IS BIGGER BETTER?
THE IMPACT OF MARINE PROTECTED AREA EXPANSION ON COMMUNITY-BASED CONSERVATION

by

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Abstract

Global, national and local institutions are adopting coastal management strategies that attempt to facilitate conservation without undermining socioeconomic development. Recently, two global conservation trends have developed that attempt to address prevailing issues of poverty and environmental degradation – community-based conservation and conservation networks. Using a political ecology lens, I examine the intersection of these trends in the local context of Pemba Island. Through fieldwork, textual analysis and literature reviews, I investigate how a community-based conservation association has been impacted by the establishment of a marine conservation network. In theory, community-based conservation and marine conservation networks offer solutions to the failures of fortress conservation and sectoral management. In practice, this case study demonstrates that these lofty objectives are difficult to achieve. These findings contribute to emerging research into the social dynamics of scaling up marine conservation areas and suggest that the success of marine conservation networks hinges on meaningful community participation.

List of Abbreviations Used

CARE: Cooperative for Assistance and Relief Everywhere

DFMR: Department of Fisheries and Marine Resources, Zanzibar

EDG: Environment Development Group

GEF: Global Environment Fund

ICM: Integrated Coastal Management

IUCN: International Union for the Conservation of Nature

MACEMP: Marine and Coastal Environment Management Project

MANREC: Ministry of Agriculture, Natural Resources, Environment and Cooperatives

MICA: Misali Island Conservation Association

MICODEP: Misali Island Conservation and Development Program

MICP: Misali Island Conservation Project

MIMCA: Misali Island Marine Conservation Area

NGO: Non-governmental Organization

PECCA: Pemba Channel Conservation Area

UN: United Nations

WSSD: World Summit on Sustainable Development

Chapter 1: Introduction

1.1.0 Introduction

Coastal ecosystems across the globe are threatened by environmental degradation caused by climate change, pollution, and destructive fishing. As a result, there has been an increasing emphasis on the need to employ coastal management strategies that facilitate conservation without undermining socioeconomic development. This research is concerned with two global conservation trends that attempt to address prevailing issues of poverty and environmental degradation simultaneously: a) the drive to scale-up the size of protected areas into larger, more integrated conservation networks; and b) the increasing emphasis on participatory, community-based conservation. Through a political ecology lens, I examine the intersection of these two global trends in the local context of Pemba Island, Tanzania. Using interviews and literature reviews, I investigate how the expansion of a marine protected area off the west coast of Pemba has impacted the community-based conservation association involved in its management. While in theory, community-based conservation and marine conservation networks both offer solutions to the failures of so-called fortress conservation and sectoral management, this research demonstrates that these lofty objectives are much more difficult to achieve in practice. Scaling up to a marine conservation network can have negative implications for community-based conservation initiatives.

1.1.1 Defining the case study

The implementation of the Pemba Channel Conservation Area (PECCA) provides an interesting example of how global conservation trends converge and translate into

local outcomes. In 1998, the Misali Island Marine Conservation Area (MIMCA) became Pemba Island's first marine protected area. With the support of several international non-governmental organizations, a community-based organization – the Misali Island Conservation Association (MICA) – was established to manage the protected area. Seven years later in 2005, MIMCA was absorbed into a much larger marine conservation network – the Pemba Channel Conservation Area (PECCA). My thesis follows the community-based organization, MICA, through the transformation and asks: How has the transition from MIMCA to the larger PECCA impacted the ability of MICA to achieve their dual coastal conservation and community development objectives? What does this case study reveal about the ability of community-based conservation organizations to function in the context of increasingly larger conservation areas? This investigation begins to unfold the complex, political nature of coastal conservation and it begs the question – is bigger better for community-based conservation management?

Figure 1: Arial photo of Misali Island.

Photo by F. Brooks, 2011

Located 50km east off of mainland Tanzania, Pemba is the second largest island in the Zanzibar archipelago and is home to some of the highest coastal biodiversity in the West Indian Ocean. The west coast of Pemba Island in particular is home to the deepest and most diverse coral reefs in East Africa; as such, it has attracted the attention of global

institutions concerned with conservation and development. A hot-spot of biological diversity, a spiritual sanctuary, a popular fishing ground, and a now a popular tourist destination as well, Misali Island has long been the epicenter of coastal/marine conservation in Pemba. The island itself is just less than one square kilometre (0.9 km^2) and is located approximately 10km off the central west coast of Pemba. Misali is uninhabited; however, it is frequently used as an overnight camp for fishers. There are approximately 10 km^2 of coral reefs surrounding Misali, and they are some of the healthiest and most biologically diverse reefs in all of Pemba, providing refuge for over 244 different fish species and 42 different varieties of hard coral (Abdullah, Hamad, Ali, & Wild, 2000; Grimsditch et al., 2009). Misali's abundance of marine biodiversity attracts fishers from as far away as Kenya, and it has been estimated that at least 36 villages across Pemba rely on Misali's marine and coastal resources for their livelihood (EcoAfrica, 2005a; Menzies, 2007). Misali's beaches are vital nesting sites for both Green and Hawksbill sea turtles and its dense coral rag forests are home to several other endangered species, including the coconut crab and the Pemba flying-fox.

Beyond its wealth of natural resources, Misali Island holds cultural significance for many Pembans as well. According to traditional Pemban spirituality, the island is home to three sacred caves that serve as shrines for offering prayers and conducting sacred rituals (EcoAfrica, 2005b). The local Islamic tradition regards the whole of Misali as a sacred island. According to legend, a Muslim prophet observed that Misali was shaped like a prayer mat oriented towards Mecca – he concluded that the island could be used as a prayer mat when one is absent (Menzies, 2007). These traditions have combined to create a number of taboos that prohibit certain behaviours on Misali, such as, the

restriction of women from spending the night on the island, and the prohibition of sexual intercourse (Abdullah et al., 2000).

Today Misali Island is one of Pemba's primary tourism attractions – trips to the island are a standard feature on the activity lists of Pemba's hotels and tour operators. There is no shortage of natural beauty on Misali. The abundant coral reefs that surround the island provide the ideal environment for snorkelling and scuba diving. There are nature trails that cut across the island from one coast to the other through the dense coral rag forest, to the mangrove patches, to the sacred caves, and back to the beach again. The long white sands of Baobab beach on the northeast edge of Misali are where all tour boats land. The far end of this beach is home to the island's visitor's center, which is a palm-thatched roof covering several long wooden tables and benches in the sand. There are a few large wooden bulletin boards on which tatty information booklets and species identification photos have been stapled to the wood and covered over by a sheet of plastic. Two dozen wooden lounge chairs lined with waterproof mats stretch halfway down the beach from

Figure 2: Misali Island.

the visitor's center and palm-thatched wooden umbrellas provide shade for lounging visitors. It is easy to see why tourists would be drawn to this uninhabited ocean oasis.

While the conservation of Misali Island has been discussed in several academic works, there has been little critical research published on the implementation process and outcomes of the PECCA initiative. In fact, several academic articles published after PECCA's establishment in 2005 discuss the conservation of Misali Island without making any mention of PECCA (See: Levine; 2007; Poonian, 2008; Tobey & Torell, 2006). My field research provides first-hand accounts of how and why PECCA was created and what impact it has had on MICA. It reveals a political tug of war between stakeholders over the conservation of Misali Island. More broadly, the case study demonstrates how vague terms of integration have served to privilege government control over community participation in coastal conservation.

1.2.0 Defining the trends

The two global conservation trends that are central to this research – scaling-up to integrated conservation networks and community-based conservation – are both rooted in the paradigm of sustainable development. The ideology of sustainable development urges humanity to form a mutually beneficial relationship with nature – one in which economic and social needs are balanced with the biological and biophysical needs of nature. In an effort to achieve this balance, advocates of sustainable development have called for increased recognition of the vital role that local communities play in achieving conservation goals. Once considered separate topics, conservation and development narratives have been integrated under the umbrella of sustainable development, and together their overarching objectives have taken on an increasingly global outlook.

The notion of sustainable development garnered global recognition after the UN World Commission on Environment and Development published *Our Common Future* in 1987. This report, more commonly referred to as the 'Brundtland Report', effectively merged the concerns of environmental conservation and socioeconomic development under the "conceptual roof" of sustainable development (Sachs, 1999, p.60). The Brundtland Report laid the foundation for the 1992 UN Earth Summit in Rio de Janeiro where the link between coastal/marine conservation and socioeconomic development was discussed on a global stage. Agenda 21 is the primary implementation document produced during the 1992 UN Earth Summit. Chapter 17 of Agenda 21 outlines priority issues for coastal and marine conservation. The document repeatedly stresses the importance of integrating coastal/marine conservation and socioeconomic development objectives. Oceans, seas and coastal areas are identified as an "integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development" (UNCED, 1992, Section 17.1). Agenda 21 calls for an integrated approach to coastal/marine management and decision making that provides opportunities for individuals and/or organizations to participate in planning and consultation.

1.2.1 Integrated Coastal Management (ICM)

Integrated coastal management (ICM) is an approach to managing coastal and marine environments that has emerged from within the rubric of sustainable development. For the purpose of this thesis, ICM is a conceptual framework that embodies both the drive to include larger areas under conservation management and to emphasize the role of communities in managing these areas. ICM is a holistic approach that understands issues

of poverty and environmental degradation to be fundamentally linked. The popularity of ICM has grown rapidly since it emerged in the 1980s and the language of ICM has since been adopted by international organizations – including the World Bank and the International Union for the Conservation of Nature (IUCN) – as the best-practice approach for addressing issues of poverty, conservation and resource management in coastal areas.

The global shift towards sustainable development has promoted an increased recognition of the "human dimension" of coastal management and the interdependent relationship between humans and the coastal environment (Weinstein et al., 2007). Subsequently, coastal management has shifted away from a sector-based approach to management towards a more integrated, multi- or trans-sector approach. What this has meant in terms of coastal conservation was a movement away from species-focused or environment specific management to a management approach that is concerned with the health of the ecosystem as a whole including the well-being of human communities. ICM follows in this vein as it attempts to balance environmental, social, and economic concerns. Achieving this balance requires integration across multiple scales of the implementation process – institutional, governmental, social and spatial (Cicin-Sain & Knetch, 1998). The emphasis on taking an integrated approach to coastal management emerged in reaction to the failures of fragmented, sector-based management (Kay & Alder, 2005). Sector-based management focuses on the management of a single activity (e.g. fishing, transport, industry, tourism, etc.) or a single habitat (e.g. watershed, forest, wetland, ocean, etc.) in isolation; whereas, ICM considers the ecosystem as an integrated whole, including humans. An ecosystem-based approach to management recognizes the

interconnection between the various ecosystem components and the "cumulative impact of multiple [user] activities" on ecosystem health (Leslie & McLeod, 2005, p.540).

The primary goal of ICM is to manage the interaction between coastal users and the environment in a way that maximizes benefits and minimizes conflicts between them (Cicin-Sain & Knetch, 1998; Kay & Alder, 2005). Coastal ecosystems are some of the most dynamic, sensitive and complex ecosystems on the planet; as a result, they pose a unique challenge to manage. While in essence the coastal zone can be defined as the area where the land meets the ocean, this definition does not adequately reflect the myriad influences that impact coastal ecosystems. For example, the source of a coastal pollutant could be hundreds of kilometres inland or hundreds of nautical miles out in the open ocean. Thus, the complexity of the coastal ecosystem requires a flexible, integrated approach to management.

ICM places a high value on ecosystem-based management strategies that increase community participation and foster socioeconomic development through conservation-based initiatives. Coastal communities are key stakeholders in ICM strategies because they are often the first to suffer the consequences of an environmentally degraded and/or poorly managed coastal area (Cheong, 2008). The actions of individuals and/or groups of individuals can have a significant impact on the coastal environment (both positive and negative) (Cheong, 2008). Therefore, directly involving coastal communities in conservation planning and implementation will increase the overall success of ICM strategies. Francis and Torell (2004) confirm that the 'human-dimension' (i.e. socioeconomic) of coastal management in the West Indian Ocean is indeed a significant factor in determining the success of coastal management outcomes. Their study identifies several lessons learned for more effective ICM in the West Indian Ocean: a) income-

generating activities should be incorporated into community-based conservation initiatives; b) local knowledge must be taken into account in conservation planning and management; c) stakeholders must be intimately involved in the planning and decision making processes; d) more scientific research needs to be produced and integrated into coastal management and planning (Francis & Torell, 2004).

1.2.2 Emphasizing community-based conservation

The idea of involving communities in conservation management is certainly not new, and it existed prior to the popularization of ICM. The sustainable development paradigm has brought to light the flaws in fortress conservation initiatives that excluded human communities from conservation. Up until this point, approaches to conservation largely excluded local populations from both the conservation area and the process of developing a management plan. This was a reflection of 19th century European and American colonial ideals that envisioned wilderness as a people-free landscape ripe for their leisurely consumption (Brockington, Duffy & Igoe, 2008). This approach to conservation has come to be known as the 'fences and fines' approach or as 'fortress conservation.' The fortress conservation model is premised on the separation of humans and nature and believes that biodiversity conservation is best achieved through the strict regulation and/or exclusion of human activities (Neumann, 2005, p. 129). Fortress conservation has been responsible for the forced eviction and exclusion of local communities from conservation areas and their management (Brockington, 2002). Excluding local communities from conservation can have negative impacts on the social and economic well-being of these communities (E.g. see: Argawal & Gibson, 2001; Berkes, 1989; Blomley et al., 2010; Nelson, 2010). These results are amplified in

countries where the history of conservation is closely intertwined with the history of colonialism; unequal power dynamics of colonial rule can be reinforced by conservation initiatives that undermine traditional relationships with nature (E.g. see: Adams & Mulligan, 2003; Brockington, et al., 2008; Igoe & Croucher, 2007; Nelson, 2010; Neumann, 1998). In response to the failures of this exclusionary style of conservation management, community-based conservation calls for a more socially just distribution of the costs and benefits associated with achieving conservation goals.

Community-based conservation projects were pitched as "win-win" scenarios that could simultaneously achieve both conservation objectives and poverty alleviation (Adams & Hutton, 2007, p.164). However, practical efforts to integrate conservation and development objectives have had mixed results and many of these projects fall short of their stated goals (Berkes, 2004; Dressler, et al., 2010). In practice, community-based conservation often becomes fused with neoliberal ideology, which promotes market-oriented solutions that ultimately undermine the autonomy and empowerment of local communities (E.g. see: Brockington, Duffy & Igoe, 2008; Duffy, 2008; Levine, 2007). Global institutions have adopted an 'add community and stir' mentality in which community-based conservation (in its hybridized neoliberal form) is used as a cure-all solution for otherwise complex, context specific social-environmental issues (Igoe & Brockington, 2007). Dressler et al. (2010) have observed that often attempts to implement community-based conservation in practice have become caught in "bureaucracies with competing political interests and management priorities" (p. 6). In consequence, the neoliberalization of community-based conservation has reinforced the unequal power dynamics that community-based conservation initiatives were designed to overcome.

1.2.3 Scaling-up to marine conservation networks

Marine protected areas are a common tool used to conserve both coastal and marine resources. Likewise, these areas are utilized to manage human impacts on coastal and marine environments as well. They are a similar concept to terrestrial protected areas – a specifically defined geographic area in which human activity is restricted and/or regulated to achieve certain prescribed conservation goals. The IUCN, one of the world's oldest international environmental organizations, defines marine protected areas as "any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment" (World Commission on Protected Areas [WCPA], 1999, p. xi). This broad definition of marine protected areas allows for a great deal of flexibility in their function and purpose.

Marine protected areas are established to achieve a variety of different objectives and they can take on a multitude of different shapes, sizes and management approaches. Claudet (2011, p. 3) outlines the most common objectives that marine protected areas are established to achieve: a) conservation of natural resources from over exploitation; b) restoration of a depleted resource or a degraded habitat; c) conservation and/or enhancement of biodiversity levels; d) promotion of sustainable and mutually beneficial relationships between humans and the environment; e) resolution and/or prevention of conflicts between stakeholders; f) development of marine and coastal ecological knowledge and understanding. At the close of 2006, there were an estimated 4,435 marine protected areas in the world (Wood, Fish, Laughren, & Pauly, 2008). These areas range dramatically in size – some cover hundreds of thousands of square kilometers while

others encompass less than a single square kilometer. Taken together, all of the marine protected areas in the world represent a mere 0.65% of the oceans (Wood et al., 2008).

With just over half of a percentage of the world's oceans protected, the health of marine and coastal ecosystems continues to decline, demanding an immediate global response (Worm et al., 2009). Agardy (2010) explains that "traditional" (i.e. sector-based) approaches to coastal management, including marine protected areas, are insufficient to deal with the "bigger (and growing) problems of unsustainable use of resources, indirect degradation of marine ecosystems and large-scale declines in environmental quality, such as those brought about by climate change" (p. 18). Research has shown that marine protected areas are linked to ecological, social and economic activities that occur outside their predetermined boundaries; therefore, marine protected areas should be managed with an integrated, ecosystem-based approach that factors in the broader context in which it exists (Agardy, 2010; Berkes, 2003; Christie & Pollnac, 2011; Cicin-Sain & Belfiore, 2005; Grorud-Colvert et al., 2011; Kelleher, 1999; Pollnac et al., 2010).

International organizations and conferences have recognized the need to increase the size of marine protected areas as well as the scope of coastal management (Christie & Pollnac, 2011; Lowry, White & Christie, 2009). Both the 2002 UN World Summit on Sustainable Development (UN-WSSD) in Johannesburg, South Africa and the 2003 5th World Parks Congress (WPC) in Durban, South Africa called for the establishment of a global system or network of protected areas – terrestrial, marine and mixed. The UN-WSSD called for the establishment of a representative global network of marine protected areas by 2012 (UN-WSSD, 2002, Section IV, 32(c)). This commitment was re-emphasized during the WPC in 2003 and again in 2006 at the 8th Ordinary Conference of the Parties (COP 8) to the Convention on Biological Diversity (CBD). During COP 8, a

target of 10% of the world's marine and coastal Exclusive Economic Zones[1] (EEZ) should be protected by 2010. Established during the 2003 WPC, the 'Durban Accord' ushered in what it labeled "a new paradigm of protected areas" (IUCN-WPC, 2003, p. 220). This new paradigm had a distinctly global and integrated vision of conservation: "We see protected areas as providers of benefits beyond boundaries – beyond their boundaries on a map, beyond the boundaries of nation-states, across societies, genders and generations" (IUCN-WPC, 2003, p. 220). Protected areas are no longer islands of conservation; they should function as part of the broader socioeconomic and ecological context in which they exist.

Fisheries management has largely been focused on single species management, couched in terms biology or economics, and practiced by centralized governments (Berkes, 2003). This approach is not working. Research of marine protected areas in the Philippines has shown that these areas are "linked social-ecological systems" that demand a more integrated approach to management (Pollnac et al. 2010). Similar research on marine conservation networks also in the Philippines has demonstrated that effective marine conservation networks must consist of "a network of people and organizations," and geographically a network must "interact in an ecologically meaningful manner" (Lowry et al., 2009, p. 287). Thus, scaling-up marine protected areas into marine conservation networks is generally more effective when implemented within a broader integrated coastal management (ICM) framework (Cicin-Sain & Belfore, 2005; Lowry et al., 2009).

[1] The Exclusive Economic Zone (EEZ) is prescribed by the United Nations Law of the Sea as the area of the ocean that the state has special use and extraction rights. This area is typically defined as extending 200 nautical miles from the shoreline out to sea.

However, there has been little research into what this looks like in practice and, more particularly, how scaling-up to marine conservation networks effects community-based conservation initiatives. The research that does exist on the social dynamics of scaling-up to marine conservation networks deals primarily with case studies in the Philippines (e.g. see: Christie & Pollnac, 2011; Lowry et al., 2009). These studies highlight the importance of forming coordinated, cooperative management frameworks in which knowledge and responsibilities are shared among the multiple stakeholders involved the conservation network. Research in this field is very new and still emerging. As such, Christie and Pollnac (2011) identify a need for more "comparative social research" on practical attempts at scaling-up to marine conservation networks. My research into how the establishment of PECCA has impacted MICA is a contribution towards filling this gap in research on marine conservation networks.

1.3.0 Thesis structure & chapter breakdown

The following chapter introduces political ecology, which is the theoretical framework that guides my research and analysis. Since my research involves multiple institutions vying for control over conservation at multiple scales, the emphasis in this chapter is on political ecology's engagement with scale and conservation. The third chapter discusses the qualitative methodological approaches used as well as the challenges that were faced during the fieldwork phase and how these were addressed. Chapter four moves the discussion on to the historical context of the case study. From Omani and British colonial to the post-colonial influence of the structural adjustment policies, this chapter showcases the long-term influence of foreign powers on the shape of coastal conservation in Pemba.

Chapters five and six unfold the more specific details of the case study. The fifth chapter chronicles the establishment of Pemba Island's first marine protected area – the Misali Island Marine Conservation Area (MIMCA) – and the community-based conservation group that was formed to manage it – the Misali Island Conservation Association (MICA). This chapter provides a detailed understanding of how MICA operated pre-PECCA. The sixth chapter follows MICA through the transition from MIMCA to the larger PECCA. Through a cross-comparison of literature and first-hand interviews, this chapter illustrates a case where the implementation of a larger marine conservation network has had a negative impact on community-based conservation objectives.

Chapter 2: Political ecology as a theoretical framework

2.1.0 Introduction

Political ecology is able to identify how practical efforts in achieving conservation goals are often marred by political power struggles for control over natural resources – for this reason, it provides an ideal theoretical framework for this thesis. In understanding how power dynamics impact human-nature relationships, political ecology engages with both the social and natural sciences. It is a framework for analysis that mobilizes a multi-scalar approach to research – scales are understood not in isolation but in interconnection. By engaging in multi-scalar analysis, political ecological research can elucidate the power dynamics that impact how the costs and benefits associated with conservation are distributed. The transformation of the Misali Island Marine Conservation Area (MIMCA) into the larger Pemba Channel Conservation Area (PECCA) demonstrates how global conservation trends have been put into practice by multiple stakeholders operating at multiple spatial and temporal scales. Therefore, with its concern for power dynamics and focus on multi-scalar research/analysis, political ecology provides an ideal theoretical framework with which to analyse this case study. This chapter presents a brief introduction to the fundamental characteristics of political ecology and how this framework is applied to the case study.

2.2.0 Defining political ecology

Political ecology emerged in the early 1980s as an analytical framework that is fundamentally concerned with the relationship between humans and nature. In the investigation of this complex and interconnected relationship, political ecology works to bridge the gap between the social and natural sciences (Adams & Hutton, 2007; Blaikie

and Brookfield, 1987). Greenberg and Park (1994) explain that political ecology emerged as a "...historical outgrowth of the central questions asked by the social sciences about the relations between human society, viewed in its bio-cultural-political complexity, and a significantly humanized nature" (p. 1). In this way, political ecology provides a lens to evaluate human-nature interconnections and identify the power dynamics that manifest themselves in these connections.

The roots of political ecology are grounded in a combination of political economy and ecology (Blaikie & Brookfield, 1987; Greenberg & Park, 1994; Peet & Watts, 2004; Robbins, 2004). From political economy, political ecology derives a foundational concern for how power relations determine the processes of production, the distribution of wealth, and management outcomes (Blaikie, 1985; Peet & Watts, 2004). From ecology comes political ecology's attention to the scientific analysis of environmental relationships, particularly the relationship between humans and the environment (Forsyth, 2003; Neumann, 2005). Political ecology, therefore, is the utilization of a social justice (political economy) lens for the critical analysis of dynamic, multidimensional relationships (ecology) between nature and humanity.

Much of the scholarship within political ecology is concerned with identifying asymmetrical power relations in the production and utilization of environmental knowledge (Bryant & Bailey, 1997). A study of power dynamics can reveal unjust distributions of the costs and benefits associated with conservation (Bryant & Bailey, 1997). Political ecology is, thus, a form of criticism that questions apolitical and/or objective explanations concerning the environment that hide inequities. Stott and Sullivan (2000) see this as a definitive feature of political ecology:

> It [political ecology] is a concern with tracing the genealogy of narratives concerning 'the environment', with identifying power relationships supported by such narratives, and with asserting the consequences of hegemony over, and within, these narratives for economic and social development and particularly for constraining possibilities for self determination. (p. 2)

Political ecologists understand the production and utilization of environmental knowledge to be both socially constructed and politically motivated; as a result, the environment itself emerges as a politicized space. As Blaikie (1985) explains in his seminal work on soil erosion in developing countries, "...even a position of so-called neutrality rests upon partisan assumptions" (p. 1). In other words, the scientific explanation for an environmental issue and how it should be managed reflects power dynamics. This understanding forms the foundation of political ecology – all ecology is political (Forsyth, 2003; Robbins, 2004).

2.2.1 Political ecology & multi-scalar research

One of the distinguishing features of political ecology is its acute attention to multi-scalar analysis (Zimmerer & Bassett, 2003). According to Blaikie and Brookfield's (1987) influential research on the relationship between land degradation and society, the transformation of environmental knowledge into management and policy outcomes occurs on multiple "nested scales of explanation." They describe these nested scales as an interconnected set:

> local and site specific where individuals or small groups make the relevant decisions; the regional scale involving more generalized patterns of physiographic variation, types of land use, and property relations and settlement history; the national scale in which the particular form of class relations give the economic, political and administrative context for land management decisions; and the international scale, which in the most general manner, involves almost every element in the world economy, particularly through the commoditization of land, labour and agricultural production. (Blaikie &Brookfield, 1987, p.68)

Within this view, scales are not predetermined, fixed arenas on which the actions of social and political institutions play out. Rather, MacKinnon (2010) argues, scales are made up of "specific processes and institutionalized practices" (p.22-23). The relationships between these constructed scales are relative (McCarthy, 2005). Within this view, scales do not exist as separate compartments – each scale exists in dynamic relativity to the other. Defining, empowering, or eliminating one scale is only possible relative to others. Due to their intrinsic interconnection, any investigation that lends focus to one scale must take into account the influence of others.

The work of Purcell and Brown (2005) emphasizes that there is nothing inherent or essential about scalar categories or divisions themselves. Scales, they contest, "are produced by social actors through political struggle in order to advance their particular agenda" (Purcell & Brown, 2005, p.281). However, with the popularization of sustainable development and community-based conservation, development researchers and practitioners have since fallen into what they call "the local trap." This is the false assumption that localizing environmental decision-making will enhance social justice and promote ecological sustainability (Purcell & Brown, 2005). The problem, they explain, is that what is "local" is often conflated with what is democratic, community-focused, and participatory even though none of these attributes are necessarily intrinsic to the local scale (p.282).

Political ecology recognizes that environmental issues have both spatial and temporal dimensions; therefore, political ecology's commitment to multi-scalar research necessitates a commitment to integrating spatial and temporal scales. Historical analysis allows the researcher to identify long-term trends (ecological, social, political, and economic) that shape conservation outcomes. Robbins (2004, p. 61) explains that

historical environmental analysis is critical to research in political ecology because it challenges one-dimensional "snapshots" of research being conducted in the present by providing a context for circumstances. Ecological change, Robbins (2004) explains, is not a linear progression; ecosystems are in a perpetual state of fluctuation. In order to plan for successful conservation management, it is important understand what are the drivers that trigger ecological degradation and recovery. Understanding how long-term trends operate on local, national and international scales allows for the deconstruction of dominant narratives that serve to skew power dynamics.

2.3.0 Conservation through a political ecology lens

Issues of conservation and resource management provide complex subjects for political ecological analysis. Political ecologists have played close attention to the power dynamics between stakeholders in conservation, how decisions regarding conservation are made and who ultimately benefits from them. This is because, Zimmerer and Bassett (2003) explain, "[the] resource systems under analysis are typically viewed as utilized ecosystems that are, by nature, in ever changing interaction with human activities... that are typically differentiated by power relations associated with gender, ethnicity, and class or wealth category" (p.8). Political ecology understands conservation as a mechanism that expresses broader power structures through controlled human-nature relationships.

An investigation into the history of conservation has shown that the establishment of protected areas can produce hegemonic forms of management that reflect broader issues of power inequity and social justice (Adams & Hutton, 2007; Peet, Robbins & Watts, 2011; Robbins, 2004). The European Enlightenment created a hierarchical dualism between humans and nature that would form the "bedrock of colonial ideas about nature"

(Adams & Mulligan, 2003, p. 22). British colonialists believed that they knew how to manage nature better than local populations (Drayton, 2000, p. 90). Colonial administrators idealised wilderness as a people-free landscape for their leisurely consumption (Brockington, Duffy & Igoe, 2008). This conception of human-nature relationships has spawned the establishment of protected areas that aim to separate and regulate human-nature relationships.

2.3.1 Scalar dynamics of coastal conservation

While the "nested scales of explanation" identified by Blaikie and Brookfield (1987, p. 68-69) are associated with land management, Campbell's (2007) research on the political ecology of sea turtle conservation demonstrates the relevance of scale in coastal conservation and resource management. Campbell's (2007) exploration of the politics of sea turtle conservation encompasses three scales simultaneously: *local* (Ostional Wildlife Refuge, olive ridley sea turtle nesting sites, Ostional village community cooperative and their legalized commercial harvest of turtle eggs); *national* (Costa Rica, Pacific Ocean, government policies and laws, Caribbean Conservation Corporation, tourism); and *international* (Inter-American Convention for the Protection and Conservation of Sea Turtles). Each scale reflects different dimensions of the conservation process and its social and environmental impacts. Campbell's (2007) multi-scalar research has added value to her analysis of sea turtle conservation in Costa Rica by allowing her to identify international and national influences on local conservation outcomes.

Campbell's (2007) research demonstrates that the conservation of marine resources such as sea turtles operates on multiple scales simultaneously – local, national, and international. Conservation creates complex relationships between scales that both

produce and reinforce skewed power dynamics. Campbell (2007) mobilizes multi-scalar analysis to identify the influence of global institutions and conservation trends on local conservation outcomes in Costa Rica. Drawing on the work of Purcell and Brown (2005), she argues that in the case of sea turtle conservation scale is employed as a strategy for the pursuit of a political agenda that privileges certain stakeholders and certain approaches to conservation over others. In this way, conservation can reinforce unequal power relationships between stakeholders. Therefore, a critical multi-scalar analysis of conservation is necessary in order to identify latent power dynamics in conservation outcomes.

2.3.2 Conservation & neoliberalism

The globalization of capitalism and neoliberal ideology has had a profound impact on human-nature relations. The interface between neoliberalism and nature has been a topic of concern many authors in political ecology (E.g. see: Castree, 2008; Igoe & Brockington, 2007; McCarthy & Purdam, 2003). Steger and Roy (2010) explain that neoliberalism operates as an ideology, a mode of governance and a policy package that favours private enterprise and free-market solutions. Castree's (2008) synthesis of recent literature on nature's neoliberalization has identified six common characteristic implications of neoliberalism: 1) Privatization of property rights; 2) Marketization of phenomena that were previously excluded from market exchange; 3) Deregulation of state intervention in social and environmental issues; 4) Regulation of state policies to encourage further privatization and marketization; 5) State-led attempts to operate public services as "efficient and competitive businesses;" 6) State-led attempts to encourage "civil society groups" (i.e. NGOs, community-based organizations, charities, etc.) to

provide any public services that may have suffered as a result of the preceding five implications. Each of these characteristics has profound implications for the control, access and utilization of natural resources and the environment.

Mansfield's (2004; 2011) work exemplifies the impact of neoliberalism on fisheries resource management and the relevance of political ecological analysis to coastal / marine conservation and management issues. Her research argues that privatization and marketization have become the dominant mode of ocean governance; she explains, the "rationale for this neoliberal turn in environmental governance is that market mechanisms will harness the profit motive to more innovative and efficient environmental solutions than those devised, implemented, and enforced by states" (Masfield, 2004, p. 313). The neoliberalization of the oceans has been in response to the crisis of overfishing in the world's oceans. The dominant explanation for the crisis of overfishing has been in terms of Hardin's (1968) theory of 'the tragedy of the commons,' which claims that in the absence of property rights individuals are self-serving and profit driven. Therefore, if a lack of property rights is the problem that is causing the crisis of overfishing, then, Mansfield (2011) argues, "the implementation of property rights is the solution" (p. 94). The solution to the crisis of overfishing, however, is not so simple. Fisheries development is a political process that "imposes a particular, culturally specific vision of what nature is, who should control it, how people should use it, and who should benefit" (Mansfield, 2011, p. 93). Understanding that fisheries development is a political as opposed to objective process, allows for the identification of skewed power relationships that perpetuate overfishing.

This thesis pays close attention to expressions of neoliberalism and its characteristic implications in the conservation of Misali Island. In keeping with the work

of Purcell & Brown (2005), my research pays acute attention to scalar dynamics and regards scale as a strategy for development rather than a prescription. Under the banner of political ecology, I compare the rhetoric of global conservation trends – scaling-up to marine conservation networks and emphasis on community-based conservation – to the reality of conservation in practice on Pemba Island. Each of these conservation trends claim to integrate environmental and socioeconomic concerns in a way that is mutually beneficial. The case study presented in my research demonstrates that in practice neither conservation nor development goals have been adequately met.

Chapter 3: Methodology

3.1.0 Introduction

This thesis originated with a desire to investigate the interconnection of people and the coastal environment; I wanted to learn more about the politics of community-based conservation in coastal environments. The dominant form of conservation has largely been in the form of top-down approaches to management that prioritize the needs of the environment over the needs of human society – this method of conservation has been accused of increasing poverty and social tensions, which can instigate further environmental degradation. Two global trends in conservation have emerged in response to the failures of top-down, sectoral management: a) the drive to scale-up the size of protected areas into larger, more integrated conservation networks; and b) the increasing emphasis on participatory, community-based conservation. These trends have similar objectives: they seek to achieve a more inclusive, participatory approach to management so that biodiversity and biophysical processes are conserved in such a way that does not undermine the social and economic development of local communities. Although these conservation trends share similar objectives, the case study on the establishment of PECCA demonstrates how these objectives prove difficult to achieve in practice.

Research conducted within the theoretical framework of political ecology demands a methodology that accounts for multiple scales of ecological, social, and institutional interactions. If the goal of political ecology is to decipher latent power dynamics in conservation, then its methodology must be one that will compare and contrast multiple narratives and explanations (Robbins, 2004; Forsyth, 2003). My research stays true to its political ecology framework by consulting a wide variety of both

academic and grey literature on community-based conservation, integrated coastal management, and marine protected areas. During my work in the field, I conducted semi-structured interviews with stakeholders representing local, national and international institutions. By including as many different perspectives as possible, this thesis is able to narrate a balanced understanding of how the establishment of PECCA has impacted MICA.

3.1.1 Discovering the case study

During the first semester of my MA, I was introduced to Salim[2] the Director of Community Forests Pemba. I discovered that from 2001-2009 Salim worked as the Accountant and Chief Field Officer of the Misali Island Conservation Association (MICA), which is a community-based conservation organization. After some preliminary research into MICA and their efforts to integrate conservation and development objectives, MICA proved to be an interesting and appropriate case study for my research interests. Initiated by a group of protesting fishers concerned for the protection of Misali Island, and with the help of several government employees and representatives from international conservation NGOs, MICA was officially registered as an NGO in 1998. As a result of their efforts, the Misali Island Marine Conservation Area (MIMCA) was established in the same year. MICA's central objective was to ensure that Misali Island's vital coastal ecosystem and cultural significance were protected from over exploitation without compromising the social and economic well-being of Pembans that depend on Misali. With this information, I decided to investigate the relative success of MICA's efforts to achieve their stated objective.

[2] Salim did give me permission to use his real name in this thesis; however, for the sake of consistency, I have chosen to use pseudonyms for each individual that contributed to my study.

However, I soon discovered through a follow-up email with Salim that the case of MICA and Misali Island was more complex and controversial than I thought. He described Misali Island as having been "kidnapped" from MICA by the government (personal communication, March 13, 2011). This had happened, according to Salim, in 2005 as a result of the establishment of the Pemba Channel Conservation Area (PECCA). This information came as a surprise to me since much of the research I had found on MICA up to that point made no mention of these events (See: Levine, 2007; Poonian, 2008; Tobey & Torell, 2006). My curiosity peaked, and this led to the development of my primary research question that I set out to investigate for this thesis: How has the incorporation of the Misali Island Marine Conservation Area (MIMCA) into the larger Pemba Channel Conservation Area (PECCA) impacted the ability of the Misali Island Conservation Association (MICA) to carry out their community development goals? In an effort to answer this question, I employed multiple qualitative research methods including ethnographic fieldwork and an in-depth survey of relevant academic research and grey literature.

3.2.0 Qualitative research

The fieldwork component of this study took place in the Zanzibar archipelago between September and November 2011. Semi-structured interviews and site visits were the primary method of data collection used in the field. I conducted thirteen semi-structured interviews with key stakeholders who possessed an intimate knowledge of the case study. In order to establish contact with these participants, snowball sampling was used. The snowball sampling method relies primarily on referrals from initial participants to generate additional participants. Since my only contact before arriving in Zanzibar was

Salim, he volunteered to identify and provide contact information for some of the initial participants in my research. From these initial participants, I was able to establish the rest of the participants once in Zanzibar.

Participants included multiple members of MICA and government employees involved in PECCA; a ranger on Misali; a professor from the University of Dar es Salaam's Institute of Marine Sciences[3]; and a dive master for a local ecotourism establishment. Interviews lasted anywhere from 30 minutes to over an hour. Each participant was asked some form of the following questions:

- How and why was PECCA created?
- Was MICA involved in the decision to create PECCA? Why or why not?
- How has the establishment of PECCA impacted MICA?

Ten of the thirteen interviews were conducted in English without the aid of a translator, and three interviews were conducted entirely in Kiswahili through a translator. Interview questions focused on how and why MICA / MIMCA / PECCA were created, their management structure, how the establishment of PECCA impacted MICA, and general information about community participation in conservation and development on Pemba. Appendix A provides a comprehensive list of all interviewees, their respective affiliations, when the interview was conducted and whether or not a translator was used.

3.2.1 Methodological challenges

I confronted two related challenges while conducting research in the field. First, this case study is complex – it deals with multiple stakeholders operating at multiple levels, and all of these are operating within a socio-cultural / political context that was entirely new to me. Upon arrival in Zanzibar, I contacted one of Tanzania's leading

[3] The Institute of Marine Science is located in Stone Town, Zanzibar.

researchers in marine conservation – Dr. Fahima of the University of Dar es Salaam's Institute of Marine Science[4]. She informed me that I would need a research permit before I could start conducting fieldwork. The application process took almost three weeks to complete, which significantly delayed my departure to Pemba Island. When I finally did arrive on Pemba Island and began conducting interviews, I was immediately struck by the complexity of the case study. Participants used an array of acronyms, many of which sounded alike. Many of the people I interviewed would refer to the acronym only and often could not recall the exact title that the acronym represented. It was almost a month into my fieldwork before I had pieced together what each acronym represented and their relationships to one another.

Second, I faced challenges associated with language barriers and translation. In Zanzibar's education system, English is the medium of instruction from secondary school onwards. Since the majority of Pemba's fishers begin fishing full-time well before they reach secondary school age and many are left with less than functional English skills. While conducting fieldwork, I made of use of a translator to ensure that the perspectives of fishers and other concerned community members who may not be fluent in English were included in this research. Three interviews were conducted with the assistance of this translator (see Appendix A). However, due to the inexperience of the translator, these interviews were unable to generate the same depth of detail as the interviews conducted in English. A limited budget and timeframe restricted my ability to find another more qualified translator; as a result, I was unable to speak directly with many of the fishers and other concerned community members involved in my case study. Instead, I was

[4] This is a pseudonym.

forced to rely on only those informants who were comfortable being interviewed in English.

As a result, my field work was largely limited to 'expert' perspectives – i.e. individuals that hold positions of respective authority within the broader community of stakeholders involved in the establishment of PECCA. Despite this limitation, I was able to interview many of the key players involved in the transition to PECCA. All of the participants in my research were keen to give their perspective on the case study, taking time out of their work week in order to speak with me. The disassociation of MICA from the management structure of PECCA was a contentious issue for each individual that was interviewed. Yet, scholarly and grey literature alike has been surprisingly silent on this issue. Participants often became visibly and audibly upset during interviews when relaying their perspective on the case study – their passion speaks to the importance of telling this story.

There is one important voice missing in my research – the Director of the Department of Fisheries for Zanzibar. He was identified as the primary decision maker during the PECCA implementation process and the one responsible for MICA's exclusion from the management framework. I was not able to obtain his contact information until halfway through my fieldwork. Though repeated attempts were made to contact the Director, they were not a success. His perspective on the case study might have been able to shed more light on the reasons for MICA's exclusion.

Finally, it is important to acknowledge that this research is subject to some of the more general challenges that any researcher may face while interviewing a participant for their research. Madison (2011, p.41-43) reviews several of these challenges in her book on critical ethnography. I faced three of these challenges while conducting this research:

1) *Degree of forgetting*: Our memories are rarely perfect and the accuracy of an event retold is bound to be effected by the memory of the individual. With this in mind, how the memory is expressed, the emotions it invokes and the degree of detail included, is equally as important as the degree of accuracy. 2) *Degree of subjective experience*: Our experience of the world, issues and events is largely subjective, thus, the act of recounting past events is filtered through the subjectivity of those telling it and is seen through the researcher's own subjective lens. This study has been sensitive to the political, social, and cultural biases that shape subjectivity. 3) *Degree of etiquette*: There are various sources that shape our conception of proper etiquette including culture, religion, society, education, and politics. Critical interviewing understands etiquette as a filter for interaction during an interview. Even though I made every effort to educate myself on Pemban etiquette, I acknowledge that there may have been other social, cultural and political dynamics at play during the interview process that I, as an outsider, was not initially aware of.

While I certainly do not believe that any one of the aforementioned challenges has distorted my research results to the point of falsehood, their influence was taken into consideration. In an effort to address all three of these challenges, I tried to interview at least one representative from each stakeholder group involved in the case study, thus, incorporating a diversity of perspectives. Each interviewee was asked a similar series of questions (depending on their affiliation) that were specifically geared towards answering the primary research question of this study and other questions were intended to unravel the more general facts of the case study. In my analysis, I compare and contrast the similarities and differences between the informants' answers to produce a holistic version of the events. I embrace the differences between one version and another as natural

discords that serve to highlight the complexity of translating global conservation trends into local, site-specific conservation practice.

Chapter 4: Coastal Conservation in Pemba

4.1.0 Introduction

This chapter is essentially a survey of the historical evolution of coastal conservation management on Pemba Island from the 7th century up until the mid-nineties. My analysis pays close attention to the influence of foreign nations and global institutions on the character of coastal management and conservation in Pemba without losing sight of local, site-specific drivers. I begin by exploring the early history of coastal communities on Pemba and the influence of Omani and British colonial rule on Zanzibar's social, political, economic and environmental dynamics. The rest of the chapter is focused post-independence Zanzibar and the impact of structural adjustment programs on the coastal use, environmental policy making, and coastal communities.

4.2.0 Pemba & the West Indian Ocean trade network

The Zanzibar archipelago consists of two main islands each surrounded by an array of smaller islands. Approximately 50km off of mainland Tanzania, Pemba is the second largest island in the Zanzibar archipelago next to Unguja[5]. It is made up of approximately 984 square kilometres of rolling green hills interrupted by deep inlets and fringed by a plethora of smaller islands. Coral reefs surround many of these smaller islands and thrive in Pemba's tidal channels, bays and lagoons. The west coast of the island in particular is home to an impressive array of coral reefs. Every community in Pemba is impacted by the coastal environment – the island is long and narrow, such that there is no place on the island more than six and a half kilometres from the coast (Gilbert, 2004). Pemba Island has been separated from the mainland for several million years by

[5] Unguja Island is the largest island in the Zanzibar archipelago and is often, confusingly, referred to as Zanzibar.

the exceptionally deep Pemba Channel, which reaches depths of up to 2000 meters (Grimsditch et al., 2009, p. 3).

Archaeological evidence indicates that Pemba has been inhabited since at least the seventh century by the Swahili, who are the same ethnic group that first populated the rest of the East African coastline (Walshaw, 2010; LaViolette & Fliesher, 2009; EcoAfrica, 2005b). Coral reefs were one of the key ecosystems that provided the resources necessary for Pemba's early Swahili communities to survive. There are 1,100 kilometres of coral reef surrounding Pemba that host a dense array of fish populations and other marine species (EcoAfrica, 2005a). Fish proved to be a vital resource to the early Swahili settlers. They not only supplied a nutritional source of food, but fish also provided a source of income as well –fresh fish could be traded locally in markets and dried fish could be traded both locally and regionally via the Indian Ocean trade network. Due to its extremely humid climate, however, drying large fish was very difficult in Zanzibar and the bulk of large dried fish that was traded in Zanzibar originated from the Arabian Peninsula (Gilbert, 2004, p.52).

The Indian Ocean trade network played a monumental role in shaping the history of the Zanzibar archipelago. The Indian Ocean monsoons seasons provided reliable winds for vessels to travel, transport and trade. From December until April the hot, dry northeast trade winds guided vessels from India and Arabia to coastal East Africa. From May until November the winds of the southeast monsoon provide less favourable conditions for travel as they are more violent and erratic than the north-easterlies. The Indian Ocean trade network created strong links between the Zanzibar archipelago, India and the Arabian Peninsula. Pemba's population began to diversify with the immigration of Indians and Arabs as well as the importation of African slaves from the interior of the

continent (Spear, 2000). From the 7th-16th century Pemba's population flourished with the steady expansion of increasingly urban coastal village-centers (Walshaw, 2010; LaViolette & Fliesher, 2009). The impact of the trade network was felt far beyond the basic exchange of material goods. Traders and immigrants exchanged philosophy, spirituality, and marital vows with the local Swahili population, which led to the gradual adoption of Islam (Walshaw, 2010). The earliest evidence of Islam in the Zanzibar archipelago dates back to the eighth century (EcoAfrica, 2005b). Fuelled by maritime trade, Islam emerged as the dominant religion in Zanzibar by the nineteenth century.

4.2.1 Divide & conquer: Omani rule

The nineteenth century brought with it the global rise of industrialization and capitalism, and Pemba was not spared its effects. As Walley (2004) argues, "Omani political expansion itself came into existence in response to the demands of an increasingly integrated global capitalist economy, which provided opportunities for some to grow rich as suppliers of raw materials and such valued commodities as copra and spices" (p.95-96). During the first half of the nineteenth century, the Omani Empire assumed control of the East African coast from as far north as what is now Mogadishu to Mozambique and including the Zanzibar archipelago. In a strategic manoeuvre to gain a competitive advantage in the West Indian Ocean trade network, Sultan Seyid Said of Oman relocated his capital to Zanzibar Town, Unguja in 1840 and took control of Zanzibar's lucrative trade market and particularly its top three earners: ivory, slaves, and spices.

As part of their quest for wealth and trade domination, the Omani introduced clove trees to Zanzibar. Wealthy Omani merchants introduced the first clove trees to the

Zanzibar archipelago on Unguja Island in 1812 as a means of increasing their wealth by investing in plantations (Croucher, 2007). Cloves were a highly valued commodity in the Indian Ocean spice trade. Up until their introduction to Zanzibar, cloves were grown almost exclusively on the Moluku Islands in Indonesia due to the difficulty of its cultivation and the specific conditions clove trees require for production (Croucher, 2007). Zanzibar proved to be the right environment for clove trees and their cultivation on Unguja Isalnd was intensified with the establishment of more and more plantations. A devastating hurricane in 1872 destroyed almost all of the clove crops on Unguja and miraculously spared those few that were on Pemba. As a result, Pemba became the primary clove producer of the region while Unguja remained the primary port for exporting them. This event marked the transition of Pemba from a bustling independent urban trade centre into "the rural hinterland foil to Zanzibar [i.e. Unguja]" (LaViolette & Fliesher, 2009, p. 436). Pemba had been successfully transformed into the agricultural centre for Zanzibar and its position had been cemented as "a sort of internal colony" of Unguja (Gilbert, 2004, p. 84). The introduction of the clove industry created a strong economic connection between Pemba (the producer) and Unguja (the exporter).

The clove industry required a significant amount of cheap labour, and this meant importing and retaining more slaves from hinterland East Africa to the Zanzibar archipelago. The British government were strongly opposed to the slave trade and had signed a series of slave abolition treaties with Sultan Said in 1822. Finally, in 1876 the British succeeded in prohibiting the sale of slaves in Zanzibar. Without the slave trade, the Sultan lost a significant portion of his wealth creation and his political control over Zanzibar was slowly usurped by the British. In 1890 Zanzibar was proclaimed a British Protectorate.

4.3.0 Concerning conservation: British colonial rule

The impact of the British influence on Pemba's coastal environment was monumental for several reasons. First, the Protectorate's imposed regulation of the dhow trade and subsequent introduction of steamships altered the physical coastal landscape as well as how communities interacted with these landscapes. Dhows were commonly used to transport slaves and other highly valued commodities from the mainland to Zanzibar and on into the Middle East (Gilbert, 2004). Dhows are commonly constructed out of cheap, local materials and are able to cruise quietly up Pemba's deep, narrow inlets and river mouths undetected. Britain's opposition to the slave trade as well as its desire for control over colonial assets sparked the first coordinated effort to legally define and regulate dhows – The Brussels Treaty of 1890 (Gilbert, 2004).

The implementation of the Brussels Treaty instigated a significant transformation of Zanzibar's waterfront landscape through the imposition of Western ideal of modernity. The British administration constructed wharfs, seawalls, breakwaters and port authority offices in all the major ports on both Pemba and Unguja (Gilbert, 2004). While in part this was done to exercise further control over dhows, this waterfront transformation was also done to accommodate the introduction of steamships (Gilbert, 2004). The British administration favoured the use of steamships instead of dhows for marine transportation because they were far easier to control "with their fewer and more 'legible' ports rather than dhows and their many uncontrollable creek ports" (Gilbert, 2004, p.75). Moreover, steamships were seen as a symbol of modernity and development as opposed to the more 'primitive' dhow (Gilbert, 2004). The introduction of steamships and the regulation of dhows effectively funnelled the majority of Pemba's marine traffic away from the

island's myriad small creeks and inlets into three major port centers – Mkoani, Wete, and Chake Chake.

The British were interested in more than modernizing Zanzibar's maritime transportation. Due to increasing concern among the colonial powers over the possible extinction of highly prized game species, such as elephants and rhinos, the Convention for the Preservation of Animals, Birds and Fish in Africa was drafted and signed in 1900 at a conference in London. The objective of this convention was to reinforce and standardize game laws across the continent (Prendergast & Adams, 2003). Three years later, the Society for the Preservation of the Wild Fauna of the Empire[6] was also founded in London to ensure that the objectives outlined in the convention were implemented properly. Members included a diverse mix of influential government officials, colonial administrators, scientists, philanthropists, game hunters, and businessmen based in both Africa and Europe. In exercising their considerable influence over the direction and character of natural resource management and conservation across the continent, the Society became one of Africa's first international conservation organizations.

Despite its ambitious goals, the original convention prompted little definitive action until a second convention was drafted and signed in 1933 (Mkumbukwa, 2008; Nueman, 2002). While both conventions did include fish as a vital resource in need of protection, little was done in terms of coastal conservation in Zanzibar during the first three quarters of the twentieth century. However, the impact that these conventions had on conservation in Africa in general is monumental. Together, these conventions and the founding of the Society mark a shift in how the colonial administrators viewed natural resources on the continent. For the first time – so far as the colonial administration was

[6] The society still exists today, though it is now known as Fauna and Flora International (FFI).

concerned – Africa's natural resources were recognized as having value beyond food and building supplies; moreover, these resources were recognized as in need of protection from exploitation by both foreigners and local inhabitants alike (Prendergast & Adams, 2003; Neumann, 2002). Despite this conceptual shift and increase in international pressure to conserve Africa's wilderness, colonial governments saw conservation as a financial burden with little political pay-off; thus, the amount of land that was being set aside for protection remained relatively low until after World War II (Neumann, 2002).

The political economy of Post-World War II Britain sparked what Neumann (2002) calls a "conservation boom" in East and Central Africa. Neumann (2002) identifies four convergent international political and economic trends that prompted a major shift in the shape of conservation in East and Central Africa after 1945. First, the desire to develop and modernize Africa prompted the British colonial government to dramatically increase its control over African land use. Colonial administrators urged the adoption of industrial agriculture techniques and imposed strict regulations on hunting and other forms of traditional natural resource gathering (Adams & Mulligan, 2003). Second, although scientific wildlife management was still a relatively new concept (having originated in North America during the 1930s), its popularity was on the rise. Wildlife biologists and ecologists from the United States argued that traditional African land and resource use was environmentally destructive. As a result, "[t]he application of ecological concepts such as 'carrying capacity' combined with the increased policing powers of the game departments and park administrations established the scientific rationale and legal authority for evicting Africans from protected areas" (Neumann, 2002, p. 34). Third, the increasing availability of commercial airline services to African destinations and the subsequent increase in tourists provided British colonial governments

the economic rationale they had been waiting for to expand the number of protected areas. Finally, the influence of international conservation organizations over the shape of conservation management in Africa was expanding in the post-war era. During the late 1950s, there was increasing anxiety among international conservationists that as colonial governments retracted their direct control over African states the newly independent African leaders would "abandon the conservation initiative altogether" (Neumann, 2002, p. 39). The result was what Neumann (2002, p. 37-39) refers to as "the second scramble for Africa" in which international conservation organizations launched international campaigns to save Africa's wildlife.

Britain granted Zanzibar independence in 1963. This independence was short-lived as just five weeks later in January 1964 a populist revolution ousted the government – including the Omani Sultan, Seyyid Jamshid ibn Abdullah and remaining British colonial representatives – which resulted in the death of thousands of Arab and Indian citizens (Honey, 2008). By April, the newly formed Revolutionary Government of Zanzibar formed a political union with Tanganyika and became the United Republic of Tanzania with Julius Nyerere as its first president. Despite the union to form one sovereign Republic, it was agreed that Zanzibar would remain a semi-autonomous state with its own president, cabinet, legislature and judicial system. As a result, certain issues are deemed 'union-matters' meaning they are governed under the union of Zanzibar and the mainland (e.g. defense, monetary and foreign policy), while other, 'non-union matters' are governed separately – e.g. environmental legislation, tourism, and land-use planning.

4.4.0 Structural adjustments, tourism & conservation

The economic potential of conservation initiatives became entrenched into national policy during the 1980s when the Tanzanian government underwent state policy reform through structural adjustments. In 1978, Tanzania went to war with Idi Amin's regime in Uganda. The war with Uganda lasted from 1978 to 1979, and it left Tanzania with a significant amount of debt (Daley, 1992). By the early 1980s the national debt had mounted to unmanageable proportions and the export revenue that Zanzibar had grown to depend on had virtually disappeared. From 1980 to the mid 1990s, the value of cloves – Zanzibar's primary export at the time – declined from $9,000 per ton to $600 per ton (Honey, 2008, p. 258). On top of rapidly declining clove prices, the country had been experiencing severe drought conditions during the early 1980s that forced a decline in agricultural production and an increased reliance on food imports (Levine, 2002). Like so many of its contemporaries, Tanzania turned to the International Monetary Fund (IMF) for financial assistance.

The IMF pressured Zanzibar to adopt structural adjustments policies that prescribed severe cut-backs to government spending on social services. The idea of a rolled-back state did not sit well with Tanzania's socialist president – Nyerere initially refused to adopt the program and the IMF cut its ties with the government in 1981 (Campbell & Stein, 1992). Nyerere's refusal to comply with IMF policies prompted the World Bank and other international funding institutions to suspend their funding until Tanzania agreed to adopt the IMF's reform package (Campbell & Stein, 1992). Between 1981 and 1985 the Tanzanian government adopted its own, self-imposed structural adjustments based off of the IMF's model. Nyerere stepped down in 1985 and was succeeded by Ali Hasen Mwimyi. A year later in 1986 the government of Tanzania

approached the IMF for financial assistance once again, and this time the government accepted the IMF's full structural adjustment program that Nyerere had rejected in 1981 (Stein, 1992). These adjustments were firmly rooted in neoliberal ideology and they caused the country to shift from a state-controlled to a free-market economy. In the wake of these policy changes, Zanzibar's public sector was dramatically reduced while policies that favoured private sector investment were adopted in its place.

Liberalisation, privatization, deregulation, and decentralization characterised the shift to a free-market economy, which provided an attractive environment for foreign private investment. As a result, the number of foreign donor investments in Zanzibar skyrocketed, and by the late 1980s approximately 80% of public investments were financed by international donor funding (Levine, 2007).The implementation of structural adjustment policies prompted the government of Zanzibar to enact a series of incentives for private investment with particular attention to bolstering private investment in tourism initiatives. For example, the 1985 Trade Liberalization Policy "advocated diversification of the economy and a greater role for the private sector" (Honey, 2008, p.259). The government amended the 1989 Investment Protection Act to include tourism as an export. This amendment qualified the tourism industry for an array of investment incentives that were developed with aim of increasing foreign capital investment (Honey, 2008, p. 259). These policies were intended to boost economic development across Zanzibar by creating employment opportunities, increasing incomes, and promoting foreign exchange.

In some ways, the government of Zanzibar was successful in achieving these goals. A 2003 study of tourism liberalization in Zanzibar claims that a total of US$63 million has been invested in tourism projects since 1986, and the vast majority of which

were owned by European investors (Madsen, 2003). Thus, with the rapid decline of clove prices during the late 1980s and early 1990s, tourism was poised to replenish the lost foreign exchange earnings (Gössling, 2003, p.191). By the turn of the millennium, the tourism industry in Zanzibar was ranked the second largest foreign exchange earner after cloves contributing over US$3 million to Zanzibar's economy annually (Gössling, 2003, p.182). While doing field research in Zanzibar during the 1990s, Martha Honey (2008) witnessed the rapid growth of the tourism industry first-hand: The government's increased emphasis on tourism resulted in a dramatic jump in the number of hotel beds – from 1995 to 2005, the number of hotel beds in Zanzibar increased six-fold (Honey, 2008, p.264). Charging USD$1,500-2,000 per hectare on land being leased to tourism operators, government profits from tourism development were on the rise as well (Gössling, 2003, p.191).

4.4.1 Implications of a growing tourism sector

The government allocated more and more of Zanzibar's coast for tourism developments, giving operators leases on land for up to 33 years at a time. In general, these policies favouring the development of private tourism ventures did little to compensate the local population for the loss of public land to private investors. Honey (2008, p. 262) recounts that each time a new lease was offered on land, a one-time payment was given to the traditional owners of coconut trees on the land because this was the only resource on the land with a market-value. The compensation they received for their trees seemed high to local residents; when in fact, the amount was relatively low to the foreign investors paying it. The inflation of coastal property value had reached amounts that were totally unaffordable for most residents. In his analysis of development

tourism in Zanzibar, Gössling (2003) examines the outcome of such rapid tourism development:

> this development [i.e. tourism] represents a process of long-term financial empowerment of the government. These findings confirm that tourism can be a centripetal, state-enhancing force (cf. Weaver 2000). Local communities, on the other hand, go through a process of financial disempowerment, which is a result of increasing prices for land and other resources important for local livelihoods, such as fish. Furthermore common property (land) has been turned into a commodity. (p.191)

Land commodification in Zanzibar has created pockets of wealth across the archipelago, but there has been little trickledown effect to the community level (Madsen, 2003).

Thanks to the government's emphasis on foreign investment, the majority of tourism developments in Zanzibar are owned by wealthy foreign companies (primarily Italian, Kenyan and South African). With low levels of education in general and minimal government investment in tourism industry training programs in specific, Zanzibar lacks qualified locals to work in the tourism industry (Mustelin et al., 2010, p. 377). Therefore, these foreign companies often import foreign workers as well to hold managerial positions, leaving only low-paid service jobs for local Zanzibaris (Honey, 2008, p. 266). There have also been reports of illegal workers migrating to Zanzibar from mainland Tanzania and Kenya in search of employment (Madsen, 2003). Migrants compete with locals for tourism industry jobs and have exacerbated social conflict in the archipelago (Gössling, 2003, p. 196).

The rapid expansion of the tourism industry places a substantial amount of pressure on Zanzibar's marine resources. Along with increasing numbers of tourists and migrant workers, the demand for fresh seafood, such as, octopus, tuna, marlin, barracuda, shrimp and lobster has also increased steadily (Gössling, 2003, p. 192). The high demand for seafood from the tourism industry causes escalating fishing pressure and a higher

frequency of fishers using destructive fishing gear/techniques (Jiddawi & Öhman, 2002). Likewise, tourism promotes the commoditization of marine resources that previously had little to no market value – shells, chunks of coral, and shark jaws/teeth are all popular souvenirs among foreign tourists (Gössling, 2003). As a result, the tourism industry has driven up the cost of seafood and other marine resources to the point that they are no longer affordable for locals (Gössling, 2003; Honey, 2008).

4.5.0 Environmental governance in Zanzibar

During the early nineties, the government of Zanzibar made some significant changes to its environmental governance strategy. The United Republic of Tanzania signed both the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCC) in 1992 and ratified them in 1996. These international agreements are steeped in the wisdom of sustainable development, promising both improved conservation outcomes *and* financial sustainability post-implementation. Distinguishing the environment as a priority area, the government released its National Environmental Policy in 1992. Echoing the mantra of sustainable development, the policy called for the conservation of environmental resources in such a way that would "advance the well-being of the present generation without affecting the ability of future generations of Zanzibar to make the most of the resources" (Majamba, 2005, p. 22). However, legislation was already in place that emphasized environmental conservation (e.g. 1988 Fisheries Act; 1989 Commission for Lands and Environment Act;

1964 Fruit Protection Decree[7]), and the National Environmental Policy did little to synthesize the existing legislation.

In an attempt to correct this and to amalgamate these individual sector-based environmental policies under one piece of legislation, the government of Zanzibar launched the Environmental Management for Sustainable Development Act (a.k.a. the Environmental Act) in 1996. The Act is divided into nine parts[8] that cover a range of issues from defining key terms to outlining offenses and obligations. Part VII of the Environmental Act forms the legal basis for establishing a system of protected areas (terrestrial and/or aquatic), and the Act outlines the purposes of this system in section 71: a) preservation; b) sustainable use of resources by residence in or near the protected area; c) propagation of genetic resources for conservation in other areas; d) education; e) management of biological diversity; f) scientific research; g) environmentally sound tourism and recreation.

The Environmental Act stresses the importance of ensuring community participation in conservation planning and management. Part IV, Section 33, recognizes the importance of addressing localised environmental issues while Section 35 identifies communities as competent resource managers. Under Section 35, communities are recognized as having the authority to structure natural resource management plans that can be enacted as by-laws specifically for their local area. The Act is also clear that any coastal management strategy or potential coastal development must be prepared with the

[7] This is just a sample of pre-existing legislation concerning the environment. To provide a comprehensive summary of all the various government policies, units, departments, ministries, projects and programs that impact environmental management in Zanzibar would be beyond the scope and purpose of this study.
[8] I) Preliminary Provisions (which consists mostly of defining key terms used throughout the document); II) General Environmental Obligations; III); Administration; IV) Planning; V) Environmental Impact Assessment; VI) Control and Management of Specific Environmental Threats; VII) Protected Areas and Biological Diversity; VIII) Offences; IX) Miscellaneous Provisions

consultation of the local community and in collaboration with "relevant institutions" (See Part IV, Sections 34.1; 35.7; 36.1) though it does not identify what qualifies an institution as being relevant.

The language of integrated coastal management (ICM) appears in the Act. Sections 26 and 37 of the Act mandates the government to take an integrated, multisectoral approach to coastal planning and management; however, there are no explicit attempts to define what exactly is meant by 'integration' in the context of Zanzibar. Furthermore, though the Act calls for ICM, it is also careful to state that this management approach can only be implemented once an area has been designated a "coastal area" by the Minister responsible for the environment. Identifying a coastal area must be done in consultation with coastal users, in collaboration with institutional stakeholders, and only after the Director of the Department of the Environment has made his/her recommendation (Environmental Act, 1996, Section 36). The coastal area, as legislated under the Act, must possess the following qualities: specific geographic boundaries, environmental value (i.e. high biodiversity, ecosystem functions, resource value, etc.), and significant socio-economic value.

Recounting the genesis of environmental law in Zanzibar, Majamba (2005) explains that the development and implementation of the 1996 Environmental Act reflects the government's ambition to meet conservation goals outlined in international conservation agreements, such as, the Convention on Biological Diversity. International institutions did more than inspire the Act, they played a significant role in the actual production of the document as well – the Food and Agriculture Organization (FAO) provided technical assistance and the United Nations Environmental Program (UNEP) provided editing assistance (Majamba, 2005, p. 23). Levine (2007) is critical of this Act,

calling it “an innovative system to guarantee access to international funds” (p.562). Part VII, Section 85 of the Environmental Act allows organizations other than the government (i.e. private sector agencies or NGOs) to become the legal management authority of a protected area. This has allowed international organizations to provide desperately needed funding and expertise to conservation initiatives in Zanzibar, particularly to Zanzibar’s more remote communities. The government of Zanzibar still maintains the authority to designate protected areas, to delegate management responsibilities of protected areas, and to assess and approve protected area management plans (Levine, 2007). As will be demonstrated in the case of Misali Island, the result is a complex conservation management regime that involves international organizations, government (national and regional), and community-based organizations.

4.6.0 Coastal livelihoods

In order to understand the history of marine protected areas in Zanzibar more generally or the conservation of Misali Island specifically, it is important to discuss the state of coastal livelihoods in Tanzania. Fishing is a critical element of livelihood for rural coastal communities across Tanzania. Any attempt to implement marine and/or coastal conservation initiatives, therefore, will impact the livelihood of fishers and their families. The vast majority of fishers on Pemba Island are artisanal fishers meaning that they run relatively small-scale fishing operations and using rudimentary technology.

There are an estimated 40,000 artisanal fishers in Tanzania who together land approximately 50,000 metric tons of fish each year (Ruitenbeek, Hewawasam & Ngoile, 2005, p.22). Gossling (2003, p. 184) provides evidence that the artisanal fishery in Zanzibar suffers as a result of over exploitation and the use of destructive fishing

techniques: the total annual catch by artisanal fishers in Zanzibar was 20,000 tons in 1988, but that amount had dropped to 15,000 tons by 2000. Tobey and Torell (2006) conducted a survey of 24 coastal communities across Tanzania that included four villages in Pemba[9]. Fishers in these areas use a wide variety of gear with gill nets and hook-and-line being the most common (Tobey & Torell, 2006, p. 843). Unfortunately, these researchers also found that many fishers use destructive fishing gear as well such as small-mesh nets, poison, and dynamite (Tobey and Torell, 2006, p. 844).

Due to the intensity and efficiency of its destructive capabilities, dynamite fishing is one of the more often cited threats to Zanzibar's marine environment. Dynamite fishing has been practiced in Zanzibar for over 40 years and has a devastating impact on coral reefs and marine biodiversity. The practice was made illegal under the 1988 Fisheries Act; however, dynamite fishing continues to ravage Zanzibar's coral reefs (Lindhjem et al., 2003). Dynamite fishing is exactly as it as it sounds – dynamite is ignited and thrown into the water. The blast kills fish and every other living creature within a range of 15-20 meters of the blast and coral reefs within a 1-3 meter range of the blast are completely decimated (Tobey & Torell, 2006, p. 844).

Equally destructive is the *kigumi* technique, which is used primarily by fishers from Kojani and Micheweni in Pemba. This is when fishers beat a patch of coral reef with long poles scaring the fish into a small-meshed seine net (a weighted fishing net) encircling the reef. Small-mesh nets are less destructive to the reef itself but their ability to capture undersized / juvenile fish makes them extremely harmful to fish populations. The destruction that these methods cause to the coral reef ecosystem is tangible, but very little baseline data exists for comparison. Biodiversity assessments of Pemba's coral reefs

[9] Wambaa, Wesha, Mwambe and Maziwa N'gombe

are unclear as to exactly how much damage has been caused by the use of destructive fishing techniques, such as, dynamite fishing and the *kigumi* technique (see: Daniels, Fanning & Redding, 2003; EcoAfrica, 2005a; Grimsditch et al., 2009; Tobey & Torell, 2006).

According to research conducted by the World Bank, many of Tanzania's fishers use destructive fishing techniques in an attempt to increase the quantity of their catch and the efficiency with which it is caught (Ruitenbeek et al., 2005). A livelihood assessment of Pemba's west coast communities conducted in November 2004 depicts difficult living circumstances for coastal communities in Pemba:

> Firewood and charcoal are the main sources of energy for 99% of the population in Pemba, with obvious negative effects on mangrove and other forests. Women spend considerable amounts of time and effort collecting firewood for cooking and water purification. The water supply network is recognized as inadequate and only 44% of the population in Pemba gets their water piped, [from] protected wells or springs and 68% of the population has no toilet facility. (EcoAfrica, 2005a, p.27)

Another study found that 90% of the 456 households surveyed had experienced household food shortages, and 18% of children were malnourished and underweight (EcoAfrica, 2005a, p.28). Tobey and Torell (2006) found that the vast majority of roads connecting rural coastal communities to larger urban market/business centers are very poor, which makes transporting the days' catch to market before it spoils even more difficult for fishers[10]. These circumstances are not isolated to Pemban fishers – similar circumstances are a reality for fishers across Tanzania. Consequentially, a causal connection can be made between poverty and environmental degradation – many fishers

[10] Some of these conditions have likely improved with the construction of an underwater electricity cable in 2010, which runs from Tanga (mainland Tanzania) to Pemba. Before the cable, less than 2% of the population had electricity and those that did had to rely on diesel generators (Tobey & Torell, 2006).

continue to use illegal fishing techniques that decimate coral reefs because they are desperate to improve their livelihoods (Ruitenbeek et al., 2005).

4.7.0 The birth of marine protected areas in Zanzibar

Modelled off of terrestrial parks, Tanzania's first generation of marine protected areas were primarily concerned with the conservation of natural resources. These initial marine protected areas were similar by definition to Tanzania's terrestrial protected areas – a specifically defined area in which human use of natural resources is restricted and/or regulated. The communities who interact and depended on the resources within marine protected area boundaries were not factored into the conservation equation (Levine, 2004). The first official government efforts to conserve Tanzania's coastal and marine environments emerged in 1975 when seven reefs along the Tanzanian coast, including the Zanzibar archipelago, were designated marine reserves under Tanzania's 1970 Fisheries Act (Walley, 2004). However, due to a lack of financial support and infrastructure, government regulation of these initial marine protected areas was minimal to non-existent – in effect, they were not much more than 'paper parks' (Walley, 2004; Levine, 2004; Andersson & Ngazi, 1995).

Zanzibar officially established its first marine protected area in 1994 – the Chumbe Island Coral Park (CHICOP). Interestingly, CHICOP is a privately owned park – it was established by Sibylle Riedmiller who is a German conservationist and former international aid worker. CHICOP is recognized under the government as a marine protected area and the island itself has been designated a forest reserve. The marine protected area consists of 0.3km^2 of coral reef surrounding Chumbe Island; this area is legally recognized as a no-take zone meaning that absolutely no resource extraction is

permitted from within the area. Snorkelling, scuba diving, and scientific research are permitted but only with the purchase of a permit. Local fishers were trained and hired as the park rangers – while they do not hold any official legal power, their job is to monitor the protected area as well as to educate visitors and locals alike on Chumbe's unique biodiversity and the importance of its continued protection. The objective of CHICOP is twofold: 1) to protect Chumbe Island's marine and coastal resources; and 2) to provide environmental education, particularly to locals. In order to provide the necessary funding to sustain CHICOP, Riedmiller constructed a seven-room eco-lodge and a visitors' centre on the island. The Chumbe Island Lodge opened to the public in 1998. (Riedmiller, 2000)

Since its inception CHICOP has been met with both praise and criticism. CHICOP has received several international awards[11] for its approach to ecotourism and has been praised for its success in protecting the marine environment[12]. However, CHICOP has faced many challenges as well. Despite their efforts to educate local fishers on the benefits of conservation, some are still opposed to the no-take zone and violations still occur (Lindhjemet al., 2003). Levine (2007) found that the majority of local residents describe CHICOP as a business, downplaying its relevance as a conservation initiative. These challenges and successes aside, as the first marine protected area in the Zanzibar archipelago, CHICOP set several precedents for future marine protected areas in the region. Established two years before the 1996 Environmental Act, CHICOP was the first marine protected area in Tanzania to be managed by a private investor. CHICOP made a

[11] These awards include: British Airway's Global Tourism for Tomorrow Award in 1999 and UNEP's Outstanding Environmental Achievement Award in 2000 (Riedmiller, 2000).
[12] Larger finfish sizes and increased diversity of fish species have been recorded within CHICOP's boundaries as compared to outside its boundaries (Wells, Burgess & Ngusaru, 2007).

direct link between ecotourism and marine conservation while also stressing the importance of community support and involvement in such a conservation initiative.

4.8.0 Conclusion

This chapter has provided a history of the Zanzibar archipelago with a particular focus on issues relating coastal and marine environments. The Indian Ocean Trade Network shaped the society, religion, politics and demographics of early Pemba. Colonial regimes fought for control over the archipelago's wealth of resources and strategic position in the trade network. British colonial administrators imposed their views of progress and modernity on the shipping and trade industry causing dramatic shifts in physical coastline. With these changes came more powerful ideas about how to best conserve the natural resources of their colonial empire. For the British colonialists, conservation became another way to exert control over the colony and was justified by generating a profit.

After independence, Tanzania was forced to adopt structural adjustment programs that promoted a rolled-back state by encouraging privatization, liberalization, and deregulation of industries and services. Structural adjustments prompted the government of Zanzibar to enact a series of policy reforms that would leverage the tourism industry to bolster its suffering economy with foreign investments. The outcome was a surge in private foreign investment in coastal hotel development that saw locals forced from their land for little compensation and placed a significant amount of pressure on marine and coastal resources as well. The neoliberal characteristics of structural adjustment programs penetrated into Zanzibar's environmental policy making. The 1996 Environmental Act allows for organizations other than the government (i.e. private sector / non-governmental

organizations) to manage protected areas. Though the Act does stress the importance of community involvement in management and decision-making, more specific details about how this may be achieved are left vague.

Chapter 5: Creating MIMCA & MICA

5.1.0 Introduction

Building off of the historical context provided in the previous chapter, this chapter chronicles the establishment of Pemba Island's first marine protected area and the community-based organization that was positioned to manage it – the Misali Island Marine Conservation Area (MIMCA) and the Misali Island Conservation Association (MICA) respectively. The chapter explores how local, national, and global institutions converged to transform Misali Island into a focal point for coastal conservation in Pemba. The conservation of Misali Island was by no means a simple, straightforward affair; multiple programs and projects formed partnerships between MICA, the government of Zanzibar and several international non-governmental organizations. These initiatives all shared a similar objective: to promote the conservation of Misali Island while simultaneously stimulating socioeconomic development in the communities that rely on Misali's resources. In many ways these initiatives were successful; however, more than five years after its formation, MICA remained dependent on foreign donor funding.

5.2.0 Mobilizing the community

Fishers from villages across Pemba rely on Misali Island's coral reefs. However, up until the mid-1990s, there were no records of any official attempts by the government to regulate or conserve Misali's abundance of marine resources. Abdullah et al. (2000) describe resource use on and around Misali Island before 1996 as an open access regime, with no official regulations governing fishing or other forms of marine resource use. In

1983, the UN World Tourism Organization[13] (UNWTO) identified Misali Island as a potential site for a nature reserve in a report dedicated to outlining Zanzibar's tourism potential. Despite the UNWTO's recommendation to conserve Misali's natural resources, there are no government records of any official efforts towards this end (Abdullah et al., 2000). A decade later in 1993, as tourism in Zanzibar was beginning to boom, the Revolutionary Government of Zanzibar leased Misali Island to a private Italian investor for the development of an exclusive hotel. This was indicative of a broader trend across the Zanzibar archipelago, exemplified by the development of Chumbe and Mnemba Islands – residents in coastal communities were losing access to land and sea for the sake of tourism development, in exchange for little to no compensation (Gössling, 2003).

MICA's current Executive Director, Hamad, explained that Pemban fishers were motivated to block hotel development on Misali by the desire to avoid emulating what happened in the case of Mnemba Island (personal communication, October 18, 2011). Mnemba is a small island off the northeastern tip of Unguja that was leased to an Italian developer. Its exclusivity created conflict with local fishers who were restricted from both fishing Mnemba's reefs as well as accessing the island's beaches (Gössling, 2003; Honey, 2008). The developer proceeded to build Zanzibar's most exclusive resort – the Mnemba Club. Previous to hotel development, Mnemba Island was uninhabited, and fishers had used its beaches to sun-dry the day's catch and air-out their nets. After the Mnemba Club opened in 1988, fishers were no longer permitted access to the island; they were not even permitted to land their boats on Mnemba in case of bad weather and/or other emergency situations. The conflict surrounding the Mnemba Club continued into the mid-nineteen

[13] The UNWTO a specialized UN agency committed to using tourism as a "driver of economic growth, inclusive development and environmental sustainability" (UNWTO, n.d.).

nineties, and fishers talked of organizing aggressive protests – even armed flotillas – to protest against their lost access and resource rights (Honey, 2008, p.276).

With the conflict over Mnemba on-going, the fishers of Pemba decided to organize protests of their own against the looming possibility of hotel development on Misali Island. The fishers feared that, like the fishers of Mnemba, they too would be denied any further access to Misali. The waters surrounding Misali provide rich fishing grounds and fishers use the island as an overnight camp. Beyond these practical uses, Misali is also a holy island invested with spiritual significance for both traditional and Islamic faiths. Thus, the fishers of Misali were adamantly opposed to hotel development on the island (Hamad, personal communication, October 18, 2011). Some of those fishers who protested the hotel development on Misali would become founding members of the Misali Island Conservation Association (MICA). While several sources refer to the Misali protests, few details on the nature of these protests and the participants have emerged (see: Abdullah et al. 2000, p.4; Menzies, 2007, p.34). Despite the uncertainty surrounding the exact nature of the Misali protests, they proved to be a success, and the government withdrew the lease from the Italian developer. However, the degree to which the protests influenced the government to designate Misali Island a protected area remains undetermined.

The Ministry of Agriculture, Natural Resources, Environment and Cooperatives (hereafter referred to as the Ministry of the Environment) launched the Misali Island Conservation Project (MICP) in 1996, but the overall management of MICP was delegated to the Department of Commercial Crops Fruits and Forestry (hereafter referred to as the Department of Forestry). Based on fishing and ecotourism as the primary activities, MICP's goal was to turn Misali Island into a financially self-sufficient

protected area that satisfied both conservation and development objectives. In need of funding to support this new project, the Ministry of the Environment approached the Environment and Development Group (EDG) and they became involved in MICP in 1996. The EDG was founded in 1990 as part of Oxford University and has since become a private-sector consultancy group based in the United Kingdom and funded by the European Union. Motivated by the quest to strike a sustainable balance between conservation and development objectives, the EDG aims to provide technical support, policy consultation and advice to institutions at multiple scales from community-based organizations to national governments and international corporations (EDG, 2005). In keeping with its mandate, the EDG provided primary funding for the initiation of MICP. The EDG played an advisory role during project planning and implementation; furthermore, they committed to provide their support (technical and financial) to MICP for two years from 1996-1998. During this time, MICP mobilized the establishment of Pemba's first marine protected area: the Misali Island Marine Conservation Area (MIMCA).

5.3.0 Protecting the environment: Creating MIMCA

The Misali Island Marine Conservation Area (MIMCA) was officially established on May 22, 1998 under section 8 of the 1988 Fisheries Act and section 10 of the 1996 Forest Resources Management and Conservation Act. MIMCA was Pemba's first conservation area – a mixed marine / terrestrial conservation area totaling 21.58km^2 (20.68km^2 marine; 0.90km^2 terrestrial). 1.4km^2 of MIMCA was designated as a core 'no-take' zone, which means that the extraction of marine life and/or other marine resources is prohibited. Diving, snorkeling and swimming in the no-take zone for recreational

and/or research purposes are permitted. The remaining 20.18 km^2 of MIMCA had regulations concerning the type of fishing gear used, catch allowances per day/fisher, and designated areas for anchorage. For example, fishers were allowed to use spears, but not spear guns because they have a greater potential to harm the coral reefs. Nets were permitted too, but only nets made of cotton[14] with mesh large enough to let smaller, juvenile fish pass through. Fishers were still permitted to camp overnight on the island as they had done in the past, but were restricted to two designated camping zones where they were permitted to collect dead wood for fuel and shelter.

The creation of MIMCA could not have been better timed. Between March and June of 1998, just months before the protected area was established, there was a mass bleaching of coral reefs across the West Indian Ocean including the reefs of Misali. Bleaching occurs when corals experience stress and loose the symbiotic micro-algae that provide them with essential nutrients and pigmentation. The loss of micro-algae causes corals to turn white and brittle leaving them vulnerable to destructive forces (natural or anthropogenic), disease, or suffocation by an algal attack. The 1998 West Indian Ocean coral bleaching event is believed to have been caused by the abnormally high ocean temperatures associated with El Niño. As a result of the bleaching event, between 1994-1999 the live coral populations encircling Misali Island decreased from 51-74% to 7-17% and the non-living substrate (i.e. rubble, rock or sand) increased from approximately 20% to 53% (Muhando & Muhammed, 2002, p. 46).

Research of the bleaching event shows that while it is possible for coral reefs to recover, any further stress on the reef system (e.g. destructive fishing) significantly

[14] Cotton is a preferred material for fishing nets because it will decompose easily should the net become lost at sea.

reduces the possibility for coral re-growth (Muhando & Muhammed, 2002; Daniels, et al., 2003; Poonian, 2008; Grimsditch et al., 2009). Thus, successful coral recovery in Pemba requires regulations on fishing and other forms of potentially destructive resources use such as those that were employed in MIMCA. While a review of the literature does not reveal a direct causal connection between the bleaching event and the establishment of MIMCA, the two events have been referred to in conjunction (see: Muhando & Muhammed, 2002; Daniels, et al., 2003; Poonian, 2008). The threat of another coral bleaching serves to underline the critical importance of protecting Misali's reefs (see: EcoAfrica, 2005a; Grimsditch et al., 2009

5.4.0 Organizing people: Creating MICA

Under the Misali Island Conservation Project (MICP) the government had already begun working with Pemba's fishers to conserve Misali Island in 1996. That same year Masoud was appointed by the Department of Forestry to be MICP's first project leader. He explained that the Department of Forestry and the EDG "thought that it is important for the community to have their organization, because… the community which are using Misali are scattered in nature" (personal communication, November 25, 2011). Masoud is referring to the fact that over 36 communities from across Pemba utilize Misali's resources. Subsequently, the government and the EDG decided that these scattered communities needed a single umbrella organization to represent their concerns, so they mobilized the fishers from these communities to form the Misali Island Conservation Association (MICA) (Masoud, personal communication, November 25, 2011). With the help of Masoud and the EDG, MICA was able to officially register with the Government of Zanzibar as an NGO two years later (in 1998).

MICA was established as a community-based conservation organization that was meant to represent local fishers. Its intention was to provide a link between communities and government institutions as well as with other Misali stakeholders, such as, tourism operators and international organizations. The emerging association needed a leader that could organize the group and guide them through the process of registering with the government. Masoud volunteered to be MICA's first Executive Director (personal communication, November 25, 2011). He admits it was a conflict of interest – he was already the director of the government-managed Misali Island Conservation Project (MICP) and now he was the voluntary leader of the emerging community-based association, which meant that he was essentially working in partnership with himself. Other sources did not appear to find this to be a conflict of interest at all; perhaps because two of MICA's three Executive Directors have also held positions in the government under the Ministry of Agriculture.

5.4.1 MICODEP

By the time the EDG funding for the Misali project ended in August 1998, MICP had yet to gain any sort of financial independence. After several unsuccessful attempts to gain more funding for the project through foreign embassies in Dar es Salaam, Masoud approached the representatives of the Cooperative for Assistance and Relief Everywhere (CARE) for help (personal communication, November 25, 2011). CARE is an international non-governmental organization dedicated to the elimination of global poverty through community empowerment. CARE has been active in providing financial support and expertise to emerging community development projects in Zanzibar since the

early nineties, which made them a logical choice to work with the Misali Island Conservation Project (MICP).

CARE had initiated a community-based conservation program on Unguja Island in 1995. Similar to the Misali Island Marine Conservation Area (MIMCA), the Jozani-Chwaka Bay Conservation Area (JCBCA) is a mixed marine / terrestrial conservation area that integrates conservation and development objectives. The JCBCA is an ongoing project that was initiated as a partnership with CARE and the Department Forestry in 1995. Honey (2008) explains:

> CARE's vision for the JCBCA project was to encourage a new type of conservation in which local people and visitors both played a role in conserving the unique coastal forest and nearby habitats and in raising the standard of living for people in nine surrounding villages. (pp. 271-272)

CARE's vision reflects the shifting global trend towards integrated conservation and development projects that factor community livelihood and well-being into the conservation equation. CARE brought the JCBCA project to the local villages in an effort "to build a constituency for its idea of participatory conservation-with-development" (Myers, 2002, p. 153). They did this through a combination of community capacity-building strategies: a) the establishment of village conservation committees and a community-based organization called the Jozani Environmental Conservation Association (JECA); b) the establishment of a community development fund that utilizes tourist revenue generated by JCBCA; c) the creation of community savings and credit programs; and d) a compensation program for farmers that lose crops due to damage from wildlife. Three years into the implementation of the JCBCA project, CARE agreed to pick-up where the EDG left off with MICP. In 1998, CARE agreed to provide technical and financial support to MICA.

According to Othman, CARE had been fundamental to the creation of MICA, and they had initiated the structure and organization of MICA "… through capacity building and the provision of grants" (personal communication, October 25, 2011). Othman was a key player in these early conservation efforts: From 2001-2004 he served as MICA's Executive Director; currently, he is the Head Program Supervisor for CARE Tanzania's Pemba office. When CARE partnered up with MICA in 1998, they implemented an integrated conservation and development initiative called the Misali Island Conservation and Development Program (MICODEP). While MICODEP did exist at the same time as the government-implemented Misali Island Conservation Project (MICP), MICODEP was technically a separate project and was predicated on a distinct partnership between MICA and CARE. MICODEP had a dual conservation/development objective: conserve biodiversity and ecosystem services in the Misali Island Marine Conservation Area (MIMCA) while simultaneously increasing incomes and improving food security in the 34 villages across Pemba that utilize Misali's natural resources (CARE, n.d.).

CARE places a high value on forming partnerships with community-based organizations (Othman, personal communication, October 25, 2011). Their strategy in achieving objectives and ensuring program sustainability places focus on increasing management capacity and community involvement in conservation (CARE, n.d.). To increase management capacity, CARE held leadership training workshops and conservation / resource management workshops to train MICA members to be field officers.[15] Primarily, the field officers were intended to foster environmental education by holding conservation awareness workshops for students, fishers, farmers, and any other

[15] Field officer is a loose term that seems to be applied to any trained MICA member (including the Executive Director, Secretary and Accountant) that visits different villages on behalf of MICA.

interested member of the community at large. Within MICA, a field officer refers to those MICA members who travel to individual communities to facilitate small-scale conservation, development projects and/or educational seminars.

To increase community involvement in the management of the Misali Island Marine Conservation Area (MIMCA), CARE fostered the development of village conservation committees (see Figure 3). These committees were responsible for the supervision and sustainable management of Misali's resources. At the outset of the program there were 22 village conservation committees (representing 26 communities) with approximately 15 members each (Hamad, personal communication, October 19, 2011). Members pay a small fee to join and a small fee each month after they join to maintain their member-status. According to the current Executive Director, as of 2004 MICA had 589 members representing 36 communities across Pemba (Hamad, personal communication, October 19, 2011). Figure 3 provides an overview of the organizational structure and responsibilities of MICA:

Figure 3: Organizational structure of MICA (adapted from MICA's 2001 Constitution).

	Members	**Responsibilities**	**Meetings**
Board of Trustees	Max. 5 elected members serve a 3 year term: 1 Representative each: Environmental mgmt; NGO sector; Financial advisor; Tourism industry; Government	- Provide guidance on overall operations of MICA and relevant policy development issues - Strengthen public relations - Assist with fund-raising	Once every 6 months
General Assembly	Max. 150 elected/invited persons including: Board of Trustees; Executive Committee; Chairperson; Vice Chairperson; Rep. Of VCC; Other invited members	- Make amendments to constitution - Review previous year's activity; discuss / plan activities for year to come - Hold necessary elections - Approve / disapprove / revoke MICA membership	Once; Annual general meeting (AGM)

		- Resolve issues presented by Assembly members	
Executive Committee	Max. 25 elected members including: Executive Director; Secretary General; Representatives of VCC; 5 women (appointed for gender consideration)	- Oversee general operation of MICA and organize AGM - Prepare annual reports, minutes, budget, audited financial statements - Monitor / evaluate VCC activities - Manage conflicts / appeals from VCC - Foster links to other NGOs	Once every 3 months
Village Conservation Committee (VCC)	Max. 15 voluntary members per VCC. Each VCC must include: Chairperson; Secretary; Cashier	- Represent community concerns - Raise community awareness of conservation issues - Supervise and provide feedback on conservation activities - Mobilise new members - Formulate by-laws	Once a month

MICA's current Secretary General, Ali, explained that the village conservation committees are open to all fishers as well as non-fishers who may be impacted directly or indirectly by Misali's conservation health, including women (personal communication, October 19, 2011). According to Othman, ensuring that women were involved in the Misali project was a priority for CARE (personal communication, October 25, 2011). Due to cultural values that limit women's role to the domestic sphere, it is much more difficult for women in Pemba to earn an income than for men; therefore, MICODEP was sure to include programs specifically targeted women. One of MICA's female board members, Abeera, explained that women were more likely to get involved in the alternative income generating projects and village credit and savings groups than in the fisher-dominated village conservation committees themselves (personal communication, October 28, 2011).

Thus, a major part of the MICODEP initiative was the establishment of a village savings and credit program in 2001. Over the course of the next two years approximately 389 people – 189 women and 200 men – from villages across Pemba obtained small loans through this program (Ruitenbeek et al., 2005, p.51). Groups of fifteen to thirty members (the majority of which must be women) have to pay a small one-time fee to be a member. Small donations are collected from members at each meeting and put towards a 'community fund.' This fund (or portions of it) is available to any member should they need it due to illness or death in the family. The 'surplus fund' is a set amount given by each member each week, but only if they are financially able to do so. Members may withdraw loans from the surplus fund with no interest. The MICODEP savings and credit program was so successful that in 2006 the Pemba Savings and Credit Association (PESACA) became its own independent community-based organization and now shares MICA's office space.

5.5.0 Managing MIMCA

Six rangers were hired and trained through MICODEP to patrol the Misali Island Marine Conservation Area (MIMCA) and to ensure regulations were being followed. Ideally, the rangers worked on a rotating schedule of two-weeks on and two-weeks off, but this was subject to change due to loss of funding, or time extra time off needed for further training or personal crisis (e.g. accident, illness, or death) (Ranger, personal communication, October 23, 2011). The construction of any permanent structures on Misali is prohibited, so the rangers sleep under thatched-roof shelters while stationed on the island. The only one of Misali's rangers whom I was able to interview said that from 1998 until 2003 he worked on a contract basis for MICA. He explained that MICA would

pay him "when they could," which meant that when MICA received funding from foreign donors they would pay the rangers for their services under a contract (Ranger, personal communication, October 23, 2011).

My interview with Masoud confirmed this: Since MICA has always been a non-profit organization, he explained, rangers were paid with funding obtained by CARE from foreign donor agencies, such as, the Ford and McKnight Foundations (Masoud, personal communication, November 25, 2011). A portion of the MIMCA entrance fee was used to supplement the ranger's pay though the exact amount of this top-up is unknown. The rangers received non-monetary benefits for patrolling the conservation area as well. MICA brought the rangers food, fresh water and other necessary supplies while they were stationed on Misali (Ranger, personal communication, October 23, 2003). CARE and MICA worked together to provide swimming lessons and first-aid training for the rangers as well as workshops on tourism management and customer service. Some rangers were sent to Kenya for further training in conservation and resource management.

In 2003, Misali rangers were hired for permanent positions as government employees (Ranger, personal communication, October 23, 2011). The ranger that I spoke with said that with a wife and family to provide for, he preferred the job security that a permanent position working with the government had to offer him. Living contract to contract and working for an NGO like MICA whose funding was primarily dependent on foreign donors was very stressful for him and hard on his family. Despite the unpredictable pay schedule, the ranger still preferred the type of working relationship he had with MICA. He explained that MICA was a much easier organization to communicate with because he had been able to developed personal relationships with staff. Working for the government he finds that there are so many different departments,

ministries, and special unit personnel that they are hard to keep track of. MICA members visited Misali frequently – most members were fishers so they were already regular visitors to Misali – whereas government officials are many and visit the island far less. (Ranger, personal communication, October 23, 2011)

5.5.1 Revenue sharing & community development

Misali rangers began collecting visitation fees for MIMCA in 1999. CARE and MICA had to lobby the government to retain control of 100% of the revenue collected (Othman, personal communication, October 25, 2011). International tourists were charged a flat rate of five US dollars (even though revenue was documented in Tanzanian Shillings). Between 1999-2004 the revenue collected for MIMCA increased dramatically (Salim, personal communication, October 25, 2011). Of this revenue, 40% went to community development projects – these projects were typically the construction of basic infrastructure, such as, building schools, *madrassas*,[16] and mosques, resurfacing roads, digging wells and laying water pipes. The remaining 60% of tourist revenue went to fund infrastructure improvements on Misali, such as, thatched roof shelters for rangers, a covered information area, signs, and wooden lounge chairs. This portion (60%) of the tourist revenue was also used to pay for rangers' lodging and food while stationed on Misali, as well as a small portion towards staff income.[17]

The Executive Director of MICA explained that the 40% of revenue that they got from Misali is "not our [MICA] money; it's your [community] money" which the community can use at their discretion for community development projects (Hamad, personal communication, October 18, 2011). In an effort to distribute these funds

[16] An Islamic school, college or university
[17] Misali rangers, and the Executive Director, Accountant and office secretary of MICA

democratically, a representative from each participating conservation committee attends the MICA Executive Committee once every 3 months. The representatives gather with the Executive Director, the Secretary and the Accountant for MICA, and the Executive Committee decide as a group which community has the greatest need for the development fund at that time; whenever possible, benefits are shared on a rotating basis. Each village conservation committee identifies a priority project that will enhance livelihoods and contribute to overall community well-being. Members of the Executive Committee facilitate purchasing the materials for the project and the whole community pitches in during construction.

5.6.0 Cracks in the foundation

From the very beginning, the existence of MICA hinged on the financial support and conservation expertise of international development organizations – first the EDG then CARE. Despite the increasing amount of tourist revenue that MIMCA was generating, it was not enough to spell financial independence for either MIMCA or MICA, and both remained dependent on supplementary foreign donor funding (Lindhjem et al., 2003). Dependence on foreign donor funding presented a challenge for both MIMCA's rangers as well as MICA's staff. Some donors included small salaries for rangers, field officers and administrative staff in their budgets, while others did not. The Executive Director, Accountant and Office Secretary receive a pay cheque whenever funding was available, but the rest of MICA's members work on a voluntary basis (Lindhjem et al., 2003). MICA's Accountant from 2001 until 2007, explained that the amount he was paid for the work that he did with MICA varied depending on donor preferences (personal communication, October 25, 2011). Some donors would allot a

small amount for staff wages and others would not provide any budget for administrative costs. Funding contracts and schedules varied too, which meant that staff could go months without pay.[18] MICA's Accountant reported that those times he was able to secure a pay cheque, the salary amounted to approximately $60-70 (US) dollars a month even though he would often be working 12-14 hours a day, six sometimes seven days a week. These long hours for low wages is what eventually drove the father of eight to resign his position as MICA's Accountant (Salim, personal communication, October 25, 2011).

Reliance on donor funding did not, however, have any direct impacts on the government employees that were assigned to work on the Misali Island Conservation Program (MICP) – their pay cheques were issued by the government and they were paid on a consistent basis[19]. MICP was intended to reflect a partnership between the government and the community (via MICA) yet the government employees could depend on a steady pay cheque while MICA staff cannot. This difference is indicative of an unequal power relationship between the government and the community that would become even more skewed once MIMCA was dissolved and the much larger Pemba Channel Conservation Area (PECCA) was established in its place.

[18] Ranger, personal communication, October 23, 2011; Salim, personal communication, October 25, 2011
[19] Ranger, personal communication, October 23, 2011; Masoud, personal communication, November 25, 2011

Chapter 6: Transitioning from MIMCA to PECCA

6.1.0 Introduction

In 2003, the World Bank commissioned a background report on the financial sustainability of marine protected areas in Zanzibar. In the report the authors simultaneously identify both the financial instability of the Misali Island Conservation Project (MICP) as well as its potential for expansion:

> MICP is still financed by donor funds, and has not yet developed a strategy for achieving financial sustainability. The performance of MICP so far looks promising, but it is unlikely that tourist visits to Misali will be able in the short term to finance operating costs. In the longer term, MICP may be seen as a platform for the potential future expansion of marine protection in Pemba. Since MICA is currently active in most parts of Pemba, once Misali is functioning well, the conservation and development activities can be expanded to other important fishing grounds in Pemba. Careful development of tourism to such an MPA [marine protected area] system has the potential to generate significant amounts of revenue and contribute to financial sustainability. (Lindhjem et al., 2003, p.37)

Foreshadowing the creation of the Pemba Channel Conservation Area (PECCA), the authors clearly identify MICA's potential capacity to manage joint conservation and development activities on a larger-scale.

In this chapter I narrate the implementation of PECCA and situate the process of its creation in the broader context of two global trends in conservation and resource management. The first is the push to increase the total percentage of the world's oceans that are under some form of regulated protection (e.g. conservation networks, transboundry protected areas, conservation corridors). The second is the drive to integrate conservation and development objectives with a particular focus on increasing community involvement in coastal management (e.g. integrated coastal management, community-based conservation). The establishment of PECCA represents an attempt to

scale-up the successes of community-based conservation (i.e. MICA) and marine protected areas (i.e. MIMCA).

6.2.0 What is MACEMP?

This chapter begins with a brief introduction to the Marine and Coastal Environment Management Project (MACEMP) that mandated the creation of PECCA. On July 21, 2005, the Government of the United Republic of Tanzania received $62.75 million (US$) in international development assistance through the World Bank to implement the Marine and Coastal Environment Management Project (MACEMP). The bulk of this money – $50million (US$) – was a loan from the International Development Association (IDA). The IDA was established in the 1960s as the lending arm of the World Bank mandated is to provide low-interest loans to the world's poorest countries. Low-interest or not, the important point here is that $50million was added to Tanzania's external debt in order to finance this massive nation-wide environmental management project.

The Global Environment Facility (GEF) contributed the second largest amount to MACEMP – a $10million (US$) grant. The GEF is an international financing agency that provides grants to developing countries as well as countries with economies in transition. The GEF was established through a World Bank resolution in 1991 and was implemented as a joint initiative between the World Bank, the United Nations Development Program (UNDP), and the United Nations Environment Program (UNEP). After the UN Earth Summit in 1992, the GEF was structured to become its own independent institution. Shortly thereafter, the GEF became the financial mechanism for several prominent international conventions concerning the environment, including both the United Nations

Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

MACEMP was a six-year project that was intended to start in July 2005 and run until August 2011. The project was designed to simultaneously achieve both conservation and socioeconomic development goals:

> The sound management of coastal resources… will contribute directly to improved incomes and to reduced vulnerability to external shocks. A second hypothesis (acting in a reverse causal direction from the first), is that increased local empowerment, through enhancing community management of the resource base and through better definition of coastal and marine property rights and responsibilities, will in turn lead to more sustainable use of the resource base. (GEF, 2005, pp. 2-3)

In Zanzibar, the MACEMP was placed under the administrative responsibility of the Ministry of Agriculture, Natural Resources, Environment and Cooperatives. The overall objective guiding the nationwide project was to achieve the sustainable management of coastal and marine resources by utilizing an integrated approach to conservation and development. There were four components to the project: 1) sound management of the exclusive economic zone; 2) sound management of the coastal marine environment; 3) establishment of a coastal community action fund; and 4) provision of project implementation support.

The objective of Component 2 was to establish a network of marine protected areas that could regulate access to coastal and marine resources through combined community/government management strategies. Component 2 was divided into two subcomponents: *Subcomponent 2(a)* was designed to support capacity building at the local level in order to develop community-based management action plans for specific coastal areas. These action plans were intended to be consistent with Zanzibar's 1996 Environmental Act in that they were designed to initiate community-based management,

promote marine zoning and support integrated coastal land-use / marine spatial planning (GEF, 2005, p. 8). *Subcomponent 2(b)* was intended provide the means for effective and efficient implementation of the planned network of marine protected areas. The majority of the funding allotted to this subcomponent – US$2.6 million – was directed towards initiating two new marine protected areas in Tanzania. Component 2 was designed to "promote marine zoning that encourages local co-management and decreasing open access conditions" (GEF, 2005, p. ix). Tanzania had committed to securing a minimum of 10% protection of its marine environment by 2012 during the Fifth World's Park Congress in Durban 2003. The establishment of these two new marine protected areas was considered a step towards meeting that objective (Ruitenbeek et al., 2005).

One of the two new protected areas being created under MACEMP's *Subcomponent 2(b)* was the 910km^2 Pemba Channel Conservation Area (PECCA). The government of Zanzibar passed the PECCA Order on Sept 23 2005 – with it the Misali Island Marine Conservation Area (MIMCA) was officially dissolved and PECCA was established as its successor. The establishment of PECCA is best understood in the context of broader shifts in coastal conservation and resource management. MACEMP is the product of a massive international effort to regulate the interaction of human populations with the coastal environment. The World Summit on Sustainable Development in 2002 and the World Parks Congress in 2003 encouraged the government of Tanzania to consider the potential of marine protected areas to boost economic development and reduce poverty in coastal areas (Ruitenbeek et al., 2005). These conferences embodied a rising global enthusiasm for marine conservation networks and ICM; the intention of MACEMP was to translate these concepts from theory into practice. Therefore, PECCA was established as a key component in a proposed nationwide

integrated network of marine protected areas that would be implemented under MACEMP.

Pemba Island was identified as a potential site for establishing a "Core Priority Network" of marine protected areas in the World Bank sponsored book: *Blueprint 2050: Sustaining the Marine Environment in Mainland Tanzania and Zanzibar* (Ruitenbeek et al., 2005, p. 5). As a symbol of the government's endorsement of the book and its findings, Blueprint 2050 was officially launched on April 18, 2005 by the Vice President's Office in Tanzania (GEF, p. 4). The findings in this book were published in support of MACEMP's Component 2 – the sound management of coastal and marine environments. The authors use the term 'network' to describe a system comprised of protected areas with a focus on conservation as well as marine managed areas with a focus on sustainable utilization. The book explains that establishing a network of marine protected areas will increase ecological protection while also contributing to poverty alleviation, financial sustainability, and institutional robustness (Ruitenbeek et al., 2005). MACEMP's intention for this network of marine protected areas was to build on "ICM strategies that empower and benefit coastal communities" (Lindhjem et al., 2005, p.5) and particularly at "the local government level" (Lindhjem et al., 2005, p.8).

6.3.0 Creating PECCA from the bottom-up

The degree to which the community was involved in the decision making process leading up to PECCA remains unclear. The story of how and why PECCA came to be is slightly different depending on the source. Both the current Executive Director and Secretary General of MICA describe the idea for PECCA emerging from the ground up. Hamad, the current Executive Director of MICA said that PECCA was, in fact, "a MICA

idea." The original idea to create a large conservation area or network of marine protected areas in Pemba had originated among MICA members. Hamad explained that MICA was inspired to expand the existing protected area (i.e. MIMCA). Their reasoning: Misali Island is a very small area, and they recognized that Misali was able to generate enough money from tourism revenue and foreign donors to fund small community development projects across Pemba, so "why don't we conserve this channel [Pemba Channel] all together? We hoped to get a lot of money [for development projects]" (Hamad, personal communication, October 18, 2011). MICA saw the expansion of MIMCA as an opportunity to both to conserve a larger area and to increase revenue for development projects. MICA sought to utilize this revenue boost to expand their reach through increased environmental education and community development projects across Pemba Island. According to MICA's vision, every community on Pemba Island would have a stake in the management of this expanded protected area network.

The current Head of Pemba's Department of Fisheries and Marine Resources (hereafter referred to as the Department of Fisheries) also described PECCA as an idea that originated with "the community" (Abdul, personal communication, October 29, 2011). However, he provided no further details on which communities or community-based organizations (i.e. MICA) had been involved in the PECCA planning process. Abdul explained that "the community" demanded that the Department of Fisheries create PECCA – the community was tired of seeing Pemba's reefs being destroyed and fishers were concerned that their total catches were shrinking (personal communication, October 29, 2011). In response to these concerns, representatives from the Department of Fisheries decided that the solution would be to create a larger protected area: "So we [Department of Fisheries] got the idea from the community and we take it… we decided

to do this, but on the advice of the community" (Abdul, personal communication, October 29, 2011). Every village supported the creation of a larger protected area, so Department of Fisheries went ahead with plans to create PECCA (Abdul, personal communication, October 29, 2011).

A 2004 assessment of fisher attitudes towards conservation initiatives in Pemba found that the majority of fishers they interviewed were in support of conservation (EcoAfrica, 2005a, p. 37). MICA has had a vital role to play in garnering community support for conservation on Pemba. Since its establishment in 1997, MICA representatives have been travelling to and working with some of Pemba's most remote fishing communities. Salim describes wading into water over waist deep holding flip-charts, DVD-players and/or TVs over his head to get to one of Pemba's more isolated communities: "This is part of the reason why MICA gained the trust and support of these communities" (personal communication, October 25, 2011). The head of the Wesha village conservation committee praised MICA for enhancing environmental awareness in his community claiming it was "MICA who woke us up" (personal communication, November 2, 2011). This trust has been reinforced by the tangible impact of MICA's community development projects. The roads, buildings, and wells that were built using the revenue generated by Misali's tourists are physical reminders of MICA's legacy. These findings suggest that the idea of scaling-up the Misali conservation area originated with community-level desires to increase development prospects and enhance their ability to attain conservation goals.

6.4.0 Top-down: EcoAfrica & the creation of PECCA

While the idea of larger conservation area was supported at the community-level, there is evidence to suggest that the implementation of PECCA was more a product of top-down rather than bottom-up development. When it came to determining the physical boundaries of the proposed conservation area and the rules governing its protection, these were largely determined and executed from the top-down. During the preparatory phase of MACEMP, EcoAfrica, an environment and development consultancy agency based in South Africa, was hired to conduct a rapid assessment of all of Pemba Island. Both MICA's former Accountant and a representative from CARE claim that EcoAfrica's report was largely responsible for determining the shape and character of PECCA. At this phase of MACEMP, the exact boundaries of Pemba's proposed network of marine protected areas had yet to be clearly defined and the whole island was being taken into consideration. EcoAfrica's role was to determine those boundaries through an assessment of Pemba's conservation potential and to identify aspects of integrated coastal management that could be supported through MACEMP (EcoAfrica, 2005a, p. viii).

According to the MACEMP proposal, EcoAfrica was to adhere to the following selection criteria in identifying Pemba's proposed conservation area network:

- Areas with strong community-driven demand and ownership for marine/fisheries managed areas and/or co-managed marine conservation areas;
- Areas of national priority as per PRS II [Poverty Reduction Strategy], specifically, highly impoverished areas with high dependence on natural resources;
- Areas with strong potential for sustainability (from and institutional and financial point of view);
- Areas of global environmental importance (i.e. biodiversity hotspots);
- Areas where MACEMP can play a catalytic role (i.e. MACEMP support for institutional strengthening, capacity building, development of a management regime, etc. would lead to leverage of additional financial resources from other donors). (EcoAfrica, 2005, p.4)

To aid them in their assessment, EcoAfrica hired a team of nine Zanzibaris. This team consisted of three MANREC[20] representatives from the head office in Unguja, one MANREC representative from the Department of Fisheries and Marine Resources in Pemba, and four representatives from environmentally focused, community-based organizations in Pemba. One of the latter representatives was MICA's former Accountant, Salim.[21] He recalls that EcoAfrica and their team of hired local experts worked diligently between the 1st and the 20th of November 2004 assessing the viability of a conservation area network on Pemba's west coast (Salim, personal communication, October 25, 2011).

When they finished, EcoAfrica reported that a total of 154 interviews had been conducted with fishers living in 19 target communities on Pemba. These interviews focused on the socio-economic significance of marine and coastal resources and what effect their use has on Pemba's ecosystem health and biodiversity (EcoAfrica, 2005a, p.7). In order to assess coastal biological diversity and its potential for tourism, the EcoAfrica assessment team observed coastal ecosystems and recorded their condition using video and photography (EcoAfrica, 2005a, p.8-9). A team of two divers conducted a total of 13 dives off the island's west coast to assess "health of the coral reefs and potential for tourism" (EcoAfrica, 2005a, p.8). Their assessment used four criteria to evaluate coral reef health: 1) signs of damage from anchor or boat; 2) signs of fishing activity, such as, turned or dragged corals and/or bits of fishing gear caught in them; 3) weather/climate damage (i.e. storm damage and coral bleaching); 4) signs of damage caused by explosives (EcoAfrica, 2005a, p.9). In its assessment of the tourism potential of

[20] Ministry of Agriculture, Natural Resources, Environment and Cooperatives (MANREC)
[21] Salim worked as MICA's Accountant from 2001-2009

the reef system, EcoAfrica, focused primarily on aesthetic value – i.e. the abundance and diversity of big, colorful fish and the prevalence of marine species that pose harm to tourists (e.g. *Diadema*[22]) (EcoAfrica, 2005a, p.9). To add more detail and depth of context, EcoAfrica supplemented this fieldwork with a review of relevant academic literature and related research pertaining to coastal conservation and development in Pemba.

In evaluating the results of its research, EcoAfrica decided that the entire west coast of Pemba should be the focus area for one of MACEMP's proposed conservation networks (EcoAfrica, 2005, p.10). While the social well-being, economic health and political stability of coastal villages across Pemba Island are comparable, the west coast of Pemba has higher levels of marine biodiversity, healthier reef systems, and a greater number of small islands, channels and inlets than the east coast. The east coast of the island faces the open Indian Ocean making it prone to a greater frequency of rough, stormy waters. Many of Pemba's fishers that live on the east coast spend the better part of the north-east monsoon season (April-September) fishing off the west coast to take advantage of its calmer waters. For these reasons, EcoAfrica (2005a, p. 62) recommended in its final report that PECCA be implemented along the west coast of Pemba Island.

6.4.1 Scaling-up successes: Justifications for expansion

The report recommended that MACEMP focus on the Misali Island Marine Conservation Area (MIMCA) as the "first target area" because it is "a scientifically proven 'seed bank' of biodiversity for PECCA and the entire region and a meeting point for fishers from the entire island" (EcoAfrica, 2005a, p. 62). Since Misali Island was

[22] *Diadema* is a genus of sea urchin endemic to the tropical waters of the Indo-Pacific region.

already well known as a conservation area to fishers, it provided an ideal location from where further "conservation initiatives could be expanded" (EcoAfrica, 2005a, p. 60). Likewise, the report identified MICA as potential leaders in "building a common vision" for the proposed conservation area (EcoAfrica, 2005a, p. 64). MICA and the MIMCA were the precursors to PECCA, which placed MICA in an ideal position to contribute to the implementation and management of PECCA. During their interviews, EcoAfrica (2005a) found that most fishers had a positive impression of conservation and were "willing to support PECCA" (p.57). The report gives credit to MICA's success in raising awareness among fishers across Pemba about the importance of coastal conservation, and it identifies MICA's village conservation committees as "ideal entry points for PECCA" (EcoAfrica, 2005a, p.47).

A number of communities in Pemba had already experienced positive outcomes from the smaller MIMCA, including the community savings and credit programmes as well as financing provided for small-scale agriculture projects. This made pitching the idea of a larger conservation area, with the capacity to generate more tourist revenue, an easy sell (Ali, personal communication, October 19, 2011). According to CARE representative Othman, the government recognized that MICA had "a high capacity [for] managing these structures [i.e. village conservation committees] and mobilizing [the] community" (personal communication, October 25, 2011). With this experience in mind, MICA's General Secretary claims that MICA had hoped to engage a "network of fishers" in which every village across Pemba would have a conservation committee and they could work together to preserve Pemba's diverse natural resources (Ali, personal communication, October 19, 2011). This was certainly a feasible idea; the EcoAfrica report observed that since many fishers in the area already worked cooperatively to some

extent, they were "...ready to be assisted to organize themselves in a PECCA-based fishing cooperative but such an initiative should be undertaken carefully and implemented very thoroughly" (EcoAfrica 2005a, p.66-67).

6.5.0 A critical look at PECCA's Order

The PECCA Order was released on September 23rd 2005 – it is the document that legally defines PECCA's geographic boundaries and its management structure. PECCA's management structure is very similar to how the Misali Island Marine Conservation Area was managed. The Department of Fisheries organized PECCA community-based management committees, which are referred to as 'fisheries management committees.' Abdul explained that there are 28 fisheries management committees involved in PECCA management representing the 34 villages that fall within PECCA's boarders[23] (personal communication, October 29, 2011). These management committees were similar to MICA's village conservation committees in that they were responsible for the supervision and sustainable management of PECCA's natural resources. The Head of Department of Fisheries in Pemba, Abdul, was careful to clarify that only fishers can be members of PECCA management committees and only the management committees that can decide how their share of PECCA revenue is spent (personal communication, October 29, 2011). This is different from MICA's village conservation committees that are open to anyone who is interested.

Similar to the organization of MICA's General Assembly, one member from each of the 28 fisheries management committees is elected to represent their community as

[23] In Pemba's three town-centers – Chake Chake, Mkoani, and Wete – more than one village uses the same landing site (or port). In these instances, two villages are merged into one committee, which works out to 28 fisheries management committees (Abdul, personal communication, October 29, 2011).

part of the PECCA Management Committee. The Management Committee has 30 members: 28 individuals each representing one of the 28 PECCA communities, one Chairperson and one Secretary. According to the PECCA Order, the Chairperson must be a representative from the Department of Fisheries and the Secretary must be a representative from one of the village-based fisheries management committees. Both the Chairperson and the Secretary are elected for three year terms by members of all 28 fisheries management committees. The PECCA Management Committee meets twice a year – once in January and once in July – in the PECCA head office and they are responsible for all management related issues of PECCA; including zoning, regulation, enforcement, and revenue. [24] The Management Committee must submit quarterly, semi-annual and annual reports to both the Director of Department of Fisheries and the Advisory Committee. These should include a revision of management activities, services provided to communities, revenue collected and financial expenditures.

The Order also mandates the creation of an Advisory Committee that the PECCA Management Committee must report to and/consult on all issues related to PECCA's management. In this way, PECCA's Advisory Committee is similar to the Misali Management Committee. As prescribed in the PECCA Order, the Advisory Committee should include the following members: the Directors responsible for the Department of Fisheries, the Department of Forestry, and the Institute of Marine Science; the Executive Secretary of Pemba's Tourism Commission; and Pemba's District Commissioners;[25] and Members of the House of Representatives for the communities that lie within PECCA's

[24] When PECCA was first implemented in 2005, the Management Committee met in the government offices in Chake Chake. The PECCA head office began construction between 2007 or 2008 and was completed in 2010.
[25] Includes the District Commissioners of Micheweni, Wete, Chake Chake, and Mkoani Districts

boarders.[26] The Order does not specify any minimum or maximum number of members for the Advisory Committee, nor does it go into any further details about what the exact duties of the Committee are save that it is intended to be an "advisory organ" for all PECCA management issues. Since the Management Committee has to submit reports to the Advisory Committee, this vague description leaves room for confusion over which committee – Advisory or Management – has more clout in PECCA management decisions. The Order does, however, identify the Department of Fisheries as the primary institution responsible for PECCA management. According to the Order, the Department of Fisheries has the power to undertake or permit to be undertaken any action within PECCA, providing that it is done in the interest of "education, research, conservation, [and] all or part of the community or government" (PECCA Order, 14.5). These vague terms allow for a wide range of interpretations for what sort of actions the Department of Fisheries has the power to sanction.

The regulations guiding conduct within PECCA boundaries are brief and vague. Within PECCA boundaries, destructive fishing gear and destructive methods of harvesting marine life, including the removal of coral, are prohibited. Anchorage and camping are restricted to certain designated areas in PECCA and may only be pursued if the Department of Fisheries has granted permission to do so; however, exactly how the Department of Fisheries's permission is obtained is not specified in the 2005 Order. According to the Order, the PECCA Management Committee has the power to prepare codes of conduct for any marine activity (i.e. anchorage, mooring, water sports, etc.)

[26] Includes Honourable Memebers of the House of Representatives for Konde, Gando, Utaani, Mtambwe, Ziwani, Chake Chake, Mkoani, and Chokocho Constituencies

"where necessary". It is not clear, however, exactly what process is undertaken to determine when the preparation of a code of conduct is necessary.

The Order provides a schedule of fees for entrance, anchorage, research, filming, and educational visits to PECCA. Like MICA's General Assembly, the Management Committee is responsible for all of the revenue collection and distribution in PECCA. Previously, the revenue generated by Misali Island was divided 60% for operational costs and 40% for community development projects. Under PECCA the division of revenue has shifted. 70% is now retained to cover PECCA's operational costs as well as expenses for Advisory and Management Committee meetings and administrative costs. The remaining 30% is divided up evenly between each of the 28 village-level fisheries management committees and is intended to "support community activities" (Abdul, personal communication, October 29, 2011). The fisheries management committees do not receive cash. Instead, they must notify the Management Committee on how they would like to spend their share of the revenue, which the Management Committee then facilitates. For example, one fisheries management committee may decide that they need replace their old destructive fishing gear with new regulation gear, and another may decide that their community needs bricks to build a new school. The PECCA Management Committee would then purchase and distribute new fishing gear for the one community and purchase materials and hire builders to construct a new school for the other.

6.7.0 'Kicked out' of PECCA?

After the establishment of PECCA in September 2005, the Department of Fisheries hired MICA under a MACEMP contract to help with the PECCA implementation process. The contract began in 2006 and ran for eighteen months during

which time MICA was hired to develop conservation management frameworks for five communities within PECCA's boarders.[27] MICA's General Secretary, Ali, explained that these management frameworks were designed to conserve local coastal/marine resources and foster community participation in management, thereby reducing the pressure on Misali's resources (personal communication, October 19, 2011). The intention was for each community to develop regulations that were specific to conserving their coastal ecosystem. Once each community had developed their own management framework, these frameworks were intended to be ratified by the government and to act as community-specific conservation by-laws.

MICA was hired under contract because, while the 2005 PECCA Order does provide a clear avenue for community participation in the PECCA management scheme, the PECCA Order does not include any mention of MICA. All signs leading up to the actual drafting of the PECCA Order seemed to indicate that MICA had a vital role to play in the successful implementation of PECCA. Thus, the explicit exclusion of MICA from the official management framework came as a complete surprise to all interviewees.[28] Some felt that MICA had been deliberately excluded, or, in the words of four different informants, MICA had been "kicked out" of the PECCA management structure.[29] None of these informants knew why the government decided to exclude MICA from the official management framework for PECCA (i.e. the 2005 PECCA Order).

[27] These communities were: Chokocho, Kangani, Kisiwa Panza, Waaba, and Wesha
[28] Except for Abdul the Director of the Department of Fisheries-Pemba
[29] The following interviewees used the phrase "kicked out" when referring to MICA's absence from PECCA's management structure: Hamad, October 18, 2011; Ali, October 19, 2011; Salim, October 25, 2011; Othman, October 25, 2011.

According to Dr. Fahima of the University of Dar es Salaam's Institute of Marine Science,[30] PECCA's boarders and management structure were created entirely from the top-down and decisions were made without consulting anyone – not her or any of her colleagues at the institute, not MICA and not local communities (personal communication, November 17, 2011). The chairperson of MICA's Wesha village conservation committee, Haji, claimed that the first time his committee heard that MICA was not included in the PECCA management structure was after the area had been gazetted in 2005 (personal communication, November 2, 2011). Haji reported that none of the fishers in Wesha that he knew had been consulted by any government official about the implementation of PECCA (personal communication, November 2, 2011). One of MICA's board members, Abeera, relayed a similar story:

> I don't know how and why [PECCA] was created. As a board member, I was at a meeting, then they just told us; we [MICA] are no longer, that MICA has been taken under the PECCA. So I don't know what happened before, or what comes to make MIMCA go to PECCA. (Abeera, personal communication, October 28, 2011)

Abeera expressed her frustration and disappointment over MICA being excluded from the final stages of the PECCA management planning process. She and other MICA board members were under the impression that the establishment of PECCA was merely an expansion of the original Misali Island Marine Conservation Area (MIMCA) and that MICA would continue to grow as the primary community-based stakeholder involved in the management of the new conservation area. Instead, MICA's Executive Committee informed the board members of the government's decision to exclude MICA shortly after the 2005 PECCA Order was passed (Abeera, personal communication, October 28, 2011).

[30] The Institute of Marine Science is based in Stone Town, Unguja Island, Zanzibar

As a result of PECCA's establishment, MICA has not received any tourist revenue from Misali or any other location within PECCA's boundaries since 2006. The Department of Fisheries has organized their own village fisheries management committees in areas where MICA-affiliated conservation committees already exist and this was a point of contention during the implementation of PECCA. Othman, the CARE representative, wrote letters to the Minister and the Principle Secretary of the Ministry of of Agriculture, Natural Resources, Environment and Cooperatives informing them that "…this is not a very good way of managing PECCA because it will create some problem, some conflict, some confusion between [within] the communities themselves... between what [MICA] village conservation committees [are] doing and what [government] fisheries management committees [are] doing" (personal communication, October 25, 2011). Even though some fishers belong to both MICA's and Department of Fisheries' committees, MICA representatives confirmed Othman's claim that there is still a lack of coordination between MICA's village conservation committees and the government affiliated fisheries management committees.[31]

Abdul, the Director of Department of Fisheries in Pemba, explained that his Department felt that PECCA's community-based committees should deal strictly with fisheries management issues and, thus, should include only fishers (personal communication, October 29, 2011). MICA's village conservation committees, on the other hand, are open to all members of the community and deal with a wide scope of environmental conservation issues. Therefore, according to Abdul, coordination between MICA's committees and the government's committees "depends on the issue" (personal communication, October 29, 2011).

[31] Ali, personal communication, October 19, 2011; Salim, personal communication, October 25, 2011

6.7.1 The dispute

When the Misali Island Conservation Project (MICP) was initiated in 1996, the project and the associated marine protected area (i.e. MIMCA) were both mandated under the Commission of Natural Resources (which became the Department of Forestry in 2000). The former Head of the Commission of Natural Resources became the Head of Department of Forestry Pemba, and during this time, he worked closely with MICA and CARE on the Misali Island Conservation and Development Program (MICODEP) as well as the government-initiated MICP. From its inception up until 2005, MICA's General Secretary reports "working well" with both the Department of Forestry and the Department of Fisheries (Ali, personal communication, October 19, 2011). Prior to PECCA, MICA's Chairman, Hamza, reported having a cooperative working relationship with the government, particularly at the village and district level (personal communication, October 19, 2011). This relationship began to sour when PECCA was established in 2005.

Several informants alluded to a dispute between the Department of Forestry and the Department of Fisheries as the reason for MICA's exclusion from PECCA's management.[32] MACEMP was implemented through the Ministry of Agriculture, Natural Resources, Environment and Cooperatives (MANREC) in Zanzibar and the Ministry made the decision to put the Department of Fisheries in charge of PECCA's implementation. The responsibility for implementing of the proposed conservation area came with a significant influx of funding from MACEMP. This made the assignment all

[32] Masoud, personal communication, November 25, 2011; Slaim, personal communication, October 25, 2011; Othma, personal communication, October 25, 2011;

the more alluring for government departments already starved for funding and likely aggravated existing tensions between them.

MICA tried to protest the Department of Fisheries' decision to exclude them from PECCA's management strategy. In 2006, MICA's Accountant, Salim, went with two other MICA representatives to discuss the situation with the Minister of Agriculture, Natural Resources, Environment and Cooperatives: "He promised us that MICA would be involved from the beginning to the end to implement the project [i.e. PECCA]. But it was not true" (personal communication, October 25, 2011). MICA's Executive Director, Hamad, relays a similar story of going meet with the Principle Secretary of MANREC. Despite being the Executive Director of MICA, Hamad is also an employee with MANREC. He claimed that the Principle Secretary of MANREC threatened his job with the Ministry when he protested MICA's exclusion from the PECCA management scheme (personal communication, October 18, 2011).

6.7.2 MICA in the aftermath of PECCA

My field research suggests that MICA has deteriorated significantly since PECCA's establishment. Without the regular influx of tourist revenue generated by Misali Island, MICA's financial stability has been severely shaken. The association has, once again, become entirely dependent on foreign donor funding. For MICA, this represents a regression back to 1998 when it was first taking shape as a community-based conservation organization – only the association no longer has any stake in the management of Misali Island. I asked Othman, one of MICA's former Executive Directors, if he felt that the establishment of PECCA had impacted MICA's work:

> Greatly! It had a very great impact on MICA. Because by that time, MICA was… losing all authority, losing all stakes that initially it had... because MICA was

> specifically created or established to manage Misali Island. So, when they are told to get out of it [Misali Island], it was like finding themselves nowhere. Then came the idea that we [MICA] have to adapt, we have to change even the name... instead of MICA we should be called PICA, which means Pemba Island Conservation Association. Because we [MICA] don't have any stake in Misali, so how can we call ourselves MICA? You see? …but it was a huge blow to MICA, I can tell you that, because that area was famous because of MICA... the government was not spending even a shilling to manage Misali. Everything was from project [MICODEP] and later on through the collection [of tourist revenue]. (personal communication, October 25, 2011)

As Othman suggests, MICA's identity has been built up around the management of Misali Island. The creation of PECCA and the subsequent exclusion of MICA from its management structure have left MICA struggling to find its place within the larger coastal management framework of Pemba Island.

Without the responsibility of managing Misali Island, informants report that MICA's activity within communities has been drastically reduced.[33] MICA has not held a meeting of its General Assembly or Board of Trustees since the association stopped receiving tourist revenue from Misali in 2006.[34] The chairperson of the Wesha Village Conservation Committee, Haji, explained that he and his committee are supposed to be meeting once a month; however, they meet far less frequently since PECCA has been established. As of November 2011, Haji reported that the last time he and his village conservation committee held a meeting was in June 2011 (personal communication, November 2, 2011). Despite its reduced activity, neither the Executive Director nor the General Secretary of MICA made any indication that the association had intentions to cease its operation.

[33] Hamza, personal communication, October 21, 2011; Salim, personal communication, October 25, 2011; Othman, personal communication, October 25, 2011; Abeera, personal communication October 28, 2011; Haji, personal communication, November 2, 2011; Masoud, personal communication, November 25, 2011.
[34] Othman, personal communication, October 25, 2011; Abeera, personal communication, October 28, 2011

Since PECCA's establishment, MICA has continued to apply for donor funding and pursue various local-level conservation and development initiatives in communities across Pemba Island. MICA's contract under MACEMP finished in early 2008. Since then MICA has been able to attain funding from the UNDP for a mangrove planting project, from the government of Finland for a tree planting project, as well as funding from a Tanzanian NGO to promote HIV/AIDS awareness education among fishers.[35] These projects have allowed MICA to continue to exist as a community-based organization. However, these projects also come with predetermined objectives that are controlled by international organizations; as a result, they provide less opportunity for community participation in determining project objectives and how the funds are spent.

6.8.0 PECCA's failures

MACEMP was scheduled to last for six years (2005-2011). The GEF extended the project in 2011 for one more year without any additional funding. While the MACEMP proposal had boasted confidence in its six year time frame for implementation (see GEF 2005, p. 2), several of my informants suspected that the one year extension was granted due to the incomplete or improper implementation of certain project components[36]. The MACEMP proposal justifies PECCA's creation as a practical step towards meeting conservation goals while bolstering economic development. However, enforcement of the rules and regulations governing PECCA is weak, and the degradation of Pemba's reefs continues unabated. While there has been no mention of absolving PECCA, the area has not achieved financial sustainability and the funding required for its on-going operation is

[35] Hamad, personal communication, October 18, 2011; Ali, personal communication, October 19, 2011
[36] Othman, personal communication, October 25, 2011; Salim, personal communication, October 25, 2011; Abdul, personal communication, October 29, 2011; Fahima, personal communication, November 17, 2011; Masoud, personal communication, November 25, 2011.

extremely limited (Abdul, personal communication, October 29, 2011). Most importantly, while the PECCA Order does provide an avenue for community participation in its management structure, the exclusion of MICA raises a red flag to the legitimacy of that participation.

6.8.1 Lack of enforcement

As of November 2011, there were only four rangers employed by the Department of Fisheries who were available to patrol, collect fees, and enforce PECCA regulations (Abdul, personal communication, October 29, 2011). As with the rangers of the previous Misali Island Marine Conservation Area, there are always a minimum of two PECCA rangers stationed on Misali Island for two week shifts at a time. At the time of my fieldwork, the Head of Department of Fisheries explained that his department had provided funding for two additional rangers to attain college diplomas in conservation management; however, he was not willing to disclose any further details on the rangers, the college or the program that they were attending (Abdul, personal communication, October 29, 2011). He was adamant that the Department of Fisheries was planning to hire four more rangers within the next month to boost their capacity to enforce PECCA regulations; however, at the time of our interview they had not yet initiated the hiring process (Abdul, personal communication, October 29, 2011).

Even though the total area under protection has increased with the establishment of PECCA, insufficient enforcement within the conservation area means that illegal fishing continues to degrade reef habitats. The Department of Fisheries has provided PECCA rangers with two boats for transportation and patrols in PECCA waters. Due to the high cost of fuel, several informants reported that rangers do not often stray far from

their post on Misali while doing their patrols and that this has contributed to the continued exploitation of PECCA's coral reefs.[37] Neither the Department of Fisheries nor the Ranger would confirm these reports; however, both complained about the high cost of fuel on several occasions.

The results of a 2009 report on the health of coral reefs in PECCA, however, add credence to my informants' claim. In that year, the International Union for the Conservation of Nature (IUCN) published the findings from a survey done on the resilience of PECCA's coral reefs to the negative impacts of climate change (e.g. rising ocean temperatures, ocean acidification, irregular and severe weather). The report found that the no-take zone around Misali Island had the highest hard coral cover (86%) as well as the highest coral diversity (42 genera). Other survey sites in PECCA found the reefs to be severely degraded; for example, Paradise reef and Fundo Outer reef each had very low coral cover (3% and 5% respectively), low coral diversity (23 and 33 genera respectively) and were largely dominated by turf algae (Grimsditch et al., 2009, p. 1). The IUCN speculates that reasons for this higher degree of ecosystem degradation are overfishing and the use of destructive fishing techniques. The study found low numbers of species with a high commercial value, such as, *Haemulidae* (sweetlips), *Mullidae* (goatfish) and *Serranidae* (groupers) and no sharks were sighted during the survey at all (Grimsditch et al., 2009, p. 1). The survey found that the enforcement of fishing regulations was not evident and that "illegal fishing methods are routinely utilized" within PECCA boarders (Grimsditch et al., 2009, p. 6) These findings from the IUCN survey suggest that PECCA

[37] Othman, personal communication, October 25, 2011; Masoud, personal communication, November 25, 2011; Salim, personal communication, October 25, 2011

has had little impact on protecting the marine biodiversity among the coral reefs that fringe Pemba's west coast.

A lead dive instructor from Fundu Lagoon,[38] Andre, also lamented PECCA's lack of enforcement. He said that during the time when MICA was in charge of the management of the Misali Island, MICA staff would regularly check in with the rangers stationed on the island and would keep them motivated and up to date with training. When MICA was in charge of managing Misali, Andre never once found boats fishing in the no-take zone. Now under government management, the rangers seem less motivated to keep up with their duties (Andre, personal communication, September 30, 2011). Confirming his suspicion, a volunteer from the United States who had been living in Pemba for a year reported witnessing one of the rangers take a patrol boat out for a 'joy-ride' just off Misali's shores – "he was doing donuts, throwing spray up and racing back and forth in the water within 100 meters of the beach" (personal communication, November 4, 2011). Since the establishment of PECCA and the disassociation of MICA from the management of Misali Island, Andre claims "it's like a floating city" around Misali and that includes within the no-take zone. While diving on Misali's reefs, he has heard the occasional "boom" caused by dynamite fishing, but has not seen any newly damaged reefs around Misali since PECCA's creation (Andre, personal communication, September 30, 2011).

Abdul, the Head of the Department of Fisheries in Pemba, admitted that the department has not been "practicing" zoning regulations in PECCA (personal communication, October 29, 2011). When asked why the Department of Fisheries has not been enforcing zoning regulations in PECCA, Abdul replied that PECCA is "still young"

[38] An exclusive hotel resort on the Waaba peninsula near Misali Island

(personal communication, October 29, 2011). The implication of Abdul's comment is that PECCA is still in the implementation process. The establishment of zoning regulations is a fundamental aspect of Component 2 of MACEMP, and Abdel's comment stands in stark contrast to the MACEMP proposal's claim that six years was a "realistic timeframe" for full project implementation (GEF, 2005, p. 2).

6.8.2 Dependence on international funding

External donor funding creates a double edged sword: were it not for foreign donor investment, many of Pemba's coastal management initiatives may not be able to exist, and yet it is this very reliance on foreign donor investment that places their financial sustainability in jeopardy. A World Bank study found that government funding for marine protected areas and community-based coastal management initiatives only made up between 5% and 15% of project budgets (Ruitenbeek et al., 2005). A budget deficit forces these initiatives to look for additional funding elsewhere. As of 2000, foreign donor funding made up between 80-90% of the total funds available for marine protected area budgets in Zanzibar (Ruitenbeek et al., 2005). PECCA has not escaped this trend and despite the completion of MACEMP, the protected area has not achieved any level of financial independence or stability.

Unfortunately, the tourist revenue that the Department of Fisheries collects from the area does not provide enough to cover all of PECCA's operating costs (Abdul, personal communication, October 29, 2011). As a result, once the MACEMP project has been completed the government will begin to look for funding from other international donors to support PECCA (Abdul, personal communication, October 29, 2011). Masoud, the Coastal Resource Manager for the Department of Fisheries, predicts that once the

MACEMP deadline has been reached the government will continue to provide salaries for those government employees hired under MACEMP. However, the department will likely be unable to provide adequate funding to support the daily operational costs of PECCA (Masoud, personal communication, November 25, 2011).

There are several problematic features of this dependency; the most significant is the uneven power relationship it creates between local, community-based conservation initiatives in need of financial support and the foreign donors that provide it. Levine (2007) explains that the international NGOs and foreign donors that implement these integrated conservation and development projects have little incentive to ensure that meaningful community participation in decision making and conservation management is sustained in the long-term. Donors are more concerned with producing quantifiable results to include in final reports than with specific outcomes (Levine, 2007).

6.8.3 Weak community-based conservation

In their review of the community-based conservation movement, Dressler et al. (2010) argue that the founding principles of community-based conservation have been "caught up in complex administrative and policy structures" (p.5) and distorted through the institutionalization of its practice and design. Indeed, this appears to be the case with the community-focused approach that PECCA has attempted to implement. As of November 2011, the community conservation and resource management frameworks that MICA had facilitated the development of had not been implemented in government legislation (Masoud, personal communication, November 25, 2011). Masoud explained that developing the management plans with the communities was just one stage in the implementation process, and the next was for the Department of Fisheries to review the

management plans and approve them. The management plans, however, have yet to be officially approved by the government and are not currently supported with enforcement. Both the approval and enforcement of these management plans require money, the Department of Fisheries either does not have enough money or is not willing to spend it (Salim, personal communication, November 6, 2011).

The process of revenue sharing in PECCA was a concern for most interviewees. Several alluded to the possibility of corruption in the management system. MICA's Executive Director believes that the PECCA management structure lacks accountability (Hamad, personal communication, October 18, 2011). According to the 2005 Order, members of the PECCA Management Committee are able to request monthly financial reports. As for members of the community-based fisheries management committees (or any other member of the general public), the Order does not specify any methods for accessing PECCA's financial records. The MICA affiliated informants all expressed their frustration over this lack of transparency. While this did not seem to be an issue for the Chairman of PECCA's Chake Chake District fisheries management committee, he did reveal that as of November 2011, his management committee has received tourist revenue from Misali/PECCA just three times since the protected area was established in 2005 (Sharif, personal communication, November 2011). Rather than redistributing tourist revenue every three months as it was done under MICA, the Department of Fisheries has redistributed the tourist revenue from PECCA only three times in the six years since its establishment.

Under the PECCA management framework, less revenue is being distributed to a smaller proportion of the population. Despite the fact that PECCA covers a substantially larger area than MIMCA did, tourist revenue is still only collected on Misali Island.

While MICA was in control of the tourist revenue from Misali Island, 40% tourist revenue was utilized for small-scale development projects. MICA's village conservation committees dictated how their portion of the tourist revenue was spent in their community. Since these development projects were meant to benefit the well-being of the community as a whole, MICA's village conservation committees are open to fishers as well as non-fishers that are impacted by the conservation of Misali Island, including women. With the Department of Fisheries in control of PECCA, the communities' share in tourist revenue has been cut. With the implementation of PECCA, only 30% of the tourist revenue being generated gets redistributed to the management committees. Since membership in PECCA's fisheries management committees is restricted to only fishers, how the revenue generated by PECCA is utilized is up to the discretion of a smaller proportion of the population that is impacted (either directly or indirectly) by the conservation of Misali Island. Fishers in Pemba are predominately men; therefore, the PECCA management committees have effectively excluded the perspective of women from the decision making process. This stands in contradiction to the MACEMP proposal, which promises to provide support to women and other vulnerable groups (GEF, 2005).

Chapter 7: Conclusion

This research has detailed two global trends in conservation: a) the drive to scale-up the size of protected areas into larger, more integrated conservation networks; and b) the increasing emphasis on participatory, community-based conservation. While each trend attempts to simultaneously address poverty and environmental degradation, the case study of Misali Island demonstrates that these lofty goals prove difficult to achieve in practice. The exclusion of MICA from PECCA's management structure demonstrates how scaling up to a marine conservation network can have detrimental effects on community participation in conservation management. As such, the case study suggests that when these two global conservation trends intersect in a local context where power dynamics are skewed, the establishment of a marine conservation network can compromise community participation in favour of national and global conservation interests.

The specific research question this thesis set out to investigate was how the incorporation of the Misali Island Marine Conservation Area (MIMCA) into the larger Pemba Channel Conservation Area (PECCA) has impacted the ability of the Misali Island Conservation Association (MICA) to carry out their community development goals. With the financial and technical support of CARE and in cooperation with the Department of Forestry, MICA was able to provide communities across Pemba with the opportunity to participate in and directly benefit from the conservation and management of Misali Island. Despite MICA's intimate involvement with Misali Island and their positive reputation, the government did not include the community-based organization in PECCA's formal management framework. As a result, MICA has lost their stake in Misali Island, the very island that they were established to protect.

How the establishment of PECCA has impacted MICA provides a fascinating case study into how power dynamics operate across multiple scales can shape the character of conservation outcomes. The language of integrated coastal management (ICM) is prevalent throughout the MACEMP proposal; however, the establishment of PECCA has resulted in a complete lack of integration. The Ministry of Agriculture, Natural Resources, Environment and Cooperatives had delegated the responsibility of the Misali Island Conservation Project (MICP) to the Department of Forestry in 1996. The establishment of PECCA in 2005 nullified MICP, and the Ministry then delegated the responsibility of the new marine conservation network to the Department of Fisheries. This decision exacerbated existing tensions between the two departments. The resulting dispute between them was cited by the majority of participants to be one of the driving forces behind MICA's exclusion from the PECCA management framework.

The Misali Island case study illustrates how vague government policies on ICM have allowed the government to usurp control over PECCA from MICA. The PECCA Order technically included an avenue for community participation in the management of the conservation area but only on the government's terms. The Department of Fisheries created management committees in villages where MICA's village conservation committees already exist. The establishment of the PECCA management committees provoked frustration among MICA's members. The once positive relationship that MICA had with the government has dissolved into feelings of bitterness and betrayal. Despite their similar objectives, there is little evidence of cooperation between MICA and the government's management committees.

The importance of community participation in the implementation and ongoing management of PECCA has been emphasized at all levels. Global institutions such as

CARE, the World Bank, the GEF, and the IUCN have all recognized the importance of community participation in conservation management. The background documents for MACEMP as well as the proposal itself (see: EcoAfrica, 2005a; EcoAfrica, 2005b; GEF, 2005; Lindhjem et al., 2003; Ruitenbeek et al., 2005) all claim that community participation is imperative to achieve MACEMP's objectives. At the regional government level, Zanzibar's 1996 Environmental Act provides policy to support community participation in conservation management. Despite this rhetoric, meaningful community involvement in the management of PECCA has not been realized.

Finally, my research is significant for what it contributes to the discipline of political ecology more generally. The case study of MICA, PECCA, and Misali Island underscores the necessity of taking a multi-scalar approach to research that analyzes global conservation trends in a local context. Unraveling the complexity of this case study required identifying the relevant global, national and local institutions involved and how these institutions related to each other. The results of this research add empirical weight to political ecology as a theoretical lens. I have applied political ecology to an emerging area of research – the social analysis of marine conservation networks. My research demonstrates the political nature of conservation in practice; that is, how powerful actors can assume control over conservation initiatives in order to serve their own interests.

Research in the Philippines investigating the social dynamics of marine conservation networks has identified community participation in conservation planning and management of critical importance to the overall effectiveness of the network (Lowry et al., 2009; Crhistie & Pollnac, 2011). With the exclusion of MICA from the PECCA management framework, the ability of community members to participate in conservation management has been limited. Follow-up studies are needed to determine whether or not

the failures of PECCA have been addressed during MACEMP's one year extension. Further research is needed to determine the long-term socioeconomic and environmental impacts that the establishment of PECCA will have. Such studies could provide valuable insight into the best-practice for scaling-up to marine conservation networks without jeopardizing community participation. If these two conservation trends are to exist simultaneously, more careful consideration must be given to how management regimes are structured to ensure that communities have a meaningful way to participate in conservation and management.

Appendix A: List of participants

Name	Date of Interview	Affiliation	Translator Used?
Abdul*	October 29, 2011	Head of Dept. Fisheries & Marine Resources, Pemba	NO
Abeera*	October 28, 2011	MICA Board Member	NO
Ali*	October 19, 2011	MICA General Secretary	NO
Andre*	September 30, 2011	Dive Instructor, Fundu Lagoon	NO
Fahima*	November 17, 2011	Senior Lecturer, Institute of Marine Science	NO
Haji*	November 2, 2011	MICA Chairman of Wesha Village Conservation Committee	YES
Hamad*	October 18, 2011	MICA Executive Director	NO
Hamza*	October 21, 2011	MICA Chairman of General Assembly	YES
Masoud*	November 25, 2011	Coastal Resource Manager, Dept of Fisheries & Marine Resources (Former PECCA Manager & former MICA Executive Director)	NO
Othman*	October 25, 2011	Head Program Supervisor, CARE, Pemba (Former MICA Executive Director)	NO
Ranger*	October 23, 2011	PECCA Ranger (Former MIMCA Ranger)	NO
Salim*	October 25, 2011	Former MICA Accountant	NO
Sharif*	November 3, 2011	PECCA Chairman of Chake Chake District Fisheries Management Committee	YES

*These names are pseudonyms

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