

# Stakeholder Engagement and Conservation Outcomes in Marine Protected Areas

## Lessons from the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) in Tanzania

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## **Stakeholder engagement and conservation outcomes in marine protected areas: Lessons from the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) in Tanzania**

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## Highlights

- MPAs are being promoted to manage the world's marine ecosystems more sustainably.
- In recent years, MPAs have started to facilitate inclusive and collaborative practices.
- In the MBREMP, there has been lack of meaningful influence from local stakeholders.
- The conservation and livelihood outcomes of MBREMP have been problematic.
- MPAs need to improve stakeholder communication and secure adequate resources.

## Abstract

Marine protected areas (MPAs) are promoted as a tool to manage the world's ocean and coastal resources more sustainably. In recent years, the protected areas management paradigm—including MPA management—has started to promote inclusive practices and collaborative management. At least on paper, this shift, and the multi-stakeholder partnerships that came along with it, should have led to better conservation outcomes, at the same time as ensuring that people affected by conservation measures have access to alternative or supplementary livelihood opportunities. In reality, the record of MPAs has been quite mixed. The aim of this study is to examine governance of the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP)—a multiple use MPA located on the southern coast of Tanzania—in view of exploring whether existing partnerships have influenced conservation outcomes. Fieldwork results, arising from key informant interviews, participant observation, focus group discussions and a survey, show that contacts and interactions between partners followed a bureaucratic process without clear and shared goals that could make conservation and livelihood objectives compatible. Unclear and poorly coordinated processes—both in relation to conservation activities, such as enforcement of the park's regulations, and in relation to livelihood projects—hampered the proper functioning of MBREMP and its actual and potential stakeholders. As a result, both conservation and socio-economic outcomes have been problematic. Future research needs to further investigate how dysfunctional partnerships and lack of collaborative arrangement among partners affect environmental and socio-economic targets in MPAs and how these can be addressed.

## 1           **1. Introduction**

2   Marine protected areas (MPAs), also referred to as sanctuaries or marine reserves (Lubchenco  
3   and Grorud-Colvert, 2015; Rodríguez-Rodríguez, 2019), are being increasingly promoted as  
4   one of the tools to manage the world's ocean and coastal resources more sustainably (Charles  
5   et al., 2016). In contrast to terrestrial conservation measures, the formal designation of MPAs  
6   for the purpose of conserving biodiversity in important marine habitats, is a relatively recent  
7   initiative (Maestro et al., 2019; Salm and Clark, 1984). Terrestrial protected areas have a longer  
8   history and are much more widespread than MPAs. The first ever documented example of an  
9   MPA was the Royal National Park near Sydney, Australia in 1879 (Laffoley et al., 2019), while  
10   Yellowstone (Wyoming, USA) was designated in 1872 and is considered to be the first  
11   National Park in the world (Maestro et al., 2019). Historically, early initiatives on designation  
12   and development of MPAs focused on the protection of threatened species or scenic locations.  
13   In recent years, however, the focus has shifted towards the protection of entire ecosystems and  
14   not just iconic species or specific areas (Laffoley et al., 2019). Research indicates that growing  
15   interest on MPAs was motivated by a series of World Park Congress meetings, held between  
16   1962 and 1982. These meetings called for the incorporation of aquatic sites into the worldwide  
17   network of protected areas (Agardy, 1994; Kelleher, 1999; Laffoley et al., 2019).

18  
19   In recent decades, there have been enormous efforts to design and establish MPAs across the  
20   globe (Maestro et al., 2019). A number of goals and targets have been set since the 2002 World  
21   Summit on Sustainable Development (WSSD) to ensure economic and environmental  
22   sustainability of coasts and ocean. The most notable ones include the adoption of the  
23   Programme of Work on Protected Areas at the Conference of Parties (COP7) of the Convention  
24   on Biological Diversity (CBD), which set a global target to protect at least 10% of the world's  
25   marine environment by 2012 (CBD, 2004). Earlier, the Fifth World Parks Congress had called  
26   for the establishment of a global system of effectively managed, representative networks of  
27   marine and coastal protected areas by 2012 (IUCN WCPA, 2003). Uncertainties in view of  
28   meeting the 2012 deadline led the revision of the target through Aichi Target 11 of the CBD,  
29   which emphasized that by 2020 at least 17% of terrestrial and inland water, and 10% of coastal  
30   and marine areas should be conserved. The target also states that conservation should take place  
31   through effectively and equitably managed, ecologically representative and well-connected  
32   systems of protected areas and other effective area-based conservation measures, and  
33   integrated into the wider landscapes and seascapes (Campbell and Gray, 2019; CBD, 2011;  
34   Wood et al., 2008). This however does not guarantee for achievement of this target given that  
35   the deadline set has now passed and the current limitations in the implementation of marine  
36   conservation activities globally.

37  
38   Despite there being many years of MPA experience, the overall effectiveness of MPAs is  
39   uncertain (Woodcock et al., 2017). Major challenges in current management and practices  
40   include but not limited to lack of systematic and scientific approaches, limited funding,  
41   conflicts between conservation and development objectives, ineffective governance and  
42   insufficient monitoring programmes (Day et al., 2012; Edgar et al., 2014). In recent years,  
43   there has also been a major transformation in the way in which protected areas are being  
44   managed, which led to moving away from state-dominated protected areas to community-based  
45   and co-management forms (Cinner et al., 2012; Mahajan and Daw, 2016) in view of promoting  
46   inclusive practices. In coastal and oceanic areas, particular emphasis has been placed on new  
47   governance mechanisms (Evans, 2009). It is widely recognized that the management of MPAs  
48   in various countries has been carried out by a variety of different agencies, sometimes  
49   competing with each other (Cinner et al., 2012; Laffoley et al., 2019). Often, there is little or

50 ineffective communication and coordination between these agencies, even in the same region  
51 or country where the MPA is located. This results in disorderly management and duplication  
52 of activities. In other certain cases, government agencies take greater responsibility for MPA  
53 activities than their capacity allows.

54  
55 Ensuring the effectiveness of MPAs calls for an urgent need to incorporate all relevant  
56 stakeholders in its management plan. Stakeholder support for MPAs activities is crucial for  
57 creating enabling environment (Himes, 2007). One possible avenue is through partnerships  
58 which occur at different levels and involve a range of stakeholders and modalities (Jacobsen et  
59 al., 2019). Partnerships cover virtually all aspects of marine conservation and management  
60 including the management of specific threats, institutional coordination, scientific research,  
61 sharing of data, knowledge and best practices, implementation of area based measures as well  
62 as creation of new financing tools (Kidd and McGowan, 2013; Lamers et al., 2014; Martin et  
63 al., 2015). Partnerships can come in various forms and scales, and can include a wide variety  
64 of actors, including the private sector. For example, a conservation partnership which  
65 succeeded to make cultural-based values visible in conservation policy in New Zealand  
66 occurred as part of the Mimiwhangata marine reserve project that was developed by the state  
67 conservation agency, the Department of Conservation, and indigenous people (Dodson, 2014).  
68 Österblom and Bodin (2012) reported that international collaborations were formed in the  
69 Southern Ocean to help reduce illegal, unreported and unregulated fishing activity. Similarly,  
70 the Marine Plan Partnership for the North Pacific Coast was established as a co-led governance  
71 framework to develop and implement marine plans for 102,000 km<sup>2</sup> of coastal and offshore  
72 water in northern British Columbia (Diggon et al., 2020). However, little evidence so far is  
73 available on what kinds of partnerships work better or worse, and to what extent different kinds  
74 of partnerships contribute to a combination of biodiversity conservation and livelihood  
75 outcomes (Jones and Burgess, 2005).

76  
77 The existing literature has shown the importance of a meaningful incorporation of various  
78 stakeholders (Di Franco et al., 2016; Yates et al., 2019), and that the mode of operation of these  
79 stakeholders is usually not clear. In Africa, this has often been embedded in decentralized  
80 efforts for management of natural resources that is based on participation and collective action  
81 of user communities as well as collaboration between state and non-state actors (Nelson and  
82 Agrawal, 2008). The emergence of participatory approaches in natural resource governance  
83 has often resulted from pressure by international conservation organizations, which has led to  
84 superficial or performative implementation of local community participatory mechanisms  
85 (Brockington, 2005). While different scholars (e.g. Huxham et al. 2000; Lasker et al. 2001;  
86 Newig and Fritsch, 2009), argue that involving multiple stakeholders through partnerships  
87 increases the governability of natural resources, there is paucity of information on whether it  
88 has worked effectively in MPAs. Many MPAs, especially in developing countries, are still  
89 controlled by the state under a monocentric organizational structure (Laffoley et al., 2019). On  
90 the one hand, this provides clear authority and jurisdictional clarity. On the other hand, it limits  
91 the building of synergies with other relevant actors, particularly non-state actors, could  
92 contribute with resources, capacities and knowledge.

93  
94 Tanzania's government in the past few decades has increasingly deployed more participatory  
95 methods of natural resource management (Koch, 2017). The existing MPAs in mainland  
96 Tanzania are known to formally operate through participatory approaches, where different  
97 actors have a stake on their activities and outcomes (Katikiro et al., 2015). All designated MPAs  
98 in mainland Tanzania —marine parks and marine reserves — are primarily led by the state  
99 under the Marine Parks and Reserves Act No 29 of 1994. The government organ responsible

100 for management of MPAs in mainland Tanzania is the Marine Parks and Reserves Unit  
101 (MPRU), which is a semi-autonomous organization within the Ministry of Livestock and  
102 Fisheries Development. Zanzibar, a semi-autonomous territory, has its own legislation and  
103 organs responsible for protection and management of its marine and coastal areas (Tobey and  
104 Torell, 2006; Hugé et al., 2018). The Marine Conservation Unit, which is established under  
105 the Fisheries Act No 7 of 2010 is responsible for conservation and protection of marine and  
106 coastal areas in Zanzibar. Unlike mainland Tanzania, there is a private MPA in Zanzibar  
107 known as Chumbe Island Coral Park (CHICOP), which was established in 1991 and is funded  
108 through ecotourism fees (Nordlund et al., 2013; Reidmiller, 2000). The first MPA in mainland  
109 Tanzania consisted of several sites legislated as marine reserves in the mid-1970s. During that  
110 time, however, there was no specific institutional mechanism in place to effectively manage  
111 the reserves apart from allocating the authority to the Department of Fisheries (Akwilapo,  
112 2007) Beginning in the 1990s, the government took concerted efforts to establish MPAs in the  
113 country (URT, 2014). An important milestone was in 1994, when legislation to specifically  
114 deal with the management and administration of MPAs was enacted by parliament (URT,  
115 2014). There are now 15 marine reserves in mainland Tanzania and three marine parks: Mafia  
116 Island Marine Park (MIMP), Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) and the  
117 Tanga Coelacanth Marine Park (TACMP). Marine reserves are no-take areas, while marine  
118 parks are designated as multiple use and allow regulated extraction of resources in specific  
119 areas. A co-management approach with local communities is increasingly sought in MPAs in  
120 mainland Tanzania, where different actors are encouraged to be stakeholders in the  
121 management plan. Understanding what actors are involved, to what extent and through which  
122 mechanisms is therefore important for shedding light on whether this is leading to enhanced  
123 socio-economic and environmental outcomes.

124

125 Many previous studies in MPAs have not addressed the issues of partnership. Despite a myriad  
126 of literature on MPAs especially governance and management, there is clear gap on how  
127 partnership of whatever type may increase envisaged outcomes of MPAs conservation  
128 activities. The current research takes a different outlook, to bring partnership as the centre of  
129 conservation. It is expected that its findings will broaden our knowledge on how participation  
130 through partnership model in MPAs may work better to ensure that objectives for both  
131 biodiversity and livelihood improvement are attained.

132

## 133 **2. Methods**

134

### 135 **2.1 Study area**

136

137 The present study is a part of the research project New Partnership for Sustainability  
138 (NEPSUS), which focuses on conservation partnerships in wildlife, forest and coastal resources  
139 (Ponte et al., 2017). The work package on coastal resources aims at understanding the role of  
140 different partnerships in achieving sustainability of fisheries, mangrove and coral reefs in areas  
141 that have at least some degree of legal protection. The spatial coverage for the coastal package  
142 is Mtwara rural district—a coastal area located in the southernmost part of Tanzania, where  
143 Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) is located.

144

145 The study of MBREMP involved fieldwork in four villages (Msimbati, Mkubiru, Mahurunga  
146 and Namidondi) and at the park headquarters. The villages were selected based on two criteria:  
147 proximity to the sea (Msimbati and Mkubiru are on-shore; Mahurunga and Namidondi are  
148 inland); and early or late acceptance for inclusion in the MBREMP jurisdiction area (Msimbati

149 and Mahurunga were early entrants; Mkubiru and Namidondi were late entrants). The four  
150 villages (see Fig 1) thus represent a broad variety of situations within MBREMP. Msimbati  
151 (on-shore, early) is a sea-facing village and has a long history of fishing activities and fish  
152 trade. For the present study, Msimbati was treated as a single large village although since the  
153 local government elections held in 2014 three new villages namely Mnuyo, Ruvula and Mtandi  
154 were formulated from it. Anecdotal evidence and oral histories indicate that trade in sea  
155 products especially sea cucumbers (*Holothuria spp*), octopus and other marine invertebrates  
156 were common between Msimbati and the northern region of Mozambique all the way to the  
157 pre-independence period. Msimbati is home to about 2000 households and a source of  
158 commercial and cultural resources in Mtwara rural. Fishing and crop farming form the largest  
159 portion of livelihood activities, but the discovery and the recent ongoing exploration activities  
160 of natural gas and oil in the area have led to a recent boom in business activities and attracted  
161 many people to immigrate. Mahurunga (inland, early) is a riverine village located on the banks  
162 of Ruvuma River. It is one of the renowned villages for the cultivation of rice in Mtwara rural  
163 district. Many people in Mahurunga are farmers, but a considerable number of people take part  
164 in fishing along the banks of the Ruvuma River and also at sea. Namidondi (inland, late) until  
165 late 2000s was a sub-village of Mtendachi village, which at that time was not within the  
166 boundaries of MBREMP. Nonetheless there were numerous initiatives to bring Mtendachi in  
167 the MBREMP jurisdiction and this happened at the time Namidondi had also been elevated to  
168 a full village status. Thus, Namidondi became part of the MBREMP between 2009 and 2011.  
169 The main source of livelihoods in Namidondi is crop farming although there are some few  
170 individuals and households that engage in fishing from this village. Mkubiru (on-shore, late) is  
171 a sea-based village located closer to the designated core zones of MBREMP. Strategically,  
172 Mkubiru and Nalingu (another village in the MBREMP which however is not a focus of this  
173 study) are situated in an area that is known to enjoy larvae dispersal from Msimbati channel.  
174 As a result, these two villages host key fish refuge and breeding sites for fish and other marine  
175 organisms. Mkubiru came late to join MBREMP following their strong opposition to the idea  
176 of a Marine Park, which led to intense conflict and hostility with MBREMP on its early days.  
177 During that time, MBREMP failed to work in Mkubiru and Nalingu villages. Besides fishing,  
178 people in Mkubiru also engage in crop farming.

179  
180 <<<<Insert Figure 1 here>>>>

181  
182 The general management plan of MBREMP is premised on stakeholder collaboration and  
183 community participation (Gawler and Muhando, 2004). It assumes that community members  
184 are essential in the implementation of activities and therefore their engagement is of uttermost  
185 importance in achieving conservation outcomes. It is important to highlight that the  
186 configuration and governance structure of MBREMP make it difficult to discern directly the  
187 interactions between actors and how different stakeholders play their roles effectively in the  
188 implementation of the management plan. Almost all villages within MBREMP have their  
189 economy based on some combination of crop farming and fishing and are relatively less  
190 developed particularly compared to the hinterland villages of Mtwara district. But marine  
191 resources are more widely used by people from sea-front villages (Msimbati and Mkubiru).  
192 Marine resource users are often suffering from the impact of declining fish stocks along with  
193 fishing rules and regulations that are perceived not to suit the local context. The villages in the  
194 study area also face recurring conflicts mainly stemming from disputes over access to, and use  
195 of, marine resources. These conflicts are reported to have been increased with the rise of groups  
196 of resource users and villages that oppose MBREMP (Katikiro, 2016). At the same time, there  
197 is also a growing awareness of the importance to take actions to thwart activities that undermine  
198 the health of resources, especially dynamite fishing. Community-led actions such as

199 community policing, reporting of culprits to authorities and educational activities have grown  
200 steadily.

201

### 202 **3.2 Data collection and analysis**

203

204 Primary data was collected in the form of a household survey, key informants interviews, focus  
205 group discussions (FGDs) and participant observation (see Table 1). The authors were involved  
206 in multiple fieldwork visits to the study villages between 2016 and 2018. The current study  
207 also involved the collection of secondary data sources, including published and unpublished  
208 reports from various government and non-governmental organisations. Participants for key  
209 informant interviews and focus groups were selected based on their role and knowledge in the  
210 use, management and conservation of marine resources. They included local community  
211 members, district fisheries officials, government officials, village leaders, private investors and  
212 business and representatives of NGOs working in the study villages. Focus groups with regular  
213 villagers were also carried out in all sites. Interviews were also held with representatives of  
214 relevant state agencies (Marine Parks and Reserves Unit, Ministry of Livestock and Fisheries  
215 Development, MBREMP), donor agencies and NGOs, tourist operators and hoteliers and  
216 private investors involved in natural gas exploration in the area. Interviews were held in  
217 Kiswahili. Participants were ensured of anonymity. Data collected from interviews and FGDs  
218 were coded and entered in Nvivo10. Survey data was processed in SPSS and cross tabulations  
219 were made to ascertain relations between basic variables related to perceptions of respondents  
220 on partnership and status of resources. The results of the analysis were presented and discussed  
221 at dissemination workshops at the district and village levels in January 2019. These workshops  
222 were organised in view of having representatives from survey respondents, from those who  
223 attended focus group discussions and from key informant interviews. During the workshops,  
224 researchers highlighted the major findings followed by a discussion with the aim of clarify and  
225 validate these findings. The feedback received was incorporated into the revised version of the  
226 analysis including the ones used for this article.

227

228 <<<<Insert Table 1 here>>>>

229

230 The survey in the study villages involved questionnaires completed by 174 heads of  
231 households. The respondents in the survey differed with respect to gender, age, livelihood  
232 activities and education level (Table 2). Approximately 78 % of the sample were male and  
233 22% were female. Almost 87% of survey respondents had up to 4 children under 18 years old  
234 in their families.

235

236 <<<<Insert Table 2 here>>>>

237

## 238 **3. Results**

239

### 240 **3.1 Perceptions on possible areas for partnership with MBREMP**

241

242 Overall, a vast majority of survey respondents perceived that the primary objective of  
243 partnership is conservation of marine resources (Fig 2). In both sea-based and inland villages,  
244 respondents believed that there were also some other areas for partnerships and a  
245 considerable proportion of respondents maintained that there was no other objectives besides  
246 conservation. Key informant interviews and focus groups revealed that local community  
247 members consider partnership to be important attribute that could bring them together to plan



248 and carry out their fishing activities and other income generating activities within their  
249 villages.

250 <<<<Insert Figure 2 here>>>>

251  
252

253 Regarding the establishment of the partnership, interviews show mixed understanding on how  
254 they evolved. Some key informants in villages felt that they were informed and consulted in  
255 various ways including at meetings and through awareness raising activities for establishment  
256 of MBREMP. Others felt that these processes and activities excluded the voices of local  
257 communities and that there was insufficient time to understand the goals of MBREMP as  
258 emphasized during a FGD:

259 When MBREMP came they were not open to us, they didn't tell us what they want  
260 to do and what communities should do. They were supposed to involve us and  
261 agree together. Initially, we collaborated well with them and the MBREMP  
262 provided training on living things (*elimu viumbe*). However, what annoyed us is  
263 when they proposed to us to seek for alternative livelihood by fishing in deep  
264 waters (FGD 13)

265

266 Interviews revealed that the partnership was largely seen to be between MBREMP and  
267 resources users and that the former did not invest much time and effort in building local  
268 capacity for implementation and monitoring of marine conservation activities. Some key  
269 informants mentioned that they had participated at least in one partnership meeting in the  
270 previous 12 months, while others highlighted that they had taken part in activities organized  
271 by partners. Despite earlier activities to design and implement activities for the park, there is a  
272 lack of structure in the working relationships of key actors who form the partnership as  
273 reiterated in one of the FGDs:

274 Residents were invited to attend several meetings organized by the park  
275 management. The initial arrangement was that our Liaison Committee, which  
276 started with eight members (they are now 12), would meet with MBREMP after  
277 every four months. The last time we met was 2015 and there was only one meeting  
278 (FGD1)

279

280 Still, many key informants echoed that there was no proper mechanisms for them to act as  
281 equal partners in resource conservation and that communication between them and MBREMP  
282 followed a hierarchical process through Village Liaison Committees (VLCs) or village  
283 governments. One key informant mentioned that the kinds of partnerships that emerged were  
284 not able to attend to the need and aspirations of resource users who will have to live with the  
285 long-term consequences of conservation activities.

286

### 287 **3.2 Engagement in fishing**

288

289 Survey respondents reported that engagement in fishing activities has decreased and explained  
290 that this could be due to the increased awareness and enforcement of fishing regulations. They  
291 argued that this can be linked at least in part to MBREMP's environmental educational  
292 activities, which led to more people accepting regulations to govern marine resources in their  
293 villages. Some said that if they could have better fishing gear, they could change their preferred  
294 fishing grounds and move to deeper waters where there is little fishing pressure. Respondents  
295 complained about some of the fishing regulations which they believed were not fair. Further  
296 complaints were made by respondents about restrictions imposed by MBREMP which banned  
297 them from accessing their traditional fishing grounds with no alternatives provided. A majority

298 of survey respondents indicated that there has not been any significant change in fish species  
299 they used to target and fishing habitats as compared to the past (Fig 3). Interestingly, many  
300 participants in FGD held were of the opinion that lack of flexibility and openness in designing  
301 the MBREMP restricted local actors to define and shared conservation objectives in ways that  
302 are meaningful to them. Consequently, it was hard for them to link changes observed in fishing  
303 practices with presence of partnerships.

304 <<<<Insert Figure 3 here>>>>

### 308 **3.3 Perceptions on the status of marine resources**

309  
310 Survey respondents were asked whether they had observed changes in fish stocks, corals and  
311 mangroves over the years. Many survey respondents were of the opinion that over the past  
312 five years fish stocks have been in a worse condition. The changes mentioned included a  
313 decline in the availability of certain groups of fish, fishermen moving more offshore as fish are  
314 not available near-shore, seasonal changes and increased price for fish. Several reasons were  
315 mentioned by both survey respondents and key informants as to why fish stocks are in a worse  
316 condition: (1) that number of people engaging in fishing activities have increased; (2) that  
317 people are using destructive methods including dynamite and dragging nets (*kokoro*) to catch  
318 fish; (3) climate change; and (4) a rise in demand for fish. Unlike fish stocks, the status of  
319 corals and mangroves was mentioned to be somehow better (Fig 4).

320 <<<<Insert Figure 4 here>>>>

### 323 **3.4 Perceptions on livelihoods change**

324  
325 Overall, respondents expressed varied opinions on changes observed in their villages to as  
326 indicators of transformation in their social and economic life. Qualitatively, many  
327 respondents thought that their life is now better than in the past as they can access easily  
328 basic materials including amenities and that their life is being changed for example from  
329 previously uses of kerosene lamps to electricity for lighting. They also indicated construction  
330 of secondary schools and health centers as well as opening of new businesses such as kiosks  
331 in their villages. Assets endowment was also mentioned as some respondents reported to own  
332 motorcycles, TV sets and refrigerators. Interviews indicated changes in quality of houses as  
333 now many have houses roofed with iron sheet as compared to the past (Fig. 5). When asked if  
334 there was a link between changes observed and previous livelihood projects in the area, many  
335 respondents denied.

336 <<<<Insert Figure 5 here>>>>

### 339 **3.5 Perceived challenges on partnerships**

340  
341 Interviews show that partners had many more expectations from MBREMP. Many key  
342 informants indicated that villagers were dissatisfied with the promises of facilitating offshore  
343 fishing activities and supporting health and education services. Documents reviewed show an  
344 absence of any legal and regulatory framework for partnering with other stakeholders. Indeed,  
345 information from focus groups reveal that there was no regular communication between the  
346 partners and this had negative repercussions on their sustained commitment. Lack of sharing

347 of responsibilities was mentioned as one of these challenges, as well as lack of transparency as  
348 explained by one of the key informants:

349 Relationship between MBREMP and local people was good in the early days. After  
350 a few years, people started to challenge the MBREMP including resisting activities  
351 planned for the MBREMP. This bitter relationship emerged due to the fact that  
352 people felt that they were going to lose access to fishing resources and that  
353 MBREMP was imposing rules and restrictions that affected their livelihoods. For  
354 example, MBREMP was not enforcing and controlling the use of fishing gears  
355 without giving alternatives and people didn't like this idea. The current situation is  
356 somewhat calm, but this does not mean people are supporting the MBREMP fully  
357 (KII\_Msimbati)

358

359 On the other hand, FGDs showed dissatisfaction on how people were involved in various  
360 activities of the MBREMP including participation in meetings, workshops and trainings. Some  
361 had opinion that MBREMP showed more interest to some villages than others although this  
362 was not clearly explained why they felt so.

363

364

## 365 **5. Discussion**

366

367 In marine conservation, and particularly in MPAs, engagement of diverse actors is critical and  
368 is often perceived to be an important attribute for enhancing participation and legitimacy  
369 (Scholz et al., 2004). Depending on the type of MPA, stakeholders can include local  
370 communities, local government, civil society, business or a combination of these. Building  
371 partnerships for conservation include designing an entity legally responsible for implementing  
372 the management plan of an MPA.

373

374 As is common in top-down governance of natural resources, the government of Tanzania is  
375 responsible for providing financial and regulatory incentives to attract partners towards  
376 conservation. In the study villages we researched, the power of the state to encourage other  
377 actors, particularly resource users and investors, in the long-term protection of marine  
378 biodiversity is limited. Different actors seem to be aware of the objectives and possible areas  
379 for partnerships, but lack clear understanding on how this could be implemented for mutual  
380 benefit. The process of establishing MBREMP was marked by misunderstandings and lack of  
381 trust that contributed to conflict and hostility between different actors (Katikiro et al. 2015).  
382 This made some actors perceive that their values and position on marine resources were ignored  
383 resulting in a shift from support to opposition of the MBREMP. Lack of clear objectives for  
384 the partnership and its implementation, as well as limited space for partners to bring in their  
385 resources and capacity in common agreed goals, lead to unintended outcomes. While the  
386 present study found evidence on the perceived improved status of corals and mangroves, there  
387 were no clear explanation of whether this was linked to the operation of MBREMP or its  
388 partners in implementing conservation objectives. The current study demonstrates weakness  
389 in the configuration of partnership as there were no mechanisms that could enable partners to  
390 bring their assets and skills to help deliver conservation goals. Indeed, local communities who  
391 are the main resource users had no clear channels where they could bring their local knowledge,  
392 concerns and interests to. Increasing meaningful stakeholder participation in MPAs is thus  
393 important to achieve conservation targets (Nenadovic and Epstein, 2016; Yates, 2014).

394

395 Previous studies (Barrios-Garrido et al., 2019; Bennett and Dearden, 2014; Himley, 2009;  
396 Sunderlin et al., 2005) have indicated tensions commonly occurring between conservation and

397 livelihoods. This came out clearly as evidenced by increasing conflicts and resistance to  
398 conservation in MBREMP (Raycraft, 2019). While it is expected that partnership could smooth  
399 and iron out such differences, large differences on the socio-economic status within the  
400 MBREMP villages seem to have hampered this process. Dependence on marine resources is  
401 still high especially in seafront villages and thus many villages still prefer to access areas that  
402 have been designated for conservation purposes including the core zones (no-take areas) of the  
403 park. Balancing between conservation and livelihood needs is crucial in addressing tensions  
404 and conflicts that might be created to perceived loss in livelihoods and associated opportunities  
405 (Bonsu et al., 2019). Creating policies which will take in livelihoods needs at the same time  
406 ensuring conservation is not jeopardised could be one of the plausible options to ensure  
407 sustainability of resources in the study area. Lessons could be adopted from other areas where  
408 marine spatial planning has worked out quite well such as the in the Caribbean Island of  
409 Barbuda (Johnson et al., 2020) and Romania (Văidianu and Ristea, 2018), but this may need  
410 resources and capacity which seems to lack in the present status.

411

412 The findings suggest that efforts to enhance conservation outcomes through partnership model  
413 could have been more effective had they been included in the MBREMP management plan.  
414 Establishment of MBREMP itself is problematic and could not have led to partnership because  
415 the agenda was taken by the powerful actors (donors and government) though it came from the  
416 community (NAO, 2018). Earlier partners seem to have their own objectives. For example  
417 IUCN promoted conservation, UNDP brought livelihood but without taking into account the  
418 communities preferences and culture of livelihood. The consequences led to creation of a  
419 feeling of lack ownership. Proper communication and accommodating of partners' need would  
420 inculcate into the minds of the community the stewardship spirit. Although earlier initiatives  
421 used NGO to raise awareness, this was not effective as participation was refunded through cash  
422 payment. In reality such approach would not lead to a long and sustained participation of  
423 communities but rather push them into what could rhetorically be explained as a partnership.  
424 In such cases, there will be no mutual understanding between the partners. Conservation  
425 outcomes will eventually be affected if the institutional set up and participatory elements  
426 remain on paper but not in practice.

427

428 The general management plan of MBREMP demands inclusion of actors in its implementation  
429 (GMP, 2005), but provides no detail on how this should be done. The budget to fund related  
430 activities is still controlled by the state and it is not enough for meaningful enforcement and  
431 awareness-raising activities. Interestingly, the inherent weakness of implementing the GMP  
432 fail to virtually cover important aspects of partnership such as sharing of knowledge and best  
433 practices as well as creating of financing tools and strategies to run various conservation  
434 activities. Given the different potential roles towards conservation, there needs to be clear  
435 agreement between the partners to ensure there is a common understanding and common  
436 expectations (Burton, 2020). Differences in expectations have caused conflicts and undermine  
437 conservation activities as stakeholders feel dissatisfied with the level and mechanisms of  
438 participation in MPA decision-making processes (Hogg et al., 2017).

439

440 Our study indicates an absence of shared influence across partners and that influence is still  
441 much vested with MBREMP, which remains solely responsible for the day-to-day activities of  
442 the park, including fund-raising. Other partners have minor roles and are not necessarily the  
443 beneficiaries of the direct outcomes of conservation of marine biodiversity. Previous studies  
444 illustrated the importance of collaborative ties between partners (Chen et al., 2019; Sterling et  
445 al., 2017), a clear attribute that was missing in our case study as well. Understanding the values  
446 held by different groups of actors involved in a partnership is useful in establishing mechanisms

447 that would facilitate their effective participation (Buchan and Yates, 2019). While the  
448 MBREMP has good elements and the structure for inclusion of the communities for  
449 conservation of marine biodiversity, the actual situation on the ground present unexpected  
450 situation. These are reflected in the perceptions from the communities on little benefit and other  
451 negative sustainability outcomes which are not indicating that it is not operated in a partnership  
452 model. Nonetheless our case study is novel in a way that it expose the facets of partnership as  
453 one of the factors that may foster collective responsibilities and shared concerns in governance  
454 of natural resources.

455

456

## 457 **6. Conclusion**

458

459 Clear roles and reasonable expectations are essential for enhancing the effectiveness of marine  
460 conservation through partnerships. While various actors may be available to take part in  
461 implementing management plan activities in an MPA as is with the case under this study, lack  
462 of a clear structure and framework for their integration weaken the possible outcomes of their  
463 collaboration. Facilitating actors in partnership to participate in both the development and  
464 implementation of management decisions is likely to lead to more effective long-term solutions  
465 to MPA management. This will take-off provided that all partners will respond positively to  
466 expand collaboration beyond financial to a better understanding of marine biodiversity and its  
467 implications on the welfare of people. There is an urgent need to improve the ways in which  
468 different actors communicate, secure the resources needed to manage the relationship on day  
469 to day basis, interact and dialogue in view of ensuring their full participation. The present study  
470 indicates incongruent contribution to conservation outcomes especially status of marine  
471 resources attributed to partnership. Besides MBREMP, which is largely backed up by the  
472 government, other partners seem to have low technical and logistic capacity to become active  
473 actors in implementing marine conservation activities. Finding ways that would create  
474 incentives for local communities will increase their stewardship and promote their participation  
475 in conservation. The present research has used partnership as a lens to discern how conservation  
476 outcomes may be enhanced where different actors participate and explore benefits.

477

478

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480

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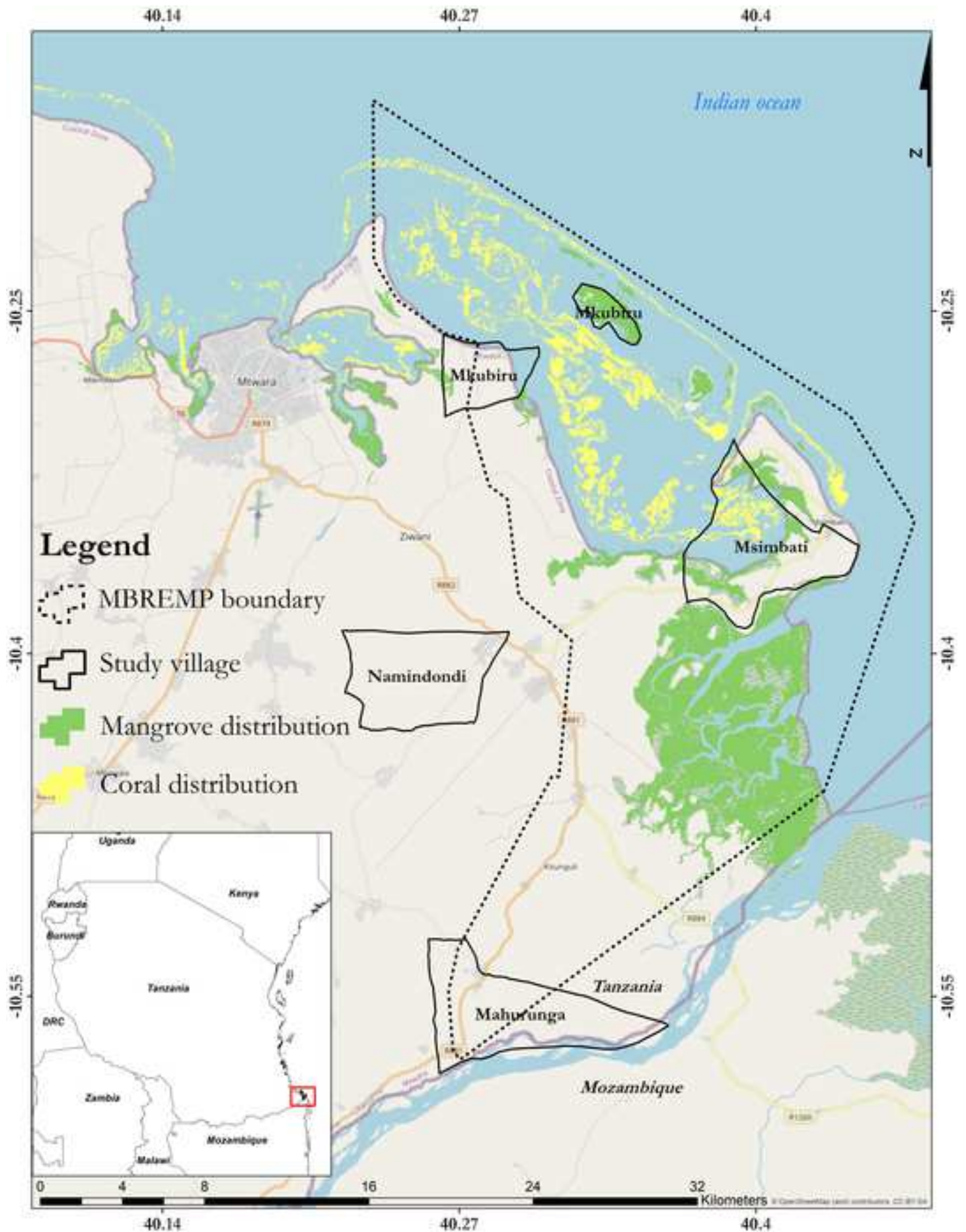
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673



**Table 1**

<b>Category</b>		<b>Focus groups</b>	<b>Key informant interviews</b>
Village	Msimbati	2	19
	Mkubiru	2	17
	Mahurunga	2	8
	Namidondi	2	14
Government institutions	MBREMP	-	5
	MALF	-	2
	MPRU	-	2
	TAFIRI	-	1
Multilateral organisations/NGOs/CSOs	WWF	-	3
	SWISS	-	2
	UNDP	-	1
	SHIRIKISHO	-	2
	AghaKan	-	1
	Jikomboe group	-	1
	KIMWAM	-	1
	MNRT	-	1
	UWADAR	-	1
	SeaSense	-	1
<b>Total</b>		<b>8</b>	<b>82</b>

**Table 2**

<b>Variable</b>	
Age range (years)	22-80
Mean age ( $\pm$ SD)	49.95 (SD $\pm$ 14.43)
Number of adults in household	2.69 (SD $\pm$ 1.21)
Education	
No formal education	31.4%
Primary incomplete	18.3%
Primary complete	45.7%
Others (secondary/vocational)	4.6%
Main economic activity	
Farming	70.3%
Fishing	22.3%
Business	4.0%
Government employee	1.1%
Others (e.g. casual labour/ <i>vibarua</i> etc)	2.3%

## **List of table and figure captions**

### **Captions for tables and figures**

Table 1 Focus groups and key informant interviews in the study villages

Table 2 Demographic characteristics of the survey respondents

Figure 1 Map showing study area

Figure 2 Marine conservation is the first objective of partnership

Figure 3 Perceived changes on targeted fish species and fishing habitats

Figure 4 Perceived changes on status of corals, fish stocks and mangroves

Figure 5 Perceived changes on condition of livelihoods

**Conflict of interest**

All authors declare that they have no conflict of interest