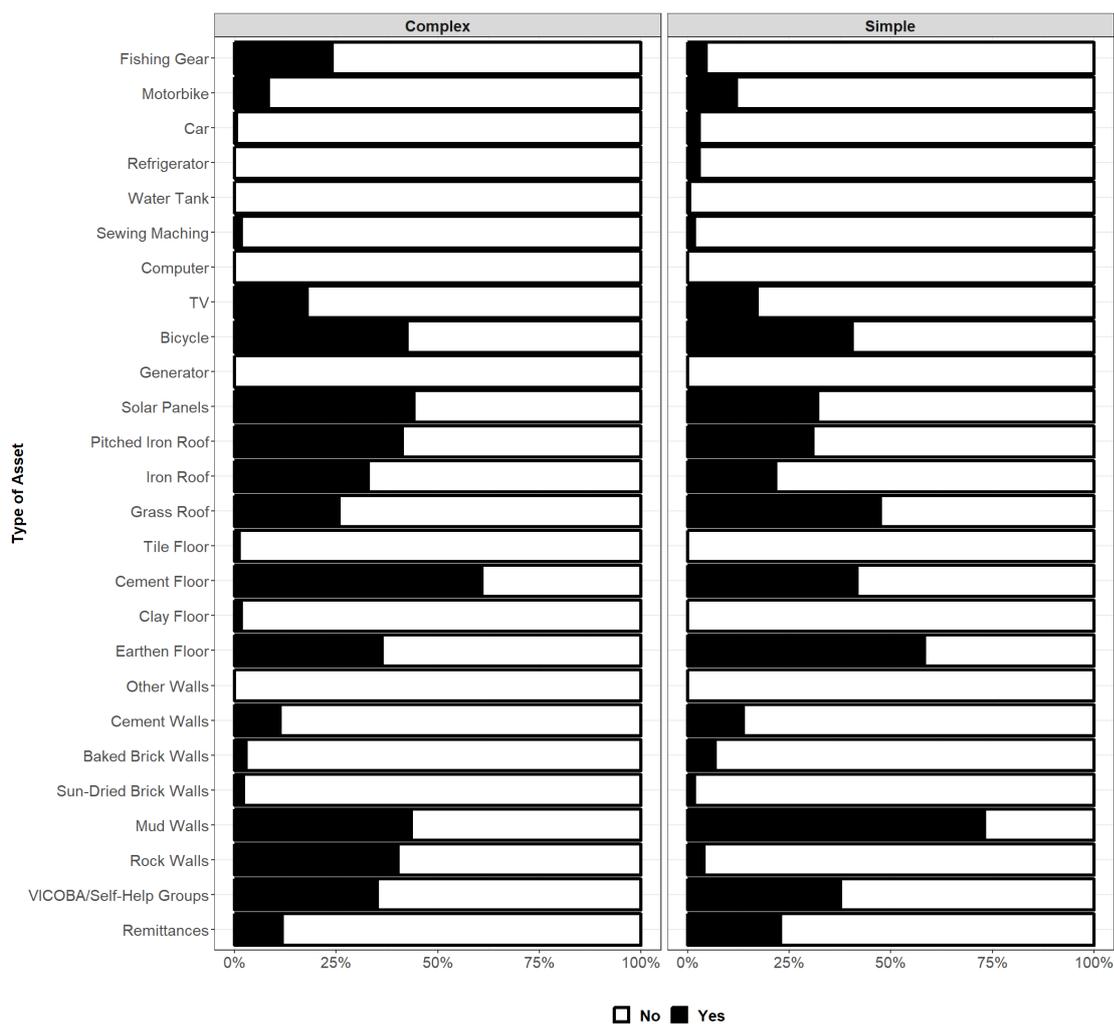
Figure 14. Relationship Between Respondents Primary and Secondary Livelihood Activities.



Source: NEPSUS survey

Figure 15 compares household wealth in BMUs and MBREMP. The figure shows that ownership of assets is very similar in the two areas, except that housing characteristics of those in the MBREMP area are poorer. This is attributed by more respondents reporting to have houses made out of mud walls, earth floor and grass roof in the MBREMP area than in BMUs. This is partly explained by the fact that households in BMU villages reported diverse livelihood activities including those with higher remunerations as compared to those in MBREMP. Limited access to fisheries resources because of stringent conditions imposed by the MP is also attributed to this uneven development observed in the two areas.

Figure 15. Household Assets.

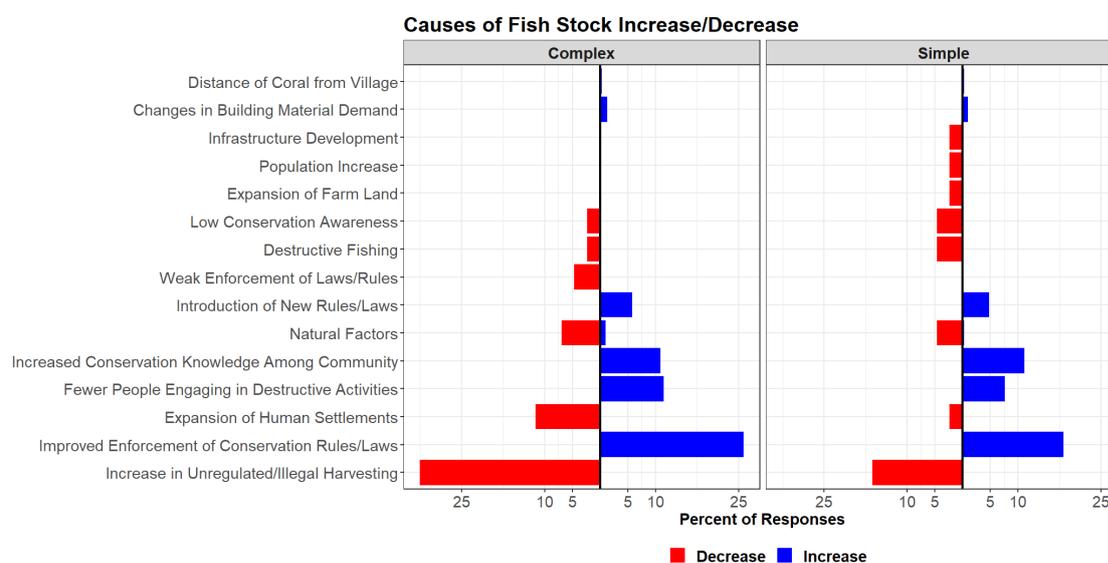


Source: NEPSUS survey

4.4.3. Perceptions of Changes in the Ecology

In this section, we report the local perceptions of changes in the ecological status of three types of coastal resources – fish, mangrove and corals. In terms of the causes of perceived fish stock increases (Table 16), respondents most often referred to the recent campaign to wipe out dynamite fishing activities. This is not connected with BMU or MBREMP activities, but to the increasing role of central government through various initiatives, including the recent formulation of multi-agency task force that aims at curbing destructive forms of fishing activities. The second reason most often mentioned is the increasing conservation knowledge among the community, which seems to similar in the MBREMP and in the BMUs (11%), together with fewer people engaging in destructive activities to harvest marine resources and increasing enforcement.

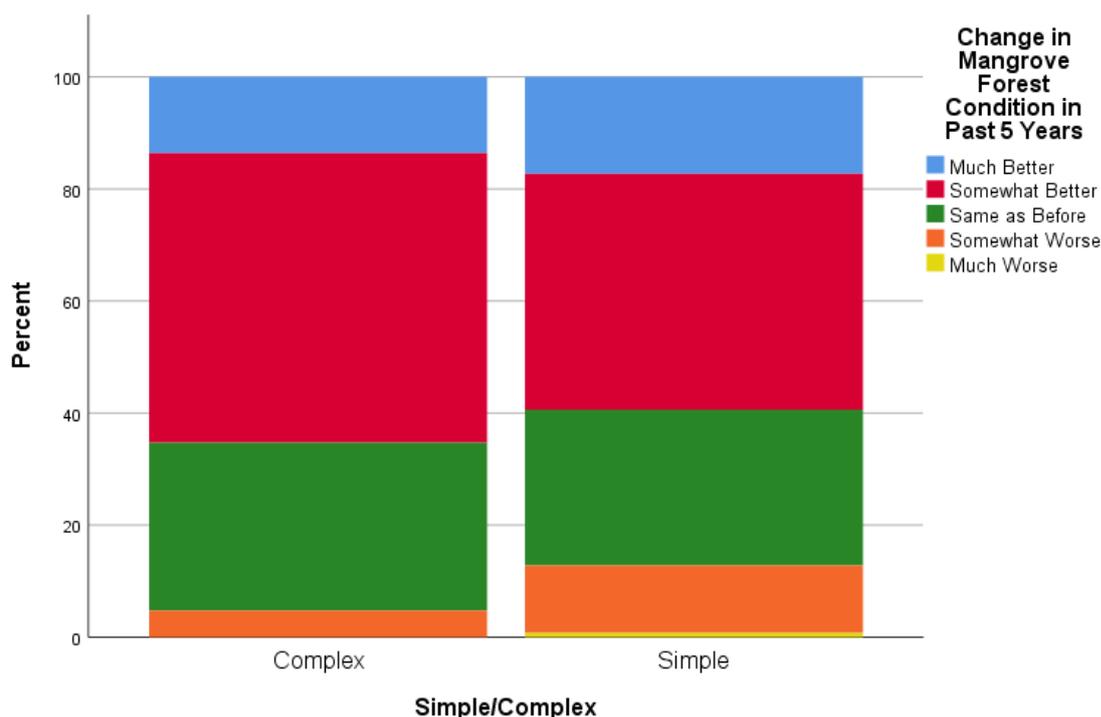
Figure 16. Causes of Fish Stock Increase/Decrease.



Source: NEPSUS survey

People in the study area report to use mangrove as wood for firewood, charcoal or building materials for houses and fences. Probing during FGDs and key informant interviews indicated that communities were also aware of the protection of coastal areas against coastal erosion and storms which is done by mangroves. Respondents also mentioned that there are several issues that threaten biodiversity in the MBREMP and BMUs mangroves: these are mangrove harvesting, clear-cutting, unsustainable fishing methods, harvesting of macro fauna, particularly edible shellfish, and erosion. Unlike other areas of Tanzania, such as Rufiji, there is almost no large-scale conversion of mangrove forest to ponds for shrimp farming in Mtwara. Nonetheless, there are some few patchy areas where mangroves were cleared for salt farms in both the simpler partnership area (MBREMP) and in the more complex partnership area (BMUs). Recently, however, salt production, especially in the MBREMP area, has become less remunerative, leading to the abandonment of many of these farms. FGDs revealed that mangrove harvesting in MBREMP and BMUs still appear to be sustainable although the preferred species for firewood and building poles have been cut substantially. In their opinion, the current status is better than in the past (Figure 17). While this study did not carry out biophysical assessment of fishing practices in the mangroves (forthcoming in a separate working paper), interviews revealed that harvesting of edible materials such as shellfish is carried out at an unsustainable rate in both BMUs and MBREMP.

Figure 17. Changes in Mangrove Forest for the Past Five Years.



Source: NEPSUS survey

Interviews and FGDs indicated that there has not been much restoration of degraded mangrove sites. Most of the reported restoration programs in MBREMP were the ones spearheaded by WWF, TASAF, local NGOs as well as by joint village efforts with a push from MBREMP and district government. These restoration programs, however, do not seem to have instilled a spirit of stewardship towards mangroves – these efforts came to an end when the lead organization stopped funding them.

Further information on the status of mangroves was elicited through oral histories. We asked elder members of the community to narrate patterns and resource user trend in mangroves over the years. One respondent remarked that there was serious mangrove clearing in 2004-2005:

“Back in the early 2000s, the mangrove was harvested a lot. The area was opened and the degradation of the beach increased. This year we have TASAF who wanted us to plant mangrove and we asked for seeds and they brought us seeds and we planted in January 2018. Now the mangroves are in good condition.”⁴³

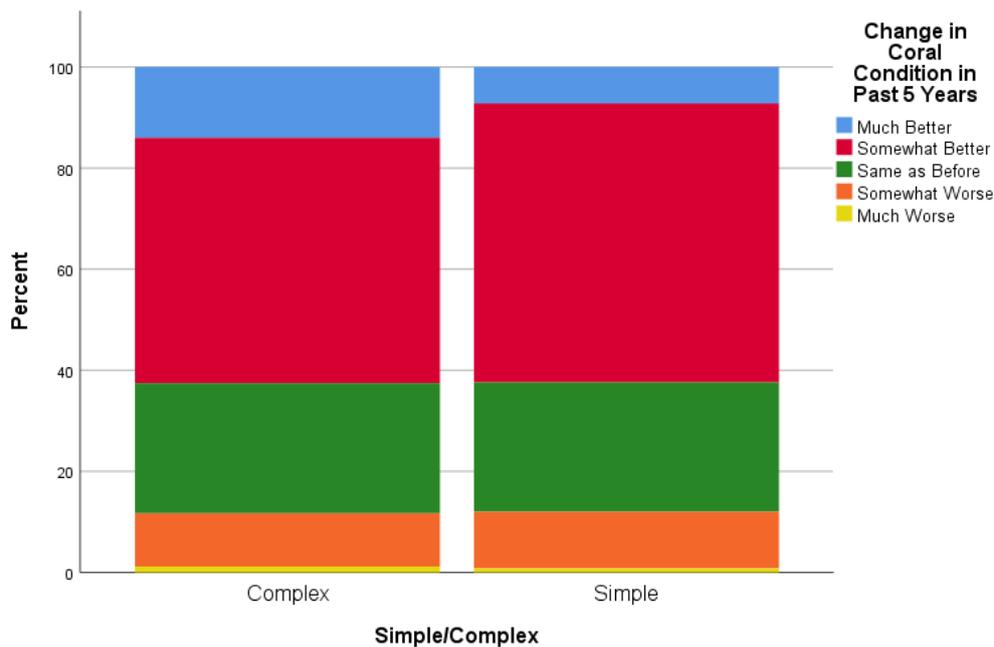
Figure 18 shows the perceptions of respondents on changes in the status of corals in the previous 5 years, showing a small improvement in both areas. Results from our interviews

⁴³ KII20032018NM.

indicate perceptions that corals might have been damaged in the past because of the prevalence of dynamite fishing.

“Blasts – dynamite fishing has contributed a lot in fish decline. This is because blasts destruct corals which are habitats for fish and therefore causing massive death of fish in and near the corals. Dynamite fishing is a very destructive method of fishing though those who do it benefit within a short time because they get many fish in a short time.”⁴⁴

Figure 18. Changes in the Coral Conditions in the Past 5 Years.



Source: NEPSUS survey

The coral status was said to be better than in the past, but not ideal, because degraded corals take a long time to restore and there are places where dynamite fishing is still carried out as noted by one respondent:

“In the 1960s and 1980s – there were very good corals and the ocean was good. The fish was available, makome and jongoo. In the middle years we had the problem of dynamite fishing, fishers were using tools which are destructive. In the 1980s and 1990s – the tools were poison, mideke, dynamite, which were destructive to corals and fish became unavailable. Later on, when the MP people came, in 2000, the ocean began to change again and became beautiful. It has become better but not the best. In some areas people continue to destroy the ocean. There are corals that

⁴⁴ KII21.

are continuing to grow but it takes time. Moreover, fish are now slowly coming back, after the 2017 operation.”⁴⁵

5. Conclusion

The introduction of MBREMP and BMUs in Mtwara rural district, Tanzania, does not seem to have yielded the expected outcomes in either partnership. Both face governance challenges related to structural, financial and participatory failures. Structurally, MBREMP has created Village Liaison Committees which are not functioning adequately. They were only incentivized when NGOs had resources to involve them in building awareness, and even then they were seen by villagers as preaching instead of helping the local community own the process. While in the setting up of MBREMP the local community was involved, the process was then captured by the the central government and local elites. As for BMUs, their committees are functioning in parallel to the Village Environmental Committees and often clash with them and even with the village government. Financially, both the MP and the BMUs are poorly equipped and the funds accrued from fines and fees are not enough to support alternative livelihood activities or provide fishing gear. There is little involvement of fishers in the BMUs and in MBREMP, which has been the main cause of failure in achieving positive sustainability outcomes in either.

Communities generally perceived these partnerships as focusing on conservation and therefore see them as beneficial as far as the ecological outcomes are concerned. But communities also see that partnerships have not been successfully addressing their major social and economic needs, such as provision of suitable fishing gears for fishers. Some of the benefits actually achieved were mostly related to the BMUs and concerned with the increased value of fish, increased trade, formation of fish groups and their support, as well as increase in community services. Part of the recent upswing in fish stocks that was observed in the district is actually linked to the work of a special task force, not the operation of the BMUs or MBREMP per se. And the decrease in coral and mangrove use for building is motivated by other factors, such as broader social economic change than the presence of the partnerships. The lack of support for alternative livelihood activities and the possible return of dynamite fishing are still major challenges.

The structures of the BMUs and MBREMP need to be revised thoroughly to improve the actual role of communities and fishers in the governance of coastal resources. This will improve a sense of ownership and increase cooperation and trust. The benefits accrued from the income resulting from fees or fines must be transparent and shared broadly, no matter how small, as it would improve stewardship. Another important way to support fishers and limit the pressure on resources near to shore would be to facilitate access to boats and gear to allow them to fish in the deep sea.

⁴⁵ KIINN.

The preliminary results presented in this paper suggest that, at least in coastal resources, the overall complexity of partnerships does not seem to show significant difference in actual performance. Both simpler (MBREMP) and more complex (BMUs) partnerships have been facing major challenges and their livelihood and ecological impacts have been relatively minor, although relatively better for BMUs than for MBREMP. This general lacklustre performance may be explained by the lack of proper participation from local communities, but also by the duplication of administrative structures that has led to confusion and conflict. This paper presented the bulk of our research results in descriptive format. In future working papers, we will explore the possible causal links in more advanced fashion, and compare our results to those of other two resources examined in the NEPSUS project – wildlife and forestry.

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