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# **Local Responses to Marine Conservation in Zanzibar, Tanzania**

Arielle Levine

## **INTRODUCTION**

Community-based methods of conservation have become “almost a new orthodoxy” in conservation and development circles (Hulme and Murphree 2001). This is particularly the case in Africa, where on much of the continent it is now difficult to find a conservation program that does not involve some type of community component. While terrestrial wildlife conservation has a long history in Africa, dating back to colonial times (Anderson and Grove 1987), the protection of marine areas is a much more recent endeavor. Community-based conservation models, initially created to work with communities and wildlife on land, face new challenges when dealing with resources located off the coast or with the dispersed communities who use them.

In spite of these challenges, the more recent nature of marine conservation programs provides new opportunities to work with communities in areas where there is little history of conflict or colonial expropriation. The newness of these endeavors also provides the opportunity for them to break from generic ‘models’ of community-based conservation, which have often been applied as a blanket approach across conservation efforts in the terrestrial realm. While much can be learned from terrestrial efforts, the novelty of marine programs allows innovative approaches to be tested when working within the particularities of different regions and with varied communities.

In the islands of Zanzibar, Tanzania, four new marine conservation areas, sponsored by four different agencies, were established in the 1990s. While these programs involve innovative new efforts to work with local communities in promoting conservation, each faces challenges in adequately protecting marine resources and gaining community support for conservation within the program. It has been difficult for sponsoring organizations to break away from the temptation to apply a blanket ‘model’ of conservation across multiple villages within a

program. Although these pilot programs espouse to work at the 'community' level, it is logistically much simpler to apply a single conservation model, designed from above, that may fail to pay sufficient attention to local village-level differences. These generic 'cookie-cutter' approaches to conservation inevitably lead to disparate local outcomes across participating villages, threatening community support for the program and potentially compromising the success of the program and of marine resource protection in general.

To more closely examine the local variation in outcome that can be found in a community-based conservation program, this paper focuses on the Menai Bay Marine Conservation Area program, located in southern Zanzibar. This program has been successful in reducing dynamite and other destructive forms of fishing in many parts of the Menai Bay region, but the responses of local community members involved in the program vary tremendously between villages, potentially threatening the program's long-term stability. In order to better understand the village-level variation found within this program, I first back up to outline the history of the rise of community-based conservation in Tanzania, particularly in the marine realm. I then focus more specifically on Zanzibar and the islands' legislative context that has allowed for the formation of new community-based marine protected areas with the involvement of a number of external actors from the non-governmental and private sectors. The Menai Bay Marine Conservation Area program is then described in detail, as are the divergent reactions of fishing communities from two villages located on opposite sides of the Bay. I outline the possible reasons behind this tremendous variation in response and what these differences mean for conservation in Menai Bay and for local acceptance and participation in the program. Finally, I call for an approach to community-based marine conservation that is sensitive to local contextual differences, adaptive in management style, and integrated at multiple levels of management, in order to maximize its potential for sustainability in the long-term.

## **COMMUNITY-BASED CONSERVATION IN TANZANIA**

Tanzania is internationally renowned for its parks and protected areas. With over 25% of its land surface set aside in parks, protected areas, and wildlife reserves, the country has placed a high priority on safe-

guarding the country's valuable wildlife and terrestrial resources (Leader-Williams et. al., 1996). Many of these areas were established during the colonial period, and the number of national parks in Tanzania rapidly expanded after the country gained independence in 1961. Parks, protected areas, and game reserves provide a significant source of revenue for the country through international tourism, as well as through funding from international conservation and development agencies.

While terrestrial conservation in Tanzania dates back to colonial times, marine and coastal conservation has only recently come into the spotlight. The Tanzanian government began to designate a few small marine reserves off the coast of Dar es Salaam in 1975. However, these areas were predominantly 'paper parks' with little effective enforcement. In the 1990s, marine conservation began in earnest with the ratification of the Marine Parks and Reserves Act in 1994 (Spaulding et. al., 2001). Since then, marine protected areas have expanded rapidly (see Table 1).

Simultaneous with a new focus on marine conservation in Tanzania and internationally, the general theory and practice of conservation and protected area management underwent a dramatic transformation. Exclusionary models of park and protected area designation and management had resulted in years of rural hardship and conflict with local communities (Neumann 1998). In response, conservation organizations began to formulate more participatory models of policy and decision making, looking for ways to involve local communities in what was variously called "community-based conservation," "community-based natural resource management" or "integrated conservation-development," among other titles. This development affected protected area management programs both in Tanzania and in other developing countries around the world (Brandon and Wells 1992; Murphree 1993; Gibson and Marks 1995; Leader-Williams et. al., 1996; Brosius et. al., 1998; Newmark and Hough 2000). Conservation and development organizations also began acknowledging the importance of obtaining community support for their efforts and of returning some of the benefits of protected area conservation to local people in order to help guarantee the long-term sustainability of their programs. Community-based conservation was heralded as the way of the future for natural resource management in developing countries, and organizations ranging from government agencies to NGOs, international de-

Table 1. Marine Protected Areas in Tanzania

<i>Site name</i>	<i>Designation</i>	<i>IUCN category</i>	<i>Year designated</i>
Bongoyo Island	Marine Reserve	II	1975
Fungu Yasini	Marine Reserve	II	1975
Mbudya	Marine Reserve	II	1975
Pangavini	Marine Reserve	II	1975
Maziwi Island	Marine Reserve	II	1981
Chumbe Island Coral Park*	Marine Sanctuary	II	1994
Mafia Island	Marine Park	VI	1995
Menai Bay*	Conservation Area	VI	1997
Mnemba*	Conservation Area	VI	1997
Misali Island*	Conservation Area	VI	1998
Mnazi Bay–Rovuma Estuary	Marine Park	VI	2000

\*Protected areas in Zanzibar (Adapted from Spaulding et. al, 2001)

velopment institutions, and private tourism operators gradually began to incorporate local community considerations into their conservation agendas.

By the end of the 1990s, it was difficult to find a conservation area in Tanzania that did not have a community component sponsored by an associated donor agency. Tanzania National Parks (TANAPA) established a Community Conservation Service to work with communities outside of national parks, supported by the African Wildlife Foundation (AWF) and World Wildlife Fund (WWF), the two largest wildlife NGOs in the country. AWF received considerable funding from USAID in the late 1980s and 1990s to establish community-based conservation programs (AWF 2004), and community components were becoming an increasingly important focus of WWF's programs (Dudley and Stolton 2003). CARE International had established Integrated Conservation-Development Programs (ICDPs) around many of the country's protected forests. Increasingly, some tourist operators were also beginning to incorporate community benefit programs with neighboring communities around their primary safari sites in Tanzania and other parts of Africa (Dorobo Safaris 1995; Kangwana and Mako 1998).

Because marine protection was initiated more recently, when this shift in thinking towards community-based methods of conservation was already underway, marine programs in Tanzania do not have the same extensive history of conflict as land-based conservation programs. Given this context, marine protected areas provide a tremendous opportunity to pilot innovative conservation initiatives in collaboration with local community and user groups. Many experimental techniques are currently underway to work with local communities around marine protected areas, often incorporating methods used in terrestrial community-based conservation strategies.

However, the techniques involved in terrestrial community-based conservation initiatives face a complicated set of new issues when applied in a marine environment. Most of TANAPA's community programs have focused on working with Tanzania's sizeable rural agricultural and pastoral populations, who are either settled in one area or occupy a fairly definable territory. Marine conservation faces additional challenges in the diffuse nature of fisher user groups that are often hard to define as traditional "communities," in the highly fugitive nature of fisheries resources, and in the fact that marine borders that are extremely difficult to demarcate and enforce. While terrestrial community-based conservation tends to focus on neighboring villages, fisheries resources are often used by people who come from great distances and neighboring 'resident' communities may not exist. In the cases where communities do live adjacent to a protected area, the involvement of only these nearby communities may overlook the effects on and importance of other key resource users. This problem reveals itself whether the program is trying to empower local user-groups as resource managers or simply distributing benefits to local populations to compensate them for lost access to resources.

## **MARINE CONSERVATION IN ZANZIBAR**

In light of the above challenges, establishing community-based marine conservation programs is a daunting, but important, undertaking. A number of these kinds of programs have been established in Tanzania over the past decade, four of which are located in the islands of Zanzibar (see Figure 1). Zanzibar is a semi-independent state within the United Republic of Tanzania composed of two main islands, Unguja and Pemba, and a number of smaller fringing islets. Fishing is an ex-

tremely important livelihood activity for the majority of Zanzibar's rural coastal populations, and this, together with small-scale agriculture, coconut and spice growing, and more recently tourism, make up the bulk of Zanzibar's economy. Although part of the Republic of Tanzania, the government of Zanzibar maintains its own departments and ministries for internal matters, and natural resource management falls within the jurisdiction of the Zanzibari government.

In each of Zanzibar's four marine protected areas there are efforts to incorporate some element of community involvement and participation. This primarily involves finding ways for local communities to have a role in the management of these protected areas and/or providing nearby communities with benefits derived from conservation in the area. Two of the programs in Zanzibar are sponsored by international non-governmental organizations (NGOs), and the other two are managed by private sector, eco-tour operators (see Table 2).

One particularly interesting feature of marine conservation programs in Zanzibar is that all were initiated through the efforts of external organizations, and each is in some way supported and managed, in part or in full, by outside agencies other than the government. Indeed, the divisions of government that would normally be responsible for managing protected areas do not have the funding or resources to manage these protected areas themselves. While many government programs in the developing world were supported heavily in the past by international development funding, during the 1980s the international donor community shifted its funding priorities away from providing direct assistance to the state. Now donor institutions emphasize decentralization or privatization of state functions, preferring to work through what are often referred to as "civil society" organizations, which are deemed to be more efficient and representative of society, or through the private sector, which is also seen as more efficient and flexible than bureaucratic government structures. In essence, this means that the majority of donor support to Tanzania is now distributed through intermediary organizations such as NGOs (often seen as institutional representatives of civil society), or it is used to encourage private sector initiatives, with very little going directly to the state (Gibbon 1995; Levine 2002). On top of this general trend in Tanzania, the political corruption and human rights violations associated with Zanzibar's elections in 1995 and 2000 (Human Rights Watch 2002) caused the rapid withdrawal of many of the state's remaining sources

Figure 1. Marine Protected Areas in Zanzibar (labeled in red). Modified from the U.S. Central Intelligence Agency Map Collection (1977).





Table 2. Marine Conservation Areas in Zanzibar

<i>Conservation Program</i>	<i>Program Type</i>	<i>Implementing Organizations</i>	<i>Location and Involved Communities</i>
<i>Misali Island Marine Conservation Area</i>	NGO	CARE International  Government of Zanzibar – Department of Commercial Crops, Fruits, and Forestry (DCCFF)  Misali Island Conservation Association (MICA)	Misali Island, West of Pemba  Works actively with 12 user communities ( <i>shehias</i> ) around Pemba; involves 34 <i>shehias</i> in fishermen's association (MICA)
<i>Menai Bay Conservation Area</i>	NGO	World Wildlife Fund (WWF)  Government of Zanzibar – Department of Fisheries	Menai Bay, Southern part of Zanzibar  Involves 17 user villages in the Menai Bay area
<i>Mnemba Island<sup>1</sup></i>	Private Sector	Conservation Corporation Africa  Government of Zanzibar – Department of Fisheries	Mnemba Atoll, NE of Zanzibar  Involves 4 nearby user communities ( <i>shehias</i> )
<i>Chumbe Island</i>	Private Sector	Chumbe Island Coral Park, Ltd.  Government of Zanzibar – Department of Fisheries	Chumbe Island, West of Zanzibar  Involves local fisher communities and Zanzibar teachers and school children

of international development funding, leaving the Zanzibar government even more strapped for resources (Bigg 1996). The private sector and international NGOs were two of the few sources left for the Zanzibari government to turn to for support.

Addressing this severe lack of government capacity and funding, Zanzibar's *Environmental Management for Sustainable Development Act* of 1996 establishes a Protected Area Management Plan (Environmental

Management for Sustainable Development Act, 1996). This plan specifically provides that the National Protected Area Board of Zanzibar can delegate its authority to institutions or individuals not employed by the government, stating that the Board “may delegate in writing any of the National Protected Areas Board’s powers except its power to recommend national protected area status to the Minister responsible for the national protected areas system.” (Environmental Management for Sustainable Development Act, 1996) Delegations can be made to “any person qualified to exercise those powers,” thus opening the potential for NGOs, the private sector, and local communities to become involved in protected area management. While the government still retains authority over reserve designation and delegating reserve management powers, much of the effective responsibility for managing and funding Zanzibar’s marine protected areas currently lies in the hands of outside agencies.

Because of the current priority of involving local communities in conservation programs, each of the institutions managing these protected areas (be it government, private sector, or NGO) has incorporated a community component into its management plans. However, it is nearly impossible for these external organizations to engage directly with local communities without working through pre-existing structures and channels established by the Zanzibari government (such as the local *sheha*<sup>2</sup> or district officials). Thus, while the *Environmental Management for Sustainable Development Act* establishes a mechanism to disengage the Zanzibari state from the management of many protected areas, external managing institutions are still required to work through the state in order to reach local communities. This creates confusing and often convoluted relationships between protected area managers, the government, and local communities, which are not necessarily conducive to building strong and sustainable conservation programs.

## **COMMUNITIES AND CONSERVATION: NGO AND PRIVATE SECTOR PROGRAMS**

The policies set forth under Zanzibar’s Protected Area Management Plan have opened up an opportunity for the involvement of a variety of institutions in marine protected area management and have resulted in a diverse range of conservation programs and methods in a rela-

tively small geographic area. This provides an excellent opportunity to compare the outcomes of different management styles, particularly the difference between private sector and NGO techniques for conservation and community involvement. As might be expected, village members' views of and reactions to conservation programs vary greatly from one protected area to another. Their responses can also vary just as dramatically, however, between villages within a single protected area program. Indeed, a given management initiative pursued, for instance, by an NGO may experience a positive response from the people it works with in one village, while members of a different village may have a strongly negative reaction against the same program.

To assess local responses to the different types of conservation programs, in-depth questionnaire-based interviews were conducted over a period from November 2001 to January 2003 with over 500 fishermen in twenty-four *shehias*<sup>3</sup> involved in each of the four marine conservation programs in Zanzibar. Focus group discussions were also conducted with fishermen in each village.<sup>4</sup> Preliminary results from this research show that while there is no dramatic difference between *overall* project satisfaction in villages involved in NGO versus private sector programs, there appears to be a difference in the *extremity* of the fishermen's reactions. Fishermen located in villages associated with private sector programs are often passively accepting (or fatalistic) in their attitude toward the programs. They may be somewhat disappointed to lose access to a fishing area, but are perhaps pleased to be receiving benefits from program funding in their villages. On the other hand, fishermen located in villages involved with programs sponsored by NGOs often exhibit a much more extreme response. When NGO programs are meeting community expectations, community members feel highly involved in and enthusiastic about the conservation initiatives. Conversely, if the program fails to live up to its promises, local community members may exhibit resentment and threaten to rebel against the program itself.

This dramatic difference in community-level responses appears surprising until one examines the different techniques used by NGO vs. private sector programs in implementing community-based conservation. NGOs tend to focus much more on capacity-building and creating community-level structures, actively trying to involve fishermen in conservation and/or management. Fishermen are encouraged

to form village conservation committees and may participate in patrols or become involved in deciding management issues. This creates an overall sense of engagement and community-level investment in the conservation programs. Private sector programs, on the other hand, operate more as socially responsible businesses. The hotels incorporate a conservation component to their operations and try to provide benefits to local community members. Ecotourism is a lucrative niche market, and community and environmental programs provide positive publicity for the hotels, as well as help to ensure good local relations. Local communities are not actively involved in management, but are passive recipients of benefits derived from tourist revenue.

While a highly engaged community is much more likely to feel invested in a conservation program, this in itself cannot guarantee a positive community response. The overall outcome of a community-based conservation program at the local level depends on numerous other factors beyond the type of implementing institution, or even the techniques used to carry out the program. These factors are often complex and difficult to predict, and can be either internal or external to the village or program itself. Additionally, program policies and responses are not static in time, but are continuously evolving in response to a changing program environment. In spite of the complex issues involved in working with local communities and the changing nature of these conservation programs, it is crucial to look at the possible sources of variations in village-level responses to programs in order to better understand program outcomes.

In order to provide a concrete example to more clearly illustrate the multiplicity of factors that can influence local-level program outcomes, the following sections provide a more in-depth look at a single marine protected area, the Menai Bay Conservation Area. While the factors illustrated here are associated with a particular program, most are cross-cutting and would also apply to an analysis of other community-based marine conservation programs, whether in East Africa or internationally.

## **THE MENAI BAY CONSERVATION AREA PROGRAM**

Among the marine conservation programs in Zanzibar, the Menai Bay Conservation Area provides a clear example of the potential for extreme variation in local response within a single program. The Menai

Bay program was established by the World Wildlife Fund (WWF) in order to address the growing problem of illegal fishing in the area, and it is currently the largest marine protected area in Zanzibar, encompassing approximately 470km<sup>2</sup> (see Figure 2).<sup>5</sup> While no region within the protected area is strictly off limits to fishing, there are seasonal camping restrictions in some areas, and stricter fishing gear regulations throughout the bay. The program was initiated in 1994, and the region was officially gazetted as a protected area in 1997. While WWF has funded most of the program, it also collaborates with the Zanzibar government's Department of Fisheries to work with local villages and has received financial assistance from USAID, the British government, and other sources to finance certain aspects of the program.

The primary aims of the Menai Bay program are to sustain the biological resources of Menai Bay through the establishment of a multi-user marine conservation area, to ensure local participation in conservation and monitoring of the protected area, and to increase public awareness and education. The project hopes to increase local capacity for sustaining conservation activities. It also has the goal of providing sources of revenue to improve local livelihoods and to make the project self-supporting in the long-term (Ngaga et. al., 1997). In pursuit of these goals, the project works with 19 villages<sup>6</sup> surrounding the Bay, and each of these villages has organized village conservation committees (VCCs) that provide a structure through which the program contacts and works with each village. The VCCs are also intended as a way of organizing village members to focus on issues of environmental protection, such as mangrove replanting and the reduction of dynamite fishing and illegal nets (Menai Bay Conservation Project, 2000).

In order to address the problem of destructive fishing in the area, the Menai program has established a system of local patrolling, providing fishermen from some of the participating villages with hand-held radios to take on their boats to report incidences of illegal fishing. Five radios were distributed to certain villages, and two patrol boats were stationed in Kizimkazi Dimbani on the east end of the bay. The patrols sometimes work together with the local coast-guard (KMKM) to intercept illegal fishermen. Between 1997 and 1999, twelve cases of illegal fishing involving 167 fishermen were brought to court (Ngaga et. al., 1999). Although fishermen complained that the fishermen who are prosecuted for the use of illegal methods are rarely punished in

any substantial way (only 40 fishermen involved in the above cases were actually fined), most villagers reported a significant reduction in dynamite fishing in Menai Bay since the program was initiated, particularly in the area around Pungume Island in the South.

WWF is also working to promote alternative sources of income in the Menai Bay villages. Tourism is actively promoted in some villages to bring in additional income to improve the livelihoods of local people. It also provides a source of revenue to support conservation activities and program expenses in the Bay. Some villages have also received assistance and training to pursue alternative non-extractive income generating strategies such as bee-keeping and tree nurseries.

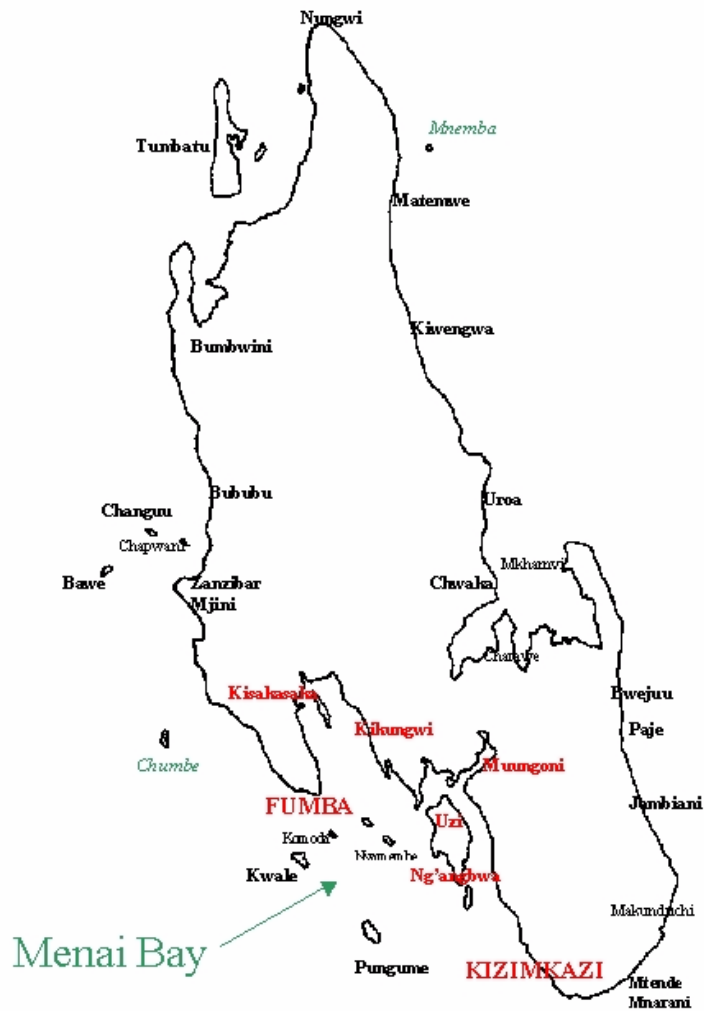
### **VILLAGE-LEVEL OUTCOMES IN MENAI BAY: LOCAL VARIATION**

The Menai Bay program has used a fairly consistent model for conservation and community involvement when working with the communities involved in the program. The VCC structure is virtually identical in each village, and the program has used similar methods for promoting conservation and alternative livelihoods, like the distribution of radios and formation of women's bee-keeping groups to work in mangrove areas. But while the model for implementing conservation programs is similar across villages, the outcomes at the village level have not been as consistent as the conceived model. This has resulted in highly divergent responses from community members within different villages, as well as high variation in village participation in and support of the programs.

Intensive interviews and focus group discussions conducted with fishermen in seven of the program villages help to throw some light on this outcome. Each of these villages is unique, and thus different responses would be expected in each area. However, the variation in community responses from different villages within Menai Bay is dramatic, with program satisfaction generally higher on the eastern end of the Bay than in the West. These differences appear to be due to a number of factors, both internal and external to the villages. These factors include, but are not limited to, differences in the infrastructure and geography of an area, local differences in history and fishing methods, the presence and extent of illegal fishing in the area (whether by village members or outsiders), village members' access to alterna

Figure 2. Map of Menai Bay and Zanzibar's Marine Protected Areas (Marine protected areas labeled in green, Menai Bay villages surveyed in this study labeled in red)

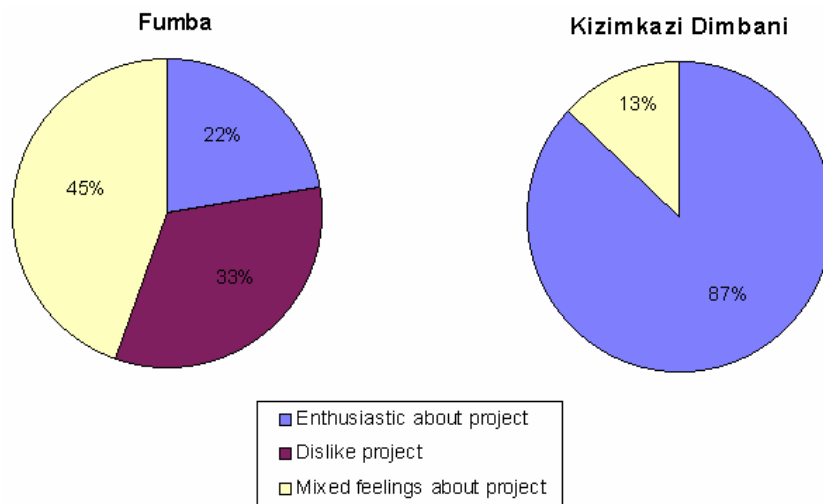
### Zanzibar: Menai Bay Marine Conservation Area



tive means of income, the degree of the community's dependence on fishing locally for their own subsistence, and variations in the previously existing social structures and history of local conservation efforts found within each village.

Two villages in particular exemplify an extreme variation in responses. One is Kizimkazi Dimbani, located on the far eastern end of the Bay; the other is Fumba, on the far western peninsula (Figure 2). Fishermen in Kizimkazi Dimbani are generally highly enthusiastic about the project, believing that it has helped their village tremendously, both through the reduction of illegal fishing, as well as through an improvement in their overall livelihoods. The village of Fumba, on the other end of the bay, is much less enthusiastic about the project (see Figure 3). While fishermen who are members of the VCC in Fumba seem to have a slightly more positive opinion of the program (a trend seen in all villages), Fumba fishermen are generally pessimistic about the program's ability to reduce illegal fishing in their area or to improve their overall situation. Many of the differences in local responses to the program between these two villages can be explained by the aforementioned factors, a subset of which is discussed here.

Figure 3. Fishermen's Responses to the Menai Bay Project





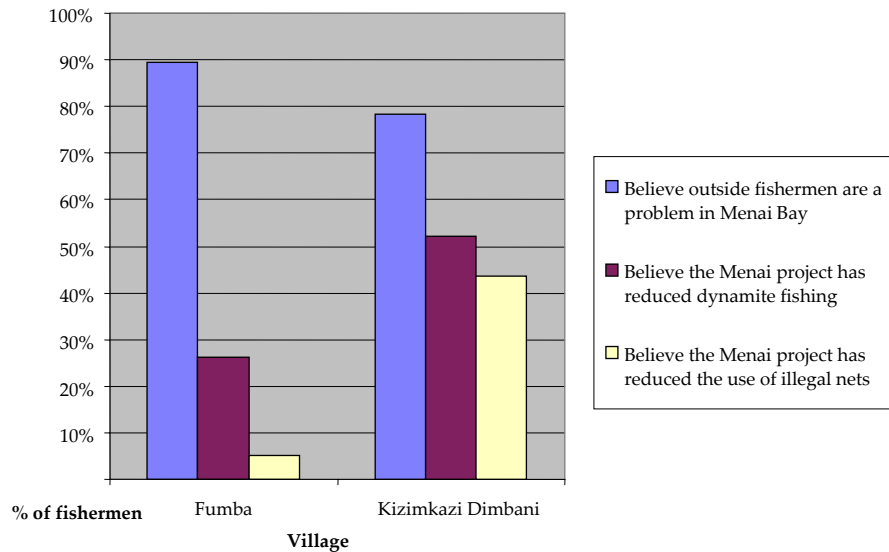
## GEOGRAPHY AND INFRASTRUCTURE

Differences in infrastructure are perhaps the most obvious factors accounting for the divergent responses in these two villages. Although Kizimkazi Dimbani is much farther from the project headquarters in town, a well-maintained paved road runs all the way to the village. Fumba is physically much closer to town, but the road to reach the village is in poor condition, and driving to Fumba can take longer than the trip to Kizimkazi Dimbani. A common complaint among many fishermen is that program officials don't come to their villages, and indeed program officers rarely make the grueling trip to Fumba. The smooth road to Kizimkazi Dimbani, however, also allows project officials to stop at other project villages en route, making a trip to this village both comfortable and convenient. Not surprisingly, program officers are much more inclined to visit Kizimkazi Dimbani than Fumba, and the village gets much more attention from the program.

Additionally, Kizimkazi Dimbani serves as the base for the program's two patrol boats and radio headquarters. One of these two boats contains two powerful outboard engines, which theoretically enable the patrol team to intercept almost any illegal fishing boat that enters the Bay. However, these impressive engines also use a considerable amount of fuel, and the limited project funds are rarely adequate to support the cost of fuelling these boats. Project officers generally lacked sufficient fuel to take the boats on patrol or to intercept illegal fishermen outside the immediate area of Kizimkazi Dimbani.

Since Fumba is located on the opposite end of the Bay from Kizimkazi Dimbani, the patrol boat is rarely able to arrive there in a timely manner in response to reports of illegal fishing, even in the unlikely case that adequate fuel resources are on hand to make the lengthy trip across the Bay. Both Fumba and Kizimkazi experience a number of outsiders fishing in their area. However, Fumba is located closer to the mainland and to town, meaning that the perceived threat of outside fishermen using illegal methods is greater (see Figure 4). The presence of the patrol boats in Kizimkazi Dimbani serves as a deterrent to illegal fishing in that area, but fishermen in Fumba do not generally believe that program has helped to significantly reduce illegal fishing occurring in their region.

Figure 4: Perceived Threat of Illegal Fishing: Fumba vs. Kizimkazi

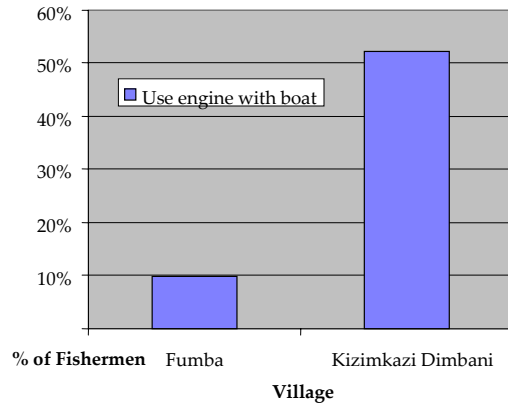


For reasons of infrastructure and geography facilitating transportation to Kizimkazi Dimbani, as well as the noticeable presence of program resources (such as the patrol boats) in that village, Kizimkazi Dimbani has become a kind of “showcase village” for the Menai Bay program. Program officers have been much more likely to bring donors and other visitors to this village, rather than some other, to observe the program. Although this was probably not the program’s initial intent, this situation has contributed to the further concentration of program attention and resources. It has also opened up other opportunities for the village, such as increased international attention and the presence of tourism.

### Alternative income through tourism

The tourist industry, which the Menai project has actively promoted as an ecologically friendly source of alternative income generation for the Menai Bay region, is already a notable source of employment in both Kizimkazi Dimbani and Fumba. The presence and potential of tourism is probably greater in these villages (with easy access to the open ocean) than in most other villages in the project area. A number of

Figure 5: Fishermen's Use of Outboard Engines



fishermen in both villages work for outside companies taking tourists out to sea, and many fishermen in Kizimkazi Dimbani also lead dolphin tours in their own boats using personal resources and initiative. The opportunities for independent employment are greater in the Kizimkazi area because its popularity and the condition of the road bring frequent casual day visits from tourists who are not affiliated with an outside company. The Menai Program has also tried to use tourism as a source of program revenue, attempting to tax tour operators at two dollars per tourist visit. This scheme met with considerable resistance from individual fishermen and tour operators alike. In Kizimkazi Dimbani, those working in tourism were worried that the fee would discourage visitors, and in Fumba fishermen and tour operators believed that they were receiving few benefits from the project and thus should not sacrifice any portion of their revenue to support it.

Tourism is a major factor contributing to the greater relative wealth of fishermen in Kizimkazi Dimbani compared with Fumba. The use of boats with outboard engines, one proxy indicator of the economic resources of fishermen<sup>7</sup>, is dramatically higher in Kizimkazi Dimbani than in Fumba (see Figure 5). While this greater use of outboard engines may predate the Menai project, it also means that many Kizimkazi fishermen are able to travel farther to fish. This makes them less reliant on their immediate area, and thus less threatened by destructive fishing in their region. Using engines also allows fishermen to inde-

pendently take tourists out in their own boats, further amplifying their potential to earn tourist income.

Fishermen in Kizimkazi Dimbani see the presence of tourism as a strong benefit provided by the Menai program, bringing in supplemental income and employment opportunities for people who might otherwise have to leave the village to find work in town. As one fisherman stated:

The village benefits because many youth get employment when indeed our own government says that there are no jobs. It isn't customary for many of our youth to move to town when they finish school because there is work here and they help each other. A person can earn two to three thousand shillings [here] that people in town can't get. Also, our village has become well known because many different visitors come here . . . and many make contributions.<sup>8</sup>

Fumba fishermen see the relationship between the Menai project and tourism differently. When asked about the two-dollar contribution that the project was soliciting from tourist operations, many fishermen cited corruption within the project. One fisherman responded,

Truthfully, this project has been given a lot of money by donors and they have not done one thing of meaning; they've used all of this money and they've done nothing . . . They say they do patrols, but they don't do this – they just take tourists out to make money . . . They say that this money will help the village, but this isn't true. If they get money they eat<sup>9</sup> it themselves and it doesn't help anything here. Now many people in Fumba don't believe in Menai.

Another Fumba resident emphasized the village's disillusionment with the project:

The people of Menai aren't honest... After we've seen that there is no truth, indeed we won't even pay [them] one dollar, because although the project appears to be doing things for the environment, still . . . destructive fishing occurs even though the project has boats to enforce the law. Therefore there is no need to pay to make their [the project officers'] stomachs fat – there is no meaning.

The uneven distribution of program attention and resources goes far to explain the differences in fishermen's attitudes between the two villages. However, other villages participating in the project also suf-

fer from negligible program attention, but their reaction against the project has not been nearly as extreme as in Fumba. As Fumba is the village in this study located farthest from the patrol headquarters and closest to the mainland and to town, the threat of outsiders fishing illegally may be greater in that area than in most other parts of the Bay, potentially exacerbating village-level dissatisfaction. However, the high degree of dissatisfaction with the Menai program found among Fumba residents may also be explained by other historical factors within the village itself.

### **Pre-existing village structures and conservation history**

The fishermen in Fumba established their own village conservation committee in the early 1980s to fight the growing problem of the incursion of illegal fishing in their area. With the help of some outside donor funding, they expanded this committee in 1992 to work with five other villages on the Fumba peninsula. This committee was not legally registered, but Fumba area villages contributed their own funds to purchase fuel and local fishermen volunteered to assist in patrolling in the area to prevent destructive fishing techniques. Fumba fishermen frequently cite with pride how they were “the first to protect the environment.”

When the Menai project began working with Fumba, the program officers asked the villagers to disassemble their local village conservation committee and create a new one under the auspices and structure of the Menai Bay program. The Fumba villagers willingly complied, expecting to receive increased support from the new WWF-funded program. Unfortunately, the villagers stated that they believed they had been abandoned by the project; the program officers rarely came to their village, and the patrol boat never reached their area. One Fumba fisherman complained, “Menai, they’ve got problems – they don’t send the boat. There used to be a committee here but it died a few years ago; it didn’t work. People came from [the project] but they did nothing.” Another stated: “Menai and WWF have done nothing for the committee – they’ve done zero. Nothing has come of it.” Other fishermen express a sense of urgency:

They [the project] need to do real work because the coral is being broken, fish are ruined, destructive fishermen fish every day – it must be protected. Fishermen must not use destructive methods, and the

project must do their work well. We don't want destructive fishing in Menai Bay.

The Menai project's failure to work with pre-existing village-based conservation structures fed into local frustrations regarding the program in Fumba. Program officers made promises to assist them, but then focused their resources elsewhere instead. This served to undermine many of the efforts that villagers had initiated themselves and reduced local levels of participation in conservation programs. As one Fumba fishermen stated:

People in Fumba were the first to protect the environment. Here we were teachers for other areas, but the project removed us . . . now people from here have lost heart – they don't continue [to work to protect the environment].

Another Fumba resident (who had been a member of both the former conservation committee and the one initiated by the Menai program) remarked:

First I sat with the community regarding conservation; Menai came and then it was just the VCC, not the community anymore.

Many fishermen also cited the increase in illegal nets in their area as a big problem, and they were frustrated that the program focused its efforts on the other side of the Bay:

Our strength has decreased because we have gotten nothing, it all goes to Kizimkazi . . . We've gotten no tools to protect against anything. People from Menai don't come often now . . . they've stopped coming completely, they only go to Kizimkazi.

Some villagers were outraged enough to state that the program officers were no longer welcome in Fumba. In early 2003, Fumba fishermen attempted to publicly voice their complaints by publishing an article in the local Zanzibar newspaper, *DIRA*.<sup>10</sup> They complained about the increased presence of illegal fishing in their area and claimed, "We call this a protected area, but this is a lie. . . This area is where we make our living. There is a word that says Marine Protected Area but this is an empty lie, it is just on paper." (*DIRA* 2003)

The Menai project's failure to work with, and in fact to undermine, pre-existing village-based conservation structures goes far to explain

the extreme resentment that many Fumba fishermen feel against the program. Kizimkazi Dimbani, on the other hand, had no formal village conservation committee before the Menai project began, and their fishermen's committee dealt primarily with matters of the fish market. The Menai program brought a formal structure and resources to the village to address issues such as the incursion of illegal fishermen in their area. It also helped to increase tourism in the village. Rather than undermining local structures in Kizimkazi Dimbani, the Menai project helped to build and strengthen them, a factor which may help to explain the fishermen's high level of support for the program.

### **IMPLICATIONS FOR COMMUNITY-BASED MARINE CONSERVATION PROGRAMS**

Although the Menai Bay project's formally stated goals and operating model are similar for all villages within the Menai Bay region, the outcomes and community-level responses vary tremendously within individual villages. The differences in responses from fishermen in Fumba and Kizimkazi Dimbani may illustrate extreme variation, but the responses from other villages involved in the Menai program also show similar variation across the bay. This variation at the village-level is not unique to the Menai program, but was seen in the results from the majority of the case-study villages associated with marine protected area programs in Zanzibar, regardless of the region, structure of the program, or type of sponsoring organization. This within-program variation makes it very difficult to deem any single program to be a complete 'success' or 'failure,' and requires that attention be paid to the nuanced differences within the different communities that the program involves.

A number of potential contributing factors may account for program variations at the village level, and the impact of local factors differs considerably by program type and by region. Despite this complexity, the Menai program does suggest several important considerations that need to be taken into account in broader efforts to implement community-based marine protected area programs.

One of the more obvious and widely applicable considerations is the consistency and equity of the dispersion of program benefits across villages. While differences in geography and in local infrastructure make consistency and equity difficult to achieve, the resentment be-

tween villages that can result from the uneven distribution of program attention and resources can be detrimental to the success and stability of the overall program goals. The Menai management focused more resources on an easily accessible location, using it as a successful “showcase village” for donors, and indeed the level of program success and local support in Kizimkazi Dimbani was very high. However, this tactic did not go unnoticed by other participating villages, and many felt alienated or abandoned by the program. Focusing resources in an easily accessible location may also serve to further marginalize villages that are already politically and economically isolated by poor access to transportation, communications, and infrastructure.

Additionally, it is important to pay particular attention to differences in local community structures and history. Externally initiated community-based conservation programs can be important tools for building local community structures to address conservation problems and for gaining community support. However, these programs must also take into account the previously existing societal structures within each village and attempt to work with these structures of civil society, rather than undermining them. While a village’s previously existing organizations and techniques for addressing conservation issues may not necessarily fit neatly within the conservation model of a wider program, it is important to try to incorporate these community structures, which have a strong local base of support, rather than dismantle them in the hopes of creating a more consistent and controllable program structure across villages. In the case of Fumba, the dismantling of the local conservation committee in favor of the Menai program’s VCC model not only alienated local fishermen from the program, it also destroyed an inter-village volunteer-based patrol system and left the peninsula without any effective locally-based structures to address the growing problem of illegal fishing in the area.

A wider issue in community-based marine conservation in Zanzibar, and one that is perhaps more difficult to address, is the structural relationship between the government and the external institutions implementing marine conservation on the island. Although the government is a key collaborator at the ground level in terms of program implementation, the state has not generally played a large role in the funding or formulation phase of the programs. If the government does not see itself as directly invested in a project, then government officials and employees may potentially be more likely to try to skim resources



from the program (at the expense of overall program goals) rather than to actively support it. A number of fishermen, and even some program employees, claimed that corruption was a problem in the Menai Bay program. If this is the case, then already inadequate program resources had to be stretched even more thinly across the project's 19 villages. This perception of corruption also detracts from the program's relationship with individual villages, undermining the program's perceived validity, as well as community trust and cooperation, which are essential components of any community-based conservation endeavor.

Another challenge to the Menai program, and to marine conservation in general in Zanzibar, is that it lacks adequate support within Zanzibar's state and legal structures. Government-sponsored patrols against illegal fishing are virtually non-existent, as the Fisheries Department lacks the money or resources to conduct such patrols. Although the locally-based patrol system established by the Menai program has dramatically increased the incidences of illegal fishermen being brought to court, particularly after it started working with KMKM, very few of these fishermen have been substantially fined or punished. This provides little disincentive for the use of illegal fishing gear in the area, especially the use of destructive types of nets, which is prosecuted less vigorously than dynamite fishing. If the Zanzibari state felt greater investment in the Menai program, and in marine conservation in general, it could demand a more active level of support and collaboration from the Department of Fisheries, the Zanzibari court system, and other sectors of the islands' government.

Since this study was conducted in 2002, some changes have taken place within the structure of the Menai program. With the signing of a resolution in late 2001 promising electoral reform between Zanzibar's two major political parties, outside donor funding has slowly begun trickling back to the islands, leaving the Zanzibari state in a less desperate financial situation. Additionally, WWF has pushed for major structural changes to the program's operations and funding, at one point threatening to withdraw their support entirely. While WWF continues to support the Menai program, the Zanzibar Department of Fisheries is now expected to contribute substantially to supporting the project through the secondment of local paid staff. The project has also expressed plans to build additional program offices in the Western and Central districts of Menai Bay (including one in Fumba) to attempt to

more evenly distribute program and patrolling resources throughout the project area. In addition, Tanzania and Zanzibar recently received a sizable loan from the World Bank to support coastal conservation activities (World Bank 2005), including the involvement of local communities. Whether these structural changes and new resources will have a significant impact at the village level remains to be seen, but they have the potential to address many of the current problems encountered by the program.

The Menai program provides an excellent example of the complex factors that are involved in implementing community-based conservation programs. The wide variation in village-level outcomes, both in favor of and against the program, illustrates the need for increased attention to the nuances and details at the local level, as well as to the program's institutional and contextual setting. Applying a single model of conservation and community involvement across multiple villages, even villages located in a similar region and setting, is bound to result in very different outcomes once that model hits local cultural, historical, and political realities. Although these different local outcomes are not entirely predictable, it is important to take the possibility of local differences into account in order to minimize negative outcomes that can undermine a program's long-term success. Program techniques and policies must be flexible both to accommodate pre-existing local structures and to deal with unpredicted changes that may arise. It is certainly a daunting task for an international conservation NGO (or any organization, for that matter) to create a community-based marine conservation program that is sensitive to local contextual differences, has an adaptive management style that can respond to unexpected needs, and is integrated with both local-level and state-level structures. However, this is the kind of structure that is essential if community-based conservation programs are to be effective and sustainable in the long term.

## NOTES

<sup>1</sup> Since the time of this study, the conservation area around Mnemba Island has expanded to become the Mnemba Island Marine Conservation Area, with

expanded borders and greater government involvement and protected area status.

<sup>2</sup> The *sheha* serves a function similar to a village or regional chief and representative to the government.

<sup>3</sup> *Shehia* refers to the administrative district just above the village level (governed by a *sheha*). Some *shehias* involve only one village, while others incorporate a few villages located in close proximity to each other.

<sup>4</sup> Effort was made, in both interviews and focus group discussions, to involve fishermen from a wide range of age groups and different socio-economic statuses. While women rarely engage in fishing in Zanzibar, group discussions were also held with women's groups involved in the programs, and some female shell collectors were interviewed.

<sup>5</sup> Map created by Hajj Mohammed Hajj & Arielle Levine (2002) (on file with the author). Red text indicates marine protected areas surrounding Unguja, the larger island of Zanzibar. Green text indicates villages involved in the Menai Bay program that were visited during this study.

<sup>6</sup> During the time of the study, the total number of villages involved in the program was 17. This number was later expanded to 19 in 2003.

<sup>7</sup> Use of boats with engines does not necessarily imply ownership, however, as many wealthier boat owners will recruit fishermen to work for them in exchange for a percentage of the fish catch.

<sup>8</sup> All fishermen's quotes were obtained through interviews conducted during April and May of 2002. They have been translated from the original Swahili by the author.

<sup>9</sup> To "eat" money is a Swahili euphemism for corruption, or skimming program resources off the top.

<sup>10</sup> DIRA, Zanzibar's only independent newspaper, was banned from publication in November of 2003, when it was deemed a "threat to national security." (AFROL News 2003)

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