POLITICAL ECOLOGY AND COASTAL CONSERVATION: A CASE STUDY OF MENAI BAY CONSERVATION AREA, TANZANIA

BY

Jamie Shinn

Submitted to the graduate degree program in Geography and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Master's of Arts.

	Garth A. Myers, Chairperson
Committee Members:	So-Min Cheong
	Jay T. Johnson
	Date Defended:

The Thesis Committee for Jamie Shinn certifies that this is the approved Version of the following thesis:

POLITICAL ECOLOGY AND COASTAL CONSERVATION: A CASE STUDY OF MENAI BAY CONSERVATION AREA, TANZANIA

Committee:	
	Garth A. Myers, Chairperson
	So-Min Cheong
	Jay T. Johnson
Dat	te Approved:
	± ±

ABSTRACT

Many of Africa's coastal areas are experiencing alarming levels of degradation. In response, marine conservation efforts there are on the rise, many of which claim community empowerment as an essential goal. Researchers have begun to use theories of political ecology to study the ways in which conservation practices in Africa can negatively affect communities living near protected areas. However, much of this important research is focused on land-based ecosystems and has overlooked coastal regions. This thesis begins to fill that gap by using a political ecology-based approach to understand the complex historical, political, and environmental factors that affect issues of degradation and conservation in the Menai Bay Conservation Area of Zanzibar, Tanzania. This study combines fieldwork and a literature review to conclude that while the conservation area recognizes the importance of authentic community empowerment, it has yet to achieve that goal, thereby compromising the overall success of the project.

ACKNOWLEDGEMENTS

First and foremost, many thanks go to my adviser, Garth Myers, for his support, guidance, and friendship over the past two years. He has spent countless hours listening to my ideas and providing me with his own. He also generously connected me to his life in Zanzibar, without which I could not have done the fieldwork for this thesis. I also want to thank my other committee members, Jay Johnson and So-Min Cheong, for their support throughout this process and for their willingness to take time out of their own research projects to help me complete the thesis.

A very special thank you goes to Ali Hasan Ali for serving as my impromptu research assistant, guide, and friend while I was in Zanzibar. Without his help I would not have been able to do much of the research I did, and I wouldn't have had nearly as much fun. Thanks also to Ali's wife Zuhura and their children Attiya, Bim, Khadija, Osama, and Yusef, for providing me with a lot of laughter and a Zanzibari family. *Ninashukuru sana*!

Thanks also to Makame Muhajir, who shared his vast knowledge of environmental issues in Zanzibar with me before I left, provided me with some of my most important contacts in Zanzibar, and helped me to process what I learned there after I returned to Lawrence. Thanks also to his family— particularly to his brother Iddi— for making me feel welcome in Zanzibar.

Finally, I am grateful to the KU Geography Department and the Kansas African Studies Center for their support and funding throughout my time as a Masters student.

TABLE OF CONTENTS

Abstra	ıct	iii
Ackno	wledgements	iv
List of	Acronyms	vi
List of	Figures	. vii
Chapte	er 1: Introduction	1
A.	Thesis overview	1
B.	Chapter outline	5
	er 2: Political Ecology	
A.	Background and introduction	8
B.	Case studies of political ecology	. 11
C.	Political ecology research in Zanzibar	. 16
D.	Applying political ecology to coastal ecosystems	. 18
Chapte	er 3: A History of Conservation in Tanzania	. 22
A.	Top-down conservation	. 22
B.	Colonial-era conservation	. 22
C.	Post-colonial policies	. 27
D.	The "new" era of conservation	. 29
E.	Conservationists as colonialists	.31
F.	Implications for coastal conservation and management	.37
Chapte	er 4: Practices and Case Studies of Coastal Conservation	
A.	Integrated Coastal Zone Management and Marine Protected Areas	. 38
B.	Case studies of marine conservation	. 40
Chapte	er 5: History, Politics, and the Environment in Zanzibar	. 54
A.	A brief history of Zanzibar	. 54
B.	The history of human-environment relationships in Zanzibar	. 58
C.	The politics of conservation	. 64
Chapte	er 6: Menai Bay Conservation Area and the Marine and Coastal Environmental	
Manag	gement Project	. 67
A.	Menai Bay Conservation Area	. 67
B.	Marine and Coastal Environmental Management Project	. 74
Chapte	er 7: Fieldwork Findings	. 80
A.	Opinions of MACEMP	. 80
B.	Rhetoric versus reality	. 85
Chapte	er 8: Conclusion	
A.	Applying political ecology to Menai Bay Conservation Area	
B.	The current state of Menai Bay Conservation Area	104
C.	The potential for future research.	105
D.	Political ecology and coastal conservation	109
Appen	dix 1: Methodology and Approach	
A.	Literature Review	
B.	Fieldwork and Interviews	114
Refere	ences Cited	120

List of Acronyms

ASP- Afro-Shirazi Party

CCM- Chama cha Mapinduzi, The Revolutionary Party

CI- Conservation International

CMAP- Community Mitigation Action Plan

CUF- Civic United Front

DCC- District Conservation Committee

EEZ- Exclusive Economic Zone

ESA- Environmental and Social Assessment

GSWP- Great St Lucia Wetland Park

ICZM- Integrated Coastal Zone Management

IMF- International Monetary Fund

IUCN- International Union for the Conservation of Nature and Natural Resources

JCBCA- Jozani-Chwaka Bay Conservation Area

MACEMP- Marine and Coastal Environmental Management Project

MBCA- Menai Bay Conservation Area

MIMP- Mafia Island Marine Park

MPA- Marine Protected Area

NRM- Natural Resource Management

PF- Process Framework

TASAF- Tanzanian Social Action Fund

TNC- The Nature Conservancy

VCC- Village Conservation Committee

WWF-World Wildlife Fund

List of Figures

Figure 1.1 Zanzibar.	4
Figure 2.1 Interest Groups in Lwangwa National Park, Zambia	20
Figure 3.1 Tanzania in Africa.	24
Figure 6.1 Menai Bay Conservation Area.	70
Figure 7.1 CMAP Consultation Framework and Responsibilities	93
Figure 8.1 Interest Groups in Menai Bay Conservation Area	103

Chapter 1: Introduction

A. Thesis overview

The health of coastal ecosystems around the globe is in decline. Even as fishers use more expensive gear and dedicate increased time to fishing, catches are steadily decreasing worldwide (Glaesel 2000: 321). Africa's coastal areas are no exception to these trends. As a result, marine conservation efforts on the continent have been on the rise during the past three decades, many of which claim community-based resource management as a primary goal. At the same time, researchers have begun to study the ways in which conservation practices in Africa often negatively affect communities living in and around protected areas. Among these researchers are geographers— and more specifically political ecologists— who strive to combine analyses of cultural ecology and political economy to fully understand the causes of environmental degradation and effects of conservation. However, much of this important research has been focused on land-based ecosystems and has overlooked efforts in coastal regions of Africa. This thesis attempts to begin to fill that gap by using a political ecology-based research approach to understand the complex historical, political, and environmental issues that affect conservation efforts in one small marine park, the Menai Bay Conservation Area (MBCA) of Zanzibar, Tanzania.

Zanzibar, a semi-autonomous polity of Tanzania, is a part of the East Africa Marine Eco-region, which stretches for 7,000 km and includes some or all of the territorial waters of Somalia, Kenya, Tanzania, Mozambique and part of South Africa (Kulindwa 2005: 2). The degradation of this eco-region— in the form of deforestation of mangroves, loss of coral reefs, declining fish stocks, and soil and beach erosion— has

vast implications for the estimated 22 million people who live near its shores, most of whom depend on the marine environment for their sustenance and livelihood (Kulindwa, et al. 2005: 3). Tanzania's coastline stretches for 2,300 kilometers, accounts for approximately 15 percent of the country's total land area, and supports nearly a quarter of its population (Torell, et al. 2004: 341). It is one of the poorest nations in the world, with an annual per capita income of \$420 US dollars (Department of State 2008); furthermore, the standard of living in rural coastal areas like those found in Zanzibar is generally lower than in the rest of the nation. In these areas, people depend on natural resources— in the form of agriculture, fishing, and seaweed cultivation— for both subsistence and commercial purposes (Lindén and Lundin 1996).

Effective coastal conservation and resource management is thus of the utmost importance in Zanzibar, both for the health of its fragile ecosystems and for the already poor communities who depend upon them for their livelihoods. Concepts of conservation and natural resource management are not new to the coastal communities. Rather, long-standing practices exist in Zanzibar, as people have depended on the health of their resources since they first settled there, no later than the 5th century AD. However, traditional forms of management eroded during the colonial and post-colonial eras, as those in power assumed much of the authority that traditionally rested with local community elders. This shift in power has rendered traditional conservation methods less effective over time, and in some cases they have become non-existent.

In recent decades, Zanzibar has seen a sharp decline in the health of it's marine environment and has in turn become a site of large-scale conservation projects backed by international Non-Governmental Organizations (NGOs) and multi-lateral aid agencies.

Inherent to many of the coastal conservation initiatives in the region is a language about the importance, and even necessity of community empowerment. While this rhetoric sounds good in theory, the success of translating such endeavors into reality has been minimal. Rather these projects, while often well intentioned, have served to further shift control over conservation and management practices into the hands of government agencies and western organizations, thereby failing to truly empower local communities to manage their own resources. As this thesis will show with the case study of Menai Bay Conservation Area, these failures are often because "the social context has been analyzed insufficiently..." (Blaikie 1987: 53). The implications of such failures can be enormous, both for the ecosystems in need of protection and the people living in them.

This thesis argues that while western-based organizations and national governments have an important role to play in coastal conservation efforts in Africa, they must do a better job of recognizing and incorporating local forms of environmental knowledge and practices into their models of conservation. By taking a political ecology approach to the study of Africa's coastal ecosystems, I believe that researchers can begin to paint a more comprehensive picture of complex local contexts and to bridge the gap between local communities and those with the financial resources needed to implement large-scale conservation projects. In so doing, I believe political ecologists can play a critical role in helping to create conservation projects that are supported by large-scale stakeholders, but which are defined and driven by local communities.

Figure 1.1 Zanzibar



(Zanzibar Department of Environment 2004: 4)

B. Chapter outline

Chapter 2 introduces the primary theoretical basis of the thesis, political ecology. It provides a brief history of the origins of political ecology and argues for its importance in studying issues of environmental degradation and conservation in Africa. Chapter 2 also provides some case studies of political ecology research, focusing on work done in both mainland Africa and Zanzibar. Finally, the chapter explores some common questions asked and concepts employed by political ecologists, as well as how the theories—primarily used to understand land-based ecosystems— can be expanded to include coastal environments.

Chapter 3 provides background on the history of western-driven conservation efforts in Tanzania, in an effort to paint a clearer picture of how the current state of conservation came to be. It begins with a look at the exclusionary practices of the colonial era and the ways in which colonialists forced Africans off of their own lands in order to create the Eden-type landscapes they imagined to exist on the continent. It then looks at the post-colonial period, during which many Africans hoped they would regain control over the resources that had traditionally been theirs, only to continue to be marginalized by the newly formed Tanzanian government and the western conservation organizations that helped develop the nation's new environmental policies. Chapter 3 then delves into the "new" era in conservation of the 1980s and 1990s, during which a new rhetoric of community empowerment was developed and many conservation organizations attempted to reframe local communities as "noble ecological savages." The chapter also discusses the general failure of this new era and the return to marginalizing practices, even though the rhetoric of community empowerment often remains.

Chapter 4 introduces the primary practices of coastal management used throughout the world, namely those of Integrated Coastal Zone Management (ICZM) and the establishment of Marine Protected Areas (MPAs). It then details five case studies of coastal conservation projects from around the global south to provide a realistic picture of the difficulty of implementing effective ICZM policies in a range of complicated contexts. These case studies help to show that while Zanzibar is a unique case, it fits neatly into and has much to add to the broader discussion of how to create effective coastal conservation efforts that are truly community-based.

Chapter 5 provides a brief background on Zanzibar, with a focus on the historical and political backgrounds that continue to play a role in conservation efforts there. The chapter also details the history of traditional methods of conservation and resource management used along the coast, establishing these practices as long-standing systems that were eroded during the colonial and post-colonial periods. The chapter also establishes the fact that Zanzibaris have a deep understanding of their environment, even though those in power sometimes paint them as ignorant of such things.

Chapter 6 provides a detailed introduction to the thesis's case study, Menai Bay Conservation Area (MBCA). It goes on to detail the primary conservation initiative in the protected area, the World Bank-backed \$75 million Marine and Coastal Environmental Management Project (MACEMP). The chapter presents the overall objectives and goals of MACEMP, as stated by project documents. This sets the stage for chapter 7, in which I draw from six weeks of interview-based fieldwork conducted in Zanzibar during July and August of 2009 to take a critical view of MACEMP. The first section of Chapter 7 discusses Zanzibari's feelings toward MACEMP, both positive and negative. The chapter

also takes a serious look at the project literature—specifically at its language of community empowerment— to discern whether or not the project has been effective in meeting that goal. Using both my own fieldwork findings and the work of other researchers, I conclude that levels of community empowerment in the project are superficial at best, thus showing that MBCA is another example of top-down conservation shrouded in a language of community empowerment.

Chapter 8 concludes the thesis by coming back to the political ecology literature presented in Chapter 2 and directly applying it to the case of Menai Bay. In so doing, it presents the political ecology of MBCA to the extent possible as a result of this fairly brief research project. It then goes on to outline a longer research trajectory one could take in order to do a more in depth political ecology-based study of MBCA, including some ideas on methodology for doing so. Finally, Chapter 8 argues for the importance of studying issues of coastal degradation and conservation from a political ecology perspective, in Africa and across the world.

This thesis does not strive to bring new or under-studied topics to light. Indeed, environmental issues in Africa, the degradation of coastal ecosystems, and the ways in which conservation can marginalize the people who live near protected areas are all thoroughly studied subjects. Rather, my goal is to begin to bridge the gap between these topics, and to make clear the benefits of approaching coastal issues from a political ecology standpoint. I believe that in so doing, we can take one small step toward creating coastal conservation practices in Africa that are environmentally sound and socially just.

Chapter 2: Political Ecology

A. Background and introduction

This thesis is grounded in the theories of political ecology. They frame the research questions I ask about and the approach I take to issues of coastal conservation in Zanzibar. The political ecology literature is vast, and it would be impossible to incorporate all of it here. Rather, I have pulled from the work of political ecologists that best informs my own research—particularly those who study environmental issues in Africa. The first section of this chapter provides a brief discussion of the definition of political ecology, the origins of the field, and why it is an important tool to use in understanding environmental issues. The second section examines some case studies of political ecology research, with a focus on that conducted in Africa, to better understand how political ecologists frame and answer their questions. The third section examines the work of scholars who have done research specifically in costal Tanzania, including that which is not explicitly political ecology but which answers questions that are important to a political ecology-based understanding of Zanzibar. Finally, in the last section I explore some potential methodology for doing political ecology work. I also discuss how the theory, traditionally applied to land-based ecosystems, can help us to better understand issues of environmental degradation and conservation in coastal settings.

The origins of political ecology can be traced to the 1970s, when it arose in response to the need for a theoretically based understanding of land degradation and other environmental problems within a "local-global political economy" (Peet et. al 1996: 4). At this time, the term itself was just beginning to be used by some scholars; others were not yet using the term, but were establishing a foundation of related work on which future

political ecologists would stand— most notably of these perhaps is David Harvey. In 1974 Harvey stated, "Arguments concerning environmental degradation, population growth, resource scarcities, and the like can arise for quite disparate reasons and have quite diverse impacts. It is therefore crucial to establish the political and social origins and impacts of such arguments" (Harvey 1974: 275). The concepts of political ecology built on the work of Harvey and other scholars as it continued to gain momentum throughout the 1970s. By the 1980s, it had flourished into its own field (Bryant 1997: 8).

Political ecology is a broad term and can be defined in a number of ways. Some place more emphasis on political economy, while others focus more on the role of political institutions (Robbins 2004: 8). However, they all suggest an alternative to an "apolitical" ecology approach (ibid.). Blaikie and Brookfield, the scholars who are often attributed with fully developing the concept in the 1980s, describe political ecology as an approach that "combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself" (Blaikie et al. 1987: 17). The concept put forth by Blaikie and Brookfield focused on the role of the "land manager" within a given economic system (Blaikie et al. 1987: 3). Muldavin further defines political ecology as an approach that is "a historically informed attempt to understand the role of the state, the social relations within which land users are entwined, and resulting environmental changes" (Muldavin 1996: 237). Finally, in an attempt to synthesize a myriad of common definitions, Robbins offers that political ecology is based on "empirical, research-based explorations to explain linkages in the

condition and change of social/environmental systems, with explicit considerations of relations of power" (Robbins 2004: 12).

Why is political ecology important? What makes it a more valuable tool for understanding environmental issues than other theories? Bryant argues that contemporary environmental work wrongly assumes "that human-environmental interactions can be understood in terms of selected social concerns...alone, without the need to grasp the nettle of political and economic interests and conflicts that are typically associated with those concerns" (Bryant 1997: 6). A political ecology approach helps us to begin to untangle those complex issues. In addition, Robbins (2004: 12) asserts that political ecology is an important tool because it can serve as a critique of views of the environment that tend to be "favored by corporate, state, and international authorities." He goes on to argue that political ecology shows the negative aspects of environmental policies, "especially from the point of view of local people, marginal groups, and vulnerable populations" (ibid).

Peet et al. further make clear the importance of viewing environmental degradation *and* conservation efforts through a lens of political ecology, arguing that environmental movements are often not simply about conservation; they can serve as a stage for broader social action and as a source of opposition to those in power. They say:

In world systems which destroy broad, even global environments, [environmental movements] have the potential to become widespread social movements- many environmental movements cut across class, gender, and regional divisions. They can also be fundamental movements in that they challenge the very basis of society- how people use nature, how human nature comes about, how imaginations are imagined. At stake in environmental movements is nothing less than the way people understand their humanity (Peet et al. 1996:268).

Thus, political ecology is an important tool for approaching issues of environmental conservation and degradation, particularly in the post-colonial context where issues of power and access to resources tend to be complicated and long-standing issues. The following case studies look at how political ecologists approach the study of environmental issues, with an emphasis on work conducted in Africa. They provide examples of some of the types of questions and problems political ecology is well suited to address, as well as some of the potential dangers of using political ecology uncritically.

B. Case studies of political ecology

In their comparison of agro-forestry schemes in Gambia and Java, Schroeder et al. (1996) emphasize the importance of carefully considering the dynamics within local communities. They challenge what they see as the prevailing belief of NGOs and large aid organizations—that agroforestry schemes work to improve both the environment and local livelihoods. To do so, they closely examine the power dynamics inherent within local communities involved in such schemes. They conclude that agroforestry projects have failed to truly recognize community dynamics and have thereby aggravated already existing gender and class conflicts; in so doing, they have also undermined environmental efforts. They conclude, "from a political ecological point of view, agroforestry systems are strongest when people can manage their resources independently" (Schroeder et al. 1996: 202). While their work addresses two specific case studies of agroforestry projects, the lessons learned can be applied more broadly, including to coastal ecosystems in Zanzibar. This research serves as an important reminder that we must not only consider the dynamics between various stakeholder groups, but also those that exist within and among the local communities affected by conservation schemes.

Along similar lines, Moore's work (1996) on the role of what he calls "micropolitics" is also important to political ecology research. He argues that there is too much emphasis on capitalism and political economy within political ecological conversations. He posits that while those things should be considered, more attention should be given to "(1) the micro-politics of peasant struggles over access to productive resources; and (2) the symbolic contestations that constitute those struggles" (Moore 1996: 126). He argues that by giving more attention to the micro-politics, we will be able to "unravel how competing claims to resources are articulated through cultural idioms in the charged contests of local politics" (ibid.). As an example, he looks at a study of environmental resource conflicts in Zimbabwe. He uses the "dynamic interplay of culture, power, and history" to show how struggles over resources are also struggles over cultural meaning (Moore 1996: 127). He argues that peasants see their landscapes as a symbol of power and of historical struggles for land and argues that we need to "situate resource struggle within the cultural production of landscape and resources" (ibid.: 139). As in Zimbabwe, Zanzibar has a turbulent colonial and post-colonial history and it will be important to consider how this frames current cultural meanings of access to and management of marine resources.

Lucy Jarosz (1996) provides a particularly useful case study in which she uses political ecology to highlight the ways in which those in positions of power often inaccurately frame local communities as the destroyers of their own environments. To do so, she uses the case study of deforestation in colonial-era Madagascar. The French colonialists in Madagascar claimed that the Malagasy people's traditional method of shifting cultivation, or *tavy*, was leading to severe levels of deforestation because it

involved the burning of forests to clear agricultural land (Jarosz 1996: 156). The practice, deemed "irrational," was subsequently banned and much of the agricultural land was transitioned into the more "rational" practice of growing cash crops for export—mainly coffee. This, the French thought, would lead to both conservation and increased revenue.

However, as a result of the increase in coffee farming, deforestation actually continued to increase, as did food insecurity for local people (Jarosz 1996: 154). Not only was the most fertile land transitioned to growing coffee instead of subsistence crops, but because coffee-farming practices in the region left large expanses of soil without plant cover, it became vulnerable to heavy rains and subsequently to erosion and deforestation (ibid.). It is also important to note that the French were not only interested in conservation and cash crops; banning *tavy* also allowed them more control over local populations. Whereas *tavy* necessitated people to live spread out over large expanses of land, the French could now more easily consolidate the population into villages, whereby there were more easily controlled and taxed (Jarosz 1996: 156).

However, the Malagasy did not respond well to the *tavy* ban; instead of viewing it as a chance for forest conservation or to garner higher income, they saw it a form of "labor control" and the cause of destruction of sacred ancestral spaces (Jarosz 1996: 158). In response, there were mass revolts and large-scale acts of resistance to the ban, often in the face of fines and imprisonment (ibid.). This resistance was significant, as it "...meant more than pitting the right to subsistence over forest conservation; it embraced issues of power, labor control, culture, and Malagasy identity" (Jarosz 1996: 158). In the end, the French were never able to eradicate the practice. This case study is relevant for two reasons. First, it shows how those in power can frame (often falsely) local populations as

the cause of degradation, particularly when their resource use practices do not appear "rational." Second, it uses political ecology to show "how local forms of resistance to the dominating discourses of reason also involve struggles over the meanings of nature, culture, and landscape" (Jarosz 1996: 161).

While Brown et al. (2004) do not focus their research in Africa, they nonetheless provide an important discussion on how to approach issues of scale in political ecology research throughout the global south. They argue that while it is easy for researchers to favor the local stakeholders within the political ecology approach to studies of conservation and development, it is important not to favor them uncritically—or, to fall into what they call the "scalar trap" (Brown et. al 2004: 608). They argue that usually "the scalar trap takes the form of a "local trap" that leads researchers to assume that the key to environmental sustainability, social justice, and democracy... is devolution of power to local-scale actors and organizations" (ibid).

Brown et al. argue that a particular scale does not have any inherent qualities, rather it is produced and reproduced through political strategies and struggles and by different actors over time (Brown et al. 2004: 609). Instead of recognizing this, however, political ecologists tend to assign certain characteristics to certain scales, falling into the "scalar trap." Whereas the local scale tends to become equivocated with culture and ecology, the "wider scales" then become synonymous with "political economic processes" (Brown et al. 2004: 612). The authors argue that understanding the reality of scalar politics is "central to understanding human-environment relationships in development processes" (ibid.: 614). This work can help us to better understand the roles

and impacts of multiple stakeholders who work on multiple scales, without assuming that local communities are the ones who are always doing things in the "right" way.

Finally, Willems-Braun (1997) provides a vital discussion on the importance of recognizing the way colonial histories frame contemporary notions and understandings of nature. He argues that "residual traces" of colonialism take the form of "buried epistemologies... in everyday relations and in social, economic, and political institutions" (Willems-Braun 1997: 5). He goes on to argue that contemporary notions of nature are likewise buried epistemologies that are "often constituted within, and informed by, the legacies of colonialism" (ibid.). This, he argues, is true for industrial forces and environmentalists alike, as their views of nature are "inherited from colonial logic and practice, with its method of classifying, recording, and describing the world" (Robbins 2004: 125).

Willems-Braun urges us to "decolonize" inherited notions that nature is separate from culture, rather, it is "embedded in social histories" and intimately intertwined with cultural identities. He argues that contemporary struggles *for* nature— as defined by the west— are "already complicit in a politics *of* nature that risks reenacting colonial relations…" (Willems-Braun 1997: 6, author's emphasis). This serves as a cautionary message to political ecologists, that they approach notions of nature critically, particularly those that are void of long and complex histories of human-environment relationships. The consequence of failing to do this, as we shall see in the next chapter, can be the creation of a new form of colonialism buried under the guise of conservation.

Taken together, these case studies and discussions paint a picture of the types of work that political ecologists do, and the important questions researchers who use the

theories ask and attempt to answer. The first three case studies paint a picture of what political ecology research looks like in Africa. The final two provide important reminders that political ecology is not perfect, and that those who employ it must be mindful of not approaching issues of the environment and conservation uncritically. With those lessons in mind, political ecology can serve as an important tool for understanding the historical, cultural, and political settings in which conservation projects occur. At it's best, political ecology can help uncover the ways in which those projects can be become both ecologically successful and socially appropriate for specific local contexts.

C. Political ecology research in Zanzibar

While there is not a lot of work being done in Zanzibar that is specifically called "political ecology," there are some researchers working in the region that are answering questions and using approaches commonly employed by political ecologists. Three notable examples are discussed in brief here, and their work is also cited extensively throughout the thesis.

The first, Garth Myers, is the only one of the three who is doing explicit political ecology-based research in Zanzibar. While he doesn't focus specifically on coastal resources, his concrete political ecology approach helps us to understand the political situation that frames general environmental issues in Zanzibar, thereby highlighting important relationships and dynamics that are critical to the success (or lack thereof) of conservation projects. He takes as his case study Zanzibar's first national park, the Jozani-Chwaka Bay Conservation Area (JCBCA). As will be discussed in detail in Chapter 6, Myers outlines the strong divide between Zanzibar's two political parties in the village of Chwaka. He asserts that conservation efforts in JCBCA are stymied by

strong political divisions, as well as by the many livelihood struggles residents face as a result of poverty (Myers 2002: 154). Because the community is so politically divided, it can make residents resistant to government enacted conservation schemes (ibid.: 156). Likewise, political divides can make it difficult for residents to come together to oversee authentic community-based conservation initiatives. The political divide found in Chwaka is not unique to that Zanzibari community. Rather, by showing how the relationships between local communities and the government can affect conservation efforts, Myers sets the social and political stage for this thesis' main case study, Menai Bay Conservation Area, located directly due south of JCBCA.

Arielle Levine's work is also extremely important to the study of Menai Bay. While she does not call herself a political ecologist, her work provides an essential backdrop for this thesis and could certainly be classified as political ecology. Levine assesses the roles of and relationships between different stakeholders in conservation projects in Zanzibar, and the affects these roles and relationships can have on the relative success of a project. In particular, she explores the role of the Zanzibari state in relation to local communities and international organizations involved in coastal conservation schemes. Increasingly, these donors have become interested in implementing community-based projects. However, the state government has ensured that they remain the official intermediaries between local communities and outside organizations. In doing so, they often undermine the independence of local communities in the "locally-based projects" and thus undermine the ultimate goal of the conservation schemes themselves (Levine 2007: 565). Furthermore, in line with the approaches of Moore and Schroeder discussed above, Levine finds differing feelings toward conservation efforts within and among

different villages, due to the unequal allocation of resources and power (Levine 2006: 123). Her discussion of the political dynamics in conservation schemes in Zanzibar provides an important political and historical understanding that I rely on heavily throughout the thesis and which can certainly be considered political ecology.

Finally, the work of anthropologist Christine Walley is also extremely relevant to this thesis. As will be discussed in detail in Chapter 4, she conducted an extensive study of the Mafia Island Marine Park (MIMP), located off the coast of Southern Tanzania. While also not explicitly political ecology, the study highlights the dynamics between government, NGOs, and local communities, as well as how the resulting "social drama" has hindered conservation efforts in the park (Walley 2004). While the islands of Mafia are associated politically with the mainland, they have significant similarities to Zanzibar. Therefore, much overlap can be drawn between conservation and development efforts between the two places. Her work combines with that of Myers and Levine to paint a broad picture of the politics and power dynamics within conservation efforts in coastal Tanzania. Together they provide an understanding of the social and political nuances that help to ground the thesis in a political ecology framework that is also regionally relevant.

D. Applying political ecology to coastal ecosystems

Throughout the political ecology literature there is a lack of emphasis on coastal ecosystems. Perhaps this is because Blaikie and Brookfield focused so much on the role of the *land* manager. Perhaps it is because during the time the field was first developed, coastal issues had not yet come to the forefront of environmentalists' agendas. Perhaps it is because it is simply more difficult to address issues of resource access, ownership, and control in ecosystems that are more fluid and dynamic than their land-based counterparts.

Whatever the reason for the dearth of marine-based political ecology work, I argue that it is an important gap to fill. As discussed in the introduction, coastal ecosystems around the world are experiencing severe levels of degradation. Political ecology is a potential tool that can be used to help create effective conservation initiatives that are ecologically, politically, and culturally informed.

While there is no formula for how to "do" political ecology in any ecosystem, the work discussed in the preceding sections provides ideas about how to structure such research. Furthermore, Bryant (1997) puts forth three concrete questions that political ecologists should be asking in their research and analysis: (1) What are the various ways and forms in which one actor seeks to exert control over the environment of other actors? (2) How do power relations manifest themselves in terms of the physical environment? And, (3) why are weaker actors able to resist their more powerful counterparts (Bryant 1997: 11)? Additionally, in their seminal book, Land Degradation and Society (1987), Blaikie and Brookfield lay out some core concepts that still define political ecology today; these include "a cross-scale chain of explanation, a commitment to exploring marginalized communities, and the perspective of a broadly defined political economy" (Robbins 2004: 72, author's emphasis). Finally, as seen in Figure 2.1, Blaikie (1995) uses a political ecology framework to identify each stakeholder group involved in a conservation project, including their positions and sources of power, goals, and means to reach those goals. While this example comes from a national park in Zambia, it can easily be modified to work for other conservation projects. This and the other concepts can be applied to issues of both land- and marine-based environmental degradation. We will

return to them later in the thesis, modifying them for Menai Bay Conservation Area.

Together, they begin to answer the question of how to "do" political ecology work.

Figure 2.1 Interest Groups in Lwangwa National Park, Zambia

Group	Position in	Source of	Interests and	Means to
	political	power	aims	reach aims
	economy			
Hunters-	Marginalized,	Limited but	Source of	Stealth and
Cultivators	excluded	through chiefs	mean, land for	poaching
			cultivation	
Safari Hunters	Expatriate	Astute informal	Rights to hunt	Vehicles, guns,
	staffed small	negotiations	in park	local
	companies			knowledge
Conservation	Networked with	Lack of	Conservation of	Lobbying,
Groups	top Zambia	informed	some species	publications,
	officials,	opinions in		international
	influential	Zambia		networking
	postings			
Bureaucratic	Control state	Part of	Ad hoc	Legislation,
Bourgeoisie	apparatus,	dominant	agreements,	budget
	access to	alliance	foreign	allocation
	capital		exchange	
Scientists	Access to	Science as	Development of	Publications,
	highest	legitimacy	'rational	individual
	positions of		policies'	access to power
	power			

(Blaikie 1995: 208)

The goal of the thesis is to begin to understand how to view coastal issues through a political ecology lens, using the Menai Bay Conservation Area as a case study. The above questions and concepts put forth by Bryant and Blaikie and Brookfield provide a starting point for framing the research approach. Using both the land-based research done by political ecologists, as well as the research done directly in coastal Tanzania—including that of Myers and those researchers who may not identify as political

ecologists, but whose research can help us answer the questions of political ecology— I will begin to apply the theory directly to issues of coastal degradation. Utilizing this approach will help me to look critically at the people-environment relationships of Menai Bay Conservation Area, illuminating the complex roles played by local communities, international organizations, and the Government of Zanzibar. In doing so, the goal is to determine the relative success of conservation efforts in Menai Bay— particularly in terms of community empowerment— as well as how these efforts might be improved to better meet MBCA's goals of fostering both ecological and socio-economic stability.

Chapter 3: A History of Conservation in Tanzania

A. Top-down conservation

In order to better understand the current status and potential success of coastal conservation in Tanzania, this chapter explores the history of land-based conservation efforts in the country. Mainland Tanzania, as with much of East Africa, has long been considered an important "hotspot" of biodiversity, replete with savannahs full of endemic wildlife. The total protected lands of sub-Saharan Africa now account for over half of all protected lands in the tropics, with twenty-five percent of Tanzania alone set aside in conservation areas (Schroeder 1999: 364). While these figures are impressive, the conservation of these landscapes has had long-term and often detrimental affects on the populations living there. This is partly because conservation has long been used as a tactic by Westerners to subjugate Africans. The history of conservation in Tanzania, as with much of the rest of the African continent, is heavily intertwined with its colonial history and legacy. The "...impulse to conserve, protect or otherwise 'manage' natural resources has historically been central to efforts by 'external' powers ... to exert social, political and economic control over African polities" (Schroeder 1999: 360). While the powers in charge of protecting these lands have changed over time, the top-down strategies have remained largely the same; they continue to utilize the unequal power dynamics established during colonialism to enforce conservation.

B. Colonial-era conservation

Conservation is not a new phenomenon in the region; indeed, it has ancient roots in many parts of the continent (Mkumbukwa 2008: 590). However, colonialism brought new forms of environmental protection and management; most often this entailed the colonial

government setting aside large tracts of land for wildlife, with limited access to natural resources granted to the Africans residing there.

Colonial era environmental protection in Africa stemmed from the relationship Europeans had with their environments at home. During the eighteenth and nineteenth centuries people in England and Europe viewed nature as something separate from humans, something to be either tamed or exploited in the name of capitalism (Walley 2004: 172). It is also important to note that Europeans at this time imagined Tanzania to be a pristine and empty wilderness, full of wildlife, and without human influence. This view was in part influenced by a string of disasters that occurred in the late nineteenth century in the vast region of what would become Serengeti National Park; a series of droughts, diseases, and increased raiding by the Maasai tribe forced inhabitants to flee, thereby creating an even deeper sense of a vast and uninhabited land (Shetler 2007: 139). However, the notion colonialists had of an empty and untamed land "was largely mythical and could only become a reality by relocating thousands of Africans whose agency had in fact shaped the landscape for millennia" (Neumann 1995b: 151). Thus, local populations were often excluded from the protected areas in Tanzania and throughout much of colonial Africa. This marginalization came outright through forceful evictions and the creation of strict new laws, and through other more subtle measures, such as increased hunting restrictions and the requirement of unaffordable hunting licenses. For instance, colonial game laws restricted all forms of indigenous hunting techniques, making guns (only owned by the very wealthy) the sole legal hunting method (Shetler 2007: 181).

Figure 3.1 Tanzania in Africa



(Central Intelligence Agency 2010)

Another example of this marginalization comes from Neumann's (1992) study of the Mt. Meru region of Northern Tanzania¹. Mt. Meru is one of the few areas in the country that actually attracted European settlement; this settlement had consequences on the land use patterns of the region that can still be seen today. Beginning as early as the 1890s, Europeans began to take over large tracts of land in the area for coffee plantations. In doing so, they also took control over the best water sources in the region, excluding the Tanzanians from this vital resource. In 1928, the British established the Meru Forest Reserve, thereby "protecting" the entire mountain and further limiting land rights. Thus, not only did the Meru people lose the best land to European settlement, their access to the remaining marginal lands was severely limited by the new reserve. Over time, this area would become part of Arusha National Park and usage rights would diminish further. The process of exclusion continued after decolonization, culminating in the 1970s with the outlawing of beekeeping, the final traditional practice that had been allowed within park boundaries. As was common in Tanzania, exclusion to land rights in the Mt. Meru region was a lengthy process. "Rather than being eliminated wholesale, customary rights in the mountain's forests [were] chipped away in a piecemeal fashion, as the state gradually tightened its restrictions on resource access" (Neumann 1992: 96).

As seen from this case study, the establishment of national parks intensified the exclusion of Tanzanians from natural resources found in protected areas. During the 1930s, the colonial government came under increasing pressure from external groups like the Society for the Preservation of the Fauna of the Empire to transition African reserves to National Park status. The first official park, Serengeti, was established in 1948.

_

¹ Case study sourced from (Neumann 1992: 85-97)

National park policies utilized slow processes of exclusion, particularly of the Maasai peoples. At first, they were literally classified as "fauna" by the trustees of the park, a classification that allowed them to continue residing there for the first years after the parks inception (Walley 2004: 173). In order for them to remain, however, they had to continue to live in their "traditional" ways, those traditions being defined by the colonialists, not the Maasai. The government essentially invented or eliminated Maasai traditions to fit their own perceptions of the African "Eden" they imagined (Neumann 1995b: 160; Shetler 2007).

Over time, officials became more concerned with scientific issues of the park and saw human agency as an increasing threat to wildlife numbers and the "unspoiled" wilderness. Practices of mass eviction and denial of customary rights intensified, creating conflicts and tensions that continue until today (Walley 2004: 174). In 1959, the Maasai were fully evicted from the parklands; they were denied access to their traditional hunting grounds and sacred areas. When local residents of the park regions continued to hunt for food, graze their animals, and gather firewood for fuel within park bounds, their activities were deemed illegal and they were labeled as "poachers" by the colonial government (Mkumbukwa 2008: 591). Thus, these Tanzanians were faced with a difficult choice between acting illegally to maintain their customs and livelihoods (with the potential of harsh repercussions), or keeping to the poorest agricultural and grazing lands to eke out a living. Through these exclusionary and marginalizing processes, the colonial government kept Africans from creating any kind of economic competition and at the same time ensured wildlife was available for their own hunting and export purposes (Schroeder 1999: 363). Thus, the landscape that the colonialists considered to be "... 'natural' was in

fact a tool for reshaping human society for the economic benefit of the colony" (Shetler 2007: 185). When decolonization became a reality in the early 1960s, Tanzanians hoped they would once again be granted access to the lands that had been theirs before the period of colonization.

C. Post-colonial policies

As in many parts of newly independent Africa, Tanzania's government retained many of the structures and policies implemented by the British; conservation projects were no exception (Mkumbukwa 2008: 593). However, because the colonial government had allowed few Africans into the upper management positions of natural resource management and wildlife programs, the new government was particularly ill equipped to take over the administration of these projects (Neumann 1995a: 365). Many large Western conservation organizations were concerned about this issue, and they kept a close eye on the country as decolonization loomed near. When the post-colonial government came to power, these organizations were at the ready to step in and offer guidance, and the government welcomed their help (Neumann 1995a: 365).

In early 1961, three months before Tanzanian independence, incoming president Julius Nyerere gave an important speech on his conservation goals, known as the Arusha Manifesto (Neumann 1995a: 365). Often left out of this part of the story is the fact that a majority of the speech was written by employees of the large conservation organization the World Wildlife Fund (WWF), a telling sign of who would soon be steering the government's conservation programs. During one part of the speech, Nyerere strayed from the WWF script and made a famous comment, one that clearly indicated what his own intentions were for conservation. He said:

I personally am not very interested in animals. I do not want to spend my holidays watching crocodiles. Nevertheless, I am entirely in favor of their survival. I believe that after diamonds and sisal, wild animals will provide Tanganyika with its greatest source of income. Thousands of Americans and Europeans have the strange urge to see these animals. (Walley 2004: 174)

Nyerere's speech, and this statement in particular, made one thing utterly clear: the primary purpose of conservation in Tanzania after decolonization was not to conserve the environment for ordinary Africans who had long made their livelihoods on those lands. Rather, it was to conserve them for wealthy tourists with a "strange urge" to see Tanzania's impressive wildlife, and who would in turn bring a great deal of money into the Tanzanian economy (Mkumbukwa 2008: 594). The new government was desperate to create a strong independent state, and thus their focus was on garnering foreign exchange and implementing effective development strategies. As a result, conservation efforts were aimed mostly at the tourism sector (ibid.). Thus, instead of returning land to local populations, the government continued colonial policies that increased marginalization of indigenous peoples and decreased their access to important resources. However, the government did not act alone in the implementation of these policies; indeed, they depended substantially on many of the large Western conservation organizations who offered their guidance and leadership.

Two such organizations were the WWF and the International Union for the Conservation of Nature and Natural Resources (IUCN, now the World Conservation Union). In fact, Nyerere's Arusha Manifesto was the official launch of IUCN's new African Special Project, whose mission was to support post independence environmental management throughout Africa (Neumann 1995a: 366). The Project trained Africans to effectively implement and maintain environmental policies. These new conservation

bureaucrats were primarily trained in Western ideologies of environmental protection, insuring that conservation in Africa would look much as the West thought it should. The Project also created a new elite class of wildlife and natural resource managers; these new bureaucrats used many of the same top-down approaches as their colonial predecessors, including the forceful evictions of local residents from parklands. This intensified conflicts and tensions between park officials and local residents (Neumann 1995a: 366).

The increasing exclusion of indigenous communities from their lands during the 1960s and 1970s resulted in further enmity from local people, and an increased lack of willingness to work with conservation efforts. More and more people began to violate park rules. While some of these "poachers" were hunting for illegal products such as ivory to sell on the international black market, most simply hunted or grazed animals on land that had previously belonged to them (Walley 2004: 175). As a result of these increased violations, conservationists and environmental management professionals realized that their exclusionary processes had actually served to create a threat to protected environments. Throughout the global south, conservationists began to realize that indigenous communities needed to become stewards of the protected lands in order for conservation to be successful. Thus, a new era in conservation, one that claimed to recognize the rights of indigenous populations, began in Tanzania and across the globe.

D. The "new" era of conservation

Beginning in the 1980s, many institutions, including the Tanzanian government, large aid organizations such as the International Monetary Fund (IMF) and World Bank, and international NGOs, began to implement projects that promoted more community involvement in Natural Resource Management (NRM). The new theory believed that

conservation efforts would only be successful if indigenous populations benefited (economically and/or socially) enough from projects to warrant a change in their environmentally "destructive" behaviors (Neumann 1997: 577). National governments throughout East Africa, with the support of large conservation organizations, attempted to implement new community-oriented conservation projects that generated revenue for local people. However, many of these projects were unsuccessful, as they failed to truly involve and consider local needs and desires.

Norton-Griffiths (2007) offers a case study of this type of situation from Tanzania's northern neighbor, Kenya. Many tourists visit Kenya and Tanzania each year to view the great wildebeest migration, thus giving the governments great incentive to keep animal numbers high. The wildebeest population is threatened, in part, by the agricultural and grazing practices of pastoralists in the border areas of Kenya's national parks. Thus, the government began to work with pastoralists in an effort to boost wildebeest numbers. They created incentives for them to lease their lands to tour operators, instead of using the land for agriculture or grazing. However, pastoralists soon realized that they actually made more money from traditional uses then they did from leasing their land. Furthermore, they realized that their grazing lands were endangered by the wildebeest migration, further diminishing their potential return from grazing and agriculture. Norton-Griffiths contends that because the wildlife provided no real economic opportunity for pastoralists, they had no incentive to help conserve wildebeest populations. He asserts that the weak state of wildlife conservation in Africa is a result of poorly thought out state conservation models such as this one, coupled with

_

² Case study sourced from (Norton-Griffiths 2007: 41-64)

"international conservation organizations which, with their seemingly limitless resources, lack of accountability and hidden agendas, wield such power and influence over conservation policy" (Norton-Griffiths 2007: 59). He argues that they are often top-down organizations with more of an interest in raising money in Western countries than creating truly successful projects in Africa, thus failing to take into account the on-the-ground realities of their proposed conservation schemes.

Thus, as this example shows, while this "new" conservation agenda has been shrouded in rhetoric of the importance of local involvement, success has been limited. While on the surface it looks as though indigenous traditions and needs are being considered, in depth analysis shows otherwise. "Post-colonial Tanzania has failed to promote a wildlife conservation practice that is ethnographically and ecologically sensitive" (Mkumbukwa 2008: 598). As a result, Tanzania has seen a continuation of conservation practices that look remarkably similar to those instituted under the colonial system. As Walley (2004: 188) says, "the era of European colonialism created many of the bureaucratic pathways, networks, and structures through which contemporary power relationships continue to unfold, albeit with different players." In the last decade, many have begun to criticize the motives behind these top-down environmental protection tactics. Taking an in-depth look at some of these criticisms can help shed light on why there has been such limited success in this "new" era of environmental protection.

E. Conservationists as colonialists

Many disturbing facts about international conservation organizations have been exposed in recent years, leading to heated discussions in many parts of the world about the appropriateness of their work. It must be noted here that many people engaged in

conservation work should be praised for their willingness to take on the difficult and complex task of environmental protection in the developing world; indeed, much of the work done by these organizations is extremely important and respectable. They are responsible for the protection of many endangered ecosystems around the globe. And yet, certain aspects of their work undoubtedly warrant critique, particularly in terms of their relationships with indigenous communities. In fact, reevaluation of large-scale environmental work is vital if we hope to create better-planned and executed conservation projects.

Many scholars and activists have critiqued conservation efforts, particularly those undertaken by large-scale NGOs in the global south. In 2004, anthropologist Mac Chapin offered a scathing critique of international conservation efforts in his article "A Challenge to Conservationists." In the article, he refers primarily to "The Big Three" environmental NGOs; they are the World Wildlife Fund (WWF), Conservation International (CI), and The Nature Conservancy (TNC). While Chapin is referring mainly to these three organizations, his argument can easily be extended to large-scale conservation initiatives in general. He critiques two main aspects of their work: their "disturbing neglect of the indigenous peoples whose land they are in business to protect" and their conflict of interest with large donors (Chapin 2004: 1).

One of the most disturbing parts of "A Challenge to Conservationists" is Chapin's discussion of the shift in priorities for environmental work during the past decade.

Whereas previous rhetoric so heavily focused on the need to work with local communities, it now appears to prioritize large-scale conservation strategies over locally based projects. Throughout the late 1980s and 1990s, many conservation organizations

issued statements of testimony to the importance of including local communities in conservation projects (Chapin 2004: 5). However, even as they touted the importance of community participation, actual on-the-ground execution of projects often showed minimal input from indigenous populations. This stemmed, in part, from the complex challenge of merging the differing values and interests of Western conservationists with those of the local populations with whom they work. Whereas indigenous groups are often most concerned with legalizing their own land rights and gaining some sort of access to resources, conservation organizations may not see humans as part of the protection scheme best for the land they are working on (Chapin 2004: 7).

Another challenge results from conservationists' expectations that community-based projects will be successful within a relatively short period of time (Barrow et al. 2001: 36). Barrow et al. argue that community conservation initiatives are "often locked into time frames too short for the organizational evolution required." Conservation organizations, seeking immediate results, tend to put more money into the projects, under the "fallacy that money can substitute for time" (ibid.). This can increase dependency and weaken self-sufficiency in local communities, inevitably leading to the conclusion that the project has failed. Indeed, Hulme et al. argue that a longer time frame is necessary if these projects are to be successful, particularly in the African context. They argue, "...the task of creating a conservation policy that is embedded in African society, rather than imposed from above, will be the work of generations" (Hulme et. al 2001:7).

Due in part to these issues, many of the community-based conservation projects implemented in the global south during the 1980s and 1990s failed. As a result, some conservation organizations began to navigate away from their prior commitment to

community participation and empowerment. Some of the major organizations have now shifted their focus toward projects based on Western science and large-scale conservation strategies, and away from those that consider the importance of small-scale realties (Chapin 2004: 3).

Another major shift has occurred in the sources of funding for large-scale conservation organizations. In the past few decades, as conservation projects have grown and outreach to different parts of the globe has expanded, NGOs have had to build increasingly larger budgets. In 2002, one estimate put the combined budgets of WWF, TNC, and CI for work in the global south at more than half of the roughly \$1.5 billion available for all conservation efforts across the globe. Additionally, the budgets of these three organizations for work in the developing world increased from approximately \$240 million in 1998 to nearly \$490 million in 2002 (Chapin 2004: 8).

While increased funding for conservation seems like a positive thing on the surface, the origins of the money offer an alarming realization. Whereas most funding previously came from individual donations and private foundations, a large percentage of conservation budgets now come from bilateral and multilateral agencies, as well as private corporations (Chapin 2004: 8). At first, many NGOs eased into relationships with large-scale donors, careful of potentially controversial relationships. For instance, WWF began taking money from USAID in the late 1970s, but were careful to make sure the money never funded more than 50 percent of any given project. However, this has become difficult as more large corporations, often with poor environmental records of their own, have begun to donate large sums of money to these organizations (Chapin 2004: 11). It is important to note that this funding is funneled almost exclusively through

the conservation organizations, not indigenous populations, reinforcing the West's power to create project agendas.

This growth in money has come with serious complications. First, there is now increased competition among the organizations as they vie for the same funding sources, and a resulting lack of willingness to work with one another. Another complication is due to the fact that some funding for the organizations is coming from oil, timber, pharmaceutical, and other large extractive industries and thus makes it difficult for NGOs to oppose their destructive practices, as these companies are often working on the very lands the conservation organizations are being supported to protect. Even if funders do not have links to controversial industries, NGOs still need to be careful to appeal to donor values in order to successfully procure funding. In this effort to appeal to the ideals of the sought after donors, organizations can loose sight of their original goals, often at the expense of already existing projects (Sachedina 2008: 345).

These critiques concur with the concerns already discussed about the "new" era of conservation in Tanzania. They make it strikingly clear that it is not just government officials enacting top-down conservation approaches that further marginalize their own people; NGOs themselves are often supporting and driving these efforts. As Sachedina points out, rather than serving to empower local communities, conservation organizations are sometimes involved in policies that can serve to further "impoverish and disempower" Africans. He argues that like development organizations, conservation organizations have the ability to "distribute fortune and misfortune" (Sachedina 2008: 396). It is thus easy to see how governments, industry, and environmental organizations

themselves have institutionalized a form of conservation that looks alarmingly similar to the colonialism of an older era.

Particularly in Africa, where conservation has its roots so firmly in colonial values and policies, we can see that while the rhetoric has evolved over time, on-the-ground actions have not usually followed suit. This form of conservation has been dubbed "ecocolonialism." When compared side by side, one can easily argue that there are indeed many comparisons to be made between colonialism and conservation in the developing world. (1) Both are/were instated and controlled by Western powers. (2) The agenda of each reflects Western values. (3) Local communities' needs, desires, and traditions are/were often not taken into account by those in power. (4) Both sometimes utilize brutal policies against local communities, such as forced removal from traditional lands. And, (5) conservation in the global south, just as colonialism before it, is justified as the West doing good on behalf of underdeveloped nations, even though it exists in large part for the benefit of Western audiences. Timothy Luke sums up the ecocolonial tactics employed by the WWF in Africa well when he says:

In many ways, the WWF is one of the world's most systematic practitioners of ecocolonialism... WWF wildlife protection programs have been concocted by small committees composed mostly of white, Western experts, using insights culled from analyses conducted by white, Western scientists that were paid for by affluent, white Western suburbanites. At the end of the day, many Africans... are not entirely pleased by such ecological solicitude (Luke 1997: 38).

Scholars and activists alike must give serious consideration to the comparison of conservationist with colonialist. If it is ignored, the risk is a continued tradition of top-down conservation that marginalizes and disempowers local communities. Instead, we must attempt to find a way forward that merges Western and indigenous values and works to benefit valuable ecosystems and the people living in them.

F. Implications for coastal conservation and management

Coastal conservation projects are in a unique position to change the conservation trajectory, as they only date back, at the earliest, to the 1940s; and they didn't begin to occur on a large scale until the late 1980s and early 1990s. Levine (2006: 49) asserts:

Because these marine protected area programs were predominately initiated during the same period that international agencies and protected area managers were acknowledging the importance of community-based methods of conservation, marine programs in Tanzania to not have the same history of exclusion and conflict as land-based conservation programs.

This lack of a long history, and correlating negative connotations, provides a distinct opportunity for the implementation of conservation projects that succeed in including, empowering, and creating trusting relationships with local communities. The history of land-based conservation in Tanzania offers a vital lesson about the importance of local involvement. Indeed, it is imperative that coastal conservation efforts do just that, as marine management will only be successful when efforts fully understand not only the complex ecological processes involved, but the many socio-economic factors directly affected by coastal governance decisions (Torrel 2000:354).

Understanding the roots of conservation in Tanzania can help us to place coastal conservation efforts within a more complex and accurate historical and post-colonial context. It allows us to more fully understand the situation in which conservation efforts are taking place, including what potential attitudes and hesitations to the projects might look like from local communities. If conservation initiatives can more accurately anticipate and mitigate these kinds of issues, they are more likely to gain the trust and partnership of local communities, and thus to be successful in implementing coastal conservation initiatives that foster ecological health and community empowerment.

Chapter 4: Practices and Case Studies of Coastal Conservation

A. Integrated Coastal Zone Management and Marine Protected Areas
In this chapter I seek to paint a broad picture of coastal conservation in order to show the
ways in which it is different from land-based conservation practices and to provide a
global context in which to situate the particular case of Zanzibar. I do so in two ways: 1) I
discuss two of the primary concepts that are used in marine resource conservation and
management and 2) I provide global, regional, and national case studies of conservation
initiatives in order to create a broader perspective of such efforts.

First, the principles and objectives of Integrated Coastal Zone Management (ICZM) (also sometimes referenced to as ICM) must be outlined, as ICZM serves as the foundation (at least in theory) for many of the marine conservation efforts across the globe. The concept of ICZM was first established in 1972 when the United States passed the Coastal Zone Management Act; the term "integrated" was added in the early 1980s. The 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil launched ICZM into the international spotlight. One of the priorities of the conference was the protection of coastal environments; it was argued that all countries should commit to implementing integrated management and sustainable development of coastal areas (Lindén 1993a). Thus began an increased worldwide effort to implement ICZM-based management of coastal resources. ICZM has been popular in many regions of the world since the Rio Conference; as of 2000, approximately 95 coastal nations were engaged in ICZM projects, 70 of which were developing countries (Tobey et al. 2002: 286).

A distinctive aspect of ICZM is "multiple use management and interorganizational activities where success depends on coordination of efforts and effective linkages among the actors involved" (Tobey et al. 2002: 288). ICZM is, at the core of its mission, a participatory and collaborative process. It aims to partner state, civil society, market actors, and local communities. ICZM strives to create place-based solutions through participatory involvement and community empowerment (ibid).

One of the most common manifestations of ICZM at the local scale is through the creation of Marine Protected Areas (MPAs). The World Conservation Union defines MPAs as "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means" (ibid.). While this definition requires that an area be put aside for conservation, it does not dictate what else it can be used for; commonly they have additional purposes, such as promoting better livelihoods, education, or research (ibid.). It is estimated that there are approximately 1,300 MPAs worldwide, 28 of which are found in East Africa (Tobey et al. 2006: 835).

While the above discussion shows the rhetoric surrounding ICZM and MPAs to be quite promising, the actual on-the-ground manifestations of such projects are not always successful in meeting their goals of community inclusion and empowerment. It is important to recognize that while coastal conservation in Zanzibar is a distinct case, there are many unique cases from the global south that involve parallel groups of stakeholders grappling with similar issues. Local and indigenous communities in many regions are struggling to access marine resources against a complex backdrop of postcolonialism, poverty, and development. In order to place Zanzibar within this larger setting, I explore five case studies—from India, New Zealand, South Africa, Kenya, and Tanzania.

B. Case studies of marine conservation

Kanyakumari District, India

In her book *Shorelines: Space and Rights in South India*, Ajantha Subramanian (2009) details the struggle of a fishing village in the Kanyakumari District of Southwest India to claim their rights to marine resources. She discusses the particular history of the case study in order to show how the "lineage of rights" informs the current situation within its postcolonial setting. She begins with the history of early traveler accounts from around 400 A.D., moves on to the Portuguese expansion into the area in the 1500s and the resulting establishment of the Catholic Church and conversion of coastal communities, and continues through the period of British colonization to current times. This detailed history paints a clear picture of how roles and relationships have formed between fishers and those in power in the region, as well as how fishers express their rights and claim their resources within the existing power structures.

The Catholic Church has played a significant role in the region since the sixteenth century, as it has served as the "landlord, tax collector, and religious authority— an imposing trinity that has served as the primary intermediary between the fishing population and successive rulers" (Subramanian 2009:2). It was thus significant when, in 1997, a group of artisanal fishers took their bishop to court over a clerical decision to institute a week-long ban on local fishing in response to locals' attack on the mechanical trawling boat of a nearby village. This violent attack was in violation of a peace deal that the church had brokered in the region, and the ban was to serve as a type of punishment for the actions. However, the fishers in the village who instigated the attack felt that the church had overstepped its authoritarian bounds and in an unprecedented move took them to court. Not only does this story paint a picture of the power relationships between state,

church, and local communities, it also details the power struggle between artisanal fishers and those who use more destructive trawling practices.

In her telling of this story, Subramanian makes three key arguments. First, she argues that current claims to resources in India's post-colonial democracy are fed by the "histories of claim making" in the region; she argues that it is a fluid process of negotiation and political subjectivity. Second, she argues that in their efforts to claim their rights, fishers in the region not only renegotiated space, they created new spaces in which to fight for justice (i.e. in the creation of a three mile fishing zone that was made accessible to only artisanal fishers). She argues, "...space itself is an essential ingredient in the struggle for rights" (Subramanian 2009: 252). Third, Subramanian suggests that in their ability to create new space, they also resisted and recreated traditional hegemonies. She goes on to argue that within development efforts, the state "...opens up new spaces for the articulation of subaltern rights and sovereignty" (ibid.: 254). Finally, she concludes that this case study shows that:

...an approach to conservation simply as state science or a community practice is inadequate for sustainable resource use. The thorough implication of states and communities through the development process suggests that any effort to redress the ills of development *has to be a joint one* (Subramanian 2009: 254, italics added).

While this story is specific to India, we can apply the lessons learned to the Zanzibar case in a couple of important ways. It can help us to recognize that resource rights and access in Menai Bay are steeped in a long and complex history that must be understood in order to accurately frame current dynamics in the conservation area. Furthermore, this case study serves as a reminder that solutions cannot come from one stakeholder alone, but must be a joint process that includes all affected parties.

Kaikoura Region, New Zealand

A second study comes from the Kaikoura region on the east coast of the south island of New Zealand. The indigenous Maori people in the area have long used the practice of $r\bar{a}hui$ to protect their natural resources (Maxwell et al. 2007:1). The practice of $r\bar{a}hui$ involves prohibiting the use of certain natural resources in a designated area in order to allow them to replenish for future use (ibid.). While the practice has changed significantly over time to reflect and cohere with modern political and conservation practices, the survival of the practice is a success story in and of itself. The process was severely eroded during the English colonial period, but there have been recent successes in implementing $r\bar{a}hui$ in conjunction with the New Zealand government. The 1996 Ministry of Fisheries Act gave the government the right to close certain areas (or at least restrict types of allowable fishing methods) at the request of local communities, in order for those communities to manage certain resources with traditional methods (Maxwell et al. 2007: 9). The same 1996 act set up an official process for requesting a $r\bar{a}hui$ (ibid.).

The official Kaikoura *rāhui* that this case study involves was approved in 2002 in order to take pressure off of marine resources that had become overused in the region. This case is interesting in that it successfully uses indigenous traditions in order to implement conservation practices in a contemporary, government-sponsored setting. However, it is important to note that there are other factors involved (namely government legislation) that can keep the local communities of the region from fully practicing the marine conservation practices that they desire (Hemmingsen 2004: 80). Thus, while this case highlights the success of merging the desires of local stakeholders with those of the government, challenges to a fully cohesive system are still present.

This case study reminds us that even when traditional methods are used in conjunction with the government, they are still enacted within a power structure where local communities are often subordinate. While the Maori clearly have some agency, they are not completely free to conserve and manage resources in the ways that they would like. This situation echoes the conversation on the "new" era in conservation, in which local desires are recognized but often not fully actualized. While the success of this story should not be undervalued, it must be recognized that there are still hegemonic issues of power at play. This can provide important context for how we define true success in the case of local access to and control of resources in Zanzibar.

Great St Lucia Wetland Park, South Africa

Post- apartheid South Africa offers a particularly interesting case study of coastal management from the African continent. While technically its eastern coast forms part of the East Africa Marine Eco-region, South Africa varies greatly from East Africa for a variety of political, social, and ecological reasons. Divisions of race and power under apartheid had great influence on how the country's environmental management efforts were enacted (Picard 2003: 182). As a result, most relationships between protected areas and surrounding black communities were full of mistrust and conflict (ibid.). The country still struggles to end the negative perceptions of protected areas instilled in black communities during the apartheid era (Picard 2003: 183). However, at the end of apartheid new efforts were made to more fairly distribute earnings from protected areas to previously excluded black communities (ibid.).

The Great St Lucia Wetland Park (GSWP) covers an area of 300,000 ha and is located in the Province of Kwa Zulu-Natal, 240 km north of Durban (Picard 2003: 183).

Originally established in 1895, GSWP contains marine, inland lake, estuarine, forest dune, mangrove, and costal lowland forest ecosystems. The park is home to Africa's biggest estuary, its largest population of hippo and crocodiles, the last significant breeding ground for the giant leatherback and loggerhead turtles, 526 bird species, and 220 km of coastline and beaches (www.stlucia.org). Nelson Mandela reportedly said that:

[Great St Lucia Wetlands Park] must be the only place on the globe where the oldest land mammal (the rhinoceros) and the world's biggest terrestrial mammal (the elephant) share an ecosystem with the world's oldest fish (the coelacanth) and the world's biggest marine mammal (the whale) (www.stlucia.org).

GSWP is managed by The Wetlands Park Authority which has three main objectives: (1) The management of the wildlife and ecological systems of the area, (2) Oversight and development of commercial activities that include nature-based tourism and associated infrastructure in the park; and (3) Improving the social and economic living conditions of people living in the area (Department of Environmental Affairs & Tourism 2005: 72).

Picard (2003: 189) argues that many black South Africans living in this region

now see real benefit to having GSWP and are in full support of its survival. While the extent to which local communities have been involved in and benefited from management of the park is not made explicit (nor could I find other scholarly work on this topic), Picard suggests that the level of involvement has been enough to change the largely negative perceptions of conservation efforts that existed during the *apartheid* era. The Wetlands Park Authority reports numerous ways in which GSWP has supported local communities. These efforts have included paying 30,000 Rand (approximately US \$3,500) to 556 families that were forcibly evicted from the park in the 1950s; this was an important step in compensation for past wrongs, however the families were not allowed to resettle in the park (Department of Environmental Affairs & Tourism 2005: 73). The

Park Authority also set aside a site within park bounds for the villagers to use to honor the ancestors they have buried there (ibid.). Additionally, local communities receive a percentage of gate revenue generated from tourism, some access to resources within park boundaries, jobs (both permanent and temporary), and training in development and tourism activities (Department of Environmental Affairs & Tourism 2005: 74). Even so, poverty levels in communities in the region remain quite high, with only a small percentage of people receiving direct benefit from the park.

While these successes are respectable, Picard argues that if conservation efforts like GSWP are to succeed in a majority ruled South Africa, then protected areas will need to further strengthen their level of engagement with local residents. She concludes that, "the GSWP cannot solve poverty and underdevelopment, but it can contribute to solving problems, while ensuring its own continued success by recognizing and engaging local residents as equitable partners in biodiversity conservation" (Picard 2003: 190).

This case study is pertinent because it shows us the implications of inequitable and unjust coastal conservation schemes, as well as how difficult it can be to solve the resulting problems over time. Even though there are efforts to right past wrongs in GSWP, it's clear that these efforts have fallen short of truly overcoming injustices resulting from the creation of the park. While the case of Zanzibar will never involve issues as extreme as *apartheid*, there are certainly (slightly) more subtle power dynamics that keep local communities in a place of less power than those implementing the conservation initiatives. Therefore, it is important to remember the potential long-term consequences of not recognizing or including local communities in a truly just way—

consequences that can be of great detriment to the long-term success of the conservation program.

Diani-Kinondo Region, Kenya

The Southern coast of Kenya has similar resources, weather patterns, and fishing histories to its Southern neighbor, Tanzania. As of 1995, approximately seven percent of Kenya's population (1,640,000 people) lived on the coast; this percentage has most likely increased significantly since that time. As in Tanzania, a large majority of coastal dwellers are Muslim, and many are of Swahili ethnicity (Glaesel 2000: 323). While some of the conservation initiatives also look similar between the two countries, there have been some major differences in the roles of and relationships between stakeholders. Exploring these similarities and differences will help place the Menai Bay Conservation Area and other MPAs in Tanzania within a broader regional context.

The Kenyan government began coastal conservation efforts in the 1960s, when they set aside the country's first marine parks. The number of marine parks continued to increase throughout the next three decades (Glaesel 2000: 329). However, unlike many of the marine parks in Tanzania that at least initially had the support of local communities, most fishers residing in communities in or near the protected areas of Kenya have long disliked the parks for two reasons: 1) some communities lost access to the waters they had historically fished, severely limiting their right to use traditional fishing grounds; and 2) the people put in management positions in the parks have mostly been outsiders from other communities who have formal education that most coastal villagers lack, causing resentment (ibid). Partially because of their animosity toward the parks, local

communities sometimes continue to fish in protected waters, choosing either those areas that are poorly patrolled or fishing under the cover of night. This, unsurprisingly, has created further conflict between local fishers and park officials.

Furthermore, Glaesel (2000) has found that the creation of marine parks in Kenya has created tension between local and non-local fishers all along the Kenyan coast. While most local fishers use traditional techniques such as baskets and cast nets, newcomers often utilize more environmentally destructive methods such as speargunning and pull seining (Glaesel 2000: 322). The conflicts between locals and non-locals have occurred at a variety of levels, from locals barring outsiders from joining cooperatives to the use of arson and the destruction of fishing gear (ibid.).

The Kenyan government has focused on coastal conservation schemes that recognize and include local communities, mostly through the establishment of numerous marine reserves that prohibit the use of speargunning and seining, but that do allow more traditional methods (Glaesel 2000: 322). While these regulations are in place to support local fishers, these efforts have not always been welcomed; many fishers resent the intrusion of the national government into what has traditionally been regulated at the local level (ibid.). Furthermore, these regulations against non-local fishers have not always been strictly enforced, as some seiners have formed strategic relationships with government officials that prevent them from being prosecuted for using illegal methods in protected waters (ibid.). As a result of the combination of loss of access to waters because of marine park establishment, the depletion of local fish stocks as a result of practices such as seining, and the loss of an increasing percentage of beachfront territory

to new tourist hotels, local fishers now view themselves as an oppressed group that bears the brunt of the detrimental affects of coastal development (Glaesel 2000: 333).

McClanahan et al. (1997) offers an excellent case study of the complexity of implementing effective management strategies in the coastal waters of Kenya with her discussion of the Diani-Kinondo region on the Southern coast. The majority of the people who live in Diani-Kinondo are of the Digo ethnic group; the group has elaborate and long-standing traditional methods for managing coastal resources (McClanahan et al. 1997:116). Such traditions include: (1) the safeguarding of marine sites that are considered to be sacred; (2) the designation of certain periods during the year when fishing is curtailed for religious purposes; (3) the requirement of non-local fishers to pay local communities for access to their fishing grounds; and (4) traditions that dictate restriction on gear and the size of fish that can be caught (ibid.: 115). While these traditions sound promising, comparative ecological studies of the Diani-Kinondo region and nearby marine parks found a much greater level of biodiversity and fish health in the protected areas. While traditional practices in the area may have been more effective in the past, a decline in the power of cultural institutions has severely hindered their potential for success. McClanahan et al. (1997:116) suggests that a merging of traditional systems of management with government supported and enforced policies would be needed for successful protection of these vital, declining coastal resources. Thus, creating a marine park under the principles of ICZM might prove the best option for the preservation of the Diani-Kinondo marine ecosystem.

Many different parties actually supported a proposed marine park in the region in the early 1990s, including local fishers, hoteliers, and researchers (McClanahan et al.

1997: 106). The local fishers supported the plan even though it would severely limit their access to traditional fishing grounds, as they hoped that the marine park would generate community income from park fees. However, the project eventually lost popularity with fishers and local government officials for numerous reasons, including: (1) a fear that the park would be expanded into an even larger area of traditional fishing grounds, and (2) a realization that the park may not deter outside fishers from invading local waters, as they had hoped (ibid.: 108). As of 1997, the environmental management plan for the region was inactive, which speaks to the complex challenges inherent to successfully establishing conservation efforts in coastal East Africa. While it is possible that improvements have been made since this time, my research could find no scholarly evidence that this was the case. This case study provides a regional context for MBCA, and helps to illuminate the complex relationships that can exist between local communities and government institutions. Furthermore, it speaks to the realistic difficulty of implementing successful long-standing conservation initiatives in the region.

Mafia Island Marine Park, Tanzania

The final example comes from the Mafia Island Marine Park (MIMP), located 60 kilometers south of Dar es Salaam, and 21 kilometers east of the Rufiji Delta in the Indian Ocean. While Mafia is similar to Zanzibar in many ways, it is politically affiliated with the mainland. It is located within the main flow of the dominating East African Coastal Current, and boasts a high diversity of marine habitats. Mafia communities depend on coastal resources for their livelihoods, and the area has long attracted visiting fishers as well. Concern over the depletion of local waters from destructive fishing

practices, such as dynamite fishing, prompted the establishment of MIMP in 1995. MIMP covers an area of about 822 km², making it the largest Marine Park in the Indian Ocean (Tobey et al. 2006). The Park operates under the principles of ICZM, seeking to improve the ecological integrity of the region while simultaneously improving the livelihoods of local communities. Of the 40,000 people in the Mafia District (comprised of five individual islands) about 13,500 live within the park, many of whom depend on the marine environment for food and income (Andersson et al. 1995). Only people from Mafia are allowed to fish in the park; a permit is required and laws against destructive fishing practices are reportedly strictly enforced (Tobey et al. 2006). "Before the establishment of the Marine Park in 1996 and purchase of patrol boats, Mafia Island was reported to be like a 'war zone' with blasts every half-hour" (Tobey et al. 2006: 844). One blast from dynamite fishing kills nearly all fish and other living organisms within the 15- 20 meter radius of the blast, and destroys all of the coral reef within a couple of meters (ibid.).

Some researchers report clear successes of MIMP. Coral mining and destructive fishing techniques have been greatly reduced through education, illegal gear exchange programs, the use of boat patrols, and local community participation (Kamukuru et al. 2004). A study done by Kamukuru et al. (2004) shows that there are four times more fish of at least one important species, the blackspot snapper, than in the adjacent heavily fished areas. Additionally, the biomass of these fish is generally six to ten times greater than that of the fish sampled outside of the MPA. The findings suggest that the same is likely true for other fish species in the area. While this study indicates that the MPA has

been good for the ecological health of the region, others have found that the results of MIMP have not always been positive.

As mentioned in Chapter 2, anthropologist Christine Walley conducted an extensive study of the social impacts and feelings toward the creation of the Mafia Island Marine Park from 1995-2000. She published her research in the book *Rough Waters:*Nature and Development in an East African Marine Park, which highlights not only the "social drama" of the marine park itself, but also how the experiences of MIMP fit into the larger discussion of globalization, conservation in Africa, and the power dynamics between governments, NGOs, and local communities (Walley 2004).

In *Rough Waters*, Walley explores the relationships and power dynamics between local communities, the World Wildlife Fund (the major international organization involved in the park) and the Tanzanian government. Walley's findings show that during MIMP's initial years, community members were pleased with the efforts of the park, even though they were often excluded from the "participatory" aspects of management. However, by 2000 she saw a clear waning of support from local residents, often finding vehement dislike and distrust of park regulations and officials. This shift was a result of villagers feeling that their access to vital resources within the park was diminishing, as well as the heightened realization that their ability to "participate" in the development and management of the park was merely superficial. Walley now indicates that dissatisfaction with the park has grown and intensified, even leading to violent conflicts between villagers and park officials (Walley 2009, personal communication).

What is perhaps most notable in the story of MIMP is that despite the animosity from local residents toward the park, those in positions of power consider it a success.

Park documents from 2000 indicate that the park was functioning well. Yet, as Walley says:

It is deeply ironic (and disturbing) that during the time in which official organs were asserting that the park was functioning at its best, Mafia residents, whose voices would remain unheard in national and international offices, were declaring their hostility toward the park and insisting that it was waging a "war" against them (Walley 2004: 252).

We can apply many lessons from Mafia Island Marine Park to coastal conservation in Zanzibar, including the insight that biological success does not necessarily equal social success. However, what is perhaps most important to take away from this case study is Walley's final findings from MIMP. Her research reminds us that the stories told by those in government and others in positions of power (including those in international conservation organizations) can differ greatly from the actual on-the-ground stories told (and lived) by residents of the protected areas. It will be important to keep this mind during the discussion of Menai Bay and the relationships and power dynamics between the many stakeholders involved in conservation there.

Each of these case studies provides unique insights into the complex realities of implementing Integrated Costal Zone Management projects in real-life settings. They also provide lessons that we can use to better understand and analyze the thesis's primary case study, Menai Bay Conservation Area. In the remaining four chapters, I introduce the particular case study of MBCA, including my own findings from fieldwork in the region. I then combine the lessons learned from these case studies with the theory of political ecology in order to critically analyze how well conservation initiatives in MBCA are meeting the goals of ICZM, with a particular focus on the goal of fostering community empowerment in the protected area. In using a political ecology approach, I will attempt to further enrich the understanding of the challenges of ICZM provided by the case

studies in this chapter. Furthermore, these questions will help us to more fully understand the dynamics and implications of the current state of conservation in Menai Bay. First, however, it is important to discuss the history of Zanzibar as it pertains to conservation areas like MBCA.

Chapter 5: History, Politics, and the Environment in Zanzibar

A. A brief history of Zanzibar

This chapter provides the historical and political context necessary to understand the current state of conservation in Zanzibar. The first section gives a brief overview of the history of Zanzibar, which serves as a backdrop for the current political tensions surrounding conservation efforts in the region. The second section details the history of the relationships Zanzibaris have with their environment; it highlights the fact that notions of resource conservation and management did not arrive with external western entities, but are rather deeply engrained in Zanzibari society. With this understanding, we can better grasp the history of traditional conservation methods on the island and the way they inform current environmental protection efforts. Finally, the third section of the chapter highlights how the current political context can complicate and impede conservation efforts in Zanzibar.

The history of the Swahili people who make up a majority of Zanzibar's population is a topic that has long been debated by historians, archeologists, anthropologists, linguists, and other scholars. However, we can comfortably say that Swahili speakers inhabited the East African coast by the end of the first millennium, living in a scattered but fairly homogenous and largely maritime culture (Spear 2000: 286). Trade is thought to have existed along the coast since the first millennium; there are clear accounts of Roman trade on the southern coast of Zanzibar as early as the 5th century, and evidence of Persian trade there dating back to the 8th and 9th centuries (Spear 2000:263). Evidence of Islam on the islands also dates back many centuries; the two oldest mosques on the island (in Kizimkazi and Tumbatu) date back to the early years of

the 12th century (Nehemia et al. 2000: 252).

It is important to note, however, that significant aspects of the typical scholarly history given of Swahili people (such as that above) conflicts with the traditional history told by Swahili people themselves. This is partly because identity is not a static thing in Zanzibar. Traditionally, "ethnicity could be inherited at birth, but it could also be adopted as necessary to meet the particular social, economic, and political goals of human actors as they negotiated their way through the complexities of real life" (Fair 2001: 29). Historically, inhabitants of Zanzibar have defined themselves in the way that allows them the strongest claim to resources at a given time (ibid.: 28). In fact many Zanzibaris, considered to be Swahili by the outside world, will not self-identify as such because it is associated with being a former slave; they instead claim descent from Persians or the original inhabitants of the areas of Hadimu or Tumbatu (Gilbert 2004: 15; Fair 2001: 36). While reconciling these two histories is not easy, it is likely that the answer lies somewhere in the synthesis of the two; this would posit that the Swahili emerged near the Northern East African coast in the first millennium and later became infused with Persian and Arabic culture and religion as a result of trade (Spear 2000: 290). Wherever the exact truth lies, it is certain that the Swahili have a long and rich history in the region.

Zanzibar too has a long and rich history. It was once a major trading crossroads for many regions of the world. Products that for the most part originated on the mainland and were brought to Zanzibar— such as for slaves, ivory, hides, and cloves and other spices— were bought and sold by merchants from across the globe. It acted as "a commercial intermediary between the African interior and the capitalist industrializing west" (Sheriff 1987: 1).

Here Yankee merchants from New England drove a hard bargain with Hindu traders in their large crimson turbans or Khojas in their long coats, exchanging ivory for American cloth; Marseillais haggled with the Somali for hides and sesame seeds from the Benedir; Hamburg entrepreneurs shipped tons of cowries shells to West Africa, where they served as currency; and Arab caravan traders rubbed shoulders with their African counterparts from the Mountains of the Moon (Sheriff 1995:1).

In part because of its central role in global trade, many have sought to rule the islands over time. The Portuguese were the first external power to successfully take hold of leadership in Zanzibar; they came to power in the late 1500s and ruled through the already existing local dynasty (Sheriff 1995: 8). But by the mid-1600s their power in the region was already beginning to give way to the Omanis who finally expelled the Portuguese completely in 1698 (ibid.). The Omanis ruled for nearly two hundred years, solidifying Zanzibar's relationship with Islam and the Middle East. It also solidified the distinction between Arabs and Africans on the island, sorting them into respective categories of "ruler and ruled" (Larsen 2004: 131). Under the Omanis, land use policies began to change on the island, as the agricultural economy shifted from one of subsistence to one of cash crops (Nehemia et al. 2000: 266). Whereas there used to be a general policy of shared equal rights to land among all people, policies of land ownership took over and the Africans became more marginalized with less access to land (ibid.). This, in part, help set the stage for later conflict between Africans and Arabs.

The Omanis succumbed to British rule in 1890, but Sultan Ali was retained as acting leader of Zanzibar (Gilbert 2004: 68). The Sultan's government was supposed to maintain control over internal affairs on the islands, however the British soon took over even local administrative duties (ibid.). Thus, while Zanzibar was called a protectorate, it looked more like a British colony (Fair 2001: 14). The British further stratified the island

into ethnic categories of Arabs, Asians, and Africans. The consequences of such categorizations had great power, they even determined the type of food people had access to (Larsen 2004: 131). Africans were considered the lowest ethnic rung on the ladder, further marginalizing them and setting the stage for conflict between the groups. Zanzibar remained a British protectorate with an Arab-ruling party until independence in 1964. Shortly thereafter, a bloody revolution took place in which the African majority overthrew the Arab minority. Thousands of people, mostly Arabs, died in the Revolution (Gilbert 2004: 158). While the killings were directed at overthrowing the elite ruling class, many poor Arab shopkeepers were also victims of the violence (Sheriff 2001:314). The party that took power after the Revolution, CCM (*Chama cha Mapinduzi*, literally the Revolutionary Party), has been in office since that time.³

Shortly after taking power, the new Revolutionary Government formed a union with the mainland country of Tanganyika, officially creating The United Republic of Tanzania, of which Zanzibar remains a semi-autonomous entity. While there is a two-party democratic system in Tanzania— the opposition party is the Civic United Front (CUF)— it is generally thought that CCM has only retained power through a series of fraudulent elections. The tension between these two parties is palpable in Zanzibar. Party politics on the island often serve as a divide between the CCM government and more CUF-dominated villages and within communities themselves. As we shall see in section three of this chapter, these government-community relationships have huge implications

-

³ CCM wasn't officially created until 1977. The party that formed the government directly after the revolution was the Afro-Shirazi Party (ASP). The ASP joined with the ruling party on the mainland, the Tanganyika African National Union (TANU), to create CCM in 1977. However, CCM- rule on Zanzibar was a direct continuation of APS-rule.

for Zanzibar, and not least of all for the success of conservation and development initiatives in the region.

B. The history of human-environment relationships in Zanzibar

Conservation and resource management are not new concepts in Zanzibar. Zanzibaris have an intimate knowledge of their local ecosystems, as their livelihoods have long depended on the health and abundance of their natural resources and they have long used measures to protect them. As McClanahan et al. (1997: 12) found in their study of coastal Kenya and Tanzania, "Traditional management embraces all the main forms of restriction practiced by modern fisheries organizations. These include gear restrictions, limited access (*ubani*), time limits (*sadaka*), size restrictions and sacred or protected areas (*mzimu*)."

In their study of Chwaka, a village located on the Central East coast of Unguja—Zanzibar's largest and most populated island—Tobisson et al. (1998) found the depth of environmental knowledge among villagers to be vast. While Chwaka is only one village, their findings can easily be extrapolated to the rest of the region, as the social, political, and ecological settings of Chwaka are generally similar to those of the rest of Unguja. While Chwaka villagers don't necessarily use western scientific terms to discuss their environment, their knowledge of such things is indisputable. They understand the relationship between the tides and the revolution of the moon, as well as the patterns and scientific characteristics of precipitation, winds, and intertidal zones (Tobisson et al. 1998). This knowledge is based on "generations of accumulated experiences" (ibid.: 681). It is important to recognize the depth of this knowledge, particularly in light of top-down conservation schemes that sometimes assume ignorance drives people to destroy

their own ecosystems. Or, who use the "ritual caveat (' poverty forces them to degrade the environment')" (Bryant 1997: 6).

Indeed, I encountered the view that Zanzibari people are ignorant in regards to their environment during an interview with one official of the Menai Bay Conservation Area (MBCA). He told me that when MBCA was founded, there was a huge need for education, because local people had little "scientific knowledge" about the sea or environment in general (anonymous, Interview, 7/30/2009). He claimed that many people believed that fish fell from the sky with the rain and that the fact that they only landed in the sea simply proved that they were from god (ibid.). He said, "Not everyone understands what is happening naturally," or what should be done to conserve it (ibid.) This, of course, conflicts sharply with the findings of Tobisson et al. above. It illustrates the power dynamic that exists between government officials and local communities, one that allows those in power to inaccurately frame local communities as ignorant and in need of external help with resource conservation and management. This idea is explored more in later chapters of the thesis. First, the below examples of traditional resource management practices further illustrate a more accurate view of the long-standing history of environmental knowledge and conservation in Zanzibar.

One of the oldest outside accounts of traditional resource management practices in Zanzibar comes from a report by R.H.W. Pakenham, British Senior Commissioner for Zanzibar during the 1940s. In his report on land tenure practices in Chwaka, Pakenham found that fishing was one of the "foremost occupations" of the *Shehia* (district), and generally of people throughout Zanzibar (Pakenham 1947: 28). In fact, he found that the number of fishermen at the time was increasing significantly from earlier periods. This

increase, Pakenham found, was due in part to a new road that connected the area more easily with the other parts of the island (and the subsequent new markets that this made available for the "disposal of catches"). This made fishing a more lucrative form of employment than agriculture and thus more people began to turn toward the sea for their livelihood.

Also around this time, fishermen stopped using more distant fishing grounds "as their fathers did" and also began to abandon the former practice of closing heavily fished areas for two or three years in order to allow them to replenish (Pakenham 1947: 28). This all combined to result in a "decline in the quantity and average size of fish obtained" as compared with the generation before. This study is of note for two reasons: 1) it points to traditional forms of management that are at least old enough to be in decline by the 1940s and 2) it provides early evidence of the degradation of fishery resources in Zanzibar due at least in part to the loss of traditional forms of conservation.

Another case study from Chwaka focuses on historic forms of mangrove conservation in the region. In 1946, eight villages around Chwaka Bay formed a community-based mangrove council to regulate the cutting of shrinking forests in the region (Williams 1996: 8). Those wishing to harvest mangroves first had to seek a permit from the council; if someone was found to be illegally harvesting mangroves there was a strict penalty of a ten-year jail sentence (ibid.). During this time, the government of Zanzibar also made development funds available to the villages, which helped to further reduce dependency on the mangroves. The local government and local village councils managed the mangroves together by making joint decisions on when the forests were unhealthy enough to warrant closure; these closures could last for more than 10-15 years

(Williams 1996: 8). However, over time there has been an immense shift in how these decisions are made; with more and more power resting with the government. As a result, whereas villagers used to perceive "...the mangroves as being theirs" they "now see the mangroves as belonging only to the government" (ibid.). Furthermore, it is reported that whereas the mangroves used to be "large and plentiful," they are now being deforested at an alarming rate. This case argues, then, that not only does locally based or joint decision-making give people a sense of ownership over their resources, it also leads to more effective conservation measures in Zanzibar.

Tobisson et al. (1998) show how other traditional forms of conservation practices in Chwaka have eroded over time. For instance, until the late 1960s there was a prawn management system in place in the mangroves near Chwaka, which they co-managed with a neighboring village. During hatching season, the area was closed for two to three months; the policy was well respected by community members (Tobisson et al. 1998: 684). However, over time, Chwaka villagers claim that the system broke down for two reasons: 1) the authority of their elders deteriorated due to increased importance of government regulation, and the government viewed the sea as common property that couldn't be managed at the village level and 2) an influx of newcomers came to the region, many of whom did not respect the local management system (Tobisson et al. 1998: 684). As a result, the prawn populations around Chwaka have been severely damaged, and in turn so has the income of fishers.

Likewise, the management system for crab fishing has been degraded in Chwaka due to increased demand and technological improvements (Tobisson et al. 1998: 684).

Whereas only the Indian population of the island previously ate crabs in large quantity,

the growth of tourism has increased this demand sharply. Furthermore, whereas harvesting of crabs used to be limited to low water during spring tide, snorkels and other new equipment have made it possible to collect them at any time (ibid.). While I do not want to suggest here that new technology is a bad thing for these fishers, I would argue that because new methods don't fit easily into the traditional management systems, they have the potential to do significant damage. These examples begin to tell the story of traditional management practices in Zanzibar that have been rendered ineffective due to both external pressures and new developments that could not have been accounted for at the time the systems were put in place. At least in part due to this degradation of local management systems, every fisherman interviewed for Tobisson et al.'s study claimed that their fish catches have declined in both number and size (Tobisson et al. 1998: 684). Thus, the breakdown of these systems has had hugely negative implications for the people and environment in Chwaka.

Finally, we turn to a more recent case of community implemented conservation measures in the Menai Bay Conservation Area (MBCA), the primary study site for this thesis. MBCA is located directly south of Chwaka and presumably shares many of the traditional forms of resource management already discussed in this chapter. In the 1980s, fishers in Fumba, one of seventeen villages in the region of Menai Bay, established their own conservation committees to combat illegal fishing practices in the region that were destroying the local fish populations (Levine 2006: 133). There was no outside sponsorship of this program; villagers themselves contributed money and time in order to patrol the waters for people using illegal fishing practices. In 1992, they expanded the committees to five surrounding villages.

A couple of years later, these committees were abandoned in order to form new ones under the more formal auspices of the World Wildlife Fund and Government of Zanzibar, as a result of the creation of MBCA (Levine 2006: 133). However, as will be discussed in detail in chapter 6, most of the resources for the MBCA are funneled through "show case villages" that are much more accessible to tourists and donors than the area around Fumba. As a result, villagers in Fumba report feeling "abandoned" by the project (ibid.). Even though their initial attempts at conservation prompted the formation of MBCA, they now receive minimal support from the conservation project, and destructive fishing practices are reported to be on the rise again in the area of the village. This is another (albeit more recent) example from Zanzibar of externally driven conservation efforts diminishing the effectiveness of more traditional community-based methods of resource management.

The point here is not to argue that traditional methods of conservation are always perfect in Zanzibar, or that outside projects are always bad. Indeed, as the first case study shows, the effectiveness of some traditional management methods were already in decline in some areas as early as the 1940s, long before any kind of large scale marine conservation initiatives were in place. What can be said conclusively here is that Zanzibaris have a long and knowledgeable relationship with their environment. Furthermore, they have long put in place conservation and management schemes to protect natural resources, as their livelihoods depend on the health of these ecosystems. The importance of these traditional forms of management should not be overlooked or discounted; as these case studies show, the implications of doing so can be negative for humans and ecosystems alike. A final case study from the Jozani-Chwaka Bay

Conservation Area takes this discussion a step further to show how the political situation further complicates conservation efforts in Zanzibar.

C. The politics of conservation

Politics in Zanzibar can have great influence over conservation and development initiatives there. Jozani-Chwaka Bay Conservation Area (JCBCA) provides a good case study of the ways in which the political situation can negatively impact conservation efforts on the islands. JCBCA began in 1993 as a collaborative project between the Austrian government, Care-Tanzania, and the Government of Zanzibar (Myers 2002: 151). From the onset, the park sparked a great deal of animosity from local communities. A major reason that villagers disliked the conservation area was because it offered protection to the endemic species of red colobus monkey that inhabits the region, and which destroys villagers' crops (Williams 1997: 15). Furthermore, in the beginning of the project the villagers were not compensated for the resulting rise in crop damage.

Ironically, the loss of crops led to villagers' increased reliance on forest extraction for income, further fueling deforestation of the quickly diminishing mangrove resources in the area that the government was attempting to conserve (ibid.).

In part to help mitigate some of these problems, JCBCA attempted to establish community-based environmental committees to oversee conservation and alternative income generation initiatives. A couple of these committees did have some success, particularly with developing some ecotourism projects in the area. The government and local environmental committees of the villages of Jozani and Pete built a boardwalk through the forest for tourists to see the mangroves and monkeys. Funds generated by the boardwalk go toward development projects in the two villages. However, there are both

environmental and social problems underlying the initiative. One official from the Department of Forestry told me that from the boardwalk it looks as though the mangroves are being conserved, and yet if you go just a couple of meters away, there is quite a bit of deforestation (anonymous, interview, 7/23/2009). Socially there are problems too; benefits from the park are unevenly distributed amongst community members, making support "far from unanimous" (Myers 2002: 153). Thus, even though there has been some amount of success on the part of the committees, even these are fraught with problems (ibid.). Furthermore, the other conservation committees in JCBCA have for the most part been deemed completely ineffective (ibid.)

Many of the problems with the committees, and with conservation efforts in the area in general, originate from the deeply seeded political issues that can be found throughout Zanzibar. While Chwaka is located in an area that has been officially affiliated with CCM, it is thought that in reality many villagers align themselves with the opposition party, CUF. (Myers 2002: 154). The divide between people of the two parties seeps into everyday life in Chwaka, making cooperation among villagers a real challenge. This, among other things, makes it difficult to implement effective community-based management projects (ibid.: 156). "The JCBCA and its environmental committees are incapacitated by party politics, participants' intervening livelihood struggles and villagers' relationships with JCBCA's sate-based and internationally financed origins" (Myers 2002: 154). We can thus conclude two things from this case study: 1) it further shows that top-down conservation schemes that disregard local needs and traditional management efforts often fail to gain the support of local communities and are thus rendered ineffective and 2) the political divide between CUF and CCM is a tangible force

on Zanzibar, one that has strong potential to hinder true community-based conservation efforts. Furthermore, Myers goes on to say that this trend is true in many regions of Africa and that, "in the current context of political tension and crises, few communities are 'ready' for projects like this" (Myers 2002: 157).

As this chapter shows, the concepts of conservation and resource management were not brought to Zanzibar by western entities. While Zanzibaris may use different language to discuss environmental issues and take slightly different approaches than those conventionally used in the west, conservation has a long history within Swahili culture. They are practices that, while not always perfect, have served the double function of sustaining both resources and livelihoods throughout generations. However, in many cases these more traditional forms of conservation have declined in effectiveness over time. This decline is in part due to the increased centralization of control to the government and the resulting loss of emphasis on community-based forms of leadership and resource management. Furthermore, the tensions between the political parties in Zanzibar have further weakened the effectiveness of community-based conservation projects in general. The political divide can exist between the CCM government and CUF-dominated villages (in terms of lack of support), as well as within individual villages themselves (as we saw with the case of Chwaka). As we will see even more clearly in later chapters, these issues have helped to create a context in which it is extremely difficult to implement effective community-based conservation schemes.

Chapter 6: Menai Bay Conservation Area and the Marine and Coastal Environmental Management Project

A. Menai Bay Conservation Area

The first section of this chapter introduces the primary case study of the thesis, the Menai Bay Conservation Area (MBCA). The second section of the chapter details the background and objectives of the Marine and Coastal Environmental Management Project (MACEMP) that is currently responsible for funding a major conservation initiative in MBCA. The Menai Bay Conservation Area is located in the southwest region of Unguja, the main island of Zanzibar. It is the largest Marine Protected Area (MPA) in Zanzibar, covering an area of 467 km². The MPA is home to large numbers of coral reefs, sea grass beds, and mangrove forests. The conservation area is managed by the Government of Zanzibar and has received significant financial and technical assistance from the World Wildlife Fund (WWF) (EcoAfrica 2005: viii). Furthermore, Menai Bay recently began receiving a large amount of funding and oversight from the Global Environmental Facility of the World Bank as a part of MACEMP, which is discussed in detail in the second section of this chapter.

The population of the conservation area rose from 11,324 in 1998 to an estimated 27,000 in 2005; this increase in population has had a significant impact on the health of the local marine ecosystem (EcoAfrica 2005: 10). The MPA encompasses 17 villages (EcoAfrica 2005: 37). Both men and women of the region partake in marine-based activities that provide sustenance and household income. Results from a survey done in the conservation area found that roughly three-quarters of total household income is "derived from the sale and trade of marine and coastal products" (The World Bank 2003: 6). Many residents also take part in the growing tourism industry of the bay; 15,000-

20,000 foreign tourists visit the conservation area each year for snorkeling and dolphin watching (Torrell, et al. 2006: 4). While the people of Menai Bay tend to be quite poor, a 2003 study shows that the lifestyle in MBCA actually tends to be slightly better than in other parts of rural Tanzania (Tobey, et al. 2006: 840).

Menai Bay saw a large decline in fish stocks during the 1980s and early 1990s, which is thought to have occurred as a result of rising food demands in Zanzibar and Dar es Salaam. Annas Massoud, the Manager of Menai Bay, said that fishermen came to the Department of Fisheries for help in the early 1990s (Massoud, interview, 7/30/09). He said that whereas they used to go out to sea for a couple of hours and catch 20 kilos of fish, by the early 1990s they were fishing for a full half of a day and catching only 5 kilos (ibid.).

This decline led to the establishment of an informal community-run monitoring project to help curb the use of destructive practices such as dynamite fishing; it was initiated by the village of Fumba and a few of its neighboring communities, as discussed in the previous chapter. Their initial management plan included the forbidding of destructive fishing practices, community monitoring of resource depletion, and an eightmonth closure of their *dago*, or fishing camps (EcoAfrica 2005: 62). However, the community members had difficulty enforcing any kind of regulations due to lack of training and resources (Torrell, et al. 2006: 7).

The Government's Commission of Natural Resources then invited the WWF to come help with these efforts; in 1994, they began to provide support in MBCA. They aimed to both help the government with management efforts and to provide environmental education for local communities. Massoud said, "If we are to remember

WWF in Zanzibar it will be for education" (Massoud, interview, 7/30/09). In 1996, the first stakeholder meeting was held to discuss the official formation of the Marine Protected Area (MPA). The meeting included the departments of the Environment, Tourism, and Education, as well as local fishermen, a few tour operators, and district government officials. Among other topics, the group discussed what the name of the MPA should be. They talked about calling it Fumba, on behalf of the village that began the conservation efforts, but they wanted it to be more encompassing of the region. They agreed on Menai Bay Conservation Area because the straight between the Fumba Peninsula and the main island is referred to as Menai Straight in old sea maps of the region (Massoud, interview, 7/30/09).

The government officially gazetted the bay as a conservation area in 1997. The park was received with mixed feelings from different parties, with local communities being mostly in favor of the new designation and non-local fishers being the unhappiest. While fishing is not excluded anywhere in MBCA, there are stricter regulations on what types of fishing are allowed than in the rest of Zanzibar. The goals of MBCA are to: (1) protect the marine ecosystem and improve resource yields through management systems that include active local community participation; (2) involve local communities in planning, implementation and monitoring of the natural resources; (3) increase awareness of conservation through educational and public awareness programs; and (4) support biological and socio-economic research and monitoring to provide the basis for rational management (Torrell, et al. 2006: 9-10).

Figure 6.1 Menai Bay Conservation Area



(Torrell, et al. 2006: 5)

There are three levels of management in MBCA. At the local level, Village

Conservation Committees (VCCs) have been established in every community. They work
in cooperation with local leaders (*Shehas*) and a village-based officer from the

Department of Fisheries to identify the needs and concerns of their particular village.

They are then responsible for, "articulating the views and concerns of the villages to the
project team and the management and steering committees, and their aim is to ensure full
village participation in project activities" (EcoAfrica 2005: 64). The District

Conservation Committees (DCCs) then brings the concerns and needs of the VCCs to

District authorities. There are 15 or so staff members from the Department of Fisheries
that are responsible for daily management and patrolling of the area (ibid.).

During the 2002-2003 financial year, 90 % of the funding for MBCA came from the WWF, with the remaining 10% coming from the government of Zanzibar (EcoAfrica 2005: 65). However, this has changed significantly with the start of MACEMP, as discussed in detail in the next section of this chapter. In 2001, a fee structure was established that allocated 70% of all revenue collected in the area to management and 30% to the development of community activities proposed by the DCCs (ibid.).

MBCA has seen some important successes. For example, employees of MBCA use a patrol boat and hand-held radios funded by the WWF to regulate the protected waters; this has proven to be fairly effective in deterring illegal fishing practices in a large portion of the park (Torrell, et al. 2006: 10). Additionally, certain fish stocks in the region are on the rise (ibid.).

One of the most promising developments in the park, in socioeconomic terms, is the growth of the tourism industry, which is mainly based on dolphin watching excursions. This has created some increased revenue in the area and has also helped to take some pressure off of marine resources, as some former fishermen now take tourists out to sea to view and swim with the dolphin pods who frequent the bay. However, because most of these excursions leave from the village of Kizimkazi Dimbani, the benefits are fairly concentrated in that village. Furthermore, one study (McCauley 2003, unpublished), found that sixty-six percent of all revenue generated from the dolphin tours stays in Zanzibar Town— the island's major urban center— where most of them are organized.

The MPA continues to face other major hurdles as well, in terms of both ecological health and livelihood improvement for local residents. Degradation of numerous aspects of the marine ecosystem is still evident. Underwater, there has been significant damage to coral reefs, in part due to fishing boats, anchors, nets, and the use of certain fishing practices such as spearing (EcoAfrica 2005: 11). Above water there is obvious damage to mollusk populations and mangroves (ibid.). These ecological problems are largely attributed to social issues that are resulting in increased stress on marine resources. These include: poverty, lack of education, lack of livelihood options, increased fishing pressure due to the growing population, and lack of proper enforcement of conservation area regulations. (EcoAfrica 2005: 13).

Social and livelihood issues in MBCA largely stem from a lack of resources. For instance, there is often a lack of funding to actually carry out the income generating initiatives formulated by the VCCs; likewise, there is limited funding for patrol boats and other important monitoring resources. While there is a \$3 fee required of every tourist who visits the park, these are sometimes not collected by guides. Even when they are

collected, they don't always trickle down to the villagers, in part because the protected area is so large (Torrell, et al. 2006: 12). Other problems stem from bureaucratic issues that result because multiple government agencies and organizations have a role in the management of resources.

As of 2004, research found that community feelings toward the park varied drastically between different villages, largely due to the unequal allocation of resources (Levine 2006:123). The villages furthest from the patrol boat headquarters—including Fumba, the island that sparked the conservation initiative to begin with—report feeling "abandoned" by the project and claim that illegal fishing is on the rise again in their region of the park. Part of this issue arises from the creation of "show case villages" used to show tourists and donors the "success" of the project (Levine 2007: 575). These villages tend to receive more resources in order to better illuminate the success of the project, and they also tend to be the villages that are already more accessible to major roads that connect to the island's urban center of Zanzibar Town. As a result, the least marginalized villages receive the most funds (and in addition, tourist visits), while the neediest receive the least (Levine 2007: 575; EcoAfrica 2005: 68). It seems that:

...Ensuring publicity, whether through publishing glossy reports and brochures or through the creation of showcase villages, can become more important than actual programme results, causing programme resources to be channeled in ways that are not conducive (and sometimes even detrimental) to building local capacity (Levine 2007:579).

Thus, while the establishment of MBCA has curbed some illegal fishing practices and other factors implicit in the degradation of coastal resources, it has yet to fully solve the causative problems of poverty and lack of livelihood options (and the deeper underlying social and political forces creating such issues). These issues will be discussed

in more depth in the remaining chapters of the thesis. This chapter now turns to one of the major projects addressing coastal conservation and livelihood improvement in the region, the Marine and Coastal Environmental Management Project.

B. Marine and Coastal Environmental Management Project

Background, objectives, and implementation

Governments are rarely the sole monetary sponsors of coastal conservation initiatives. Large nonprofit organizations and international assistance institutions such as The World Bank have financially supported many ICZM projects around the world; one estimate says that the World Bank alone has given over \$500 million to such efforts (Tobey et al. 2002: 286.). They are certainly a major player in coastal management in Tanzania, particularly through their Marine and Coastal Environmental Management Project (MACEMP). MACEMP is a \$75 million, six-year project that began in 2005 to:

Improve the regulatory and institutional framework for management of marine resources- particularly establishing the links between the marine environment and the fishery resource and what are expected to be conservative estimates of sustainable commercial exploitation of marine fishery resources. It also aims to fill gaps in the data describing the fishery in Tanzanian marine waters and the coastal and offshore environment upon which the fishery depends (The World Bank 2003: 5).

At this point, it is difficult to tell an unbiased story of the establishment of MACEMP, as the World Bank or Government of Zanzibar has commissioned nearly all of literature on the Project. While this makes for a partial view of MACEMP's background and objectives, it nonetheless gives an important overview of the goals of the project. The most comprehensive of these documents is the Environmental and Social Assessment of MACEMP (ESA) (Gustavson, et al. 2005), created by an external environmental consultancy group for the United Republic of Tanzania. The ESA draws

heavily from many of the other documents created for the project, and so is used to provide much of the information on MACEMP found in this chapter.

There are three main components of MACEMP. While Components 1 and 2 are of great interest and importance, Component 3 is most relevant for the purposes of this thesis, as it focuses on the well-being of communities impacted by the project. Each of the components is described briefly in the table below (Gustavson et al. 2005: 9-13):

Component	Objectives
Component 1: Sound	Implement a common governance regime for the EEZ,
Management of the Exclusive	increase revenue from the EEZ, develop resource
Economic Zone (EEZ)	management strategy for the EEZ
Component 2: Sound	Support ICZM efforts, Support comprehensive efforts
Management of the Coastal	to create MPAs and other marine management areas,
and Marine Environment	Increase total area under protection
Component 3: Coastal	Establish the Coastal Village Fund in partnership with
Community Action Fund	Tanzanian Social Action Fund (TASAF) to empower
	communities to create and sustain projects that work to
	improve local livelihood options and the sustainable
	management of marine resources

MACEMP focuses on a number of areas throughout coastal mainland Tanzania and Zanzibar, including Menai Bay Conservation Area. As seen from Figure 7.1, the other regions included in the project are the Rufiji-Kilwa-Mafia Complex, the transboundary MPA with Mozambique (Mnazi Bay-Ruvuma Estuary area), Latham Island, Mnemba Island Marine Conservation Area, and the Pemba Channel Marine Conservation Area (Gustavson, et al. 2005: xi).

In order to implement its conservation and resource management strategies,

MACEMP partners with numerous government agencies and development organizations.

In Zanzibar, the government agencies responsible for implementing the project are the

Department of Fisheries, the Department of Environment, and the Department of

Commercial Crops, Fruits and Forestry (ibid.). One of the primary aid organizations that MACEMP partners with is the Tanzanian Social Action Fund (TASAF); they collaborate to implement projects that support community-based initiatives that compliment Component 3 of the project. The objective of TASAF is to "empower communities to manage interventions that contribute to improving their livelihoods" (Gustavson, et al. 2005: 64). TASAF states that it "is guided by the principles of community demand driven development and follows a bottom up planning and decision making through community empowerment" (www.tasaf.org). They support projects focused on improving such things as access to health, education, and water services, public works, and alternative income generating activities for vulnerable communities and individuals (ibid.; Gustavson, et al. 2005: 64).

A major aspect of Component 3 is the funding of sub-projects that are aimed at improving the lives of communities impacted by the project. The types of sub-projects funded under MACEMP include: fisheries development, aquaculture development, the development of shore-based processing and marketing, and other industry-based developments such as eco-tourism (Gustavson et al. 2005: 85). However, as we will see in the next chapter, the process of funding these sub-projects is quite complicated, begging the question: how successful are these efforts in creating true alternative livelihood options?

Expected outcomes and recommendations for success

The Environmental and Social Assessment (ESA) expects numerous results from the implementation of these three project components, both positive and negative. They include (chart adapted from Walmsley et al. 2004: 11):

Potential Positive Impacts	Potential Negative Impacts
 Increased and improved welfare of communities through poverty alleviation; Enhanced financial sustainability in the communities; Improved social capital within communities as a result of planning; Increased capacity for co-management and reduction of vulnerability in communities to impacts; Ensured longevity to the resource base for financial and livelihood sustainability; and Ecological protection of key coastal areas. 	 Loss of access to marine resources in a particular area (i.e., displacement); Loss of habitual land and water uses; Change to the quality and/or quantity of a resource a household can access; Change in the seasonal access of the resources; Change in the nature of access (e.g., unregulated to regulated); and Change to the types of assets needed to access resources (e.g., banning certain fishing gear).

In order to ensure as many positive outcomes as possible, the ESA makes several

recommendations. These include:

- MACEMP should serve as the link between all donor-supported coastal conservation and management initiatives;
- A strategy should be put in place that will educate all stakeholders, increase environmental awareness, and create a sense of ownership over the Project;
- There must be better training of local government officials;
- A review of current community-level projects relating to MACEMP should be undertaken in the participating villages;
- Local communities should be engaged early on in the mitigation process, paying special attention to existing imbalances of power within those communities;
- Environmental assessments should be conducted before any sub-projects are implemented;
- There must be better training of local environmental officials so that they are able to conduct such environmental assessments;
- And, there should be training and placement of mariculturalists at the district or regional level to help implement management plans and reduce conflict between resource users (Gustavson et al. 2005: 83-84).

It is important to consider how the ESA arrived at these expected outcomes and

recommendations. The data was collected in two ways. Information was gathered through already existing documents (many of which were created specifically for this project), as well as through interviews with "key stakeholders" (Gustavson et al. 2005: 31). These interviews covered a range of topics, including: "livelihoods (existing and alternative livelihoods); consultation and communication processes; conflicts and dispute resolution; and monitoring and evaluation" (ibid.). The interview process also sometimes included mapping exercises to help individuals identify important community resources and activities. These interviews "targeted individuals that were particularly knowledgeable of the district in question or of identified valued components, and who could speak to the issues affecting specific stakeholder groups as a whole" (ibid.). The ESA does not indicate how informants were determined to be particularly knowledgeable.

Multiple stakeholder interviews were held in September 2004 throughout the MACEMP region, including one in Menai Bay Conservation Area (in the town of Kizimkazi) with members of the fisheries committee and local fishers. Concerns discussed by the interviewees are detailed in the ESA, but they are not broken down by region. However, it is still interesting to look at the main concerns that were identified among the stakeholders. Some of note included: the difficulty for fishers to participate in other livelihood activities because they live in a fishing culture, lack of appropriate gear (especially for deeper offshore waters), the need for development of local fish markets and storage facilities, the need for capital for development of alternative livelihood activities, the need for "buy in" from the grassroots level, better communication about the project from the implementing agencies, and the conflict between the need for nutrition with the overuse of marine resources (Gustavson et al. 2005: 91-94).

While the ESA claims to speak to solutions for each of these concerns, along with all others listed in the document, it is not made clear how they will be addressed in a tangible way. As will be seen in the following chapter, my fieldwork shows that there is little evidence that these concerns are being effectively dealt with in MBCA, or that alternative livelihood improvement schemes are being implemented in an effective manner. Comparing the language of the project documents with the actual results of the project will help us to understand the true level of success of MACEMP, particularly in terms of community empowerment. While the ESA and other related documents paint a hopeful picture of a conservation project that empowers and improves the lives of coastal communities in Tanzania, we must critically ask if this is the case, or if the project is just another example of top-down conservation-as-usual.

Chapter 7: Fieldwork Findings

A. Opinions of MACEMP

This chapter uses fieldwork conducted in Zanzibar to better understand how the Marine and Coastal Environmental Management Project (MACEMP) is meeting its goals of community empowerment in the Menai Bay Conservation Area (MBCA). The first part of the chapter focuses on general feelings toward MACEMP, based on interviews conducted during July and August 2009. The second part of the chapter looks more critically at the discrepancies between the language used in the MACEMP literature and what my interviewees told me is actually happening in MBCA. In this section, I also take a critical view of the processes of community empowerment recommended by the literature, in an attempt to understand their likelihood for success.

I found mixed opinions of MACEMP during my fieldwork; feelings about the project generally fell into three camps. Some people were largely in favor of the project; they felt that it is having a fairly significant and positive impact on local communities in Menai Bay. Another group animatedly disliked MACEMP; they felt that it has fallen short of its promises and potential. A third group was also critical of the project, but their criticisms went beyond MACEMP and were aimed at large-scale aid and development work happening in Zanzibar more generally. These people were skeptical of projects implemented by agencies like the World Bank. As one interviewee told me, "the problem in Africa is sustainability," meaning that many projects fail because that are not sustainable in the long-term (anonymous, interview, 8/4/09). While consideration must be given to all perspectives, it is interesting to note that the interviewees who fell into the third camp tended to be upper level government officials and scholars who have had a

great deal of experience working with projects such as MACEMP. Viewpoints from each of the three camps are explored below.

A few of my interviewees felt that MACEMP is a successful project. For instance, one retired official from the Department of Fisheries had mostly positive things to. He feels that the marine resources of Menai Bay are healthier due, at least in part, to the new policies put in place by the project to prevent the use of destructive fishing gear (anonymous, Interview, 7/27/09). He also thinks that one of the most important components of MACEMP is its effort to reduce poverty through improving fishing practices and creating alternative income opportunities. Examples of successes he mentioned include access to better fishing gear (such as improved nets and outboard engines so that fishing boats can travel further out to sea), fertilizers to help with agriculture, supplies to start bee keeping initiatives, seedlings to help replant mangroves cut for fuel and building purposes, and chickens to begin animal husbandry projects.

Likewise, Shehah Hamdan, the MACEMP project coordinator for the Department of Fisheries, feels that there has been a lot of positive "interventions" by MACEMP at the local level (Shehah Hamdan, Interview, 8/3/09). He said, "People call MACEMP a project, but really it's a program." Hamdan pointed out that there have been over 200 community level projects implemented as a result of MACEMP; he emphasized that if each of the 200 projects impacts 10-20 people, there is a lot of benefit created for local communities.

On a final positive note, a local employee of the MACEMP project in Kizimkazi, Khalfan, also painted an optimistic picture of MACEMP during our interview. He said that there is increased patrolling of illegal fishing activities because there are now more

patrol boats as a result of the project (Khalfan, Interview, 8//8/09). He added that now people know the waters are being better patrolled, and so are less likely to try to fish illegally. Finally, Khalfan said that the fishers have a few new fishing boats as a result of the project, each with outboard engines so the they can get further out to sea and thus relieve pressure on the oft-fished near-shore areas.

As mentioned above, I also encountered quite a bit of negativity and disappointment about the project. For instance, the same retired official from the Department of Fisheries who generally feels that MACEMP has been a success also sees problems. Primarily, he thinks that there is a noteworthy amount of corruption in the upper levels of leadership (anonymous, Interview, 7/27/09). He said, "[The] auditor is the same as the accountant, no one can follow the proper use of funds." The retired official argues that money and goods do eventually get to everyone, but in smaller amounts than they should because of the corruption at the top levels. Similarly, the former Director of the Department of Surveys and Urban Development for the Government of Zanzibar told me that because MACEMP is nationally managed and based in Dar es Salaam, no one in Zanzibar is completely responsible for the expenditure of allocated funds and so there is a lack of accountability (Makame Muhajir, Interview, 2/5/10). The people who are responsible are on the mainland and so misuse of money in Zanzibar is not necessarily seen (ibid.). This matches the pre-MACEMP findings of Levine in the region, when she says, "priorities and accountability flow outward towards international sponsors rather than inward to the local level. It is difficult for these programs, externally defined and executed across multiple communities in multiple regions, to account for local particularities..." (Levine 2006: 7).

Hamisi, who among many other related activities worked as a research assistant on a project analyzing conservation practices in MBCA, feels that MACEMP is a disappointment because it had so much potential, but has actually done very little (Hamisi, Interview, 7/29/09). In his opinion, a lot of this is because there is a disconnect between local communities and the people in charge of the project. He feels that no one actually talked to the fishers to see what they think realistic solutions to over fishing are. Hamisi also sees a problem with the lack of feedback that local people are able to give about the project. He says that there is no chance for evaluation to see if projects have been successful. Finally, Hamisi argues that everything about the project is "too big" (ibid.). He feels that MACEMP came in with huge ideas that sound great, but they can be difficult to implement locally. Sometimes what is important, Hamisi feels, is to think small and realistically. He thinks that the big money and big ideas actually take away from local progress and local success.

Others criticized the literature produced by the project. One official in the Department of Environment commented that it is important to realize that MACEMP is producing a lot of nice pieces of literature, but when you really look at it, most of it isn't original research; it's merely citing other literature (anonymous, interview, 7/16/09). This indicates, he argues, that they're not really doing on the ground research, and so don't really know what's happening or what's needed. Likewise, an official in the Department of Fisheries told me that he thinks that a lot of the literature on socioeconomic status produced in relation to MACEMP was not scientifically or conclusively studied (anonymous, interview, 8/3/09). Therefore, he thinks that the baseline documents may not provide precise data and will thus make accurate evaluation difficult.

I also heard quite a bit of doubt about the effectiveness of the alternative livelihood projects implemented as a part of MACEMP. Hamisi said that the project gives people goats to create alternative income generation, but that that doesn't create enough additional income to keep people from fishing and therefore doesn't actually help take much pressure off of the marine ecosystem. Along similar lines, an official with the Department of Tourism wondered how the project can ensure that people are getting enough out of alternative livelihood projects to really take the pressure off of marine resources? If you can't do this, he wondered, then what's the point of the project (anonymous, interview, 8/4/09)? Likewise, an official with the Department of Fisheries told me that he sees a lack of alternative income generating projects in all of Zanzibar's MPAs (anonymous, interview, 8/3/09). He argues that the projects put in place don't actually provide enough income for local people; he would like the government to conduct a study on how much money such projects actually generate in order to determine if it is enough to actually relieve pressure on marine resources.

Other people were wary of those implementing the project. One of my interviewees, a respected Zanzibari scholar, commented that you have to know whom the conservation projects actually benefit. He said that you have to be sure that conservation is good for the local people, not for the "overseers who want a kickback" (anonymous, interview 8/7/09). The official with the Department of Tourism told me that he generally doubts all World Bank projects, because of their history and their large-scale perspective. He quipped, they "use the same prescriptions for all diseases" (anonymous, interview, 8/4/09). He was also skeptical about whether or not MACEMP could become self-sustaining. Finally, a scientist with the Institute of Marine Sciences of the University of

Dar es Salaam, who has done extensive scientific work in the region, told me that she thinks the people in charge of MACEMP haven't done anything with money yet. Also of note, she doesn't think that many local communities within MBCA are actually in favor of the project (anonymous, interview, 7/10/09).

As seen from these interview findings, opinions of MACEMP vary widely. While these interviews are not substantial enough to be considered statistically significant, they do make it clear that there is a great deal of concern over various aspects of the project, including how it engages with local communities. Furthermore, many of these concerns stem from a more general apprehension toward large-scale development initiatives. In the next section, I juxtapose the language of the project documents with such concerns. Additionally, I provide a critical look at the feasibility of implementing the community empowerment initiatives suggested in the MACEMP literature.

B. Rhetoric versus reality

Conservation literature the world over is ripe with rhetoric of community empowerment. Large-scale donors, NGOs, and governments all speak to the importance of community-based conservation efforts. Yet, it is often left unclear just how such empowerment is to take place. This trend is true in Zanzibar, too. As Levine points out, Zanzibar's *Environmental Management for Sustainable Development Act*, which has substantial impact on the policies of the MPAs there, "provides a role for local communities in the management of natural resources, but does not elaborate or provide guidance on how to implement that objective" (Government of Zanzibar 1997, as cited in Levine 2006: 65). Thus, we can see that the legislature on protected areas in Zanzibar fosters a sense of ambiguity about exactly how to include local communities. While the MACEMP

literature attempts to give tangible ways to do this, I will show that in the end it only leaves us with a deeper sense of vagueness.

Throughout the MACEMP literature, there is strong language about the importance of community empowerment. The below examples emphasize this point:

From the Process Framework for the Marine and Coastal Management Project:

The operational structure and institutional mechanisms associated with the implementation of MPAs are sometimes exclusionary with respect to local communities, especially when driven by national and international interests. There may be little involvement by local communities and little local input to decisions on user or access rights to the resources within the MPA. To avoid this type of model, which can result in hardship and conflict in local communities, MPAs should be developed with greater attention to community participation, seeking to ensure a long-term sustainability of programs promoting an integration of conservation development. As the goal of MACEMP is to establish this type of inclusion activity within coastal communities and to ensure that the economic well being of local communities remains the same or is improved ... clear mechanisms for communication and consultation with affected local communities are key. (Walmsley 2004: 13)

From the Rapid Assessment of Menai Bay Conservation Area:

It must be stressed that any attempt to circumvent an inclusive and thorough management planning process will create a vacuum in which the key tool for management will be missing (EcoAfrica: 57)

From the outset, however, it must be accepted that a Management Plan for the MBCA cannot be drawn up in isolation from its users. Equally important, it must be realized that a management plan is not an end in itself; rather, what is important is to follow an inclusive and thorough process to arrive at a management plan that has the buy-in of all the relevant parties... This is very different from a plan drawn up by consultants, or by one or two government officials with only a few copies available and no one knowing what it is anyway (ibid.)

Community participation is a key aspect to take into consideration in future decisions if the MBCA is to reach its objectives of sustainable and integrated development and bring benefits to local communities (ibid., 65).

These and countless other examples, peppered throughout MACEMP-related documents, show the extent to which the importance of community inclusion is recognized. Not only is the importance of this recognized, but the implications of failing to do so are also clearly discussed. However, this begs the questions: what are the tangible ways in which communities are being included and empowered? In my research, I found two primary suggestions for enacting community empowerment: through already existing Village Conservation Committees (VCCs) and through the development of Community Mitigation Action Plans (CMAPs). However, as we will see in the end, while both of these options may sound good on paper, neither is effective in reality.

Village Conservation Committees

As discussed in the previous chapter, the VCCs have a great deal of responsibility in the management of Menai Bay, including that of expressing their communities' needs to more upper levels of management. The Rapid Assessment of Menai Bay Conservation Area (MBCA) says:

Community participation is a key aspect to take into consideration in future decisions if the MBCA is to reach its objectives of sustainable and integrated development and bring benefits to local communities...The preparation of the final version of the MBCA Management Plan needs to involve communities through ample consolations and through direct involvement of VCCs... (EcoAfrica 2005: xix)

Furthermore, a document written by two employees of the Department of Fisheries states, "The [VCCs] are involved at different levels of fisheries management, with virtually every management decision enforced by the government having taken their consensus into consideration" (El Kharousy et al. n.d.: 6). These documents paint a clear picture of the VCCs as essential tools for community involvement. Indeed, the Manger of Menai Bay told me that they were established to try to empower local people to act at the

village level (Massoud, interview, 7/30/09). As part of belonging to VCCs, some members have been taken to Mafia Island Marine Park and other MPAs to see how marine parks work in other regions. According to Massoud, when they see the success of these other places, they become really supportive of conservation efforts and spread the word to other community members in their home villages (ibid.).

However, in my research I also found that the VCCs are ripe with problems. The government document quoted directly above goes on to identify numerous problems with the VCCs. These include: conflicts with other stakeholders over appropriate conservation regulations; opportunism (particularly in terms of using inside knowledge of boat patrol schedules and routes for their own benefit); kinship issues that arise when VCC members are expected to regulate their own family members' fishing practices; not communicating clearly with their communities' about important information; and, not engaging closely enough with their communities to be able to understand their needs and requests (El Kharousy et al. n.d.: 6).

Likewise, some interviewees spoke of their concern over the effectiveness of VCCs. One official in the Department of Fisheries that I spoke to feels that the VCCs are starting to loose their original meaning; a large part of this, he argues, is that the government now has too much influence over the committees (anonymous, Interview, 8/3/2009). This is due to the fact that VCC members are taken to meetings and conferences and given other perks, and thus they are likely to agree with what the government wants in order to continue to benefit from their positions as committee members. So, according to the official, the government can easily get VCCs to agree to the projects and regulations that they want to implement, even if it's not in line with the

desires and needs of their villages. Thus, the official argues, things look like they are "locally managed" and yet they are actually very much influenced by the desires of the government (ibid). He said that the "voice [of the VCCs] is being lost along the way" and that it would be better if they were totally independent from the government. Finally, he asserts that the committees don't have any true power because at any point the government can overrule them and stop recognizing their authority; thus, "it's all artificial in the end" (ibid.).

I heard similar concerns from an official in the Department of Forestry, who talked with me about the VCCs in the Jozani-Chwaka Bay Conservation Area (JCBCA), located just north of MBCA. The official said, "Frankly speaking, I have not been impressed by [community-based projects]" (anonymous, Interview, 7/23/09). He pointed out that in the immediate vicinity of Jozani-Chwaka Bay there are 9 VCCs mandated with resource management of the conservation area, but there is still poaching and encroachment on protected areas. He argues that this is because the VCCs don't have good capacity. He said, "[We] need to come up with *real* solutions" (ibid.).

These sentiments are echoed by the work of Myers (2002) in which he also found the conservation committees in JCBCA to be completely "incapacitated." Furthermore, Williams (1997:15) argues that as a result of poor village government leadership, the VCCs in Chwaka "never properly formed." Williams also found evidence of ineffective VCCs elsewhere in the region. In reference to those in the village of Ukongoroni he says, "The conservation committee does not yet have sufficient institutional strength and capability to address (with the aid of other external institutions) the complex socioeconomic and environmental issues faced by the village" (Williams 1997: 17). While the

VCCs mentioned above are not located in MBCA, they are a part of the same system and formed within a similar structure. Finally, in his research in three villages of MBCA, Meela (2001) found that the VCCs there were not able to successfully mobilize large parts of their communities to take part in conservation efforts in the bay (Meela 2001: 66). Furthermore, he found that even when VCC- and other community-based meetings occur, not everyone is equally involved. Specifically, women are largely underrepresented, as these meetings are seen as a place for men and only a select few women who hold positions of power (Meela 2001: 65). Thus, even when the community is involved in decision-making, there is a clear gender division that gives most of the power and influence to men.

While these interviews are not statistically significant, they are congruent with other research done in the region. They begin to raise very real concerns about the effectiveness of VCCs, particularly if they are considered the focal point of community empowerment in conservation projects in Zanzibar. The document on the topic argues that when VCCs do not truly represent their communities:

This results in the local fisher's community feeling that the government is dealing with only the [VCC] and not the people the committees are supposed to be representing. The consequences of this are often infightings and skepticism towards the government from the local community (Levine: 2004), and the inevitable breaking down of cooperation. (El Kharousy et al. n.d.: 9)

A break down in cooperation has widespread implications for the general success of the conservation area, both ecologically and socially. Thus, based on this research, it seems that the VCCs are not helping MACEMP meet its goals of community empowerment.

Community Mitigation Action Plans

According to the MACEMP literature, the Village Conservation Committees are not the only vehicle for community empowerment in MBCA. The Process Framework (PF) for MACEMP (Walmsley 2004: 14) outlines a clear method for community empowerment. The PF document was created by external environmental consultants "to serve as a guide through which activities and procedures related to MACEMP can be enhanced to incorporate the interests and needs of coastal community members and affected stakeholders" (ibid.: 3). It says that the purpose of the PF is, in part "to ensure that affected people have a meaningful role in [MACEMP] decisions and in deciding on and implementing alternatives to restore or improve livelihood and incomes affected by those decisions" (ibid.). Therefore, the PF is the document where we see the tangible ways in which the developers of the project hope to promote community empowerment.

The PF states that each community affected by MACEMP should have a Community Mitigation Action Plan (CMAP) in order to ensure that any negative impacts resulting from the implementation of MACEMP, such as reduced access to fishing grounds, is mitigated by the development of other income generating activities. The CMAPs are intended to be "community-driven, focused on facilitating alternative livelihood activities, and are to be submitted for approval" to the upper levels of management within MACEMP (Walmsley 2004: 14). In order to ensure that the plan is workable within MACEMP, they must include: proposed income restoration activities, organizational responsibilities, community participation, a schedule, a budget, and a plan for monitoring and evaluation of the proposed projects (ibid.). In order to ensure that the CMAPs meet these objectives, they are to be drawn up under the consultation process also laid out in the PF. The consolation process is an important element of the PF, as it "is

a mechanism for dialogue, decision-making and empowerment for coastal communities" (Walmsley 2004: 16). An general overview of the procedure can be seen in Figure 7.1.

As Figure 7.1 indicates, the process of consultation outlined in the PF (as well as the Community Mitigation Action Plans that are expected to result from the process) entails many steps, and appears to be extremely top-down in nature. While community members do have a role in implementing the mitigation plans, the actual development of those plans appears to be driven by those in upper levels of management within MACEMP. In addition to the top-down nature of this process, I see three other clear problems.

First, the consultation process seems like an incredibly cumbersome and convoluted task for each of the 17 villages within MBCA to take on, let alone for each village in Tanzania affected by MACEMP. It seems unrealistic to think that each of the five steps happened effectively in every village. Community leaders would need to be identified, communities would need to be organized, the procedure would need to be clearly translated into Swahili, and there would need to be an immense amount of cooperation from stakeholders with what are presumably differing goals and objectives. This problem of information dissemination was discussed by Meela's findings on policy development in Menai Bay (pre-MACEMP). He found that information about newly formed policies did not reach all of the affected stakeholders (Meela 2001: 69). He said, "...People in communities along the coast of Zanzibar have limited access to information regarding policies addressed to them" (Meela 2001: 70). Furthermore, no one mentioned the CMAPs in my interviews, even when I asked government officials in charge of MBCA and MACEMP directly about community impacts of the project. This leads me to

Figure 7.1 CMAP Consultation Framework and Responsibilities



(Walmsley 2004: 17)

believe that if this process is occurring at all, it has certainly not been the "clear mechanism for communication and consultation" it was hoped to be.

It is important to note here that I did see some evidence of community-requested mitigation activities, however they were much a result of more simplified process and on a smaller scale than talked about in the PF. During an interview with Annas Massoud, the Manager of Menai Bay, he showed me a large stack of requests for project funding from local villages in the protected area. He showed me how they must be stamped by the local VCC and the local Sheha in order to verify that the group or individual are really in need. Annas said that the requests tend to be for projects related to things like improvements to dispensaries, schools, and for the purchase of sustainable fishing gear (Annas Massoud, interview, 7/30/2010). He indicated that many of these requests were granted. Thus, there does appear to be some level of success with projects at smaller.

Second, and perhaps of more importance, is the concern that even if CMAPs are being drawn up for every village, could it possibly translate effectively in every place? Does this framework take into consideration the differing power dynamics and unique contexts that are inevitably found at every level of the process? As discussed with the VCCs, even when communities do have a voice, those of other stakeholders in positions of greater power can affect it. Furthermore, the communities in question likely don't have one voice. There are power dynamics within each village, and stated desires and needs will vary depending on who is speaking for the community. As Walley reminds us:

In general, the language of development found among international and national institutions tends to be abstracted from the social realities of particular locales and is often couched in technocentric terms that reduce complex socioeconomic and political issues to rationalized policy directives and generic solutions (Walley 2004: 227).

I argue that Figure 7.1 is yet another generic example of top-down management plans that have given little thought to how such processes will play out on the ground in specific contexts. Thus, even if the consolation process is in place, what is the likelihood that it works?

Finally, if the ultimate purpose of the development of the CMAPs is to create "alternative sources of funding and support for the development of alternative livelihood activities" (Walmsley 2004: 14), then we should theoretically be able to determine their success based on the level of implementation of new livelihood activities. However, my interview results above suggest that there is a long way to go before alternative livelihood initiatives in MBCA can be called successful. Thus, even *if* the CMAPs are actually being implemented *and* they are working within specific community contexts to achieve empowerment, then it appears as though their efforts have yet to come fruition.

My findings are in line with what other researchers have found in the region of MBCA and in coastal Tanzania generally. While Levine's work was done directly before MACEMP began, in her discussion of each of Zanzibar's four Marine Protected Areas (including MBCA) she indicates that there was already a gap between rhetoric and reality. She says:

The involvement and participation of local communities is...an explicit part of the rhetoric of each of Zanzibar's protected area programs. Indeed, each program does have a community element and works in some way to provide benefits to local community members. Still the degree to which local residents are actually "participating" in these programs, or having real influence over program priorities, goals, and implementation, is questionable. Programs are largely designed from the outside...Community members have little real ability to affect program direction, strategies, or outcomes (Levine 2006: 199).

Thus, MACEMP seems to be continuing along a trajectory that was already in place in Zanzibar. This is similar to Walley's findings from her study of the Mafia Island Marine Park (MIMP), located off of the southern coast of Tanzania. As discussed in Chapter 5 of the thesis, that MPA saw a sharp decline in support from local communities as they came to the realization that their level of participation was merely superficial. Walley says:

Although some conservationists, including those involved in the Mafia Island Marine Park, are attempting to incorporate "communities" and "participation" into their planning, these concepts are easily conceived as generic slots to be fit into preordained projects while the socioeconomic and political processes at work are left unexplored (Walley 2004: 245).

The consultation process of the PF seems to fit into this mold of conservation very well.

There are clear slots in which different stakeholders are expected to neatly fit, all working together to create one unanimous goal. There appears to be no flexibility built in for the messiness of real life that will inevitably occur during implementation.

At this point, we can begin to draw many conclusions about MACEMP's role in MBCA. My findings show that while there is some support for the project among Zanzibaris, there is also quite a bit of concern. Furthermore, even while the project places great emphasis on community involvement, in reality it is an extremely top-down project that proposes unrealistic means for achieving community empowerment. Furthermore, in the place where the potential for true community empowerment exists, the Village Conservation Committees, we find ineffective leadership and more top-down control from the government. While there are some examples of small-scale mitigation projects taking place, they are nowhere near the scale indicated as necessary by the MACMEP documents. These issues suggests that MACEMP is far from meeting its goals of true

community empowerment. Thus, I argue that while the rhetoric found in the MACEMP literature implies a new project with great potential to truly work with local communities, it is actually just another example of a top-down conservation scheme that cannot translate those goals into reality.

Chapter 8: Conclusion

A. Applying political ecology to Menai Bay Conservation Area

In the first section of the chapter, I return to the political ecology literature presented in the Chapter 2 to show how it relates specifically to Menai Bay Conservation Area (MBCA). The second section of the chapter summarizes the current state of MBCA, as viewed from the perspective of the literature. In section three, I explore ways in which future research might more fully study the political ecology of Menai Bay, as well as some potential methodology for doing so. Finally, the fourth section offers concluding thoughts on the importance of approaching coastal issues in Africa from the perspective of political ecology.

Chapter 2 of this thesis outlined what a political ecology approach looks like, with an emphasis on work done in postcolonial Africa. Based on the literature presented in that chapter, the remaining chapters of the thesis have attempted to present the social, political, and historical information necessary to inform a political ecology understanding of Menai Bay Conservation Area. For example, Schroeder (1996) and Moore (1996) both speak to the importance of understanding not only the relationships among stakeholder groups, but also the "micro politics" that exist within groups, particularly at the local level. I have also attempted to do this with my discussion of the political divide that exists in many Zanzibari communities, and the negative impacts this can have on local cooperation with conservation and development projects in the region (Myers 2002).

Additionally, in line with Jarosz's research (1996) on the how the French framed the shifting cultivation practice of the Malagasy of Madagascar as "irrational" during the colonial era, I have also tried to paint a picture of how those in power in MBCA have

framed local communities as the destroyers of their own resources; this dynamic is made evident in the discussion of the perception of local communities held by those in power in Chapter 5. Additionally, as with Jarosz's work, I have attempted to show that local communities' lack of cooperation in conservation projects is not necessarily resistance to conservation itself, but rather it can be resistance to those in power. As we saw in the work of Myers (2002) in the village of Chwaka, resistance to conservation is partially a result of a political divide. He asserts that even though people may recognize environmental problems, as well as how to solve them, "...political or educational matters prevent those people from acting in the interests of development and conservation for the good of the majority" (Myers 2002: 158). I would argue that this, at least in part, could be considered an act of resistance directed at the ruling political party in Zanzibar, which is responsible for the conservation project in Chwaka.

Chapter 2 also provided important cautions to keep in mind when using political ecology as a research or analytical tool. Brown et al. (2004) reminds us to not fall into the "local trap" that favors local communities uncritically. While I recognize that I have placed a good deal of emphasis on the importance of empowering local communities in MBCA (and the failure of those in power to do so), I hope that I have not done so uncritically. Indeed, I have attempted to show that local practices of conservation are not always perfect (as seen in Pakenham's 1947 study of Chwaka), but rather that recognition and integration of local practices and knowledge has not happened to a great enough extent in MBCA. Also in Chapter 2, Willems-Braun reminds westerners to be wary of their own notions of "nature," as even those of environmentalists are often inherited from a colonial history in the form of "buried epistemologies." I recognize that as a Westerner,

I am not able to fully divorce myself from such notions of what nature is or how it should be conserved. However, it is my hope that I have also incorporated a Zanzibari perspective, particularly with the discussion in Chapter 5 of Zanzibaris' vast knowledge of coastal ecosystems. At the very least, I hope I have paid due consideration to the long-standing resource management practices used by Zanzibaris, ones that existed long before interactions with western powers interested in their own notions of conservation.

Chapter 2 also laid out some ideas on how one might "do" political ecology. In revisiting these ideas, we see that the thesis has at least begun to use these approaches to look at Menai Bay. First, Bryant (1997: 11) puts forth that political ecologists should be addressing three questions. They are: (1) what are the various ways and forms in which one actor seeks to exert control over the environment of other actors? (2) how do power relations manifest themselves in terms of the physical environment? And, (3) why are weaker actors able to resist their more powerful counterparts? Answers to these questions (summarized in table 8.1) have been seen throughout the preceding chapters of the thesis. In chapter 3 we saw obvious ways in which colonial forces exerted control over the environment of local communities on the mainland, through outright exclusion and forced removal of villagers. In the post-colonial era in Chwaka, Tobisson et al. (1998) provide more subtle examples of this control being exerted by government powers, through the creation of policies that eroded the power held by local elders to enforce traditional conservation measures. The same case can be used to answer question 2, as these changing power dynamics resulted in resource management practices that led to a substantial reduction of prawns and other marine species, harming both local environments and the livelihoods of villagers. Finally, in response to question 3, we can

again look to the work of Myers (2002) on how the political divide in Chwaka has led to a reduction in local cooperation with conservation projects. As discussed above, this lack of cooperation can in some ways be seen as an act of resistance directed at those in power. Thus, this study of MBCA and the surrounding region has begun to answer the questions put forth by Bryant; a deeper dissertation-length study would be needed to answer them more fully.

Table 8.1

Question 1: What are the ways and forms in which one actor seeks to exert control over the environment of other actors?	Answer 1: Creation of government policies that subsumed the power held by local elders to enforce traditional conservation measures
Question 2: How do power relations manifest themselves in terms of the physical environment?	Answer 2 Increased government control over resources resulted in a reduction of prawns and other marine species, harming both local environments and the livelihoods of villagers.
Question 3: why are weaker actors able to resist their more powerful counterparts?	Answer 3: Resistance through lack of cooperation

Second, we also saw some of the core concepts put forth by Blaikie and Brookfield (1987) in Chapter 2, which continue to inform political ecology work today. These are "a cross-scale *chain of explanation*, a commitment to exploring *marginalized communities*, and the perspective of a *broadly defined political economy*" (Robbins 2004: 72, author's emphasis). This thesis certainly uses a cross-scale chain of explanation; it addresses the roles of local communities, national governments, international NGOs, and bi-lateral aid organizations. It also looks at how actors at different scales have extended power and influence over time in Zanzibar. Additionally, the thesis has had an obvious (but not uncritical) focus on marginalized communities, with its emphasis on local villages involved in top-down conservation projects. The thesis has addressed the

political economy of the situation less explicitly, although the importance of it is implied throughout. This is particularly true with the Marine and Coastal Environmental Management Project (MACEMP), as it is both a conservation- and development- driven initiative and comes attached to a large sum of funding that many people in Zanzibar and Menai Bay are trying to access and utilize. Thus, while the thesis doesn't make explicit mention of the political economy aspect of the research, it is inherent to the situation. More in depth research would provide a better and more nuanced understanding of how the political economy of Zanzibar impacts conservation projects there.

Finally in Chapter 2, we saw a chart from Blaikie (1995) organizing the primary stakeholders in a Zambian conservation area, including their positions and sources of power. In light of the political, cultural, and historical context of MBCA that has been provided in the preceding chapters, we can now use the concept of the chart to organize the stakeholders of Menai Bay (see Figure 8.1). This chart makes clear who has the power and who doesn't in MBCA. While the sources of power for the local communities are the Village Conservation Committees— who have been deemed ineffective in the region—the sources of power for the government, WWF, and World Bank include the international community and the potential to inform or create regional and national policies. Those are clearly not equal forms of power. Likewise, the means to reach each group's aims are also quite different for the stakeholders. Whereas the government, WWF, and World Bank can do so through access to financial resources and policy creation, the local communities are left again to working with VCCs or to acting illegally. With this in mind, it is interesting to note that the three groups in positions of greater power list community empowerment among their goals in MBCA, and yet the chart

Figure 8.1 Interest Groups in Menai Bay Conservation Areas

Group	Position in	Source of power	Interests and	Means to reach
	political economy		aims	aims
Local Communities	Marginalized, empowered in theory but not in reality	Village Conservation Committees, small acts of resistance	Subsistence, revenue, access to resources traditionally belonging to them	Illegal fishing and mangrove harvesting, working with Village Conservation Committees (only minimally effective)
Government of Zanzibar	Control and create policy, intermediary between aid organizations and local communities, access to capital	Inherently powerful, creators of policy, implementers of conservation and development projects, allocate money	Control of resources, access to resource revenue, conservation, "community empowerment"	Creation of policy, garnering of international support and funding
World Wildlife Fund (until 2005)	Collaborators with government, scientists, and others is positions of power	Government connections, international community, financial resources	Conservation, "community empowerment"	Informing policy making, scientific research, publications, garnering more donor money
World Bank (after 2005)	Collaborators with government, control over government due to financial resources	Government connections, international community, financial resources	Conservation, "community empowerment (stated interests"	Creation of new large-scale conservation and resource management project, MACEMP, informing policy making, scientific research, publications

(Concept based on Blaikie 1995: 208)

shows that the local communities have no legitimate source of power. Thus for the time being, community empowerment is left as a goal in quotations only, as its importance is recognized, but it has yet to become a reality.

These three approaches to "doing" political ecology begin to present some of the potential methodologies and approaches one can use to conduct such research. As evidenced in the preceding paragraphs, these approaches are not only appropriate for the land- based ecosystems they were originally developed for, they are also useful for their coastal counterparts. While more in-depth analysis and research is needed to fully create a political ecology of Menai Bay Conservation Area, it is my hope that this thesis has taken the first steps in doing so. The next section of this chapter will briefly summarize what I see as the current state of MBCA, as seen through a political ecology lens.

B. The current state of Menai Bay Conservation Area

Given the above discussion, in addition to that found in Chapters 3-7, we can begin to draw some conclusions on the current state of Menai Bay Conservation Area, as seen from a political ecology viewpoint. Chapter 3 situated coastal conservation in MBCA within the broader setting of conservation in Africa. The discussion in chapter 4 anchored the thesis in a more global perspective of coastal conservation.. Chapter 5 provided a brief history of Zanzibar, as well as that of long-standing human-environment relationships on the islands. Chapter 6 provided the history of MBCA, as well as a discussion of the dominant conservation project there, the Marine and Coastal Environmental Management Project (MACEMP). Finally, Chapter 7 presented the findings of my fieldwork, both of interviews conducted in Zanzibar and the gray literature obtained there. Through an in-depth analysis of my findings, it was determined

that community empowerment, while recognized as important, had yet to be realized in any substantial form in MBCA.

Collectively, these chapters begin to paint a picture of the political ecology of Menai Bay Conservation Area. MBCA is enshrouded in a rhetoric of community empowerment that provides hope it will be different than conservation as usual; yet, a variety of issues have prevented this from happening. These issues include: Zanzibar's long and complex history and resulting power dynamics, difficulties inherent to ICZM and coastal management in general, the political tension found between and amongst stakeholders, and ineffective forms of community empowerment. While this research only skimmed the surface of such issues, I argue that we can at this point determine that goals of ICZM have yet to be met in MBCA, particularly those of community empowerment. This finding is strikingly similar to the discussion in Chapter 3 on environmental efforts during the "new" era of conservation on mainland Tanzania, which spoke to the importance of community participation, but failed to actualize these goals. It seems that coastal conservation efforts are repeating the mistakes of their land-based counterparts in Africa. The following section will discuss the ways in which political ecology research could continue along the trajectory begun in this thesis to better understand how to create effective community-based policy in Menai Bay Conservation Area, as well as for coastal ecosystems more generally.

C. The potential for future research

While time did not allow for me to expand my study to the depth necessary to take a complete look at the political ecology of MBCA, it did provide some ideas on how to do so in the future. In addition to expanding upon the ideas of Bryant, Blaikie, and

Brookfield discussed in the first section of this chapter, I would also draw heavily from the work of Bassett et al. (2003). In their edited volume *African Savannas: Global Narratives & Local Knowledge of Environmental Change* (2003) they lay out a clear methodology for doing political ecology-based research in Africa, on which I would base any future research conducted in Zanzibar. They argue that the types of conservation that have occurred on the continent up until this point "allowed no place for 'local,' 'practical' knowledge, devaluating the latter in favor of findings of 'science'" (Bassett et al 2003: 13). They insist on the importance of including subtler and more nuanced forms of local knowledge than the "master narratives" of the west generally allow for (Bassett et al. 2003: 18). They argue that following their methodology will lead to a better understanding of how to effectively manage Africa's environments. While this work is again focused on land-based ecosystems, I argue that each point can easily be translated to work in coastal systems as well.

Bassett et al. argue for a hybrid methodology that combines both natural and social science. They say, "The challenge to all environmental research in Africa is to demonstrate the interaction of multi-scale biophysical and social practices in the explanation of environmental change" (Bassett et al. 2003: 23). The first step in their hybrid methodology is "measuring landscape change" (Bassett et al. 2003: 21). This is important, they argue, because current environmental policy is often developed without a firm understanding of what the current state of the environment truly is. A failure to understand and distinguish between environmental changes over multiple time scales can lead to misunderstandings and failed policy development (ibid.). They suggest using scientific studies of geomorphology, as well as aerial photography, vegetation transects,

and remote sensing in order to do this work. While these specific methods will not work in coastal settings for obvious reasons, the concept can still be transferred. Baseline studies of the health of coral reefs, fish species, mangroves, and the like can similarly lead to a better understanding of the state of the environment. These can be compared with the few historical "scientific" records of such things that do exist for the region, as well as with anecdotal accounts from villagers. Furthermore, if researchers begin to keep accurate records now, it will help inform better policy decisions in the future.

The second part of Bassett et al.'s methodology is "recovering the past." They show that in order to do so, data must be collected from a variety of actors. They argue for the use of interviews with key informants, oral and written histories, semi-structured interviews, participant observation, surveys, and other techniques. They also urge researchers to collect the views of a variety of actors, including government officials, aid and donor organizations, NGOs, and the like. They argue that samples of local communities should include a diversity of gender, age, location, occupation, ethnicity, and economic status (Bassett et al. 2003: 24). No tweaking is necessary to utilize these techniques in a coastal setting; indeed, one could argue that they are simply urging for the use of good qualitative methodology to understand the long histories of research sites. It is my hope that I have begun to do this in this thesis, but further work is certainly necessary.

Finally, Bassett et al. argue for the use of "discourse analysis" in studying Africa's environmental issues. They argue that it is important to conduct "discourse analysis of environmental and development texts" because they provide "insights in the origins of key ideas..." that currently inform environmental policy (Bassett et al. 2003:

24). In doing discourse analysis, they argue, researchers can begin to deconstruct the often-inaccurate perceptions of African environments that are used to inform and create environmental policy. Bassett et al. argue that through measuring landscape change, recovering the past, and doing discourse analysis of contemporary environmental and development literature, political ecologist can create more accurate perceptions of environmental issues in Africa, opposed to the ones told through the often incorrect master narratives of the west. They argue that this new perception has the potential to create more effective conservation policies in Africa.

Bassett et al. argue that utilizing the methodologies laid out above will greatly improve environmental knowledge about African environments, which will be critically important to developing more effective policy. I would add that these ideas should not be limited to the land-based ecosystems most often discussed by Bassett et al. and other researchers of similar viewpoints, but that they can be easily expanded to include, and indeed must include, their coastal counterparts. I believe that combining the methodologies and themes of Bassett et al. with the concepts discussed in the first section of this chapter has the potential to foster the in-depth research necessary to apply political ecology not only to Menai Bay, but also to coastal ecosystems throughout Africa and the global south. In doing so, I believe critically important changes could be made to coastal policy that has up until this point fallen short of its full potential. Not least of all, political ecology has the potential to help Marine Protected Areas truly reach the goal of implementing placed-based solutions through community empowerment.

D. Political ecology and coastal conservation

Menai Bay Conservation Area provides one small case study of a coastal conservation project in post-colonial Africa. Yet, it is not an anomaly. It fits neatly into the larger global discussion of conservation projects—both coastal- and land-based—that have a rhetoric of community empowerment, but that fail to truly deviate from the more standard model of top-down driven conservation. As seen in Chapter 7, conservation efforts in MBCA fail to truly understand and account for the specific issues of Menai Bay. Rather, it attempts to force community empowerment processes into a mold that is congruent with the "master narratives" many large-scale NGOs and aid organizations subscribe to.

All of this is not to say that MBCA, or the MACEMP project in particular, is a complete failure. Nor is it to say that they are not well-intentioned projects that truly strive to empower community members living in the conservation area to improve their livelihoods in ways that simultaneously take pressure off of the fragile marine environment. I believe that at some level the Government of Zanzibar, the World Wildlife Fund, MACEMP, and other large-scale stakeholders involved in conservation in Menai Bay have the interests of communities in mind. And yet, I also believe that these goals are hampered by the buried epistemologies they each hold of what "nature" and "conservation" are supposed to look like; they cannot let go of these western notions in order to see and incorporate those methods of conservation and resource management that have historically been used in the region. Furthermore, one can argue that it may be too soon to decide if conservation in MBCA is successful. As Hulme et al. state:

Community conservation has not proved the panacea that many had hoped for and short-term technical analyses seeking to measure whether 'conservation' and 'development' have both improved are likely to lead to negative conclusions and 'disenchantment' with the strategy. However, reinventing conservation in Africa—for that is the task in hand—was never going to be a quick job that could be easily accomplished. If a longer-term perspective is adopted then the evidence...points to the conclusion that community conservation has made a useful contribution to pushing forward knowledge about more effective institutional frameworks for conservation" (Hulme et al. 2003: 296).

I argue that taking a political ecology-based approach to research, coupled with a longer-term perspective, has the potential to create truly successful forms of conservation that are healthy for ecosystems and people alike, and that are driven and supported by the communities most affected by conservation initiatives. This will involve developing a true system of "co-management" that gives agency to all stakeholders. According to Berkes (2005), "Co-management is a partnership in the sharing of management power and responsibility between a group of resource users and the government" (Berkes 2005: 23). Berkes goes on to say that in the case of marine resources there is a need for a multilevel system of co-management because there is "likely to be several communities or regions of resource users and several levels or branches of the government" who are involved and affected by management decisions (ibid.). The task of creating such a system will not be an easy one. It will involve taking an in-depth look at the cultural, historical, environmental, and political settings of individual contexts, bridging the gap between natural and social science research, decolonizing buried epistemologies of nature and conservation, and finding ways for NGOs, aid agencies, national governments, and local communities to enter into a dialogue on creating co-management systems.

Perhaps it is naïve to believe this will ever be possible; it certainly won't be simple or happen in the near future. However, based on the research and analysis conducted for this thesis, I believe that combining research based in political ecology, the well intentioned but often misplaced motives of large-scale stakeholders, the core concepts of Integrated Coastal Zone Management, and the desires, ideas, and needs of local communities will help to create a truly new form of post-colonial conservation. To do so, a stronger dialogue is needed between researchers doing political ecology-based research, practioners implementing on-the-ground projects, and local communities; the perspectives of each of these three groups will benefit from each other's understanding of the complex issues at hand. Finally, it is necessary for political ecologists who study environmental conservation and degradation to include coastal ecosystems in their research. As this thesis has tried to show, places like Menai Bay Conservation Area would benefit greatly from research based in a political ecology framework. I believe that doing so has the potential to create conservation projects that will benefit fragile marine ecosystems and the people who depend upon them for their livelihoods throughout coastal Africa.

Appendix 1: Methodology and Approach

I began this project with three primary interests in mind: The theory of political ecology, the region of Zanzibar, and the topic of conservation and its effects on local communities living in and around protected areas. I began building a base of knowledge about such issues during the first year of my Master's course work and was eager to form my interests into one cohesive research question. After developing the primary research question and relevant sub-questions discussed in the introduction, I developed a three-part methodology for my qualitative study: a primary literature review, a gray literature review, and fieldwork in Zanzibar.

A. Literature Review

Primary Literature

My literature review began with the onset of my Masters course work, when I started to read the relevant writing on Africa (and East Africa in particular), political ecology, and conservation for classes and for my independent research. In doing so, I began to identify the core texts and authors that would serve as the foundation for my thesis work. For instance, in my reading of Christine Walley's book *Rough Waters: Nature and Development in an East African Marine Park*, I began to understand how the experiences of coastal Tanzania fit into the larger discussion of globalization, conservation in Africa, and the power dynamics between government, NGOs, and local communities (Walley 2004). I also began to understand how these dynamic and often precarious relationships can change over time, directly affecting the success of conservation initiatives. Walley's work led me to other literature surrounding this and related topics.

Likewise, my course work introduced me to many authors whose work in mainland Africa provides a historical background of conservation on the continent, and the ways in which the history continues to inform modern-day practices. Roderick Neumann, Richard Schroeder, and Jan Bender Shetler, for instance, helped me to understand the dynamics of post-colonial conservation in mainland Africa, and led me to other literature on related topics. Finally, a series of political ecologists, including Garth Myers, Don Moore, and Chris Brown, helped me to better understand the theoretical literature of the field and to think about how to frame my research questions in a way that would best contextualize the issues of coastal conservation in Zanzibar in its specific social, political, and historical setting.

Throughout my first year as a Masters student, I read as much of this literature as I could in order to form my base of knowledge. Prior to embarking on my trip to Zanzibar, I focused on the literature most pertinent to the region and my particular fieldwork. Upon my return, the literature I chose to read became more and more specific to the research questions I undertake in the thesis. It is my hope that together these bodies of literature have formed a strong foundation to support my analysis and conclusions.

Gray Literature

While in Zanzibar, I procured numerous documents that can be considered "gray literature," or literature that is not from a scholarly, peer-reviewed source. A majority of the gray literature I obtained is in the form of environmental reports on the Menai Bay Conservation Area and the Marine and Coastal Environmental Management Project, as discussed in detail in chapters 6 and 7. Examples include the "Environmental and Social Assessment of the Marine and Coastal Management Project (MACEMP)", the "Rapid

Assessment of the Menai Bay Conservation Area (MBCA)", and the "Process Framework for the Marine and Coastal Management Project (MACEMP)." I also obtained a couple of historical documents from in the libraries of the Western Indian Ocean Marine Science Association (WIOMSA). Finally, I was able to access copies of student's Independent Study Projects in the library of the School for International Training (SIT) because of my affiliation with the organization as an alumnus of its study abroad program.

I use the gray literature for two primary purposes in the thesis. One, a bulk of the information on the backgrounds and objections of MACEMP are from these documents, as there are almost no other sources of information on this topic. Two, I use them to show the rhetoric of the MACEMP conservation initiative, and then to compare that rhetoric to what is actually happening on-the-ground in Zanzibar. While much of the literature is biased toward the World Bank or Government of Zanzibar, as they largely commissioned it, it none-the-less helps me to make critical observations of the ways in which conservation initiatives are conceived of, implemented, and framed for local communities.

B. Fieldwork and Interviews

Pre-departure Preparation

I conducted six weeks of interview-based fieldwork in Zanzibar during the summer of 2009. Before leaving, my primary contact for my fieldwork was Makame Muhajir (known as Muhajir). Muhajir was the director of the Department of Surveys and Urban Development for the Government of Zanzibar for eight years. He is currently finishing his PhD in Geography at the University of Kansas. He was an essential contact for me, as

we were already friends and he is well connected to many Zanzibaris who are knowledgeable about my research questions. Muhajir and I had a couple of long meetings before I left, during which he gave me advice, names and phone numbers of potential contacts, and general background information that was relevant to my research. Perhaps most importantly, he put me in touch with his cousin, Shehah Juma, an employee of the Department of Environment. Shehah Juma would serve as my initial contact in Zanzibar, and Muhajir set up an email exchange between us before I left.

In addition to talking with Muhajir, I also spent quite a bit of time talking and preparing with my advisor, Garth Myers, as he has extensive knowledge of Zanzibar and what it is like to conduct research there. His advice was invaluable and he also established some contacts for me, most importantly with his research assistant and good friend Ali Hassan Ali (known as Ali). Finally, Garth helped me to gain approval for my research from the KU Human Subjects Committee. The help I received from Muhajir and Garth, in addition to the large amount of reading I had conducted in preparation for the trip, equipped me well to begin my work in Zanzibar.

Zanzibar

It was exciting to arrive back in Zanzibar, where I hadn't been since my semester abroad there in the fall of 2002. I quickly settled into my comfortable apartment in the center of historic Stonetown. Almost instantly upon my arrival, I received a phone call from Ali and we met in the gardens located around the corner from where I was staying. It quickly became clear that he intended to help me with my research as much as he was able, which was a welcome and unexpected surprise. Additionally, he became a quick friend and

confidant, and it was nice to have someone to help me navigate the complicated Zanzibari streets and culture.

I allowed myself a couple of days to settle in before beginning the interview process. The first person I met with was Muhajir's cousin Shehah Juma. Our first meeting was very informal, we met to introduce ourselves to one another and to discuss my research project and whom I should get in touch with for my first interviews. We also talked about when I could meet his (and Muhajir's) family; this was clearly important to him. In the end, I ended up spending quite a bit of time with their family, including taking a trip with them to their home island of Tumbatu. While this did not directly influence my research, it added an important layer to my understanding of Zanzibari life.

After my initial meeting with Shehah Juma, my actual interviewing commenced. All interviews were semi-structured; I would generally prepare 6-10 questions in advance, but would let the interview take whatever course made sense in relation to whom I was interviewing. I interviewed my initial contacts from Shehah Juma first, and then used the snowball method to find other interviewees. I also interviewed a couple of people I knew from my previous experience as a study abroad student in Zanzibar. By and large, most of my interviewees were employees of various government departments; this is due to the fact that my initial contacts (Muhajir and Shehah Juma) were well connected in that arena, and also because those people generally spoke very good English. It is also important to note that I was in a slightly precarious situation, as I did not have an official research permit from the Government of Zanzibar. This was due to the fact that they are extremely difficult to procure and take a long time to process. At the advice of my advisor, I decided it was best not to even attempt to get one. Thus, in order

to make sure I was not conducting illegal research I approached my work as "preliminary" for dissertation research I would return to conduct later. While I was not certain of this plan, it was a strong possibility and so I did not see any ethical issues with it.

In part because of this, I would begin my interviews by inquiring about what environmental issues the interviewee thought should be the focus of my longer dissertation research. This approach ended up being beneficial in two ways: 1) it allowed me to gain an overall impression of what people think are the main environmental issues on the island (which are many) and 2) it tended to make the interviewee feel more comfortable, as they could talk about their primary concerns and thoughts and not just answer my directed questions. After we discussed their ideas, I would express interest in MACEMP as a research project and ask them their opinion. This either led to interesting and informative discussions about the Project, or they would brush off the comment because they either didn't find it important or didn't want to discuss it.

I quickly fell into a daily routine. I would wake early and go to Swahili class for the first four hours of my day. After class I would eat a quick lunch and Ali and I would meet to discuss our plan for the afternoon. On days we did not have an interview scheduled, we would either spend the time making phone calls or tracking down people in person to set up times to talk. If we had an interview scheduled we would go to the person's office (or occasionally a pre-determined restaurant or home). Ali would generally introduce me in Swahili and then I would make as much small talk in Swahili as possible. I found that even my feeble attempts to speak the language made people feel more comfortable and open to my questions. Then the interview would commence in

English. During the interview, I would take quick notes on the conversation, being careful to write down direct quotes that I knew I might want to use later. Ali generally didn't intervene in the actual interview, unless there was a need for something to be translated. In total, I interviewed 17 individuals, some of whom I interviewed two or three times.

After the interview, Ali and I would walk to get *kahawa* (coffee) and discuss the interview. He often had important insights on the person and/or conservation that I would not have been able to discern on my own. Ali would then walk me home and I would commence to typing up my field notes from the day's interview. I would first write down the conversation as accurately as possible; I would then write down my impressions and thoughts on the interview, as well as notes on follow-up questions for the person (I found that it sometimes took two or three interviews to get people to really open up about their thoughts and opinions). I also had a few "informal" interviews with people I befriended who wanted to give me their opinions or thoughts on coastal conservation in Zanzibar.

Post-Zanzibar

I returned from Zanzibar just in time for the start of the fall semester at KU. I set aside the interviews and gray literature I had acquired for a couple of months and focused on my course work. It was beneficial to take time away from the research I did there, as I was able to approach it with fresh eyes and perspective a couple of months later. During the first semester I continued my literature review, and found that I had a new perspective from my time in Zanzibar. As I began to write the thesis, the literature served as the foundation, but I found that I was able to use the interview results to add anecdotal and tangible support. In addition, I found that the gray literature I acquired provided a wealth

of information on Menai Bay Conservation Area and MACEMP that I would not have been able to find in the US. My fieldwork provided me with a more realistic and broader understanding of both the social and environmental setting of Zanzibar. It is my hope that in using this methodology I have been able to infuse the scholarly literature with some of the realities and intricacies of life and conservation in Zanzibar, and ultimately to draw accurate and insightful conclusions.

REFERENCES CITED

- Andersson, Jessica and Zainab Ngazi. "Coastal Communities' Production Choices, Risk Diversification, and Subsistence Behavior: Responses in Periods of Transition: A Case Study from Tanzania." Ambio 27, no. 8 (1998): 686-93.
- Barrow, Edmund and Marshal Murphree. "Community Conservation: From Concept to Practice." In African Wildlife & Livelihoods: The Promise & Performance of Community Conservation, edited by David and Marshall Murphree Hulme, 24-37. Oxford: James Currey Ltd, 2001.
- Bassett, Thomas J. and Donald Crummey. "Contested Images, Contested Realities: Environment & Society in African Savannas." In African Savannas: Global Narratives & Local Knowledge of Environmental Change, edited by Thomas J. and Donald Crummey Bassett, 1-30. Oxford and Portsmouth: James Currey and Heinemann, 2003.
- Blaikie, P. and H. Brookfield. Land Degradation and Society. London: Methuen, 1987.
- Blaikie, Piers M. The Political Economy of Soil Erosion in Developing Countries Edited by Longman development studies. London and New York: Longman, 1985.
- ——. "Changing Environments or Changing Views?: A Political Ecology for Developing Countries." Geography 80, no. 348 (1995): 203-14.
- Brown, J. Christopher and Mark Purcell. "There's Nothing Inherent About Scale: Political Ecology, the Local Trap, and the Politics of Development in the Brazilian Amazon." Geoforum 36, no. 2005 (2005): 607-24.
- Bryant, Raymond L. "Beyond the Impasse: The Power of Political Ecology in Third World Environmental Research." Area 29, no. 1 (1997): 5-19.
- Central Intelligence Agency, The. "The World Factbook: Tanzania." 2010 [cited June 2, 2010]. Available from https://www.cia.gov/library/publications/the-world-factbook/geos/tz.html#.
- Chapin, Mac. "A Challenge to Conservationists." World Watch 17, no. 6 (2004): 17-31.
- Department of Environmental Affairs & Tourism. "The Greater St Lucia Wetland Annual Review 2004-2005." Department of Environmental Affairs & Tourism, 2005.
- EcoAfrica. "Rapid Assessment of the Menai Bay Conservation Area (MBCA)." 105: Ministry of Agriculture, Livestock and Environment; Department of Fisheries and Marine Resources, 2005.

- El Kharousy, Zahor Mohamed and Bishara Juma. "Establishment and Involvement of Village Fishermen Committees in Management of Fisheries in Zanzibar." 1-13: Government of Zanzibar, Department of Fisheries and Marine Resources, Unknown.
- Fair, Laura. Pastimes & Politics: Culture, Community, and Identity in Post-Abolition Urban Zanzibar, 1890-1945, East African Studies. Athens Ohio University Press, 2001.
- Francis, J., A. Nilsson, and D. Waruinge. "Marine Protected Areas in the Eastern African Region: How Successful Are They?". Ambio 31, no. 7/8 (2002): 503-11.
- Gilbert, Erik. Dhows & the Colonial Economy of Zanzibar 1860-1970, East African Studies. Athens: Ohio University Press, 2004.
- Glaesel, Heidi. "State and Local Resistance to the Expansion of Two Environmentally Harmful Marine Fishing Techniques in Kenya." Society & Natural Resources 13, no. 4 (2000): 321-38.
- Gustavson, Kent, Jay Walmsley, and Zoe Kroeker. "Environmental and Social Assessment of the Marine and Coastal Management Project (MACEMP)." Dartmouth, Nova Scotia Jacques Whitford Environment Limited, 2005.
- Harvey, David. "Population, Resources, and the Ideology of Science." Economic Geography 50, no. 3 (1974): 256-77.
- Hemmingsen, Sarah A. 2004. Kaitiakitanga: Maori Values, Uses and Management of the Coast, Geography, University of Canterbury, Canterbury.
- Hulme, David and Marshall Murphree. "Community Conservation in Africa: A Introduction." In African Wildlife & Livelihoods: The Promise & Performance of Community Conservation, edited by David Hulme and Marshall Murphree. Oxford: James Currey Ltd, 2001.
- Jarosz, Lucy. "Defining Deforestation in Madagascar." In Liberation Ecologies: Environment, Development, Social Movements, edited by Richard Peet and Michael Watts. London and New York: Routledge, 1996.
- Kamukuru, A.T., Y.D. Mgaya, and M.C. Öhman. "Evaluating a Marine Protected Area in a Developing Country: Mafia Island Marine Park, Tanzania." Ocean and Coastal Management 47, no. 7 (2004): 321-37.
- Kulindwa, Kassim, Aloyce Hepelwa, and Simon Mesaki. "Proposal on Livelihood Diversification in the EAME." Dar es Salaam: University of Dar es Salaam, 2005.

- Larsen, Kjersti. "Change, Continuity and Contestation: The Politics of Modern Identities in Zanzibar." In Swahili Modernities: Culture, Politics, and Identity on the East Coast of Africa, edited by Pat Caplan and Farouk Topan. Trenton, N.J., Asmara, Eritrea: Africa World Press, 2004.
- Levine, Arielle. 2006. Staying Afloat: State strategies, international dynamics, and local outcomes in managing Zanzibar's marine protected areas Environmental Science, Policy, and Management, University of California, Berkeley, Berkeley, CA.
- ——. "Staying Afloat: State Agencies, Local Communities, and International Involvement in Marine Protected Area Management in Zanzibar, Tanzania." Conservation and Society 5, no. 4 (2007): 562-85.
- Linden, O. "Resolution on Integrated Coastal Zone Management in East Africa Signed in Arusha, Tanzania." Ambio 22, no. 6 (1993): 408-09.
- Linden, O., C.G. Lundin, eds. Integrated Coastal Zone Management in Tanzania. Stockholm: Gotab, 1996.
- Maxwell, Kimberley H. and Walley Penetito." How the Use of Rāhui for Protecting Taonga has Evolved over Time." In Intern Research Report. Wellington, New Zealand University of Wellington, 2007.
- McCauley, Lindsay. "Flipper Caught in the Net of Tourism: Assessment of Dolphin Tourism in Kizimkazi." Zanzibar, Tanzania: School for International Training, 2003.
- Mcclanahan, T.R., H. Glaesel, J. Rubens, and R. Kiambo. "The Effects of Traditional Fisheries Management on Fisheries Yields and the Coral-Reef Ecosystems of Southern Kenya." Environmental Conservation 24, no. 2 (1997): 106-20.
- Meela, Josephine Theobald. 2001. Community Participation and Integrated Coastal Resources Management: The Case of Menai Bay Conservation Area, Zanzibar, Management of Natural Resources and Sustainable Agriculture, Agricultural University of Norway, Norway.
- Mkumbukwa, Abdallah R. "The Evolution of Wildlife Conservation Policies in Tanzania During the Colonial and Post-Independence Periods." Development South Africa 25, no. 5 (2008): 598-90.
- Moore, Donald S. "Marxism, Culture, and Political Ecology." In Liberation Ecologies: Environment, Development, Social Movements, edited by Richard Peet and Michael Watts. New York and London: Routledge, 1996.
- Muldavin, Joshua S.S. "The Political Ecology of Agrarian Reform in China." In Liberation Ecologies: Environment, Development, Social Movements, edited by Richard Peet and Michael Watts. London and New York: Routledge, 1996.

- Myers, Garth Andrew. "Local Communities and the New Environmental Planning: A Case Study from Zanzibar." Area 34.2 (2002): 149-59.
- Nehemia, Levtzion and Randall L. Pouwels. The History of Islam in Africa. Athens: Ohio University Press, 2000.
- Neumann, Roderick P. "Political Ecology of Wildlife Conservation in the Mt. Meru Area of Northeast Tanzania." Land degradation and rehabilitation 3, no. 2 (1992): 85-98.
- ——. "Ways of Seeing Africa: Colonial Recasting of African Society and Landscape in Serengeti National Park." Ecumene 2 (1995): 150-69.
- ——. "Local Challenges to Global Agendas: Conservation, Economic Liberalization and the Pastoralists' Rights Movement in Tanzania." Antipode 27, no. 4 (1995): 363-82.
- ——. "Protected Area Buffer Zones and the Politics of Land in Africa." Development and Change 1997, no. 559-582 (1997).
- Norton-Griffiths, Mike. "How Many Wildebeest Do You Need?." World Economics 8, no. 2 (2007): 41-64.
- Pakenham, R.H.W. "Land Tenure among the Wahadimu at Chwaka, Zanzibar Island." Zanzibar, Tanzania: British Colonial Government, Zanzibar, 1947.
- Peet, Richard and Michael Watts. Liberation Ecologies: Environment, Developments, Social Movements. New York and London: Routledge, 1996.
- Picard, Catherine H. "Post-Apartheid Perceptions of the Greater St Lucia Wetland Park, South Africa." Environmental Conservation 30, no. 2 (2003): 182-91.
- Robbins, Paul. Political Ecology. Edited by John Paul Jones III, Critical Introduction to Geography. Malden: Blackwell Publishing 2004.
- Sachedina, Hassanali Thomas. 2008. Wildlife is Our Oil: Conservation, Livelihoods and NGOs in the Tarangire Ecosystem, Tanzania, School of Geography and the Environment, University of Oxford, Oxford.
- Schroeder, Richard A. "Geographies of Environmental Intervention in Africa." Progress in Human Geography 23, no. 3 (1999): 150-69.
- Schroeder, Richard A. and Krisnawati Suryanata. "Gender and Class Power in Agroforestry Systems: Case Studies from Indonesia and West Africa." In Liberation Ecologies: Environment, Development, Social Movements, edited by Richard Peet and Michael Watts. New York and London: Routledge, 1996.

- Sheriff, Abdul. Slaves, Spices & Ivory in Zanzibar: Integration of an East African Commercial Empire into the World Economy, 1770-1873, East African Studies. Athens: Ohio University Press, 1987.
- ———, ed. The History & Conservation of Zanzibar Stone Town, East African Studies. London: James Currey, 1995.
- ——. "Race and Class in the Politics of Zanzibar." Africa Spectrum 36, no. 3 (2001): 301-18.
- Shetler, Jan Bender. Imagining Serengeti: A History of Landscape Memory in Tanzania from Earliest Times to the Present. Edited by Jean Allman and Allen Isaacman, New African Histories. Athens: Ohio University Press, 2007.
- Spear, Thomas. "Early Swahili History Reconsidered." The International Journal of African Historical Studies 33, no. 2 (2000): 257-90.
- St. Lucia Estuary and Wetlands Park World Heritage site. 2009. *The St. Lucia Estuary and Wetlands Park World Heritage Site* [cited May 8 2009]. Available from www.stlucia.org.
- Subramanian, Ajantha. Shorelines: Space and Rights in South India. Stanford: Stanford University Press, 2009.
- Tanzanian Social Action Fund. 2010. *The Tanzanian Social Action Fund*. [cited 5/1/2010]. Available from www.tasaf.org.
- Tobey, James and Elin Torell. "Coastal Poverty and MPA Management in Mainland Tanzania and Zanzibar." Ocean and Coastal Management 49 (2006): 834-54.
- Tobey, J. and R. Volk. "Learning Frontiers in the Practice of Integrated Coastal Management." Coastal Management 30, no. 4 (2002): 285-98.
- Tobisson, Eva, Jessica Andersonn, Zainab Ngazi, Lars Rydberg, and Ulf Cederlog. "Tides, Monsoons and Seabed: Local Knowledge and Practice in Chwaka Bay, Zanzibar." Ambio 27, no. 8 (1998): 677-85.
- Torell, E. "Adaptation and Learning in Coastal Management: The Experience of Five East African Initiatives." (2000): 19.
- Torell, E., M. Amaral, T. Bayer, J.Daffa, G. Luhikula, and L. Hale. "Building Enabling Conditions for Integrated Coastal Management at the National Scale in Tanzania." Ocean and Coastal Management 47 (2004): 339-59.
- U.S. Department of State. 2010. *Background Notes: Tanzania* 2008 [cited January 10 2010]. Available from http://www.state.gov/r/pa/ei/bgn/2843.htm#.

- Torell, Elin, Aviti Mmochi, and Karen Palmigiano. "Menai Bay Governance Baseline." 18: Coastal Resources Center, University of Rhode Island, 2006.
- Walley, Christine. Rough Waters: Nature and Development in an East African Marine Park. Princeton, New Jersey: Princeton University Press, 2004.
 - ——. 2009. Personal email correspondence, April 2, 2009.
- Walmsley Environmental Consultants. "Draft Final Report to the United Republic of Tanzania on Process Framework for the Marine and Coastal Management Project (MACEMP)." 1-42. Dartmouth, Nova Scotia: Walmsley Environmental Consultants (in collaboration with Jacques Whitford Environment Limited), 2004.
- Wells, S., N. Burgess, and A. Ngusaru. "Towards the 2012 Marine Protected Area Targets in Africa." Ocean and Coastal Management 50, no. 1 (2007): 67-83.
- Willems-Braun, Bruce. "Buried Epistemologies: The Politics of Nature in (Post)Colonial British Columbia." Annals of the Association of American Geographers 87, no. 1 (1997): 3-31.
- Williams, Andrew. "A Socio-Economic and Natural Resource Management Profile for the Seven Jozani-Chwaka Bay Conservation Project Villages, Zanzibar." 1-21, 1997.
- World Bank, The. "Global Environment Facility Concept Note: MACEMP." (2003), http://www.iwlearn.net/iw-projects/Fsp_112799470544/project_doc/tanzania-coastal-marine-project-concept-paper.pdf/view
- Zanzibar Department of Environment. 2004. State of the Environment for Zanzibar. Zanzibar, Tanzania: Government of Zanzibar.