

**Community-Based Conservation and Development: the Case of the *Mori Kunda*
Community Forest in Tujereng, The Gambia**

By

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This thesis is dedicated to the people of Tujereng and the Mori Kunda clan members who welcomed me into their lives and shared their knowledge and experiences with me.

I am forever grateful.

ABSTRACT

Community-Based Conservation and Development: the Case of the *Mori Kunda Community Forest* in Tujereng, The Gambia

By Meagan Symington

Protectionist forest conservation can have negative impacts, as people are excluded from local lands and resources—in the name of conservation. Negative ecological effects can also ensue, especially where poverty is relatively high and people depend directly upon forest resources to meet daily needs. Community-based conservation (CBC) was developed to synergize social, environmental and economic aspects of conservation by actively involving local communities. To combat deforestation and promote development, The Gambia implemented a Community Forestry Programme (CFP), giving land and resource ownership rights to local communities provided they adopt management responsibilities. Exploring Tujereng's *Mori Kunda Community Forest* it was determined that CBC has the potential to result in both development and conservation outcomes. However, outcome extent was dependent upon: incentives; access to land; external training, funding and resources; poverty; competing industries; environmental stewardship; community consultation and values; as well as the communally oriented structure and disposition of Gambian society.

Keywords. Community-Based Conservation, Development, Community Forestry, Social Ecological Systems, Participation, Environmental Stewardship, Community, The Gambia.

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ACRONYMS AND ABBREVIATIONS

CBA	Community-Based Approach
CBC	Community-Based Conservation
CF	Community Forest
CFC	Community Forestry Concept
CFP	Community Forestry Programme
CIA	Central Intelligence Agency
FAO	Food and Agriculture Organization (of the United Nations)
GEF	Global Environment Facility
GFW	Global Forest Watch
GGFP	Gambian-German Forestry Project
GOTG	Government of The Gambia
GTZ	German Agency for Technical Cooperation
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
MKCF	Mori Kunda Community Forest
NGO	Non-Governmental Organization
NSGA	Nova Scotia-Gambia Association
REB	Research Ethics Board
SES	Social Ecological Systems
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNFF	United Nations Forum on Forests
WB	World Bank
WCED	World Commission on Environment and Development
WCMC	World Conservation Monitoring Centre
WHO	World Health Organization
WTO	World Trade Organization
WWF	World Wildlife Fund

CHAPTER ONE

Introduction

1.1 Deforestation and Development

Historically, humans have had an intimate relationship with the natural environment as it has provided resources and services that have allowed people to survive and flourish. However, the past century has revealed a growing disconnect between people and nature. This phenomenon has occurred congruently with the manufactured perception of wilderness and conservation, which excludes people from nature. This elimination of people from their local environment in the name of conservation has led to unsustainable environmental degradation, as conservation efforts are often viewed as secondary to people's subsistence, economic and livelihood needs. In the last few decades there has been a shift in approaches to conservation, which view people as an integral part of, rather than a hindrance to their local ecosystems and thus, a vital element in ensuring successful and mutually beneficial outcomes for people and the environment.

The environment, however, is not static. Even without human intervention, a proportion of environmental change occurs as a part of a natural cycle. However, humans have exacerbated these changes by increasing the level of stress placed on the environment and its resources. This stress can in part be attributed to increases in population, industrialization, urbanization, resource use and pollution as well as changes

in land use, which have led to unsustainable levels of environmental degradation. One of the most significant effects of continued degradation is climate change—a phenomenon that has been intensified by harmful anthropogenic activities. Article 1 of the United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” The UNFCCC recognizes the importance of distinguishing between naturally occurring and anthropogenic changes in climate and thus refers to climate change as alterations in the atmospheric composition that can be attributed to human activities, in contrast to climate variability, which is attributable to natural causes (IPCC, 2014c, p. 5).

Most climate scientists now agree that the current trend of global warming has resulted from a human induced expansion of the ‘greenhouse effect’¹—an increase in temperature that occurs when heat, radiating away from the Earth, becomes trapped in the atmosphere by certain ‘greenhouse gases’ (GHGs)² (NASA, N/D). When the amount of emissions exceeds the amount that can be naturally removed, the result is an increase in atmospheric concentrations of GHGs (IPCC, 2007). The industrial revolution represents a significant turn of events that led to the dramatic growth of global anthropogenic GHG emissions. According to the Intergovernmental Panel on Climate Change (IPCC)—the

¹ The ‘greenhouse effect’ is: “the process in which the absorption of infrared radiation by the atmosphere warms the Earth. In common parlance, the term ‘greenhouse effect’ may be used to refer either to the natural greenhouse effect, due to naturally occurring greenhouse gases, or to the enhanced (anthropogenic) greenhouse effect, which results from gases emitted as a result of human activities” (IPCC, 2007, p. 875).

² According to the IPCC there are four main GHGs that are emitted due to human activities: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and halocarbons (a group of gases containing fluorine, chlorine or bromine) (2007, p. 37).

leading international scientific body for the assessment of climate change—the highest growth in GHG emissions between 1970 and 2004 can largely be attributed to energy supply, transport and industry. Although growing at a somewhat lower rate, residential and commercial buildings, as well as forestry (including deforestation) and agriculture sectors, have also played a significant role in GHG emissions (IPCC, 2007). The IPCC has further declared carbon dioxide (CO₂) as the ‘most important’ anthropogenic GHG, as it represents 77% of total GHG emissions. Although scientists have been aware of the correlation between increased atmospheric CO₂ levels and rising temperatures of the Earth’s surface, or global warming, since the late 19th century (Arrhenius, 1896), the severity of human contributions to climate change have not been fully accepted until relatively recently. In a 2013 report, the IPCC publicly recognized the central role of anthropogenic causes of climate change stating, “the science now shows with 95% certainty that human activity is the dominant cause of observed warming since the mid-20th century” (p. v).

Although there are many sources of CO₂ emissions (both natural and human induced) there are also many different sources of carbon storage, such as forests, soils, oceans and the atmosphere. Carbon stores can act as either *sinks*, which absorb more carbon than they emit, or *sources*, which have the opposite effect (David Suzuki Foundation, n.d.). However, the balance between sources and stores of carbon, through the carbon cycle³, has been altered due to harmful carbon emitting practices such as fossil

³ The ‘Carbon Cycle’ describes the exchange of carbon that flows between different reservoirs; a cycle that has both slow and fast components. Any cyclic change that shifts carbon from one reservoir inevitably leads to more carbon in the others. Changes that put more carbon into the atmosphere, result in warmer temperatures on Earth (NASA, 2001).

fuel combustion as well as increasing loss and degradation of global carbon sinks. Forests are an integral part of the global carbon cycle. Covering about 31% of the Earth's total land area, forestlands encompass approximately four billion hectares (FAO, 2010, p. xiii). Living forests naturally absorb CO₂, through the process of photosynthesis, and sequester it as biomass—with large amounts of carbon also stored in the organic layer of forest soils, both above and below ground (UNEP, FAO, UNFF, 2009, p. 36). Forests also release CO₂ through the process of respiration as well as through decaying organic matter and the burning of biomass (UNEP, FAO, UNFF, 2009, p. 36). Forest loss and degradation alters the carbon cycle, as CO₂, stored in both forests and forest soils, is released and shifted into the atmosphere, thus becoming a source of GHG emissions and resulting in an increase in atmospheric temperature. The destruction of forests can be human induced (deforestation), where forestlands are cleared and converted for other uses as well as naturally occurring (natural disasters) where forestlands are converted due to an incapability of natural regeneration. Global warming is expected to exacerbate forest-related environmental concerns by increasing the possibility of forest fires, insect infestations, abnormal migration of invasive species as well as loss of native plant and animal species (David Suzuki Foundation, n.d.; UNEP, FAO, UNFF, 2009, p. 34-35).

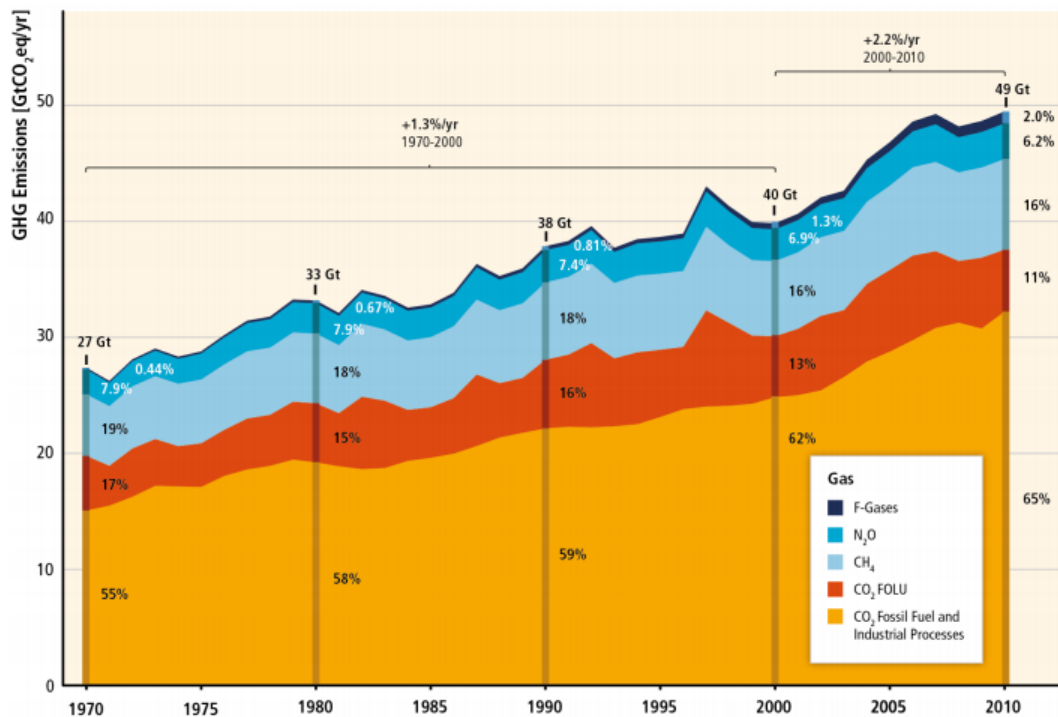
At present forests serve as a global net carbon sink, as most of the world's land-based carbon stores can be found in forest ecosystems and wetlands (IPCC, 2014a). However, they are not evenly distributed between tropical and northern latitudes. Accounting for approximately 40% of total annual land based CO₂ absorption, tropical forests play an important role in carbon sequestration (Britton *et al.*, 2007, as cited in

UNEP, FAO, UNFF, 2009, p. 36). According to the IPCC, “[t]he global terrestrial carbon sink is partly offset by the loss of forest carbon stocks to the atmosphere through land use change, largely in the tropics” (2014a, p. 294). Degradation, related to logging and fire in particular, in non-tropical forest areas has also been a major contributor to the release of CO₂ emissions into the atmosphere. Canadian managed forests, for example, have experienced significant forest loss and degradation⁴, mostly resulting from fire and insect damage (Stinson *et al.*, 2011), making it the global leader in *intact forest landscape* (IFL) degradation and third in *tree cover loss* from 2001 to 2012 (GFW, n.d.). Global Forest Watch (GFW) analysis concluded that although in 2013 nearly a quarter of global IFLs were contained within Canadian borders, approximately 26.4 million hectares (about 23 times the total land area of The Gambia) had been lost between 2000 and 2012—accounting for 21% of total IFL degradation (n.d.). This considered, rising rates of significant forest conversion in developing countries, due to changes in land use, overgrazing as well as forest degradation, resulting from the over-exploitation of forests resources, has greatly impacted the amount of GHG build-up in the atmosphere (UNEP, FAO, UNFF, 2009, p. 36). It has been estimated that deforestation claims about 13 million hectares of forest each year and is responsible for approximately 12% to 17% of global anthropogenic GHG emissions, ranking it as the second highest contributor of CO₂ emissions, after the burning of fossil fuels, which claims about 57% (van der Werf *et al.* 2009, as cited in Tienharra, 2012, p. 551; IPCC, 2007, p. 36; UNEP, FAO, UNFF, 2009,

⁴ Although these numbers are relatively high, the Canadian Government reported that deforestation only claimed 0.05 million hectares of forest in 2012. This is because forests lost to fire and insects are not considered in these figures. According to the Government of Canada, “Deforestation is the clearing of forests to make way for new, non-forested land uses, such as urban development or agriculture. Land that temporarily has no trees is still considered to be a forest when the trees are expected to grow back—like after fires or harvesting” (Natural Resources Canada & Canadian Forest Service, 2014, p. 6)

p. 37). Figures 1.1 and 1.2 show global anthropogenic GHG emissions by gases⁵ and economic sectors respectively.

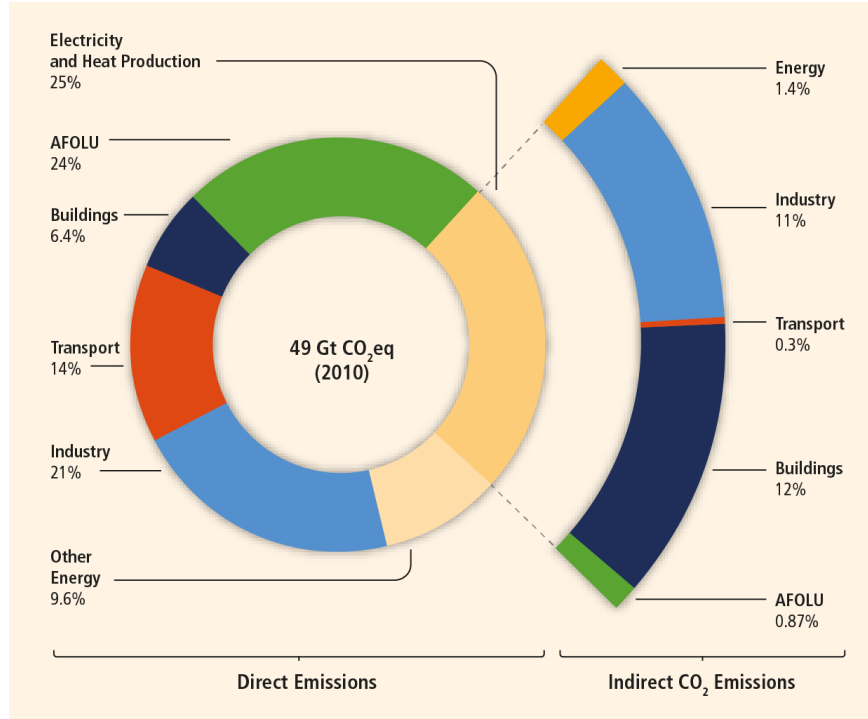
Figure 1.1 Total Anthropogenic GHG Emissions by Groups of Gases 1970-2010



Source: IPCC, 2014d p. 7

⁵Only the gases whose emissions are covered by the UNFCCC are included in these statistics: carbon dioxide (CO₂)—from fossil fuel combustion and industrial processes as well as from Forestry and Other Land Use (FOLU)—methane (CH₄), nitrous oxide (N₂O), fluorinated gases (F-gases) (IPCC, 2014d, p. 7).

Figure 1.2 Greenhouse Gas Emissions by Economic Sector (2010)



Source: IPCC, 2014d, p. 9

Although rates remain alarmingly high, recent years have revealed signs of decline in global rates of deforestation (FAO, 2010; Meyfroidt and Lambin, 2011, as cited in IPCC, 2014a). However, although rates have declined as a whole, this trend is not consistent amongst all regions or countries. This reveals a weakness in aggregate data, as successes and/or failures can be misleading as regional and national disparities can become hidden. For example, high rates of forest loss that persist in certain areas can be evened out by lower rates occurring in others. Nevertheless, reforestation projects together with afforestation (the planting of trees on previously non-forested land) as well as the natural expansion of forests are helping to reduce global forest loss and degradation (FAO, 2010, p. xiii). According to the FAO, as of 2010, planted forests accounted for approximately 7% of global forest area, while 36% was titled ‘primary

forest’ (no human intervention) and 57% was designated ‘other naturally regenerated forest’ based on its selective human intervention (p. xviii).

The growing awareness of the immediacy of the climate change problematique has led to increased concern for the world’s forestlands. As a result, forests are being incorporated into large-scale climate change mitigation strategies⁶ that aim to reduce CO₂ emissions caused by forest loss and degradation, while stimulating economic gains for various stakeholders. As of late forest conservation programs have been viewed as synonymous with climate change mitigation efforts. However, the many facets of forest conservation have a history of being framed as a means of promoting local development—a reality which is increasingly so. Whereas in the past, the benefits of conservation programs were defined in terms of conserving wildlife, today they are framed globally in terms of climate change—with dominant approaches utilizing market based strategies for achieving conservation (discussed in Section 2.2.1). That being said, deforestation has severe consequences that affect more than just GHG emissions. The world’s diverse forests serve as some of the richest terrestrial ecosystems on the planet in terms of biological diversity (biodiversity). However, it has been estimated that deforestation has reduced the abundance of forest species by 30% in the last century, with a further 38% loss anticipated between now and 2050 (UNEP-GLOBIO, 2008 as cited in UNEP, FAO, UNFF, 2009, p. 38).

⁶ The Reducing Emissions from Deforestation and Forest Degradation Plus (REDD+) program is an example of a mitigation program adopted by the UNFCCC to help reduce GHG emissions as well as promote development and economic growth. The ‘plus’ stands for the conservation and sustainable management of forests as well as the enhancement of forest carbon stocks (Sukhdev, 2011, p. 1).

In addition to their importance to the planet's natural cycles and biodiversity, forests also provide many resources and services that benefit people directly. Forests contribute to local livelihoods through employment, by providing subsistence products and services as well as serving as *de facto* economic “safety nets” in times of need—particularly in developing countries, where social assistance may be low or non-existent (FAO, 2010). Examples of livelihood benefits include: the use of forestlands for food crop production; the hunting and gathering of forest foods to help meet seasonal and/or emergency dietary shortages (i.e. floods, famines, droughts, wars); as sources of fodder for livestock, which provide primary subsistence and income; as a source of construction materials, household goods, fuel, crop nutrients and medicines (Falconer & Arnold, 1989; Scoones, Melnyk & Pretty, 1992; Kerkhof, 2000, as cited in Scherr, White & Kaimowitz, 2004). Additionally, bush meat⁷ has become increasingly important in terms of trade and consumption for many people. According to Bennett, bush meat accounts for over 50% of the protein consumed by people living in and around tropical forests, while the trade in bush meat has swelled enormously. In Africa alone, it has been projected that the annual trade in bush meat has surpassed one million metric tons—a trade that has been expanding due to increased accessibility to new forest areas that have been opened up by logging roads (2000, p. 922). According to the FAO, in 2012 the forestry sector (including management, harvesting and manufacturing) contributed approximately 1% of global GDP, which equates to about 729.1 billion USD (based on 2012 World Bank global GDP estimates), and employed about 0.4% of the total labour force (p. 25).

⁷ Bush meat (also wild or game meat) comes from non-domesticated animals hunted for food, often found in forest areas.

However, aggregate data can conceal regional and national disparities, as in many countries or regions, particularly in rural areas, the forest sector is responsible for a greater portion of the national economy and percentage of employment. Additionally, global GDP estimates do not account for the contributions of informal activities within the sector, such as the production of wood-fuel and non-wood forest products (FAO, 2012, p. 25). These estimates also disregard the provision of ecosystem services (and their impacts on health), such as: water quality and flow regulation, erosion prevention, carbon sequestration, biodiversity habitat, habitat for crop pollinators and predators of agricultural pests, as well as microclimate regulation; nor do they account for the non-monetary social and cultural value of forestlands (Scherr, White & Kaimowitz, 2004). It is estimated that global ‘business as usual’ deforestation would result in annual losses of ‘natural capital’ that would cost between 2 and 4.5 trillion USD a year (Sukhdev, 2010, as cited in FAO, 2012). This dollar amount was based on a monetary valuation of ecosystem services⁸ (i.e. provisioning, regulating, cultural and supporting services), which can be defined as “the flows of value to human societies as a result of the state and quantity of natural capital” (TEEB, 2010).

1.2 Study Area

Increased international awareness and recognition of the anthropogenic contributions to climate change has amplified concern over global forest loss and degradation in many regions of the world. One country facing such problems is The Gambia, West Africa. Widespread deforestation has resulted from the intensification of

⁸ For more information on this evaluation see TEEB, 2010.

agricultural production, bushfires, drought and land development (including settlement, encroachment and road construction) (FAO, 2010). These issues have been exacerbated by high rates of population growth together with direct forest resource dependence and relatively high rates of poverty and unemployment. According to GFW, in 2011 the forestry sector was responsible for approximately 0.6% of the country's GDP, contributing 4.8 million USD to the economy. In an attempt to control deforestation, the government of The Gambia (GOTG), together with the German Agency for Technical Cooperation (GTZ), the Food and Agriculture Organization (FAO) of the United Nations as well as various non-governmental organizations (NGOs), initiated the Gambian-German Forestry Project (GGFP), which sought to establish both community forests and community-based forestry projects in 1991 (UNESCO, 2013). This later led to the Community Forestry Concept (CFC), which took a community-based approach (CBA) to forest management, referred to as community-based conservation (CBC). The implementation of community forestry, referred to as the Community Forestry Programme (CFP), aimed to enhance forest conservation by engaging local communities. Increased access and privileges, in terms of resource exploitation and land rights, were offered to community members provided they adopt conservation and management responsibilities for local forestlands. As CBC has become increasingly popular, various critiques have come into light such as the ability to produce both conservation and development on a large scale, the malleable definition of the term 'community' as well as the level of equitable participation. The following case study was conducted in order to analyze the CFP's ability to stimulate both development and conservation outcomes—the primary objective of CBC—in Tujereng, The Gambia.

The *Mori Kunda Community Forest* (MKCF) in Tujereng—located southwest of the capital city of Banjul—was explored as a case study of the broader CFP, which uses CBC to promote forest conservation and development within the country. Tujereng is one of numerous communities in The Gambia threatened by forest loss and degradation, which has been intensified by issues particular to coastal areas. More specifically, Tujereng’s forest resources have been threatened by a fish smoking and processing area located in the neighbouring community of Tanji. Tanji relies primarily on firewood to support this local industry, which is a major source of income for many families in the area. Furthermore, firewood and charcoal (produced from wood) are the main sources of fuel for cooking in The Gambia, a reality that reinforces the need for wood for daily subsistence. Firewood and charcoal are also major commodities for sale in Tanji. Issues of poverty and unemployment together with the significant demand for firewood to support this nearby industry were noted as drivers of illegal or non-permitted logging and resource harvesting from the MKCF, which was threatening local conservation and consequent development efforts. In an attempt to protect local forest reserves, community members in Tujereng, specifically the *Mori Kunda* members, pursued the government’s CFP. The CF is named after the *Mori Kunda* clan, or extended family, who contributed the land necessary to partake in the CFP and who adopted all management and conservation responsibilities (further elaboration in Chapter Five). The MKCF in particular was selected as a case study, as the research sought to examine a community forest (CF) that was not an original pilot community nor had it received outside funding or additional training, but that had completed all three phases of the CFP (three phases explained in Chapter Four). The rationale was that the case study should attempt to

represent a typical CF that had been established based on community motivation in order to investigate local reasons and rationales behind forest conservation. Figure 1.3 shows the location of the study area in relation to the country and the continent.

Figure 1.3 Map of The Gambia



Source: Will Flanagan, 2015a

1.3 Research Questions and Thesis Statement

The research aimed to gain an understanding of past and present forest conservation initiatives undertaken by government, NGOs and local people in The Gambia—with a special focus on the CFP in Tujereng. The objective was to examine the CFP’s ability to bring about *conservation*, meaning the preservation of forestland and promotion of environmental awareness, as well as *development*, in terms of equitable participation and benefit. The central research question was: does community-based

conservation have the potential to contribute to advancing both forest conservation and development outcomes in Tujereng, The Gambia?

Protectionist approaches to forest conservation (i.e. protected parks and reserves) can result in negative socio-economic outcomes, as people are often excluded from local lands, resources and services—in the name of conservation (Duffy, 2010; Brockington & Igoe, 2006; West, Igoe, & Brockington, 2006; Brosius, 2004). Often established without consideration for traditional tenure rights over land and trees, protected areas can redefine use and access to the detriment of local communities. Negative impacts on people can also lead to negative ecological effects as local subsistence, economic and livelihood needs often take precedence over conservation efforts, especially where poverty is relatively high and people depend directly upon forest resources to meet daily needs. Thus, excluding people from conservation can perpetuate a cycle of unsustainable environmental degradation. To rectify these downfalls, community-based approaches (CBAs) were developed, endeavouring to synergize the social, environmental and economic aspects of conservation by actively involving local communities. Community-based conservation (CBC), which has become increasingly prevalent in the past few decades, has sought to address human and ecological needs by fostering development and conservation outcomes (Berkes, 2004). Rather than an obstacle to conservation, CBC sees people as integral to local ecosystems and vital to ensuring successful and mutually beneficial outcomes for people and the environment. The effectiveness of CBC as a mixed development and a conservation strategy, however, has been questioned (Redford & Sanderson, 2000). Certain proponents of participatory development have argued that

local participation has been superficial and has not resulted in desired development benefits (Campbell & Vainio-Mattila, 2003; Pimbert & Pretty, 1995; Arnstein, 1969, as cited in Leach, Mearns & Scoones, 1999). It has also been argued that CBC's conservation capabilities do not measure up to the conservation achievements of the protectionist model (Spinage 1998; Terborgh, 1999, as cited in Roe & Elliott, 2006). This argument has often been grounded in a deep ecology⁹ perspective, which recognizes nature's intrinsic value regardless of its utility to people (Fletcher, 2010).

Faced with increasing rates of forest loss and degradation together with high levels of poverty and direct forest resource dependence, the government of The Gambia adopted a CBA to forest conservation in the 1990s. In an attempt to combat deforestation and promote development the Community Forestry Programme (CFP) was implemented. The CFP fostered motivation to participate in conservation efforts by giving local communities sole land and resource ownership rights as well as providing opportunities to gain economic returns from sustainable resource exploitation—provided they adopted management and conservation responsibilities. In the case of the *Mori Kunda Community Forest* (MKCF) in Tujereng, it was determined that CBC has the potential to result in both development and conservation outcomes. However, certain external variables had significant impacts on the extent of the outcomes, such as poverty and unemployment as well as competing industries, such as fish processing and land sales together with a lack of alternative energy sources. The CFP greatly enabled local conservation efforts by

⁹According to the *Foundation for Deep Ecology* the term 'deep ecology' was coined by Arne Naess in 1972 and the movement seeks a radical change in humanity's relationship with nature which recognizes the inherent value of all living beings regardless of their utility to people (Drengson, 2012). For more on 'deep ecology' see Arne Naess, 1973; Bill Devall and George Sessions, 1985.

building upon an existing sense of environmental stewardship. The MKCF was able to maintain the original integrity of local forest cover, increase involvement in conservation initiatives and enhance environmental awareness in the community. Development on the other hand, defined in terms of equitable participation and benefit, was highly dependent upon different variables, such as the particular definition of community, community values and consultation processes as well as external training, funding and resources (or lack thereof). Finally, the communally oriented structure and disposition of Gambian society has been highly conducive to CBC in general and to the CFP specifically, which has allowed for integration of local knowledge into conservation practices as well as the ability to adapt management strategies to local realities.

1.4 Methodological Overview

A documentary search of past and present approaches to forest management and conservation in The Gambia was conducted in order to appreciate the context within which the CFC emerged. This was followed by an analysis of the CFP as experienced by the community of Tujereng, which served as a case study through which to measure the CFP's ability to conserve forestland as well as to ensure local participation and benefit. Conservation was examined in terms of forest cover, involvement in conservation and environmental awareness. The development was analyzed by investigating the level of local 'participation' (a foundational principle of CBC) in the CFP as well as resulting social and economic 'benefit'—highlighting land rights and ownership transfer benefits, as they have been a key motivators for participation and conservation. Table 5.2 details the terms of analysis. In an attempt to achieve a holistic understanding of the situation,

data obtained from existing documents was compared with personal testimonies collected from government officials, NGO workers as well as community members.

A qualitative research approach was taken, which allowed for a relatively holistic understanding of Tujereng's complex reality as well as the relationship between conservation and development in the community. Elements from the case study as well as participatory approaches were also incorporated into the research design. An understanding of the local lived experience was necessary to fully comprehend the CFP's impact from the community perspective. A case study helped to facilitate this comprehension by analyzing the MKCF in detail together with multiple variables, within a larger context. The participatory element enabled direct interaction with participants, allowing community members to tell their side of the story in their own words. The objective was to portray local opinions and assessments of the CFP based on participant experience. Local perceptions of the situation were *interpreted* by giving voice to the community through incorporating elements of participatory research. This combination proved to be the best viable option to collect the data necessary to achieve the research objective within the available six-week time period. Multiple research techniques were also used including: participant observation, focus groups as well as group and individual interviews. Interviews were semi-structured and used open-ended questions pertaining to past and present local methods of environmental conservation and resource management with regards to Tujereng's forest areas. These techniques allowed participants to convey their own experiences and perceptions as well as helped to align the direction of study with local concerns. They also provided the opportunity for mutual learning experiences

as well as occasions to observe community interaction with the environment, while building trusting relationships with the community and partner organization. Interview participants included key informants, identified based on their involvement in environmental education, conservation and resource management, as well as community members who were solicited verbally using the ‘snowballing’ technique, following the suggestions of other participants. There were no demographic stipulations with regards to participants, with the exclusion of anyone under the age of sixteen.

Data analysis was conducted using a framework for SES analysis, which contends that people must be seen as part of, rather than separate from nature, developed by the Community Conservation Research Network (CCRN) (see Figure 6.1). The concept of SES (see Chapter Two) refers to the integration of people in nature (Berkes & Folke, 1998b; Berkes *et al.*, 2003). The framework takes a systems approach to conceptualizing the human-nature, or social-ecological, relationship and applies it to conservation to highlight management strategies that benefit both people and the environment (Berkes *et al.*, 2014). Consistent with the objectives of CBC, the CFP aims to bring about conservation (ecological) as well as development (social) outcomes. This highlights the applicability of SES analysis with regards to CBC, as this approach—much like the SES framework—views the human relationship with the environment as an integral part of the ecosystem and thus must be considered when developing or ameliorating conservation strategies. The research methodology is further outlined in Chapter Four.

1.5 Chapter Outline

This thesis is organized into six chapters and three appendices. Chapter One, *Introduction*, presents the research problem and provides an overview of the thesis. Chapter Two, *Literature Review*, explores existing literature and key theoretical issues and debates surrounding conservation and development. Chapter Three, *Social Ecological Systems and Forest Conservation in The Gambia*, puts contemporary forest conservation into context by focusing on the evolution of Gambian conservation efforts in relation to the SES framework. Chapter Four, *Background and Research Methodology*, contextualizes the research while outlining the study design, research approaches, techniques and methods used. Chapter Five, *Empirical Data: Community Forestry in Tujereng*, presents the study location while comparing existing policies, reports and documents with personal testimonies from community members, government officials and NGO workers. Chapter Six, *Community-Based Conservation: Implications for Conservation and Development*, provides an analysis of the data, followed by some final conclusions and implications for development. Recommendations for policy and community action, along with possible future research pursuits are also discussed. The appendices include the interview schedules, an interview question guide and an information cover letter.

CHAPTER TWO

Literature Review

2.1 ‘Wilderness’ and the *Unnaturalness* of ‘Nature’

Nature. Wilderness. Environment. When we hear these words certain images come to mind. Oftentimes we think of wild or uninhabited virgin land. We imagine an escape from that which is “civilized” as it is something or somewhere that is profoundly ‘Other’¹⁰. It is often seen as sacred or pure, untainted by human interference and therefore must be preserved—ironically for the sake of humanity as well as the planet upon which humanity resides. Therefore, its very existence is based on the assumption that nature only ‘is’ in its most true state, where people are not. However, this perception of nature is anything but *natural*¹¹, as it has been socially constructed. According to William Cronon, nature, or wilderness, is “[f]ar from being the one place on earth that stands apart from humanity, it is quite profoundly a human creation—indeed, the creation of very particular human cultures at very particular moments in human history” (1995, p. 69). In Western culture the perception of nature has changed significantly over time. Cronon makes reference to the negative connotations and biblical associations of the eighteenth century, where nature was something to fear, as it was seen as the antithesis to all that was good—a place on the outskirts of civilization where a person could lose oneself to spiritual

¹⁰ The ‘Other’ refers to that which is opposed to the human ‘Self’. See Hegel, 1977.

¹¹ ‘Natural’ refers to existing in, or derived from nature; not made or caused by humankind (Oxford Dictionary, 2014).

danger and moral temptation (1995, p. 70-71). However, a shift in perception unfolded at the end of the nineteenth century, where places with exceptional natural beauty began to be recognized as such and started attracting visitors to marvel at the sublime magnificence of these seemingly supernatural places. People began to idealize these natural wonders, thus the concept of nature adapted to mirror the cultural values that produced it (Cronon, 1995, p. 4).

The physical representation of this need to protect the sanctity of nature has been famously attributed to Yosemite (now National Park) in the United States, which was the first 'modern protected area', or wild-land park, established in 1864 (Cronon, 1995, p. 3). By the beginning of the 20th century, Yosemite was once again a site of incredible influence with regards to shifting perceptions of nature and conservation, as there was nation-wide debate over the damming of the Tuolumne River in the Hetch Hetchy valley, which was located within park boundaries. Although the dam was eventually built, large-scale opposition to this project represents an emerging movement in protectionist conservation and environmental activism (Cronon, 1995, p. 71). Protected areas have since been identified as important methods of conservation, notably receiving international recognition at the First World Conference on National Parks, organized by the International Union for the Conservation of Nature (IUCN) in 1962. From here, the first global *List of National Parks and Equivalent Reserves* was compiled by the United Nations and the IUCN resulting in the *UN List of Protected Areas*, which amalgamated all of the world's protected areas officially recognized by government (UNEP-WCMC, 2014). From here on out, the protectionist conservation model, which was derived from a

culturally embedded perception of nature, was justified and exported globally. This engrained the conception of people-less nature and therefore people-less conservation.

2.1.1 The Epistemology of Nature and Conservation

Not only is the notion of nature something constructed, but more importantly its construction is also “about much more than just nature” (Castree & Braun, 1998, p. 5). The construction of nature carries with it wider social, cultural, political and economic influences and implications that tote separate agendas or aspirations. Borrowing from the words of Heidegger,¹² nature is “enframed” by that which has influenced its creation, such as socially and culturally created discourse that often favours Western notions of industrial capitalism. Scholars such as Michel Foucault (1970, 1972, 1980) and Edward Said (1978; 1985; 1993), along with others (Harding, 1991; Smith, 1999), have argued that there is a strong relationship between power and knowledge. Foucault emphasized the role of language and the power of discourse, which refers to any distinct way of thinking, talking and writing about a given topic, or “combination of intellectual and political practices that makes sense of events, objects and relationships” (Mallon, 1995, p. 5). From this perspective discourse is seen as a means of obtaining and asserting power over others by creating the reality in which they live (Greenough & Tsing, 2003, p. 13). Power is derived from knowledge and therefore the epistemology, or creation of knowledge is inherently political, as it serves to shape a specific reality, which pursues a certain agenda of domination. According to Cox (1981), knowledge production always occurs at certain times, for particular audiences and specific purposes. From the

¹² Heidegger (1977) uses the German word *Gestell*, translated as *Enframing*, to describe the essence of something, or the way in which truth reveals itself.

Enlightenment perspective, the recording of history can be seen as playing an integral role in knowledge production. Drawing on the Hegelian notion that history is also about ‘Spirit’ or ‘Self’ realization, as a revelation of rationality, it becomes clear that the process of ‘othering’, or creating knowledge about something or someone else in opposition to how one perceives ‘Self’, has everything to do with knowledge and therefore power.

The question remains, however, why did this specific Western perspective come to be the accepted truth? Although the answer to this question is complex, it has been argued that it has everything to do with unequal power relations and the control of knowledge creation—after all, history is almost always written by the victors. Wai (2012), for example, has argued that all knowledge is political as it is constructed subjectively and mediated through power. Knowledge carries with it ‘baggage’, meaning it is socially conditioned by positions of power, location and privilege, which affect its validity and influence. This has produced lopsided power relations due to the one-sided recording of history as a universal truth, thus sustaining existing relations of power through the creation of knowledge. For some, history has been seen as a set of discursive practices and representations, meaning that the perceived reality of the Other (in this case nature) is engineered by the West through various ‘politics of power’ in order to justify intervention and continued means of imperialism (Wai, 2012). It is through this Western-centric process of knowledge creation that the very idea of nature has been manufactured in opposition to that which was considered society or civilization.

A central paradox has been highlighted in the Western conception of nature, as it embodies a dualistic vision with people and nature at opposite poles. This is paradoxical because if to be true nature must not be spoiled by human presence, then by definition there can be no place for people in nature (Cronon, 1995; Castree & Braun, 1998). This is problematic, as it inhibits progress towards solutions to environmental problems where humans and nature could co-exist in a mutually beneficial scenario, leaving little room for people to find an ethical and sustainable place in nature. Furthermore, if people are separated from nature then it can lead to the exploitation and/or pollution of areas inhabited by humans without consequence. It is important to think about how and why we know what we know about nature and consequently conservation, as the constructed reality of preserving nature's purity by excluding people has also shaped the reality of global conservation practices without accounting for possible local incompatibilities.

2.2 Protectionist Conservation

Until the 1970s, mainstream conservation efforts were primarily top-down and dominated by parks and wildlife reserves. Rooted in Western culture, this type of conservation carries the underlying assumption that nature's purity depends on the absence of people and therefore people must be excluded. It has been maintained that this core assumption pushes an underlying agenda, which seeks to generate public support for people-free conservation (Duffy, 2010). This approach is often referred to as 'classical' or 'mainstream', 'protectionist' or 'fortress'¹³ conservation, bearing reference to physical and legal barriers that are created to separate protected areas from outside intrusion.

¹³ For more on 'Fortress Conservation' see Brockington, 2002.

Henceforth, it will be referred to as ‘protectionist conservation’. Since its conception, this approach has hugely expanded, as increasing numbers of new parks and reserves have been established worldwide (Chape *et al.*, 2003). The concept of people-less nature and conservation has been exported globally, resulting in the successful establishment of over 100 internationally recognized protected areas, covering over 18.8 million km², which equals approximately 12.65% of the Earth’s land surface (Chape *et al.*, 2003, p. 21).

Although protectionist conservation has been successful in large-scale preservation of natural places, it has also had negative socio-economic impacts on locals who depend on the natural resources and services within the enclosed areas. Historically, protected parks and reserves have often been established without consideration for traditional tenure rights. The result has been a redefinition of land rights, which can inhibit traditional access to land and resources that do not align with a two-dimensional concept of property ownership. This can impact local communities by altering previous means of employment, food production, cultural and religious sites and access to fuel wood, forest products and medicines—essentially it impedes people from meeting livelihood needs (Gutierrez, 2011). Property ownership can be multi-dimensional with overlapping concepts of resource use, access, control and responsibility. There can also be complex gendered dimensions to resource tenure regimes, which include differences in rights to own land; spaces and places of resource use; management and control; access to trees, forests and their products; as well as gendered access by season or other measure of time (Rocheleau & Edmunds, 1997). It is important to recognize and incorporate local customs and norms into project and policy interventions, as formalized property titles, for

example, “often underplay the significance of women’s existing resource use and ownership rights as encoded in the customary law of many societies” (Rocheleau & Edmunds, 1997, p. 1354). Conservation laws and regulations can also result in social injustices, such as displacement, marginalization and alienation of local communities, by redefining previously quotidian practices as criminal behaviour without distinction (i.e. subsistence versus commercial poaching) due to the ‘enclosing’ or privatization, of previously common land (Duffy, 2010).

2.2.1 Enclosure of the Commons: A Market-Based Approach

The enclosure of previously communal land, in the name of conservation, has often been justified by arguments such as Garrett Hardin’s *Tragedy of the Commons*, expounded in 1968. Here, commons are seen to inevitably result in environmental degradation and resource depletion, as it is assumed that everyone has free and unmanaged access to communal resources without any obligation to take care of the commons. This justification assumes that human behaviour is naturally driven by self-interest, ignoring the key factor of ‘community’ inherent to the commons. However, this practice reveals a duality, as there are no commons without community, meaning there can be no enclosure without destruction and fragmentation of community (De Angelis, 2004, p. 58). This reveals a divergence in environmental valuation. It has been argued that “international biodiversity conservation is creating new symbolic and material spaces for global capital expansion”, as conservation can be seen as a catalyst for capital accumulation, as new enclosures together with conservation-based enterprises provide new economic opportunities (Corson, 2010, p. 578). Although the relationship between

conservation and capitalism is not a new development, scholars, such as Castree and Braun (1998), have argued that nature, and thus conservation, is increasingly being remade in the image of commodity. A market-based approach has been promoted as the most efficient way of ‘saving the environment’ while providing livelihood opportunities for local people. This approach works within a neoliberal¹⁴ framework, promoting commodification (i.e. assigning a monetary value to natural resources and services), with the objective of deterring environmental degradation through a system of financial gains and losses.

Some scholars have argued that an estimation of the total current economic value of the ecosystem and its services is essential in order to prevent environmental degradation (Costanza *et al.*, 1997). From this perspective ecosystem services are infinitely valuable to the global economy and contribute enormously to human welfare. However, they have also been greatly undervalued. Thus, it has been reasoned that it is necessary to assess the value of the natural capital stocks in order to give them adequate weight with regards to global decision-making. According to Costanza *et al.* (1997) valuation could provide a more accurate reflection of ecosystem services and natural capital as well as aid in project appraisal, where services lost must be weighted against benefits gained. However, there are many aspects of environmental resources and services that would be difficult to quantify, including, for example, socio-cultural significance, importance in terms of place-based identity and aesthetic value. This

¹⁴ Neoliberalism, which can be conceptualized as an ideology, a mode of governance as well as a policy package, promotes a capitalist agenda of deregulation, liberalization and privatization as the path to (economic) development (Roy & Steger, 2010, p. 11-14).

approach propels the idea that nature is something to be dominated or controlled, while allowing for environmental degradation to become part of the cost of doing business.

From a Marxist perspective, De Angelis (2004) has described the origins of the commodification of nature as being rooted in the rise of capitalism, which endorsed the enclosure (or privatization) of the commons through the process of primitive accumulation. Enclosures represent the beginning of the separation of the producer from the means of production, creating the preconditions for a capitalist mode of production. Capital accumulation is seen as a continual process of increased separation, which produces commodities (for exchange) and surplus value as well as the capital relation itself. In this vein, the commodification (and restructuring) of nature is seen as a means of systematically increasing disparity and generating patterns of uneven development, as environmental discourse has been created in such a way that shapes relations of power, usually in favour of the West (Castree & Braun, 1998). Brockington, Duffy and Igoe have argued that, “conservation is not merely about resisting capitalism, or about reaching necessary compromises with it. Conservation and capitalism are shaping nature and society, and often in partnership” (2008, p. 5). Roth and Dressler add that the shaping of market processes has also led to “new forms of conservation governance that reconfigure local livelihoods, economies and environments” (2012, p. 366). Increasing convergence between market-oriented conservation and local economies only intensifies resource use and does not address underlying issue such as overconsumption and wasteful practices (Roth & Dressler, 2012). This argument is highlighted in O’Connor’s second ‘Contradiction of Capitalism’ which stresses the absurdity of the

“destruction of the natural resource base and physical environment upon which [capitalism] depends for continued growth and sustainability” (Ervine, 2007, p. 127). It has also been argued that unsustainable resource exploitation is driven by wealth, not poverty as *demand* in wealthy countries fuels biodiversity loss and environmental destruction, as *supply* attempts to keep up (Duffy, 2010). The success of the market-based approach is based on system of accumulation, which is fundamentally contradictory to the idea of conservation and sustainability.

Protected areas in which wildlife can flourish without human intervention are important and deserve protection. However, the underlying assumption of people-less nature and conservation places a wedge between people and the environment, creating an impediment sustainable development. Human inhabitants are often part of the reality of many biodiversity rich areas and therefore must be included in conservation efforts that respect and fit the local situation.

2.2.2 The Search for ‘Another Development’

In order to contemplate the role of conservation in development, we must also examine the concept of ‘development’ and how it too has been subject to change over the years. Over the course of the ‘development decades’ the perception of development has changed significantly, arguably beginning with US president Harry Truman’s inaugural speech in 1949, which *introduced* ‘development’ to the world. From this point onwards, development was largely conceived of as economic growth, which basically equates development with GDP/GNP. In the 1970s this one-dimensional concept of development was called into question, as it ignores other aspects of the process, including: social,

cultural, political and environmental dimensions of development. During this time period, there was an awakening to the multidimensional nature of development and a movement was established, which sought to integrate these multiple aspects of development. This progression towards a new paradigm for development led to the search for ‘another development’, which aimed to be “more socially inclusive, human in scale, environmentally sustainable, and participatory in form, initiated from within (civil society) and below (in the grassroots)” (Veltmeyer, 2006a, p. 31). Essentially, there was movement away from exclusion and towards inclusion. For conservation this meant the movement away from people-less strategies towards people-centred methods.

2.3 ‘Sustainability’ and the Mainstreaming of ‘Sustainable Development’

Environmental degradation has negative impacts on human development (and vice versa). As a result, the notion of sustainable development was conceived in an attempt to forge a connection between the social, economic and political concerns over human development issues and the environmental concerns over the ecological consequences of human development. The concept of sustainable development gained momentum in the 1980s and has been well documented in a series of publications including: the *World Conservation Strategy* (IUCN, 1980) and the Bruntland Report, *Our Common Future* (World Commission on Environment and Development, 1987) as well as the documents that resulted from the United Nations Conference on Environment and Development (UNCED), also known as the Rio Conference, in 1992, the Johannesburg World Summit on Sustainable Development in 2002 (Adams, 2009) and more recently the United Nations Conference on Sustainable Development, commonly called Rio+20 or

Rio Earth Summit, in 2012. The most widely used definition has come out of the Bruntland Report, which says that sustainable development is: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43).

The word ‘sustainability’, literally the ability to sustain, is derived from the Latin word, *sustineo*, meaning to support or endure (Morwood, 2005). The concept of sustainability can generally be conceived of as the endurance of systems and processes. However, this concept has multiple disciplinary origins, including social, economic and ecological roots, which inevitably leads to periodic variances in the concept’s definition¹⁵. Nonetheless, the equitable balance of these three pillars of sustainability are what led to the idea of ‘sustainable development’. However, there are also many other definitions of the concept, which put more emphasis on the environmental aspect. For example, the definition put forward at the UK Forum for Future sees sustainable development as a “dynamic process which enables all people to realize their potential and improve their quality of life in ways which simultaneously protect the Earth’s life support systems” (Forum for the Future, 2006). Variance in definition aside, the concept of ‘sustainable development’ has gained momentum in the mainstream from the outset, as the envisaged solution to contemporary environment and development issues.

2.3.1 Critiques

In terms of ecological concerns there are primarily two separate points of view. A ‘preservationist’ perspective tends to favour the preservation of natural areas, without

¹⁵ For a complete historical analysis on the evolution of the concepts of sustainability and sustainable development see Adams, 2009; Mebratu, 1998.

human intervention (i.e. protectionist conservation). In contrast, a ‘conservationist’ or utilitarian perspective also favours the preservation of natural areas, however, it tends to be in the name of enlightened self-interest, where conserving nature is done for present or future human benefit (Nash, 1982). Sustainable development is a product of the latter; human benefit is derived from sustainable management and preservation of the non-human world. It is this fundamental difference in thinking about the environment that has led to certain critiques of sustainable development, notably the “wrong agenda” critique.

Although the concept of sustainable development aims to achieve inclusive development by bridging the divide between the social and natural worlds, it has also been criticized on a variety of fronts¹⁶. The concept itself has been criticized for fostering certain “delusions”, as sustainable development has been viewed as an “oxymoron”. The terms are seen as contradictory and hold opposing imperatives. From both a biophysical and social point of view, the argument contends that due to the fact that development is based on a model of continued growth, it cannot possibly be sustainable as the resources upon which continued growth depends are indeed finite (Robinson, 2004). Therefore, the very essence of this notion of development is seen to be in opposition to the idea of sustainability. However, it is all relative, as this perspective is based on a certain idea of development and if this conception were to change, this argument would no longer hold as much weight with regards to the concept of sustainable development (Adams, 2009; Forsyth, 2005). It has also been thought to be pursuing the “wrong agenda”, as the anthropocentric frame of reference from which the concept was derived places more importance on achieving sustainability for human over non-human needs, resulting in an

¹⁶ For a detailed account of the critiques of sustainable development see Gibson, 1991; Robinson, 2004.

unequal balance of priorities (Robinson, 2004, p. 376). It has been argued that the ambiguity of the term has attracted hypocrites, including powerful actors, who have appropriated the term in order to allow for business as usual, essentially turning the idea into meaningless rhetoric (Gibson, 2002; Robinson, 2004; Adams, 2009). However, the flexibility of the concept together with its ability to amalgamate divergent and interdisciplinary ideas has also been a source of praise (Adams, 2009). Just as the first photograph of Earth from space was influential in realizing the finiteness of the *Blue Planet*, the WCED definition of sustainable development has been extremely contributory in promoting a global perspective of our planet's future.

2.4 Participatory Development

Another key aspect of what some have referred to as a 'paradigm shift' in development thinking, was the movement away from exclusionary top-down initiatives towards more inclusive bottom up approaches. Participation was touted as the obvious means through which to achieve increased inclusion in the development process, where local people would be actively involved in their own development. The concept of 'Participatory Development' (PD) has significantly been attributed to the fundamental works of Paulo Freire (2005) and Robert Chambers (1983, 1986, 1994a; 1994b; 1994c; 1997). Freire's influence on PD comes from his ideas on critical pedagogy and experiential learning. He proposed an alternative relationship between teacher and student, and thus society, where the student is no longer a passive recipient of knowledge, but a co-creator, as the student participates in the shared creation of her/his own knowledge. Thus, there is a shifting or sharing of power contained in knowledge creation,

through a process of empowerment. Building on this notion, Chambers, promoted participation as a means of empowering socially and economically marginalized members of society in shaping their own reality through increased involvement in decision-making—by putting them at the center of development policy and practice. PD gained momentum in the 1990s, when a new family of participatory research methods was introduced under the name Participatory Rural Appraisal (PRA) (Chambers, 1994). By the turn of the millennium, ‘participation’ and ‘empowerment’ became central concepts in mainstream development discourse¹⁷ (Mikkelsen, 2005, p. 55-56). However, there are many definitions and levels or stages of participation ranging from passive to active, with the later being the ideal¹⁸. According to Chambers (1994c), there are three main uses and meanings of participation: “cosmetic labelling, to look good; co-opting practice, to secure local action and resources; and empowering process, to enable people to take command and do things themselves” (1994c, p. 1).

2.4.1 Critiques

Although PD was successful in illuminating the importance of allowing people the opportunity, or right, to participate in their own development, it has also been criticized on various grounds. Undoubtedly the most well known compilation of critiques has boisterously reproached PD for its *tyrannical* use and domination as a development strategy that furthers structures of oppression, and in so doing has illuminated various important areas in need of consideration (Cooke & Kothari, 2001). The following are some of the major issues that have emerged within PD. The mainstreaming of

¹⁷ For a more complete history and analysis of PD see Cornwall, 2008; 2011.

¹⁸ For further information on different stages and levels of participation see Arnstein, 1969; Pretty, 1995.

participation into development discourse has led to an abuse of the concept, in part due to the preference or requirement of participatory approaches by many government and donor agencies. Implementation agencies use participation rhetoric as a 'rubber stamp' to gain legitimacy or funding, when in reality little to no participatory methods are used, or they are used uncritically resulting in limited empowerment—a phenomenon known as “tokenism” (Richards, 1995; Mohan, 1999; Mohan). PD has also been criticized for having a tendency to romanticize the local (“localism”) and downplaying local socioeconomic inequalities as well as broader national and global power relations (Mohan & Stokke, 2000). Claims of empowerment and inclusion have also been questioned as it has been suggested PD tends to homogenize communities, reproducing local inequalities, as more the powerful/vocal frequently dominate the discussion, resulting in elite capture and further exclusion of marginalized groups (Mikkelsen, 2005). Women are often said to be among the most marginalized, as underlying issues of unequal gender norms and relations at various levels in society are often overlooked (Guijt & Kaul Shah, 1998; Mayoux, 1995; Mosse, 1995; Parpart, 2000; Cornwall, 2003). Concerns over scale and reach have also been illuminated, as it has been argued that many development issues cannot be tackled at the local level, therefore, issues pertaining to the broader structures of development remain untouched (Mohan, 2001, p. 10). Finally, it has also been argued that PD lacks insight into the root causes of underdevelopment and leaves inequitable local and global power relations that perpetuate the cycle of underdevelopment unchallenged (Cornwall, 2000; Mohan, 2001). Concerns over cost, time, efficiency as well as facilitator skill and knowledge have also been voiced.

Many scholars, however, have embraced these critiques, building upon PD's foundation and integrating innovative new theoretical as well as practical methods, tools and techniques (Hickey & Mohan, 2004; Gaventa, 2005; 2006). The concept of participation has also been incorporated into various disciplines, including branches of research, politics, environmental management and education. PD has significantly influenced the conception of CBAs to development and conservation, as participation has been envisioned as a fundamental element in achieving sustainable solutions.

2.5 Community-Based Conservation and Development

The way people come to know what they know about nature inherently shapes the way they interact with it. Although the aforementioned Western perception of nature has dominated the conservation scene since the mid-nineteenth century, the late 20th century witnessed changes to this approach. The epistemology of nature varies between and within different societies and as a result environmental management practices have adapted to these customized realities. The search for alternatives to the protected areas approach began around the 1970s in an attempt to rectify some of the downfalls of past exclusionary top-down approaches. At this time many environmental justice¹⁹ issues, where local people felt disadvantaged in terms of equitable distribution of environmental benefits and burdens, were brought to light. A significant event that propelled forward motion towards CBAs to conservation—community-based conservation (CBC)—was the passing of resolution 12.5 (Protection of Traditional Ways of Life) by the IUCN General

¹⁹ According to the Environmental Protection Agency (EPA), 'Environmental Justice' can be conceived of as, "the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies" (EPA, 2014).

Assembly in 1975, which recognized the rights, knowledge, stewardship and interests of indigenous people in relation to conservation areas (IUCN, 1975, p. 153-154). Other influential initiatives that led to the conception of CBC include: “the concept of buffer zones, introduced by UNESCO’s Man [sic] and the Biosphere programme in 1979, and Integrated Conservation and Development Projects (ICDPs) popularized in the late 1980s and early 1990s” (Campbell & Vainio-Mattila, 2003, p. 421). CBC, which has become increasingly prevalent in the past few decades, was developed in an attempt to rectify some of the downfalls of the protectionist approach. It can be defined as “natural resources or biodiversity protection by, for, and with the local communities” (Western & Wright, 1994, p. 7). The central idea of the concept is “the coexistence of people and nature, as distinct from protectionism and the segregation of people and nature” (Western & Wright, 1994, p. 8). Furthermore, CBC aims to address environmental justice issues by actively involving local people in their own development through increased participation, thus adopting some of the fundamental principles of PD. The idea is that “if conservation and development could be simultaneously achieved, then the interests of both could be served” (Berkes, 2004, p. 621).

It has become widely accepted that issues of biodiversity loss and poverty (including monetary as well as non-monetary aspects) are connected (Adams *et al.*, 2004). However, there has been increasing concern that global conservation efforts have been in conflict with poverty reduction strategies (Sanderson & Redford, 2003). CBC resulted from this growing concern. Some of the problems that contributed to the movement towards CBC include the exclusionary nature of protectionist conservation

strategies, the philosophical basis of protected areas (people-less nature) as well as various environmental justice issues. With the concepts of sustainability and participation in mind, CBC was created in an attempt to synergize the social, economic and environmental aspects of conservation and development. CBC also aimed to establish a ‘middle ground’ between local communities and top-down conservation initiatives by promoting local participation in the decision-making process of conservation and natural resource management. Former occupiers of protected areas, along with people who held various types of land and/or resource rights, were often evicted and excluded from their local environment in order to establish protected areas (Brockington, 2002; Adams et al., 2004; Duffy, 2010). The incorporation of a development component in CBC initiatives, together with increased local participation, also helped to reduce conflict and enhance local legitimacy of conservation programs, which was often lost due to the way in which past protected areas were established. However, much like the trend of ‘participation’ in development discourse, the integration of development and poverty reduction strategies in conservation gained increased popularity in the 1990s, resulting in a merging of mainstream conservation and development narratives in conservation policy and programs (Campbell & Vainio-Mattila, 2003). Finally, CBC can be seen as a way of combining traditional practices and modernist modes of conservation, while capitalizing on local ecological knowledge (LEK) and therefore linking different types of knowledge.

Looking at forest conservation in particular, there has been a growing movement towards the CBC approach, especially in developing countries, which may be attributed to the built in poverty reduction aspect. Local dependence on forest resources and

services as well as grievances over the exclusionary nature of the establishment of protected areas can also be seen as having a significant impact. Forestlands serve as crucial habitat for many plant and wildlife species and therefore are important in terms of biodiversity conservation. As was previously outlined, forest resources and services are also extremely valuable socially and economically to people. Thus, it would seem that forests make ideal candidates for CBC.

According to Campbell and Vainio-Mattila (2003), theoretically, CBC took a different approach than past endeavours, as its objective was to put community involvement at the center of conservation, as opposed to being the mechanism through which to achieve conservation. However, Adams *et al.* (2004) illustrate four different perspectives on the objectives of CBC. They are as follows. The first perspective sees poverty and conservation as separate policy realms; extinction and poverty are treated as separate issues. The second position views poverty as a critical constraint on conservation, while the third believes conservation should not compromise poverty reduction, meaning conservation should in no way increase poverty. The final point of view understands poverty reduction as being dependent upon living resource conservation, where conservation is conceived of in terms of sustainable use as a means of poverty reduction. A discontinuity between the goals and objectives, and therefore uses of CBC can be identified, as they vary depending on desired outcomes and disciplinary perspective. Thus, in general, CBC can be seen to embody the dualistic objective of enhancing biodiversity conservation as well as providing socio-economic incentives and/or benefits to local people. However, these objectives are not always

equally weighted, nor are they not necessarily consistent with one another, as the emphasis can diverge from one situation to the next.

2.5.1 Critiques

CBC, however, is not without its critiques. CBC endeavours to combine conservation with development, while serving the interests and objectives of both. However, both sets of interests do not necessarily always align, which is a reality that has caused certain scholars to question the merits of the approach (Kellert *et al.*, 2000; Barrett *et al.*, 2001). Furthermore, some scholars have argued that practitioners of CBC have not taken lessons learned from PD into account and therefore, have often failed to achieve meaningful participation (Campbell & Vainio-Mattila, 2003). It has been argued that CBC often fails to include local people in all levels of participation, including decision-making and project development, and that projects conceived, implemented and evaluated by outside agencies reflect the problematic nature of the term CBC (Wells & Brandon, 1992; Campbell & Vainio-Mattila, 2003). From this perspective, development is stifled, as participation is not fully implemented nor is it completely equitable, resulting in a disproportionate distribution of socio-economic benefits. CBC has also been viewed as a “Trojan horse” as it promotes a predetermined agenda, under the guise of decentralized management and autonomous decision-making (Blaikie, 2006). In this view, the participatory aspect of CBC is means of getting people “on side” with predetermined conservation projects, usually with the end goal of creating or enhancing a protected area, which limits the scope of CBC efforts within the boundaries of a fixed notion of conservation (Campbell & Vainio-Mattila, 2003). This has been attributed to

the conceptualization of CBC, which resulted from pragmatic, philosophical and environmental justice concerns. CBC has been related to a protectionist conservation approach in the sense that it emphasizes participation as a means of achieving and expanding conservation, rather than participation being an end in itself (Campbell & Vainio-Mattila, 2003). Furthermore, the impact of CBAs in general has been the subject of contestation, as the extent to which it can achieve conservation and development on a larger scale has been questioned, due to its small-scale focus as well as a variety of other reasons (Leach, Mearns & Scoones, 1997). Proponents of deep ecology, who see nature as a public good independent of its utility to people, have argued that CBC does not measure up to the conservation achievements of the protectionist model (Fletcher, 2010).

CBC has also been criticized for its implication with neoliberal philosophy, which is problematic as it has been associated with the creation or exacerbation of inequality²⁰ (Brockington *et al.* 2008; Fletcher, 2010). Furthermore, the commodification of nature, common to the neoliberal agenda, may alter local values and meanings associated with natural resources and services, impacting socio-cultural community dynamics as well as place-based identities (Sullivan 2006; West 2006). Another source of critique comes from CBC's apparent simplistic attitude regarding traditional management practices and for its heavy reliance on "western scientific criteria to determine appropriate conservation practices" (Campbell & Vainio-Mattila, 2003, p. 426).

²⁰ Examples of neoliberal conservation strategies include: "1) the creation of capitalist markets for natural resource exchange and consumption; 2) privatisation of resource control within these markets; 3) commodification of resources so that they can be traded within markets; 4) withdrawal of direct government intervention from market transactions; and 5) decentralisation of resource governance to local authorities and non-state actors such as non-governmental organisations (NGOs)" (Fletcher, 2010).

2.5.2 What Constitutes a ‘Community’?

With increased movement towards CBAs, the concept of ‘community’ has become a fundamental unit of analysis. Despite its popularity, there is no clear consensus on the concept’s definition and it is relatively rarely critically examined by those concerned with CBAs (Agrawal & Gibson, 1999). There have, however, generally been three basic characteristics that have been identified as commonly attributed to the term, which view ‘community’ as: a small spatial unit (small in size and territorial affiliation), a homogenous social structure (i.e. socially, culturally, economically) as well as common interests and shared norms (i.e. shared kinship, history, knowledge, beliefs, morals and customs) (Bernard, 1973; Kepe, 1999; Agrawal & Gibson, 1999). Due to the common attribution of these characteristics to the concept, they are also assumed to be true for all communities; however, this is not always the case. In fact, many scholars have argued that the homogenization of communities to fit these characteristics is not only inaccurate but also harmful as it ignores many factors that can negatively affect development and conservation projects, especially when the goal is to enhance equitable participation (Leach, Mearns & Scoones, 1997; Agrawal and Gibson, 1999; MacDonanld, 2003).

The applicability of communities to conservation and development is also based on a variety of assumptions, such as assumed knowledge of community members of local environmental resources and services and consequently their management qualifications. These types of assumptions spring from the tendency to romanticize the ‘community’, assuming that community members are naturally prone to environmentalism or equality

(i.e. the “mythic community”²¹ and the “Ecologically Noble Savage”²²) (Kapoor, 2001). It has been said that these views ignore differences within communities as well as the various actors and influences on decision-making (Agrawal & Gibson, 1999). Shifting power balances in decision-making to incorporate internally legitimate institutions of authority have been noted as important factors to avoid conflict and resistance (MacDonald, 2003). However, from another perspective, participation in CBAs has been referred to as undemocratic, as local politics and social structures are romanticized, ignoring social and economic hierarchies within communities (Schroeder, 1999a, p. 17).

Although a degree of truth to the aforementioned assumptions has been acknowledged, it has been maintained that a more fruitful means of approaching the concept of community may be to focus on institutions²³ as well as the multiple interests and actors within communities and how they influence decision-making (Agrawal & Gibson, 1999; Kapoor, 2001; Berkes, 2004). Both internal as well as external actors influence community decision-making, including the diversity of interests, norms and processes, institutions, politics as well as power relations, and are therefore important aspects to consider when conceptualizing ‘community’. Understanding the historical and traditional contexts of conservation can help to counteract some of these downfalls and can be useful in terms of bridging the divide between local practices and modernist models of conservation. Furthermore, increased recognition of the historical basis and valuation of local ecological knowledge (LEK) and conservation practices can help to

²¹ See Agrawal and Gibson 1999.

²² See Redford 1990.

²³ Institutions can be defined as “humanly devised constraints that structure human interaction, made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions, and self-imposed codes of conduct), and their enforcement characteristics” (Berkes, 2004).

empower communities and minimize resistance and conflict as well as develop more locally relevant programs (MacDonald, 2003). However, recalling the heterogeneous nature of communities, it is also important to remember that tradition and motivation for conservationist practices are also highly fluid (MacDonald, 2003).

2.6 Social Ecological Systems: Integrating People in Nature

Just as the search for ‘another development’ led to the integration of ‘sustainability’ and ‘participation’ (among other concepts) into development theory and practice, a paradigm shift in ecology has also been observed. CBC is a by-product of these shifts in thinking. From this perspective, three separate conceptual shifts have been identified: “a shift from reductionism to a systems view of the world, a shift to include humans in the ecosystem, and a shift from an expert-based approach to participatory conservation and management” (Levin, 1999; Bradshaw & Bekoff, 2001; Ledwig, 2001, as cited in Berkes, 2004). The simultaneous movement towards alternative—sustainable, participatory and equitable—ways of doing development and conservation fall within a shifting paradigm that can be observed across disciplines.

Systems thinking ²⁴ takes a holistic approach to understanding a given phenomenon as a part of a whole (system) rather than an isolated issue. When looking at social issues for example, systems thinking would approach the issue from a variety of perspectives that could include different aspects of human society (i.e. culture, economics, geography, history, politics etc.). The same would be done when investigating an environmental issue; various components of a given ecosystem would be

²⁴ For further information on general systems theory see von Bertalanffy, 1969.

considered together as interconnected elements of a whole, rather than looking at a given problem in isolation. Past ways of thinking about environmental management have been essentially linear and reductionist, based on cause and effect thinking and mechanistic views of nature. The objective was to reduce natural variation so as to make ecosystems more productive, predictable and controllable—essentially the idea was to simplify ecosystems down to a level where problems could be viewed in isolation in order to facilitate “one-size-fits-all kinds of management” (Berkes, 2004). However, there has since been a movement towards complex systems which on the other hand, are not limited to linear thinking, as they incorporate nonlinearity, uncertainty, emergence, scale and self-organization, which lends itself well to systems thinking (Levin, 1999; Gunderson & Holling, 2002). With regards to environmental management, the “systems approach is replacing the view that resources can be treated as discrete entities in isolation from the rest of the ecosystem and social system” (Berkes & Folke, 1998b, p.2). Natural resources, such as forest resources for example, are a part of the environment that is heavily engrained and important to both human as well as ecological systems, and therefore seem to be compatible with a social-ecological systems (SES) approach to management, which considers both as individual parts of a larger system.

Based on the widespread popularity of concepts like ‘sustainable development’ and ‘community-based conservation’ we can see that it has become increasingly important to view humans as a part of, rather than separate from nature. The need to conceptualize the social and natural systems as two interacting parts of an interconnected whole has become increasingly important and relevant to emerging types of

environmental management and conservation (Berkes, 2004). However, there is no consensus on the way in which to theoretically or practically accomplish this integration. The concept of social-ecological systems (SES), which refers to the integration of humans in nature, has been devised as a framework through which to conceptualise this complex relationship (Berkes & Folke, 1998b; Berkes *et al.*, 2003). Social-ecological systems are “integrated complex systems that include social (human) and ecological (biophysical) subsystems in a two-way feedback relationship” (Berkes 2011). ‘Feedback’ refers to “the result of any behaviour which may reinforce (positive feedback) or modify (negative feedback) subsequent behaviours” (Berkes & Folke, 1998b, p. 6). A feedback relationship then, examines the connections between management practices, ecological knowledge (EK) and social systems, as oftentimes, social mechanisms are developed to facilitate management practices based on EK (Folke, Berkes, Colding, 1998). Multiple scales and levels²⁵ of social interaction with the environment (i.e. EK, institution, governance structures) can be found in any conservation effort. For example, community conservation efforts may differ significantly from government efforts. Therefore, it has been maintained that management must be adaptive, to allow for experiential learning from the feedback relationships between the human and natural systems.

With the movement towards the social science of conservation, or “sustainability science”, where place-based models are used to understand dynamic relationships between nature and society, local ecological knowledge (LEK) has gained increased legitimacy (Kates *et al.*, Berkes, 2004). Here, both manager and resource users work in

²⁵ ‘Scale’ includes a spatial, temporal and analytical dimension, in terms of size. ‘Level’ refers to a specific point along a scale (or a ‘unit of analysis’ within a scale); it is often used in reference to levels of governance (Berkes *et al.*, 2014).

collaboration to better understand complex systems and find innovative management and conservation solutions through experiential and adaptive learning and active participation. Local environmental management or conservation strategies are often based on LEK and embedded in social mechanisms, such as cultural or traditional practices, that have been adapted based on a given reality²⁶. Due to the scale of CBAs, CBC can be extremely conducive to this reality. Further elaboration on the role of culture in conservation can be found in Chapter Three.

2.7 Conclusion

The romanticized idea of a people-less nature has sprung a disconnect between humans and the natural world, which has been exacerbated by various changes in society, such as religion, westernization, politics, population growth, economic growth etc. People have removed themselves from the ecological system, which has led to increased unsustainable environmental degradation, as resources are being used without regard for their ability to be replenished or recycled. In general, humans have been relatively slow to recognize the signs and symptoms of environmental degradation. The previously mentioned disconnect between people and nature further exacerbates this issue, as it allows people to exploit environmental resources and services without appreciating what that means for the rest of the ecosystem. Climate change, biodiversity loss and deforestation are but three examples of environmental degradation, which have resulted from the overexploitation of the Earth's natural resources and services. This thesis argues that by using various means of fostering motivation and stewardship, CBC can be used to

²⁶ For more information on social-ecological practices and mechanisms see Folke, Berkes & Colding, 1998.

revive conservation efforts and consequently minimizing degradation and enhance community benefit. Using the Community Forestry Programme (CFP) as a case study, the research shows that various incentives, such as increased land rights, access to resources and economic benefits, helped to foster stewardship and motivation for conservation within the 'community'.

CHAPTER THREE

Social Ecological Systems and Forest Conservation in The Gambia

3.1 Introduction

The purpose of this chapter is to put contemporary forest conservation into context by focusing on the evolutionary aspect of Gambian conservation efforts and how they relate to the Social Ecological Systems (SES) framework. In this way, the issues discussed in the literature review can be linked to the historical and contemporary reality of forest conservation in The Gambia. There are many factors that can lead to changes in both social and ecological systems. Due to their interconnected nature, factors that affect one system can ultimately have implications on the other system(s). From a social sciences perspective, this chapter also explores the role of people in the environment and how changes in, or shocks to social systems can have broader ecological effects. A social system can be thought of as either individuals or groups that interact directly or indirectly in a physically or territorially bounded situation, which share a common focus or inter-related foci (Sociology Guide, 2014). Social systems are comprised of many diverse sets of relationships (i.e. cultural, ethnic, religious, political, economic) that range from small groups to whole societies, which have shared norms and patterns of behaviour with distinct and often interrelated governance structures and institutions. A historical perspective on the outside influences on social systems in The Gambia can provide insight into transformations or alterations in interrelated forest management and

conservation practices and the resulting impact on ecological systems (i.e. forest loss and degradation). Various factors throughout history that shaped Gambian society, and thus environment, were examined along with shifts in conservation practices.

3.2 Forest Conservation in The Gambia: Change Over Time

The aforementioned Western perception of nature has had a lasting imprint on conservation worldwide and The Gambia is no exception. Imported protectionist conservation created a shock to the social system, by altering governance structures and management practices that had been based on local or traditional ecological knowledge²⁷ and embedded in social mechanisms. This created a dichotomy between traditional management practices (i.e. sacred groves, taboos etc.) and new protectionist conservation techniques. However, as will be discussed further on in this chapter, Gambian conservation practices (both traditional and imported) have evolved and adapted to fit the local reality through CBC. That is not to say that there is no room for improvement, just that the original shock of protectionist conservation has been absorbed and adapted upon.

Colonial Legacy

Scientific forest management was first introduced in The Gambia by the British colonial administration in the late 1940s, using a state-led approach to the problem of forest loss and degradation (Sonko & Camara, 1999). This approach was based on the Western conception of people-less nature and conservation. As was discussed in Chapter Two, this perception can be seen to have religious roots, as Christianity played a major

²⁷ When discussing local or traditional knowledge the author is referring to what Tim Forsyth calls 'indigenous knowledge,' which he defines as "a type of knowledge that has evolved within a particular community and cultural context, and has been passed from one generation to another" (2004, p. 341).

part in shaping the original perception of nature in Western culture. Importing this worldview affected local perceptions of nature and thus modified previous human relationships with the environment. Changes in conservation institutions and governance structures modified existing social systems, which led to changes in certain ecological systems. Indigenous environmental management and conservation practices that had been derived from local or traditional ecological knowledge, and were expressed through social mechanisms, were then changed, or altered congruently to fit with new perceptions. This created a disconnect between past and present management practices (social system) as well as the local environment (ecological system). Forest parks and wildlife reserves were first established in 1952 (66 parks in total covering 34 909 ha), which absorbed large plots of fallow land as well as traditional forest reserves, the resources of which were intended for local domestic use (Sonko & Camara, 1999). The Gambian government continued with this approach after independence, which was achieved in 1965.

Negative Socio-economic Impacts

This exclusionary process of land conversion, or enclosure, ignored traditional tenure rights over land and trees, as it redefined land use and access to the detriment of local communities (Sonko & Camara, 1999). Many people relied on forestland as well as the resources within the enclosed areas for economic as well as livelihood needs. This practice also ignored the importance of the place-based identities of local people, which sprouted a legacy of suspicion and mistrust, whereby local people responded to environmental initiatives by demanding recognition of their needs (Schroeder, 1999a).

Another example of the negative consequences of this type of conservation is the criminalization of previously quotidian uses of forest products or practices, as they became illegal due to the ‘enclosing’ or privatization, of previously common land, thanks to restrictive forest laws and regulations (Sonko & Camara, 1999). Furthermore, forest degradation was actually intensified as a result of the loss of traditional ownership rights over land and forests, as the exclusion of local communities from forestlands (that they felt belonged to them) spawned an unwillingness to protect or conserve an area that had been taken away from them (Sonko & Camara, 1999). Thus, the exclusion of local communities in state-led resource management efforts hindered the objective of conservation, intensifying degradation, and left little room for mutual benefit or collaboration efforts between the local level and the state.

3.2.1 Non-immediate Influences: Historical and Contemporary

From a SES frame of reference, social and ecological systems are interconnected; factors that stimulate changes in one system can also have secondary, or non-immediate effects on another. In addition to the directly related changes in forest management noted above, there are also other important indirect factors that have created shocks to Gambian social systems. These shocks have influenced shifts in environmental management practices that had been embedded in social mechanisms, by altering different aspects of Gambian society. These changes have accrued over centuries of outside interaction and intervention in various areas of Gambian society such as culture, religion, education, as well as political and economic organization. Influencing factors that lead to changes in worldviews, or the way people conceptualize a certain reality can also indirectly affect

the social-ecological relationship, or the human relationship with nature. The following provides a historical overview of important changes to Gambian social systems.

The geographic location of present day Gambia has been home to a plethora of ethnic groups²⁸ belonging to a variety of kingdoms and empires²⁹ as well as religions and world views, which have been linked to other areas of West Africa, the Sahara, Europe, and the Americas through trade and cultural exchanges (Bellagamba, 2006). The evolutionary nature of social organization resulted in a region connected by culture and worldviews. Religion is a fundamental pillar of Gambian culture and society, as it played an influential role in shaping Gambian social systems and worldviews, together with traditional West African practices. Islam and Christianity were introduced to West Africa in two separate waves. Islam was first introduced around the eleventh century via the trans-Saharan trade network, where many local rulers and elders were converted and introduced Islamic ideas and laws to their people (Gilbert & Reynolds, 2008). Christianity first appeared in the area in the mid 1400s when Europeans made initial contact.

The Portuguese were the first Europeans to commence trade relations in The Gambia. They are recorded to have captured several West Africans from the mouth of the Senegal River around 1444, whom they shipped back to Lisbon, thus commencing the trade in slaves, which would dominate trade relations in the area for the next four

²⁸ The five most numerous ethnic groups in The Gambia include: the Mandinka (Mandingo, Manlinke), Fula (Fulani), Wolof (Jolof), Jola (Diola) and Serahule (Serehuli, Soninke) (Gailey, 1965; Saine, 2012).

²⁹ Some of the major kingdoms and empires to which the people of this area owed allegiance include the Takrur (or Tekrur) Kingdom (11th-14th c.), the Mali Empire (14th c.), the Wolof Empire (14th c.), the Songhai Empire (16th c.) and the Mande Kingdoms (16th c.) (Gilbert & Reynolds, 2008).

centuries (Gailey, 1965; Gilbert & Reynolds, 2008). Trade concessions were ceded to the English in the mid-sixteenth century as a result of decreasing Portuguese influence (Gailey, 1965). The Gambian territory contained no natural resources of appreciable economic value; however, it was prized because of its geographic location. Due to its width and depth The River Gambia was considered the most navigable waterway in West Africa, which made it very valuable in terms of trade (Gailey, 1965). Being such an important port made The Gambia that much more vulnerable to outside influence, which led to increased social fluctuations. The English declared slave-trading illegal in 1808, however it was not fully abolished for another fifty years or so meaning many colonial powers had continued interest in the Atlantic Slave Trade (AST) making the territory susceptible to raids and poaching (Gailey, 1965; Gilbert & Reynolds, 2008). Due to this threat, in 1816 local leaders allowed the British to establish a fort in Banjul in exchange for protection, allowing Britain greater control over the territory (Gailey, 1965). Thus, the end of the AST in The Gambia led to further entrenchment of British colonization. As a protectorate of Britain, the government was later restructured under British indirect rule, with few officials at minimum expense, later integrating local rulers and practices where possible to govern smaller areas (Gailey, 1965). The multi-cultural reality of The Gambia was further engrained as a result of the ‘Scramble for Africa,’ a continent-wide colonial territorial division and annexation of African territory by European powers, often attributed to the Berlin Conference of 1884. At this time many peoples were divided from other members of their own ethnic group as well as united with members of other ethnic groups within arbitrarily defined borders.

The second wave of Islam took root as a result of the Soninke-Marabout Wars (SMWs), which began in the 1850s. These conflicts were Muslim jihadist “wars of purification” between the Marabouts, who were holy Islamic clerics and teachers that sought to bring an end to pre-Islamic rituals and practices, and the Soninkes, who were the non-Islamic traditional rulers of The Gambia (Gailey, 1965; Saine, 2012, p. 47). The SMWs, which officially ended around 1901 after most of the ruling families had been killed or were in exile, deeply reshaped The Gambia’s cultural, religious and political worldview (Saine, 2012). The second wave of Christianity set in around the second half of the nineteenth century when colonial missionaries established schools, introducing Western-style education to The Gambia. Both Islam and Christianity became further engrained as a result of formalized education, as local languages and traditional practices were forbidden in school. In the past, education was relatively informal, as skills and knowledge were passed from one generation to the next where professions were almost always pre-determined by birthright as a result of the caste system. For example, if your father was a blacksmith, more than likely you would follow in his footsteps, inheriting skills and knowledge that had been passed down from his father before him. Cultural practices were another form of transferring knowledge. A particularly well-known example of traditional education include the use of *griots* (or *jeli*), whose mastery of the spoken word and recollections of genealogies of patron(s) have been influential in transmitting history (Saine, 2012). Colonization, religion and education reshaped or modified many traditional institutions in The Gambia, as they sought to eliminate indigenous practices and ways of life (Saine, 2012). Abdoulaye Saine emphasizes this point by maintaining that, “Christian missionaries introduced Christianity and were

driven by the belief that Africans needed to be saved through the Gospel. Islam had a similar mission and coexisted with some African traditions and institutions until the Soninke-Marabout Wars that were fought to cleanse Islam of these so-called Africanisms” (2012, p. 25).

Examples of more contemporary influences on Gambian social systems that led to shifts or alterations in indigenous traditions and cultural practices include: integration into the global capitalist economy, neoliberal Structural Adjustment Programs (SAPs)³⁰ and advances in communications technology. Globalization (i.e. international social, cultural, political and economic integration) and urbanization have also been influencing factors. According to Saine, “[m]odern education and globalization have slowly eclipsed many social organizations, even if they remain in some modified form today... The collectivist ethos that once was prevalent in Gambian and other African societies has been eroded somewhat by education, rural to urban migration, and shifts in the national and global economies” (2012, p. 135). Returning to the discussion regarding the Western perception of wilderness and conservation as well as the neoliberal agenda of environmental commodification from Chapter Two, this too can be seen as an influence on local worldviews. This type of change in perception can alter the way people interact with nature, affecting place-based identities and culturally engrained conservation methods or management practices.

³⁰ For more on SAPs in The Gambia see McPherson & Radelet, 1995; Parfitt, 1995; Noorbakhsh & Noorbakhsh, 2006.

3.3 Traditional Beliefs, Cultural Practices and Social Mechanisms

Social changes can alter worldviews, creating a disconnect between past and present ways of doing things. Consequently, past management practices can become irrelevant because the cultural practices or social mechanism in which they were embedded are no longer adhered to. Although many traditional beliefs and cultural practices have decreased significantly, not all of them have disappeared. Remnants of social mechanisms—many of which have informed management and conservation practices—can still be identified. At present only about 1% of Gambians claim to solely practice indigenous religions, as compared to 29% in 1963 (Access Gambia, 2013). However, much of the population still engages in certain aspects of this belief system, which pre-dates the arrival of both Islam and Christianity. Due to the blended reality of The Gambia—along with general religious tolerance due to centuries of co-existence, intermarriage and cooperation—rather than being destroyed, the traditional belief system has been absorbed and modified to fit with Islamic and Christian practices (Saine, 2012). An important example is the dichotomous role of the Marabout in contemporary Gambian culture. In the past, soothsayers, traditional healers, midwives, woodcarvers, leatherworkers, blacksmiths, goldsmiths and griots were considered to be endowed with magic or mystic powers that would allow them to intervene on behalf of those less fortunate. These gifted individuals would be asked to perform miracle healing, produce fetishes to ward off evil spirits, provide protection or luck, as well as to place curses on rivals. Although today the Marabout's authority is based on the Qur'an, rather than the supernatural, they perform similar tasks by creating amulets or *juju*, which are made out of verses from the Qur'an that have been encased in leather or metal (Saine, 2012). *Juju*,

for example, can be used for the protection or conservation of a certain area or specific tree. Being Muslim or Christian does not bar one from seeking these services.

Examples of traditional or cultural practices that relate to conservation include: the use of taboos, sacred groves, seasonal or temporally restricted areas and harvests, superstitions as well as juju. A significant example of a sacred grove (*Santangba*) that has been preserved through traditional means can be found in a place called Kotokali, near Brikama. This place is regarded as scared because it is the location of the first settlement in the area, dating back to the thirteenth century, which was founded by Mandinka migrants from the Mali Empire, during the reign of Sundiata Keita³¹. According to Access Gambia (2013), its impeccable preservation can be attributed to the belief that the area is occupied by the spirits of ancestors, and therefore, it is taboo for local people to take fruit, fell trees or hunt in the area. Fear, together with the use of mascots or masquerades, cursed objects, fetishes and potions, as well as the telling of fables or legends, have obtained conservationist results, as access to certain areas has been restricted or inhibited. Witches, devils and evil spirits who come out at night, for example, are notoriously revered in Gambian culture, as they are feared due to their ability to prey on humans. As a result, people generally do not sit under trees at night, as this is where spirits reside. Furthermore, superstition has it that witches are especially dangerous during ceremonies such as circumcision, when they can prey on uncircumcised boys or girls (Saine, 2012, p. 43). Consequently, among the Mandinka, a masquerade known as *Kankurang*, (see Figure 3.1) dressed in a costume of reddened tree bark, is deployed to ward off evil during circumcision ceremonies, which involve the enforced

³¹ The legend of Sundiata is an important part of West African history. See Niane, 2007.

seclusion of both males and females. *Fambondi*, a more sophisticated version of Kankurang, is believed to have spiritual powers that allow him to protect the area as well as those undergoing the circumcision ceremony. However, going into the area without this protection leaves one vulnerable to devils, witches and evil spirits.

Figure 3.1 Kankurang Masquerade



Source: Personal Photo, 2012

The outlined direct and indirect changes to Gambian social systems are not the only reasons for degradation, as other issues, such as population growth, urbanization, agricultural expansions, natural disasters, climate change as well as poverty and unemployment, have also been major influencing factors. However, these shocks have undermined previous conservation methods embedded in cultural practices and traditional beliefs, as these changes altered different aspects of social systems in The Gambia. These shocks reduced the incidence of traditional practices by imposing new

ways of seeing and doing things, that weren't necessarily based on local or indigenous knowledge.

3.4 Towards a CBA to Forest Management and Conservation

As a result of the failure of the state-led approach, new locally relevant methods of forest conservation were needed. A solution that was less exclusionary, but no longer based on somewhat out-dated practices was necessary. Thus, began the movement towards a CBA to forest management and conservation. New forest policy was created in 1976 (passing legislation in 1977) although it was very similar to the top-down colonial administration policies of the 1940s and 1950s (Sonko & Camara, 1999). Since the late 1970s The Gambia has launched successive reform programmes, most notably the Economic Recovery Programme (1985) and the second Structural Adjustment Programme (1988/89-1990/91), which culminated in the country's long-term development strategy—Vision 2020, enacted in 1994 (GOTG, 1996). Although decision-makers were becoming increasingly aware of the environmental problematic, particularly forest loss and degradation, early policies failed to include environmental considerations, which had a negative impact on environmental management (Sonko, 2011, p. 11). It was not until the 1980s that it became clear that the dominant forestry practices would not be capable of ceasing the destruction of the country's forestlands and resources, thus new approaches were needed. Due to the failure of the country's previous state-led approach, in 1987 The Gambia sought to find a way to engage local people into the process by reinstating the commons, albeit a significantly modified version, through CBC efforts.

In 1991, the government of The Gambia (Department of Forestry) with support from the UN Food and Agriculture Organization (FAO), the government of Germany as well as various local non-governmental organizations (NGOs) initiated the Gambian-German Forestry Project (GGFP), which sought to establish both community forests and community-based forestry projects (UNESCO, 2013). This sparked a chain of progressive legislation, policy and management plans including the Gambian Forest Management Concept (GFMC), established through the Gambian Forestry Act in 1995, the National Forest Fund in 1996, the 1977 Forest Legislation (revised and enacted in 1998) and the National Forestry Action Plan from 2001 to 2010 (UNESCO, 2013). This new institutional framework laid the foundation for community forest ownership, conservation and management in the country. The GFMC promoted an integrated and participatory approach to forest management and served as the basis for future action. It was revised in 2001 to be more oriented towards community participation in the management of state owned forest as the Community Forestry Programme (CFP)—in addition to Joint Forest Park Management and Community Controlled State Forests (Jammeh, 2008). From 2000 to 2004 the FAO facilitated further integration of economic incentives in the Community Forestry Concept and in 2009 The Gambia joined the FAO's National Forest Programme—aiming to have close to half of its forests communally managed by 2016 (FAO, 2011). In this way, the idea was that forest conservation, climate change mitigation and adaptation as well as local development would be tackled collectively through CBC.

3.4.1 The Community Forestry Programme Explained

In The Gambia, community forestry is set up through a step-by-step process that aims to build confidence and trust between primary stakeholders, which include the Department of Forestry and local communities. This is done by setting formal agreements between the Department of Forestry and forest committees, which are either newly formed or refurbished traditional groups (i.e. Village Development Committees, clan members, council of elders) within the existing village structure, that represent communities (with men, women and youth representatives) at the local level (Sonko & Camara, 1999). The forest committee organizes labour and work plans with community members, while the forestry department provides technical assistance and advice on “basic forest practices such as plantation management, forest protection, tree nursery technology, simple bookkeeping and problem analysis” (Sonko & Camara, 1999, p. 47).

There are three phases in total. The first, which takes about six months, is the ‘Start-up’ phase where interested communities must set up a forest committee that undergoes forestry department training in order to create a management plan and apply for a Preliminary Community Forestry Management Agreement (PCFMA) to facilitate the gradual transfer of forest ownership from state to community (Sonko & Camara, 1999). During this phase the community has no additional rights in terms of resource use other than domestic consumption, as resources are still State-owned at this point. After the PCFMA is signed, the ‘Preliminary’ phase begins, which aims to sort out potential conflicts regarding different forms of land use as well as legalize the process by obtaining signatures from all major stakeholders. During this period, land is usually marked off by

planting of a belt (5 to 20 meters wide) of cashew, gmelina or *Cassia siamea* trees, which helps with fire protection, along with natural and artificial boundaries such as rivers or roads (Sonko & Camara, 1999). This stage lasts about three years and the community is given “extended forest user rights to collect and commercialize felled trees on the fire-break and perishable forest resources, such as fruits and leaves, within the forest” (Sonko & Camara, 1999, p. 48). The final ‘Consolidation’ phase renders the boundaries permanent and enacts a Community Forestry Management Agreement (CFMA), formalizing the permanent transfer of ownership rights over forest resources to the community so that they can benefit from the commercialization of forest resources in ways that were approved in their management plan (Sonko & Camara, 1999). At this point the only condition left is for the Divisional Forestry Officer to approve a final management plan to ensure sustainable resource use and protection. However, forest legislation reserves the right to revoke the transfer or ownership agreement should there be any severe misconduct of the forest committee (Sonko & Camara, 1999). At the end of each stage there is an evaluation process before the next stage begins and permanent transfer of ownership rights are considered. See Table 3.1 for an outline of the different community forest (CF) phases and features as outlined by the National Environment Agency (NEA) (2010).

Table 3.1 CF Phases and Features

Features	Start-up Phase (2-6 months)	Preliminary Phase (3 years)	Implementation/ Ownership Phase (Permanent)
Milestones of CF set-up	-Villagers express interest in CF -PCFMA signed	-Evaluation -CFMA signed	Iterative forest assessment and planning in 5 years intervals
Legal forest status	Forest Reserve		Community forestry
Legal instruments	Forest Act		
	Forest Regulations		
		Statement of neighbouring villages; Village resolution; statement of district chief; PCFMA	Community forestry rules CFMA, Order of the secretary of state for forestry
Rights granted by applying the legal instruments	User rights based on section 27 (1) of the Forest Regulations 1998	-Exclusive access and control over land -Extended forests user rights based on the PCFMA terms and conditions	Exclusive and full user rights or restricted forest ownership based on the CFMA terms and conditions
Management planning		Preliminary management plan (3 years) and annual work plans focusing on forest protection/ control	Medium-term management plan (5 years) and annual work plans focusing on forest protection, development and sustainable management
Commercial forest product utilization	Licensing system open to anybody	-Community Forestry -Licensing system according to the PCFMA terms and conditions	Community Forestry Licensing system based on sustainable forest management
Rights/ benefits of participating communities	Collection of forest products for household consumption and forest grazing		Use of forest products regulated by the forest committee
		All proceeds from the sale of forest products from the fruits and perishable non-wood forest products	85% of the proceeds from the sale of forest products: Joint management for reserves within the customary lands (CCSF)
Duties of participating communities	-Forest identification, committee formation, work plan establishment and land conclusion -Tenure agreements	-Provision of labour force for work plan implementation; agreements on final forest -Boundary and tenure arrangements and contracts	Provision of labour force for work plan implementation as regulated by the forest committee
Rights of non-participating communities	Collection of forest products for household consumption and forest grazing	No rights unless granted by the forest committee	No rights unless negotiated with the forest committee

Source: Adapted from NEA, 2010, p. 95-96

The CFP has been praised for large-scale success. According to the World Future Council (WFC) (2011), The Gambia's model of community forest management has successfully taken an innovative approach to curbing deforestation by increasing forest cover by 8.5 percent over the last two decades³². The policy takes a long-term approach to transitioning tenure from State to community ownership, reaching 12 percent of forestlands in 2011. It has also reduced the incidence of illegal logging and bush fires in community forest areas and contributed to the development of new markets for forest resources and services (WFC, 2011). In 2011, The Gambia's Community Forestry Policy was internationally recognized as one of the world's most innovative policies, winning silver at the UN FAO Future Policy Awards. It was "the first policy and legislation in Africa to provide local populations with secure and permanent forest ownership rights. Transferring forest tenure from State ownership to management by local communities enabled them to reduce illegal logging and forest fires, slow desertification and benefit from using the forest products" (FAO, 2011). As of 2013, there were over 500 villages or communities participating in the CFP, managing over 300 community forests, which covered over 24,000 hectares (UNESCO). In addition, multiple communities on the West Coast have recently implemented tree-planting projects to aid with deforestation, signing protection agreements for individual communities to protect these trees for a minimum of 25 years as part of a carbon offset project (Ecosystem Marketplace, 2013). *The Gambia Experience*, a local organization in the tourism sector, and the *Siro Tree Nursery School*

³² Annual national tree planting campaigns and community woodlot projects (funded by the US Agency for International Development, USAID from 1980 to 1985) and orchards (funded by the European Economic Commission, EEC, from 1986 to 1990) also contributed to this achievement (Schroeder, 1999a).

supplied 12,000 seedlings of different varieties with the intention of benefiting local economies as well as the environment (Ecosystem Marketplace, 2013).

3.5 Community Structure in The Gambia

A key issue that was identified in the research was the fluidity of the term ‘community’ within the context of the Community Forestry Programme (CFP). This has led to questions of *who* constitutes a participant and beneficiary with regards to community forestry in The Gambia, as a ‘community’ can be defined based on various demarcations. In terms of participation in the CFP a village, clan, family or even individual can technically constitute a ‘community’ in the sense that any of these groups can apply for community forest (CF) status. The only prerequisite for participation is traditional tenure and ownership over a given piece of land to be put forth as a CF. Forest tenure in The Gambia is discussed in Sections 3.5.1 and 5.4.2, and the extent of participation and benefit is elaborated in Section 5.4. The following historical depiction of the community structure in The Gambia helps to illustrate this fluctuating concept.

Past kingdoms in The Gambia enjoyed relative autonomy, however, they also shared certain similarities, many of which are still prevalent in contemporary social structures. For example, the majority of ethnic groups in The Gambia were socially and politically organized based on a caste system that distinguished between freeborn citizens, artisans and slaves (Saine, 2012). Furthermore, each kingdom had a king (*Mansa*) who was appointed based on royal lineage, a council of elders and advisors as well as a standing army. Each kingdom was further subdivided into territorial

constituents at the village, ward or district, as well as compound³³ levels (Saine, 2012). Each village was then governed by a member of the founding lineage, usually the eldest male, now known as the *Alkalo* (or *Alkali*), together with a council of elders and advisors (Saine, 2012). Historically, every family in a village would belong to a lineage clan of related families. Among the Mandinka, in particular, one or more families would establish a settlement in a given area that would eventually grow into a village or town made up of extended families. This grouping of compounds is called a *kabilo* (Saine, 2012). In certain circumstances the *kabilo* can consist of an entire village or a particular part of a village or town, where most, if not all, of the residents are related by blood or marriage. The *kabilo* is also often referred to as *kunda*, which is further defined and specified by the last name shared by the majority of the residents (Saine, 2012). For example, the *kabilo* in charge of the community forest in Tujereng, which is outlined in Chapter Five, is called the *Mori Kunda*, named after the clan or extended family in the area. There are numerous *kabilo* in The Gambia, each with leaders making up a council of elders. Together with the *Alkalo* and head of the local mosque (the Imam), the *kabilo* serves as the village's governing body, providing support and guidance to its members (Access Gambia, 2013). As Islam gained prominence in The Gambia the Imam became an integral part of society, so he too is an important member of the *kabilo*. Although the government and its various branches, rather than individual kings, now exercise executive power, the social structure at the village level has remained much the same.

³³ A compound is an amalgamation of homes fenced by a wall, or some other demarcation, typically populated by extended family members and/or close friends.

3.5.1 The Land and Resource Tenure Paradox

This multi-level conception of community has been engrained in the CFP, which makes it difficult to make generalizations on who participates and benefits, as this can differ from case to case, making it challenging to ensure consistency and equitability. This fact also highlights the importance of defining the meaning of ‘community’ in each case. This leads to a second key issue, which involves one of the central benefits of, or motivations for participation in the CFP—land and resource tenure transfers. From a SES perspective, social motivation that has been fostered using different incentives, has resulted in ecological benefits such as environmental conservation and stewardship. Incentives, such as economic gains from sustainable resource exploitation or increased land rights, have been instrumental in legitimizing conservation efforts and fostering motivation for community participation as well as promoting environmental stewardship. However, these incentives have also served as a means of ‘reconnecting’ people with conservation, and thus nature, by validating traditional tenure systems. However, the re-invigoration of the traditional system has led to what can be referred to as a ‘land and resource tenure paradox’, as two separate and somewhat contradictory tenure systems are coexisting in contemporary Gambia. With regards to the CFP, this has led to certain implementation constraints, such as land disputes, which have surfaced as a result of this dual tenure system (the traditional versus the state systems) as well as clashes with traditional landownership rights. These disputes have been noted to occur both externally between different communities as well as internally between community members (Schroeder, 1999a). However, many communities have implemented a ‘peace committee’ to help resolve these conflicts, which consist of village heads that are respected for their

objectivity and knowledge of traditional land rights (Sonko & Camara, 1999). Various issues of equity in terms of participation and benefit, as well as different gender dimensions³⁴ have also been highlighted—these issues are explored in Chapter Five.

3.6 Conclusion

In summary, the interconnected nature of social and ecological systems implies that factors that stimulate change or alterations in one system can also affect the other. Therefore, it can be said that changes to various aspects of Gambian social systems have altered pre-existing environmental management practices that were based on local knowledge and embedded in social mechanisms, ultimately leading to changes in certain ecological systems, such as forest loss and degradation. Furthermore, changes in social systems, which relate either directly or indirectly to forest conservation, have altered feedback relationships between the social and ecological systems, which inform adaptive management practices. CBC efforts, such as the CFP, can be seen as a means of creating new feedback relationships by re-establishing a human connection to the environment, or social-ecological linkages, through incentives such as land and resource tenure transfer as well as other economic and social benefits. However, with the central objective of the thesis in mind, which was to determine whether or not CBC has the potential to result in both development and conservation outcomes, several issues linked to participation in and benefit from the CFP were illuminated. Furthermore, questions regarding equity and the Gambian conception of community as well as the dualistic nature of tenure regimes in

³⁴ For more on gender dimensions of forest resource and land tenure in general see Rocheleau & Edmunds, 1997. For more on these issues in The Gambia specifically, see Schroeder, 1999a; 1999b.

the country were also brought to the fore. This chapter served to introduce these matters, while Chapter Five will provide further information with regards to Tujereng specifically.

CHAPTER FOUR

Background and Research Methodology

4.1 Introduction

This chapter provides background information on the state of Gambian forestlands and the various conservation methods, programmes and policies employed up to date. The rationale for the research design as well as the methodology is also explained. The *Mori Kunda Community Forest* in Tujereng in particular was explored as a case study of The Gambia's Community Forestry Programme (CFP). The objective was to examine the CFP's potential to contribute to advancing both conservation and development outcomes in the community. The guiding research question was: does community-based conservation have the potential to contribute to advancing both forest conservation and development outcomes in Tujereng, The Gambia? To reiterate what was previously outlined in Chapter One, the stated objective of CBC is to achieve both 'conservation' and 'development' simultaneously. Therefore, for the purpose of this thesis, these terms had to be clearly defined, or broken down, in order to give meaning to these concepts and determine whether or not the CFP had reached these objectives. The terms of analysis are explored in detail in Chapter Five; however, the following provides a brief summary.

Development was conceived of in terms of ‘participation’ in (as it is a foundational principle of CBC) and ‘benefit’ from (i.e. social, economic, cultural) the Mori Kunda Community Forest. Consequently the level or degree to which participation and benefits occurred as well as any stipulations for involvement was also considered. This breakdown illuminates another concern to be considered, which is the issue of *who* participates and *who* benefits. Theoretically, the community constitutes the *who*; however, the term ‘community’ has been quite contested and can have several meanings depending on the context. Levels and degrees of participation can also be wide-ranging and tied to issues of inequity. Thus, determining who participates and benefits, as well as to what extent, is not so straightforward. The local (Tujereng/ Mori Kunda) and official (governmental/ policy) definitions of the term ‘community’ were investigated to gain a better understanding of who participated and received benefits. Furthermore, benefits can be broad and subjective; therefore, the analysis largely focused on land rights and tenure transfer, as this has been a primary attraction or motivator for the program. Conservation was conceptualized as ability to protect or conserve the forest area, decreasing rates of deforestation, increase in conservation programs or activities (i.e. tree planting, sustainable harvesting) as well as increased environmental education, awareness and stewardship. A SES framework was used as a lens through which to further analyze ‘success’ by looking at whether or not the CFP could foster motivation for environmental stewardship and conservation through the use of incentives such as the possibility for economic gains or increased land rights.

4.2 Country Background

Geographical Context

The Gambia, located in West Africa, is the smallest country on the African continent. It consists of a narrow strip of land bisected by the meandering Gambia River—the country’s defining characteristic. The Gambia shares terrestrial borders to the North, South and East with the larger country of Senegal, and extends 480 km eastward from its 80 km of coastline along the Atlantic Ocean (CIA, 2014). This tiny country exists in the flood plain of the Gambia River, which is flanked by savannah and low-lying hills. The Gambia’s climate is consistent with that of the Sudano-Sahelian agro-ecological zone, which has a pronounced cooler dry season from October to late May/early June and a hotter rainy season from mid-June to October (FAO, 2010). The Gambia has an estimated total area of 11,295 km²—1,295 km² of which is covered by water (CIA, 2014). As of the last national forest assessment (NFA), conducted in 2010, approximately 27% (300,000 ha) of the country’s total area was classified as forest³⁵. The Gambia’s forestlands are part of two bigger belts of vegetation, the Sahel and the Sudan, which sprawl East and West across the continent. This region is particularly important because it separates the Sahara Desert from the rest of (Sub-Saharan) Africa. The Gambia River is of particular regional importance, as it serves as a natural barrier to encroaching desertification, infringing southwards from the Sahara Desert (Thoma & Camara, 2005).

³⁵ This figure is based on a newer classification systems used in the 2009/10 NFA, which includes mangroves. Excluding mangroves, the figure would decrease to 23 percent.

Social, Political and Economic Context

The Gambia is a former British colony that gained independence on February 18th 1965, as a constitutional monarchy within the Commonwealth of Nations. In April 1970, The Gambia officially became a Republic. However, in October 2013 after 48 years of membership, the government of The Gambia decided to withdraw completely from the Commonwealth (BBC, October, 2013; The Guardian, October, 2013). The colonial legacy in The Gambia is important because not only did it shape the course of development strategies in the country but it was also significant in terms of accelerating trends in deforestation. The beginning of relatively large-scale forest resource exploitation can be traced back to the early 1900s (Thoma & Camara, 2005). At this point the Gambian territory was still covered by dense and almost impenetrable forest. However, large areas on the north bank of the Gambia River were being cleared for groundnut (peanut) cultivation. The abolishment of slavery meant new means of economic growth had to be sought which was found in the cultivation and exportation of cash crops such as groundnuts (Gailey, 1965). Groundnut cultivation remains central to the Gambian economy to date. High rates of deforestation between 1946 and 1968 (Table 4.2) have been attributed to excessive mahogany logging throughout the country, as the wood exports became increasingly lucrative for the colonial administration, thus creating a market and setting a monetary value for certain forest resources (NEA, 2010).

In 2013 The Gambia's national GDP was \$914 million current USD, with a GDP per capita of \$494.40 USD, which when adjusted for purchasing power parity (PPP) equal to about 1,666.40 USD—ranking it as a low income country (World Bank, 2014).

These statistics however, do not account for wealth disparities within the country, such as differences between rural and urban populations, or gender for example. Using the Human Development Index (HDI), which measures social factors such as health and education in addition to economic standing, in 2012 The Gambia ranked 165 out of 187 countries, placing it below average in the low human development category as well as below the average for countries in Sub-Saharan Africa (UNDP, 2013). The Gambia claims one of the top population densities in Sub-Saharan Africa—176 people per km² (The Gambia Bureau of Statistics, 2013). In 2013 the country had roughly 1.88 million inhabitants with a population growth rate of 3.3% per annum (World Bank). In 2011 about 42.7% of the total population was living in rural areas; however, this rate is decreasing, due to an estimated 3.63% rate of urbanization (CIA, 2014). As of 2010, the majority of the rural population was still heavily dependent upon access to free forest resources for fuel wood, construction materials, fodder, food, medicines and other daily needs. These resources constitute an import source of non-monetary income within the informal forestry sector not accounted for in economic statistics such as GDP (FAO, 2010). Forest loss and degradation is increasing along with the Gambian population.

In 2012, it was reported that the formal forestry sector, consisting primarily of wood, pulp and paper production and processing, only accounted for about 0.8% of GDP (UNDP, 2012). However, domestic consumption of forest resources along with small-scale commercialization, such as the sale of wood (i.e. fuel-wood and construction materials) as well as non-wood forest products (i.e. fruit, herbs and medicinal plants)—economic activity generally undertaken by women—is not considered in the overall

economic performance of the country (UNDP, 2012). Ecological services and cultural functions are also unaccounted for in these figures. The informal trade in forest products across the border to Senegal is also largely ignored, as the monetary valuation of rural household consumption is not accounted for, leading to an underestimation of this sector's economic contributions (Thoma & Camara, 2005). The consumption of fuel-wood (and charcoal³⁶) accounted for approximately 80-85% of the primary domestic energy for more than 90% of the population in 2004 (NEA, 2010). In The Gambia, firewood is collected from forest parks, reserves, community managed forests, open access or community controlled state forests, and private owned forests; however, as resources dwindle much of the country's fuel-wood and charcoal supply is imported from the Casamance region in southern Senegal (NEA, 2010). As the Gambian population continues to grow, the significance of the forestry sector will assume an increasingly important role in socio-economic development, as the demand for forest resources will intensify, placing added pressure on the country's resources. Table 4.1 illustrates forest contributions and socio economic benefits.

³⁶ Charcoal production was banned in The Gambia in 1980 but its importation is still permitted.

Table 4.1 Forest Contributions and Socio-economic Benefits in The Gambia

Contributions of the Formal Forest Sector to Employment and GDP, 2011									
EMPLOYMENT					GROSS VALUE ADDED				
Round-wood Production	Wood Processing	Pulp & Paper	Total for the Forest Sector		Round-wood Production	Wood Processing	Pulp & Paper	Total for the Forest Sector	
1,000	1,000	1,000	1,000	% of total labour force	US\$ million	US\$ million	US\$ million	US\$ million	% of GDP
2	0	0	2	0.3	5	0	0	5	0.6
Indicators of the Socio-economic Benefits from Forests, 2011									
EMPLOYMENT		GROSS VALUE ADDED		FOOD SECURITY		ENERGY			
Total for the Formal and Informal Sector		Total for the Formal and Informal Sector		# of People Using Wood-fuel to cook		Primary Energy Supply from Wood			
1,000	% of total labour force	US\$ million	% of total GDP	1,000	% of total population	MTOE*	% of TPES*		
45	5.8	41	4.8	1,484	83.6	0	51.6		

*Total Primary Energy Supply (TPES) is the total amount of energy used in a country (all sources). It was measured in Million Tonnes of Oil Equivalent (MTOE). One MTOE equals about 3.8 million m³ of wood.

Source: Adapted from FAO, 2014, p. 97, 101, 109

4.3 Forest Cover in The Gambia

Forest cover in The Gambia has been decreasing at various rates since 1946. However, certain types of forest, often referred to as land use classes (LUCs), have declined more rapidly than others, while increases in certain LUCs have also been recorded. Noteworthy trends in the data include significant *declines* in total forest cover from 1946 to 1968, 1968 to 1980, as well as from 1997/98 to 2009/10. An *increase* in forest cover has been recorded from 1981/82 to 1997/98, which has been thought to have largely resulted from the recovery of former fallow lands into tree and shrub savannah (Sillah, 1999; UNDP, 2012). It is important to note that prior to the most recent (2009/2010) national forest assessment (NFA) ‘forest’ was defined at a lower forest cover

percentage and was categorized according to different definitions, therefore, certain disparities in the data can be identified (see FAO, 2010 for further explanation of the different methodologies). Furthermore, earlier years calculated the percentage of forest cover in comparison to a total land area of 1,129,500 ha while later years rounded to 1,130,000 ha. With these differences in mind, the 2009/2010 NFA makes general comparisons between the 1981/82 and 1997/98 national forest inventories (NFIs) by adjusting the numbers to the previously used LUCs. Finally, mangroves are included as ‘forest’ in the more recent forest inventories/assessments but were not included in the older ones, so this adjustment was also made. This, along with a noted inconsistency in data between reports, also adds to the disparities in data. However, the important thing to observe from this data is the general trend of declining forest cover from 1946 to 2010. Table 4.2 illustrates these changing trends in forest cover. The statistics are categorized according to the older definitions and classifications of forests.

Table 4.2 Changes in Forest Cover from 1946 to 2010

% of Total Land Area	1946	1968	1980	1981/1982	1997/1998	2009/2010
(Closed) Woodland (%) Forests on freely drained soils w/ tree cover of 50% or more (canopy density)	60.1	8.0	1.3 (14,400 ha)	~12.5 (90,700 ha)	~1.1 (12,000)	N/A
Open (Savannah) Woodland (%) Forests on freely drained soils with 10-50% tree cover	13.3	17.6	10.7 (121,600 ha)		~7.8 (88,800 ha)	~10.8 (123,000 ha)
(Tree & Shrub) Savannah (%) Tree/shrub vegetation on freely drained soils w/ less than 10% tree cover or heights less than 11 meters	7.8	31.7	24.8 (280,400 ha)	31 (347,700 ha)	~32 (360, 800 ha)	~23 (264,000 ha) *Includes closed woodland
Total Forest Cover (%) (Excluding Mangroves)	81.2	57.3	36.8 (416,400 ha)	~38.5 (438,400 ha)	~41 (461,600 ha)	~34 (387,000 ha)
Total Forest Cover (%) (Including Mangroves)	—	—	~43 (484,400 ha)	44 (505,300 ha)	~46 (520,400 ha)	37 (423,000 ha)
Mangroves	—	—	6.0 (68,000)	~5.9 (66,900)	~5.2 (58,800)	~3.1 (36,000)
Population Density Person per km ²	25.0	35.0	57.0	66.9	108.0	172.8 (*2013)
Source(s)	Sillah, 1999; NEA, 2010	Sillah, 1999; NEA, 2010	Sillah, 1999; NEA, 2010	FAO, 2010	Sillah, 1999; NEA, 2010; FAO, 2010	FAO, 2010 Gambia Bureau of Statistics, 2013
*1980, 1981/82 and 1997/98 figures reflect forest cover as a percent of total land area, 1,129,500 ha, including water surface. 2009/2010 figures round to 1,130,000 ha. The reference area for 1946 and 1968 is unknown. Thus, comparison between figures is limited due to different classification systems. The data merely shows general trends in forest cover. (~) Author's Estimates based on provided data						

4.3.1 Causes of Deforestation in The Country

Forest loss and degradation in The Gambia has been attributed to issues such as rapid population growth, urbanisation, poverty as well as climate change and severe weather (Sonko, 2011). Increasing pressure on forests has resulted from the expansion of settlement areas including increased extraction of forest resources such as fuel wood, timber for housing materials and tourist areas, food, medicines, fodder for livestock as well as wildlife for hunters (Brownell, 2011). Increased demand for fuel-wood due to population growth and lack of access to alternative options has been cited as the most important factor causing forest degradation (Bojang, N/D). Climate change, decreased rainfall, desertification as well as annual cycles of bush fires are also major factors in forest loss and degradation (GOTG, 2007). Amplified agricultural production, which has quickly expanded into forestland, is another major factor, as the Gambian economy is highly dependent on this sector. The agricultural sector constitutes approximately 30 percent of the country's GDP and employs more than 70 percent of the total labour force (UNESCO, 2013). According to Sillah (2002), "total woodland cover has progressively decreased from 57% in 1968 to only 41% of the total land in 1993. Areas with dense tree cover tend to get less dense, and desertification is estimated to be currently progressing at the rate of 7% [per year]" (as cited in Sonko, 2011, p. 4). Of this 41 percent however, about 78 percent is severely degraded, belonging to the degraded tree and shrub savannah forest category (UNESCO, 2013). More specifically, closed woodland forest area has decreased as much as 86 percent (between 1968 and 1993) due to agricultural expansion and commercial logging for timber and fuel wood (Bojang et al, 2005; GOTG, 2000, as cited in GOTG, 2007). Although contested (Foley, 1994), one study (Ridder, 1991) has

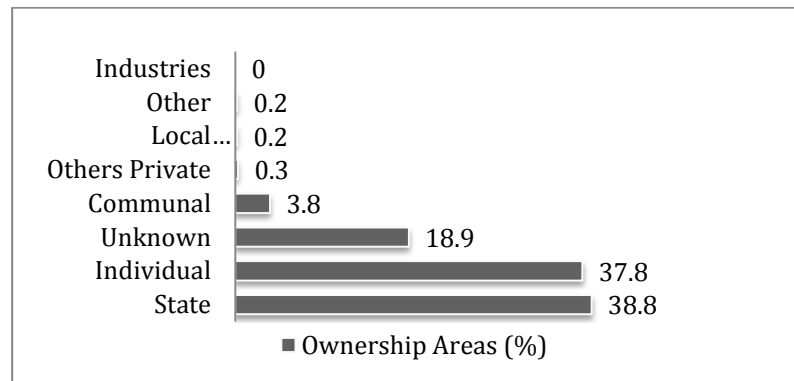
put the rate of deforestation in The Gambia at six percent per annum, illuminating local as well as profound regional implications for all those living South of the country, as the Gambian forests form the ‘vegetative frontier’ against the growing desert (Schindele & Thoma, 1995, as cited in Schroeder, 1999a). Loss of species from deforested and degraded areas is intensified by human wildlife conflicts and hunting (GOTG, 2007). Developments including road construction, urban expansion, poor agricultural practices, fuel-wood and timber extractions together with the rapid expansion of commercial agriculture have also been major contributors to forest encroachment (USGS, 2013).

4.4 Forest Management and Ownership Agreements in The Gambia

The present research highlights community-based forest conservation and management in The Gambia, specifically focusing on the Community Forestry Programme (CFP). Although it is an important part of the Gambian Forestry Policy, the CFP is not the only approach used, nor is it the management type employed for the majority of forestlands in The Gambia—at present. The shift towards CBC and Participatory Forest Management (PFM) was first initiated in the early 1990s through the Gambian-German Forestry Project (GGFP), which implemented community forests (CFs) and community-based forestry projects. This led to progressive legislation, policy and management plans, which integrated PFM concepts, notably the Gambian Forest Management Concept (GFMC), implemented in 2000, which merged State and community management of natural forest into one concept, leading to Joint Forest Park Management (JFPM) and Community Controlled State Forests (CCSF) (Department of Forestry, 2005). Since its implementation, the GFMC, which is a package of PFM

strategies, has served as a blueprint for forest management and conservation in the country (Jammeh, 2008). A key objective of past forest policy (1995-2005) was to retain 30% of the total land area in the country as forestlands, as this percentage was deemed necessary to ensure an ecological balance to maintain sustainable development and economic growth. 75% of these forestlands were to be managed by local communities through transferred ownership (IPSI, 2012; Department of Forestry, 2005). However, as stated in the 2010-2019 Gambia Forest Policy, only 12% of this target was achieved, thus the objective was extended to the present policy period. Despite the introduction of PFM concepts over 20 years ago, which aimed to transfer close to three quarters of the country's forestlands to local communities, the State remains the primary caretaker. As of 2010, 38% of total land and 54.3% of the country's forestlands were owned and managed by the State (2010, p. 70). However, the government, in partnership with the FAO, has since taken measures to increase awareness of the Community Forestry Programme (CFP). These include large-scale educational campaigns (sensitization) and forest policy (2010-2019) popularization programmes, which aimed to help increase the transfer of forestlands to communities and to encourage private participation in forest management in order to achieve policy goals, such as the transfer of 200,000 ha of forest lands to local communities (FAO, 2010). Table 4.3 shows the distribution of land ownership.

Table 4.3 Land Ownership by Percentage



Source: Adapted from FAO, 2010, p. 71

Forest conservation and management in The Gambia can generally be divided into three main categories: State forests, private forests and participatory managed forests. These categories can then be further divided into sub-categories that have two primary functions: production (i.e. plantations) or protection (i.e. conservation) (NEA, 2010). Each category is briefly outlined below. However, more attention is given to participatory managed forests, particularly community forests, as this was the focus of the research. The research concentrated on community forestry because of the management strategy's stated development goals in addition to its conservation endeavours, which is consistent with the objective of community-based conservation.

State Forests

State forests are comprised of two separate sub-categories. The first includes forest parks and natural forests, the primary function of which is for protection or preservation, as well as forest park plantations, which are primarily used for production resulting in economic benefits. The establishment of forest plantations was an especially popular strategy used by the Department of Forestry from 1953 to 1985. Approximately

13,000 ha of monoculture forestlands had been created; the primary tree species planted was *Gmelina aborea*, because it is a variety that grows relatively straight and tall and reaches maturity quickly which is beneficial for timber production, as well as minimal amount of *Tectona grandis* trees that were planted primarily in the Western Region (NEA, 2010). However, due to the high costs of establishment, maintenance and fire protection, as well as concerns over biodiversity loss, the department has since reoriented its focus towards the more natural forest management (NEA, 2010). Forest reserves (or protected areas) fall under the second sub-category of State forests and are managed under the Department of Parks and Wildlife, and regulated by the Wildlife Conservation Act of 1977, which strictly prohibits any form of forest exploitation and utilization (NEA, 2010). In the State forest management scenario the government owns and controls the forest lands and resources. The exception, however, is when State forests are jointly managed with local communities, as is the case for certain forest parks or reserves. For example, the Tanji Bird Reserve is managed jointly (i.e. JFPM) by the State (Department of Parks and Wildlife) together with the surrounding communities of Brufut, Tanji, Madiana and Ghana Town (see Case Study 4.1). In the joint management scenario community members can obtain forest licenses and felling permits from the government in order to harvest dead wood as well as a minimal amount of live trees. Permit holders can either use these resources for personal consumption or sell a regulated amount for economic profit. State forests generally provide the majority of wood for domestic energy as well as construction needs in the local communities (NEA, 2010). State forests constitute the largest percentage of forest land area and have been the most degraded in the past, as a result of forest fires, over grazing and unsustainable forest resources

exploitation, among other previously mentioned causes. Joint forest management was implemented in an attempt to preserve existing forestlands while including local communities through participation and benefit so as to increase the legitimacy and efficiency of these areas. As of 2010, this forest category was still the most degraded among the three forest categories (NEA, 2010).

Case Study 4.1

JFPM was explained during an interview with a government official for the Department of Parks and Wildlife. When asked to explain the joint management strategy used for the Tanji Bird Reserve he said, “*Yes, these four villages [Brufut, Tanji, Madiana and Ghana Town] they have selected their committee members. Brufut has the largest committee and they are the owners of this park. For example, they selected about 8 people, Tanji 4 people, Madiana 4 people, and Ghana Town 4 people. So they formed committee members. So these committee members, they are here on behalf of the local communities. They are between the community and the government. [...] For example, where Brufut is the owner and they are the largest committee. If there is 100 dalasi, let's say Brufut will have 50 percent and Tanji would have 25 percent and then Ghana Town and Madiana will have about 12 percent because they are the smallest communities.*” In this scenario where more than one community is involved, participation, representation and benefit is determined based on percentage of ownership. (A-16, Personal Communication January 7, 2014)

Private Forests

Private forests are also divided into two sub-categories: natural forests and plantations. These forests are owned or leased by an individual(s) that has registered with the Department of Forestry or holds a Memorandum of Understanding (MOU) that will entitle the owner to management support from the department. Individuals can apply to the department to register a private forest as either a natural forest that will be protected or conserved, or as a plantation that will produce timber or other forest resources for economic purposes (NEA, 2010). In either case, the individual owner(s) is generally the major participant and receives all primary benefits unless an alternative arrangement has been set up by the owner(s) and/or community.

Participatory Managed Forests

Participatory managed forests (PMFs) contain three sub-categories: community forests (CF), joint forest park management (JFPM) and community controlled State forests (CCSF), all of which have the stated function of forest protection or conservation. Small-scale production or subsistence resource exploitation does occur—just not at the expense of conservation. Forest resource exploitation is more controlled in this case than that of State controlled forests (NEA, 2010). This forest category solicits local participation in order to legitimize conservation efforts. Local communities had largely ignored or even opposed the government’s previously discussed protectionist conservation efforts, as a significant portion of the land used to create State forest parks previously belonged to local communities according to traditional tenure. The exclusion of local communities and the absorption of their communal land alienated people and resulted in increased deforestation. Participatory management strategies looked to regain the trust and cooperation of community members by actively involving them in conservation efforts and thus, re-legitimizing conservation. In this scenario local communities can claim traditional ownership over forest areas that are then ‘given’ or ‘returned’ (a matter of perspective) to the community, by the State, along with resource and land ownership rights. However, resource exploitation is limited to pre-determined conditions outlined in the community’s management plan. As of 2010, over 34,000 ha of forestlands were being managed as CFs and 9,000 ha of State forest parks were being managed through JFPM (NEA, 2010). These figures indicate that further action is needed to meet the policy target of transferring 200,000 ha of forestlands to community management (FAO, 2010).

Social, Economic and Environmental Benefits of PMFs

The stated objective of community forestry is “to increase the welfare of local communities through the introduction of ecologically adapted natural resource management practices [and] to contribute to protect and maintain an adequate national forest cover and/or slow down and eventually stop environmental degradation” (Thoma & Camara, 2005, p. 3). This objective is in line with that of CBC, which seeks to bring about both conservation as well as development outcomes with the concepts of sustainability and participation in mind. In terms of social and economic benefits derived from PMFs, there have been several programmes implemented by government and NGOs to try and boost the development outcomes of this approach. For example, the FAO, in collaboration with the Department of Forestry, have employed the FAO’s Market Analysis and Development (MA&D) approach to enable local communities with technical skills and resources that will allow them to generate individual and/or communal revenue from the sustainable use and management of forest resources. MA&D is a three-step methodology and series of tools and marketing strategies used to develop business ideas adapted to the local reality³⁷. For instance in the case of community forestry in The Gambia, MA&D methodology helps to identify economic opportunities from local forest resources that can be exploited in such a way that they also contribute to local conservation efforts (Dampha & Kanimang, 2005). The first pilot project was launched in 2000, increasing to 26 communities as of 2005. Examples of forest products made available using the MA&D methodology, include: sustainably harvested fuel wood, logs/timber, bee honey and wax, netto, palm-oil, handicrafts, Rhun palm slits, eco-

³⁷ For more on MA&D see Dampha & Kanimang, 2005; Thoma & Camara, 2005; Jammeh 2008.

tourism, forest walks, tree nurseries and kembo posts³⁸ (Dampha & Kanimang, 2005). It has been recommended that the MA&D approach be integrated into core forestry management concepts and strategies, and movement in this direction has begun (Dampha & Kanimang, 2005). Although the MA&D approach has not been implemented in all CFs, each gazetted CF gains the rights to their local forest lands and resources, giving them the opportunity to benefit socially and economically from the subsistence as well as commercial exploitation of these resources as defined in their pre-determined management plan approved by the Department of Forestry.

4.4.1 Mangroves

The most recent national forest assessment reported that approximately 3% of The Gambia's total land area, or 12% of total forest area, consists of mangroves (36,000 ha), which are categorized under the general umbrella classification of 'forest' (FAO, 2010). The 2010-2019 forest policy, refers to mangroves with regards to the general policy objective, to: "reserve, maintain and develop forest land resources including mangroves ecosystem covering at least 30% of total land area which is capable of environmental protection" (Republic of The Gambia, 2010). However, the exact proportion of mangroves to be protected is not given and other than "maintaining riverbank stability" no further elaboration on the management strategies or approaches to mangrove conservation is provided. As mangroves grow in brackish water along The Gambia's coastal areas, estuaries and riverbanks, mangrove management and conservation falls within the jurisdiction of several government institutions involved with the coastal

³⁸ Netto trees produce seeds or 'beans' that are harvested to be produced into foodstuffs; Rhun palms are a type of tree, the fronds and splits or trunks of which are used for construction purposes; wood from kembo trees is often used for posts in construction (Dampha & Kanimang, 2005).

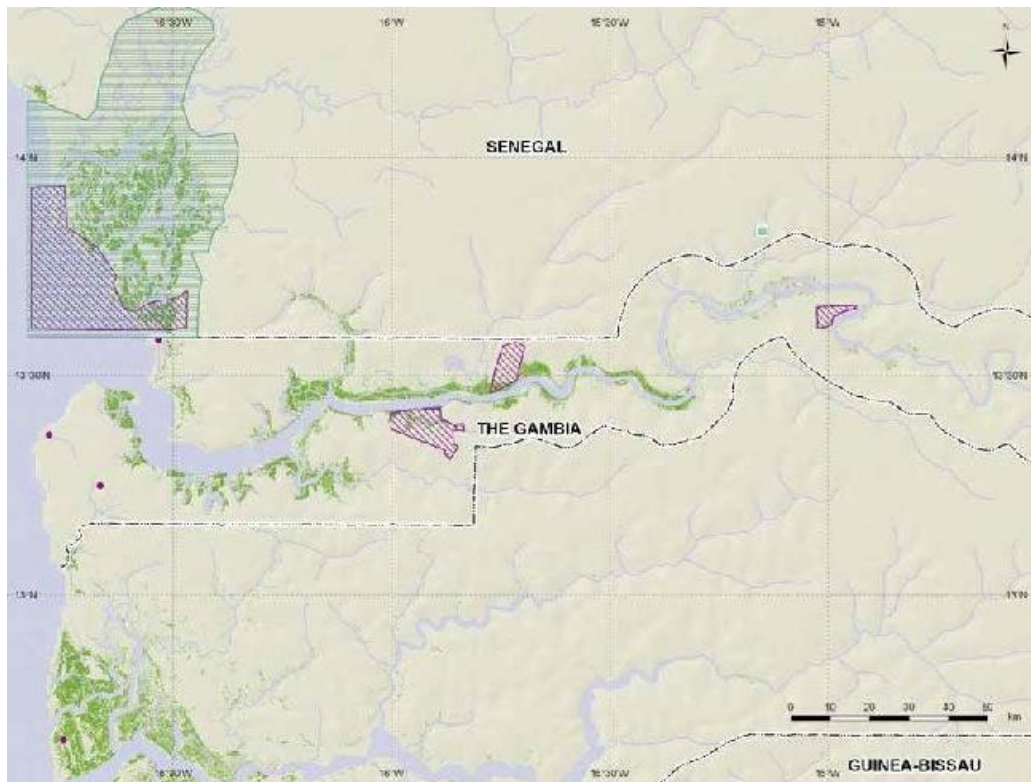
environment, such as the National Environment Agency, Department of Fisheries, Department of Forestry, Department of Parks and Wildlife Management, and the Department of Tourism (Lee *et al.*, 2009). However, a general lack of consistency has been noted in sectorial policies as well as implementation and enforcement capacity due to manpower, technical and logistical shortages. These shortcomings have further been attributed to the tendency of the various departments to “operate independently and in isolation rather than adopting a holistic approach in formulating and implementing policies” (Lee *et al.*, 2009, p. 33). This reveals an immediate need for mainstreaming approaches between and within different sectors of the government.

Mangrove cover has also decreased as a result of die-backs from disturbed water exchange, illegal exploitation and conversion of tidal areas into shrimp and fish farms (UNDP, 2012). However, the Gambian mangroves (Figure 4.1) are among the most intact wetlands in West Africa that claim international importance as part of the West African Marine Eco-Region (WAMER), which is “one of the world’s most biologically diverse and economically important marine habitats and fishing zones” (Crow & Carney, 2012). Past conservation approaches have primarily focused on preserving nature without consideration for the social aspect of mangrove areas (Crow & Carney, 2012). In recent years more NGOs, civil society groups and national institutions, such as Wetlands International, Mangrove Action Project (The Gunjur Environmental Protection and Development Group), Wings Over Wetlands (WOW) and World Wildlife Fund (WWF), have been working towards improving mangrove conservation in the country. WWF in particular launched the Gambia-Senegal Sustainable Fisheries Programme (GSFP) in

2009, which looks to include local communities that rely on mangrove ecosystems for their livelihood needs, into conservation strategies (USAID, 2013).

It is clearly stated in Gambian forest policy that mangroves fall under the umbrella designation of ‘forest’, however, a relatively small percentage of CFs contain mangroves. This of course reflects the lower percentage of mangrove forests versus other types of forest areas in The Gambia; however, mangrove forests have the potential to present unique development benefits for participating communities. Mangrove conservation, however, does require specialized ecosystem management strategies in comparison to other forest classifications, as they face different challenges and threats. Although there are mangrove areas as well as individual mangrove conservation projects within specific participatory managed forests, such as Tanbi Wetland National Park as well as Kiang West National Park and the surrounding community forests, mangroves conservation could be expanded upon within the CFP. As highlighted in the GSFP, mangrove ecosystems are intimately linked to human social systems, as they provide significant and unique social and economic benefits to local communities. Oysters, for example, which grow on the roots of mangroves, serve as an important source of food as well as income for Gambian women in particular (Crow & Carney, 2012). The government as well as local NGOs has increasingly promoted oyster harvesting and other small-scale subsistence aquaculture activities, while investigating sustainable alternatives to traditional methods, such as cutting mangrove roots to retrieve oysters, which can harm the trees (Van Lavieren *et al.*, 2012). Figure 4.1 shows mangrove areas in The Gambia.

Figure 4.1 Mangrove Areas in The Gambia and Senegal



Source: Corcoran, Ravilious & Skuja, 2007, p. 32

The inclusion of local communities in mangrove conservation efforts presents a wealth of opportunity for conservation as well as economic, livelihood and food security benefits. However, as noted by Crow and Carney (2012), it also has the potential to lead to further mangrove degradation and deforestation if managed unsustainably. The overfishing of estuaries has also been noted as a concern. Shrimp exports, for example, have expanded significantly and have become quite lucrative, which could have negative effects on mangroves (Laë et al., 2004). This highlights the need for increased sensitization programmes on sustainable harvesting methods as well as monitoring and regulation, which reiterates the logistical and financial obstacles previously mentioned. However, this is an area that could potentially be ameliorated through further expansion

of the Department of Forestry's community forestry programme (CFP). It is the argument of the author that mangrove conservation could greatly benefit from further integration of mangroves into the CFP, providing specialized sensitization as well as MA&D programmes for community forests consisting of entirely or partially of mangrove areas. Further elaboration on these recommendations can be found in Chapter Six.

4.5 Methodological Considerations

4.5.1 Research Approaches

Qualitative

Preliminary research and fieldwork was conducted using a qualitative approach, which incorporated elements from both the case study as well as participatory approaches. A qualitative approach helped to contextualize personal testimonies, enriching the data and providing a deeper understanding of the lived reality in Tujereng as well as the relationship between conservation and development in the community. In qualitative research, rather than precisely measuring predetermined hypotheses, a holistic understanding of complex realities is sought, where research questions, hypotheses and even design can evolve throughout the research process (Mayoux, 2006, p. 118). Non-linear methods and analysis provided the flexibility to expand on the direction of the research based on the findings. Quantitative research on the other hand, is derived from "experimental and statistical methods in natural science" (Mayoux, 2006, p. 116) and begins with existing theories, which generate hypotheses that inform rigid research designs and deductive techniques used in data collection. The positivist 'scientific method' is premised on the philosophical assumption that reality is explicit in its

existence and it is up to the observer to discover this reality through rigorous ‘objective’ measurement of predetermined hypotheses (Mayoux, 2006, p. 116). Social phenomena are, therefore, transfigured into precise numbers, through deductive and linear statistical analysis, and interpreted by the researcher to prove or disprove the hypotheses (Warren & Karner, 2010, p. 3, 5). Hypothesis testing is linked to general causal explanations, where large numbers of cases are examined with a relatively small number of variables, which can cover a wide research area but can only realize a shallow level of understanding due to its restricted nature (Scott & Garner, 2013, p. 9). The rigidity of quantitative research is confined to linear and pre-determined ways of thinking, which can hinder certain types of knowledge creation, as it does not allow for an evolutionary research process. This means that it can yield results that are only part of a larger picture, missing important contextual detail that cannot necessarily be measured numerically.

In qualitative research, the researcher *is* the instrument, as she/he is involved in the research process as a consequence of contact with participants and/or their social settings (Warren & Karner, 2010, p. 5). Therefore, the author’s involvement in the research process, as a consequence of contact with participants and/or their social settings, must be taken into consideration. Proponents of qualitative research question the “possibility of ‘objectivity’ and instead [aim] to understand differing and often competing ‘subjectivities’ in terms of very different accounts of ‘facts’, different meanings and different perceptions” (Mayoux, 2006, p. 116-118). Qualitative approaches tend to be more inductive or holistic as well as non-linear in terms of methods and analysis, as they allow the findings to guide the direction of study, to some extent, which lends itself to interpretive or social constructivist understandings (Warren & Karner, 2010, p. 4).

Furthermore, qualitative research leans towards a more vertical or deeper analysis of a smaller number of cases with a larger number of variables, in contrast to the horizontal nature of quantitative research. This means that qualitative research can be difficult to measure or generalize upon through statistical reasoning (Scott & Garner, 2013, p. 9, 12). The openness and flexibility of qualitative research, however, have led to criticisms, including a lack of focus, non-generalizability, influenced by biases (both participant and researcher) as well as subjective external analysis (Mayoux, 2006, p. 120-121).

Case Study

Case study research seeks a detailed analysis of a single, or small number of cases with varying units of analysis, striving to understand rather than explain a case within its own context (Berg, 2009, p. 318-319; Schrank 2006a; 2006b). This research project was classified as an 'Interpretive Study' as it sought to examine how X (the community) interpreted the phenomenon of Y (Community Forestry) in the context of Z (community-based conservation), typically classified as fitting a case-study research design (Mikkelsen, 2005, p. 125). Critiques include a lack of control (Campbell & Stanley, 1966, p.6) and being less rigorous and systematic than other approaches (Berg, 2009, p. 317). However, the combination of the case study with qualitative and participatory approaches expanded and strengthened the tools needed to meet the research objective, which aimed to understand a single case (Tujereng's *Mori Kunda Community Forest*) while looking at multiple variables (conservation, development, participation, benefit). An understanding of the local lived experience was necessary to fully comprehend the impact of the Community Forestry Programme (CFP) from the community perspective.

Participatory Research

The origins of the participatory approach to research can be found in development activism where social change and empowerment of marginalized groups, from the local grassroots level, prioritize the research process (Mayoux, 2006, p. 117). Participatory research seeks to promote democratic mechanisms in decision-making and implementation by giving voice to marginalized members of society (Mikkelsen, 2005, p. 31; Mayoux, 2006, p. 118). Participation seeks to capture diversity in a holistic manner by analyzing local opinions and assessments of a given phenomenon based on participant experience and perception, thus actively contributing to the research in their own words, rather than those of the researcher. However, this approach reveals a ‘participation paradox’ (cooperation versus tyranny) as many levels of ‘participation’ can be identified, from coercion to positive motivation or empowerment, so it must be defined in each case (Mikkelsen, 2005, p. 53-54). The present research incorporated a relatively minimal aspect of participatory research, as the author endeavoured to add the community’s perspectives on the outcomes of the CFP to the collective conversation of CBC in The Gambia. This was done by presenting the research findings as spoken by various village members. Participatory research, however, has been criticized for being too context-specific, over-influenced by power relations and being subject to facilitator skill and understanding (Mayoux, 2006, p. 120). It must also be noted that participatory research is complex and compels an acknowledgement of, and reflection on, differences in power relations (within and outside the community as well as between researcher and participants), the epistemology of knowledge or ‘facts’, and the effect of outsiders

conducting research in communities other than their own. For a more in depth discussion on the contemporary debates regarding participation refer back to Section 2.4.

This research project was viewed as a *project* related study, as it investigated the effects of community-based conservation on a specific community (Mikkelsen, 2005, p. 129). Large-scale projects, such as the CFP, are often assessed based on the success or failure to reach given outcomes, which are frequently measured in quantitative terms. This, however, often ignores local knowledge that can be useful in ameliorating such programs. Thus, it is important to take both local and large-scale assessments into account. Soliciting data on local experience of the CFP and incorporating this information into adaptation decisions through knowledge sharing could lead to increased success.

4.5.2 Research Techniques

Documents and scholarly literature were reviewed to provide context as well as to better understand past research conducted on forest conservation and management practices in The Gambia. An ongoing literature review incorporated multiple sources of data. Secondary sources included government documents and policies, which were obtained online as well as through pre-arranged access to The Gambia's National Environment Agency's (NEA) library and documentation center in country. The collage of literature helped to illuminate gaps to be addressed during primary data collection. Primary sources included personal testimonies from government officials, NGO workers and community members collected while in country.

Semi-Structured Interviews

Participants shared local knowledge regarding past and present conservation practices, including their experiences participating in, and/or benefiting from Tujereng's *Mori Kunda Community Forest*. This helped to enrich and inform the case study about historical changes, vulnerabilities and adaptations in the surrounding forestlands and local environment as well as provide valuable information regarding local successes and struggles in the community forest process. Community recollections of social and cultural changes over time were also investigated in relation to changes in local relationships with the environment (spiritual, religious, customary, ceremonial, subsistent, economic etc.). This information was later compared and contrasted with other sources of data such as international institutions and NGOs (i.e. UNEP, FAO, WWF) as well as different governmental bodies (i.e. NEA, Department of Forestry; Parks and Wildlife). Past and present forest policy content, which was put in place to remedy social, environmental and economic issues derived from past forest conservation initiatives, was also compared to the personal testimonies of local community members. These testimonies helped the author to understand the local perception of The Gambia's CFP and its ability to bring about participatory conservation and development benefits.

Individual interviews helped to gain a deeper understanding of individual lived experiences, while group interviews, looked to pursue collective information from multiple people. Both were used depending on the appropriateness of the situation as well as participant comfort. 27 Interviews were conducted in total—20 of which were primary interviews conducted by the author as well as seven secondary interviews conducted via the author's thesis supervisor (Appendix A). Interviews ranged from 19 to 73 minutes and

took place in communal areas such as the marketplace/town-square or inside participants' homes or workplaces, depending on the appropriateness of the situation as well as participant preference and/or comfort. An interview 'dry run' with an NSGA staff member (the author's partner organization) as well as a Tujereng community member was conducted before heading into the field, so as to ensure cultural relevancy and linguistic comprehension. Interviews were semi-structured and used open-ended questions, which roughly followed an interview question guide (Appendix B). Open-ended questions were used so that participants could answer questions freely in their own words and expand on certain topics that they felt were important, which allowed for the possibility of acquiring information that was not predetermined (as informed by Willis, 2006, p. 144-145). This technique helped to align the direction of study with local concerns.

Focus Groups

Two separate focus groups were conducted in order to gather a relatively generalized understanding of the youth perception in Tujereng that could have been overlooked in in-depth interviews. Focus groups were used as it has been suggested that a group setting can help certain types of people, youth in particular, feel more comfortable than one-on-one interviews. This technique also allowed for a participatory and mutually beneficial learning opportunity, as participants were able to reflect and expand upon on the shared information. Focus groups were conducted at the end of the research process with Tujereng's Peer Health Educators (PHEs), as they were actively involved in environmental sensitization initiatives in their school and community. Thirty students (fifteen girls and fifteen boys) were divided into two groups based on gender, to ensure participants felt as uninhibited as possible. PHEs were solicited based on their ability to

provide insight into community perceptions and awareness of local deforestation problems and conservation initiatives. This information also provided contrast to data collected from older generations, which comprised the majority of individual interviews.

Observation and Field Notes

Research was conducted over a six-week period (November 2013 to January 2014). Much of this time was spent in Tujereng where conversations and observations were often ongoing. Informal conversations with residents were viewed as positive opportunities to build relationships and trust. This often led to interview opportunities as well as occasions to collect data using obtrusive participant-observation. Observation was direct (in the moment), unstructured (without the use of guidelines or checklists) and non-disguised, as participants had full disclosure of the author's status as an outside researcher (Joppe, N/D). Observations were later recorded as part of descriptive field notes that were used to check for validity, as a part of triangulation, to compare with participant interviews (Joppe, N/D). Recording observations allowed the author to reflect on the data and helped to provide context in terms of time and place.

'Gatekeepers' within the community, such as the *alkalo* (village leader), local teachers and the head of the VDC, were sought to ensure permission and ease of entry into the research area. Field trips with local informants helped to put certain pieces of the research into context. Examples include visits to Tujereng's Mori Kunda Community Forest, eco-camps and wildlife reserves, neighbouring villages and nearby firewood markets and fish smoking areas. While conducting this research the author was simultaneously involved with a separate education project in Tujereng. This project

involved environmental education training in a local school as well as the creation and premiering of a documentary on environmental changes over time in Tujereng. Throughout implementation there were many opportunities, including filmed interviews, site visits, invitations into people's homes as well as a community dinner and film night, that allowed the author to participate in community activities and observe local dynamics.

The aforementioned environmental education project was designed based on the idea of creating and enhancing partnerships between collaborating organizations, project facilitators and community members, as well as maximizing local input into project formation and implementation. The author's thesis research was influenced by this guiding notion of mutual participation and benefit. As a result, attempts were made to give value to local participation and legitimize the trust and relationships built by providing closure to the research process in which people took part. This was done by sharing the results of the author's research (in thesis form) with participants, including: the village of Tujereng and the Mori Kunda members, the NSGA, The Gambia's National Environment Agency (NEA) and the Department of Forestry. Twice participants mentioned that in a past research study, involving certain members of the community, the outcomes of their labour had never been disseminated to participants and as a result they were slightly reluctant to fully participate. Thus, steps were taken to ensure that upon completion, the author's thesis would be made available online and a hard copy would be kept at the NSGA office, the Alkalo's office in Tujereng as well as in the NEA archives.

Participant Selection

Interview participants included key informants identified based on their

involvement in environmental education, conservation and resource management, as well as various community members who were approached using a mixture of convenience and purposive sampling. The role of inviting people to participate in the research process was assumed primarily by the author (via translator) and took place in person, often involving approaching people at random. However, for certain interviews with key informants, such as government officials, NGO staff and local teachers, introductions and meetings were arranged before hand through the author's thesis supervisor and partner organization. The 'snowballing' technique, which followed the suggestions of other participants, was also used and the same questions were asked in each interview until responses become repetitive (as informed by Willis, 2006). Participation was voluntary and there were no demographic stipulations, with the exception of the exclusion of anyone under the age of sixteen. Equal representation of men and women was originally sought; however, this was challenging due to gender roles within Gambian society, and the tendency for males to occupy the majority of leadership roles. Tujereng's Village Development Committee (VDC) helped seek out people with specific knowledge on the *Mori Kunda Community Forest* or local forest conservation activities. These people were then informed about the research and asked to partake in an interview. As a side effect of the snowballing technique, efforts on behalf of key members in the community to provide as much information as possible were at times unintentionally gender biased. 'Heads' of various groups were recruited to provide information on certain subjects were often (but not always) men, which made it difficult to interview women belonging to the same group. Extra effort was necessary to try and attain equal representation.

4.5.3 Methods of Analysis

All interviews and focus groups were recorded using a digital audio recorder. Audio files were later processed and transcribed into a word document. Transcription was facilitated by software (ExpressScribe) designed to expedite the process. The advantage was that the author was then able to concentrate on interacting with participants rather than vigorous note taking. The transcription process also allowed the author to become fully immersed in the data, which provided an opportunity to discover recurring themes, commonalities and disparities. The author strived to create exact reproductions of audio files to preserve authenticity. The process began with an inductive explorative analysis of the empirical data collected from preliminary interviews with a variety of key informants, which helped to solidify the research questions and hypothesis. From there data was transcribed with the objective of teasing out a general understanding. This was done through deductive analysis looking for trends and patterns using a three-step coding process, where conceptual categories, themes and concepts emerged from within the data in an attempt to generate grounded theories or explanations to compare to empirical observations through inductive reasoning (as informed by Mikkelsen, 2005). The coding process included: 1) *open coding*, which identified ‘codes’ (i.e. concepts, themes, categories) in the initial sweep of the data; 2) *axial coding*, which added/adjusted codes and related categories to sub-categories; and finally 3) *selective coding*, which compared and contrasted categories and integrated theory into the analysis (Mikkelsen, 2005).

Descriptive field notes, indicating general observations, participant information and location, were recorded to ensure maximum information retention. These notes helped to record important information that could not be obtained from other sources,

such as non-verbal forms of communication like personal reactions, facial expressions, tone of voice or nuances in language as well as settings, including social and temporal contexts. Field notes also helped to document certain events and record key observations or emerging theoretical and methodological themes and ideas as well as personal memos. Field notes were then analyzed in concert with the transcribed data and existing documents so as to paint a fuller picture of the research, using two to three people to record and compare notes, to aid with triangulation, cross-checking and to reduce bias (as informed by Mikkelsen, 2005). Data triangulation helped to enhance the reliability and validity of the data by using three or more independent sources (i.e. different respondents or items of analysis) for each interpretation (as informed by Berg, 2009).

4.5.4 Challenges and Limitations

The primary limitation was the short timeframe in which to conduct this research. Due to external obligations the research was limited to a six-week period during a time of the year that was not ideal, as it fell over the Christmas holidays. All schools, offices and businesses closed for the break, for different lengths of time, which shortened the time available to conduct certain interviews with key participants such as government officials, NGO workers as well as school teachers. This meant that a strict interview schedule had to be adhered to, which was often challenging, as it added unnecessarily long working-hours to an already time-intensive research project.

Furthermore, because the research was conducted in a social, cultural and linguistic context that was not native to the author, many aspects of this research project took considerable time, which necessitated a flexible research schedule. For example,

certain local customs had to be adhered to before conducting research, such as formal introductions to the alkalos as well as setting meetings with the council of elders to seek permission to conduct interviews in Tujereng. This was done in to build trust as well as counter any feelings of uneasiness within the community—a process that was relatively time consuming. Cultural differences were at times challenging, as it led to certain miscommunications due to differences in the concept of time, or in the way plans were confirmed, for example. Therefore, managing expectations and setting accurate goals was another important aspect of the research project, so as to avoid unrealistic expectations on behalf of all those involved. Furthermore, gender roles and norms, and the expectations of women in society, often differed from the author's own views and realities, which emphasized the need for cultural awareness and sensitivity while working in a country other than one's own. Rather than female involvement being a given throughout the research project, extra attention was needed in an attempt to achieve equitable participation amongst men and women without overstepping any cultural boundaries.

Methodological Challenges

There were many benefits of using the chosen research methods; however, there were also certain challenges. Participatory methods allowed the research to be open to participant guidance, which was very useful but also required a strong grasp on the research topic so as not to drift from the objective. The interview technique revealed incredible amounts of information, however, articulating questions in such a way as to uncover the required information was at times challenging. Moreover, the real or perceived power dynamics (including ethnicity, class and gender differentials) between interviewer, translator and interviewee could have affected the openness of participant

responses. Power relations within the community could have also played a role in influencing participant responses. Direct influence could have taken place within group interviews, as although some people may have felt less inhibited and more open to sharing in a group setting, it is possible that more outspoken participants could have muffled the less confident, poorer or lower status participants. Indirect influence could have occurred out of fear of real or perceived potential consequences, social or otherwise, unknown to the interviewer. Additionally, audio recording and/or note taking during the interview process may have affected how freely participants revealed information. However, the author chose these tools to retain as much information as possible. Furthermore, differences in interpretation and participant meaning may have occurred due to different cultural perspectives or perhaps nuances in meaning were unknown to the author. However, understanding was verified for accuracy through a process of triangulation as well as linguistic and cultural interpretation by a Gambian translator, which helped mitigate these limitations.

Translation, Key Informant and Partner Organization

The research took place in a social, linguistic and cultural environment other than the author's own. Participant responses were often given in local languages, with which the author was not familiar. This barrier presented possible concerns including the loss of trust or understanding between interviewer and participant. For this reason, as well as to ensure understanding and facilitate analysis, a translator/interpreter, with whom the author had previously worked, expedited both linguistic and cultural understanding. There is a possibility that some meaning may have been lost in interpretation; however, when necessary, follow up questions were used to elaborate on given subjects. Furthermore,

post-interview discussions between interviewer and translator were also carried out to verify gaps in understanding. The use of a translator also had many benefits, as the collaboration with a local Gambian, as a guide or key informant, facilitated trust as well as cultural interpretation and further explanation when necessary. This particular translator was an employee of the Nova Scotia-Gambia Association (NSGA), a local NGO, which facilitated the author's research as a partner organization. The NSGA works with Gambian youth on a variety of health and environmental education initiatives. This collaboration was beneficial as NSGA staff offered expertise and knowledge regarding local environmental issues and programs implemented by different organizations.

4.5.5 Ethical Considerations

An ethics application was submitted and approved by the Saint Mary's University (SMU) Research Ethics Board (REB) with an original approval period from November 22nd 2013 to November 22nd 2014. An extension period was granted for continuation until November 22nd 2015. All information gathered remained confidential and the author had sole access to the raw data. The data will be stored for five years post thesis publication and will then be destroyed as required by SMU REB Data Storage Guidelines. Participation was voluntary and confidentiality was maintained unless otherwise specified. Prior to participation participants were asked for their consent as well as to specify whether or not they approved the use of an audio recorder. Although a hard copy information cover letter was available in English (the official language of The Gambia at the time) it was used primarily as a guide to solicit oral consent—via translator—in an effort to be mindful of linguistic barriers, as native or first languages can vary significantly within a given area, and literacy difficulties (see Appendix D).

CHAPTER FIVE

Empirical Data: Community Forestry in Tujereng, The Gambia

5.1 Introduction

The objective of this chapter is to present key primary and secondary data so as to contextualize the case study as well as show empirical evidence supporting the author's thesis, which is that in the case of The Gambia's Community Forestry Programme (CFP), community-based conservation (CBC) has the potential to contribute to advancing both conservation and development outcomes. However, the terms of analysis—conservation and development—must be further defined in order to substantiate this argument and determine whether or not the CFP has been successful (see Table 5.2). In terms of conservation, success was investigated by examining forest cover, involvement in conservation and environmental awareness. With regards to development however, there are multiple aspects to take into account, including social, economic and political factors. This considered, development was investigated in terms of 'participation' (a foundational principle of CBC) as well as social, political and economic 'benefit'. Participation was analyzed based on who participates, what they participate in and to what extent they participate. Benefit was explored based on type and distribution, which was categorized as social (i.e. health, education, culture), economic (i.e. monetary/non-monetary) and political (i.e. land and resource ownership transfer).

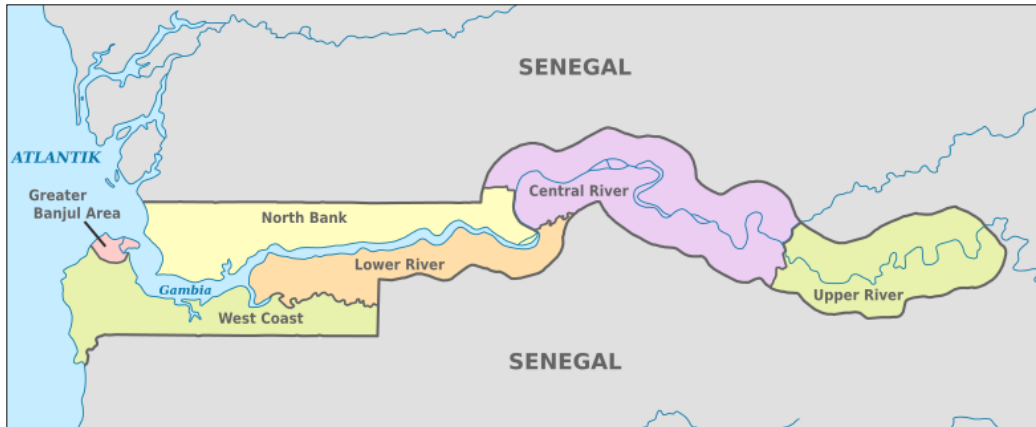
5.2 Study Area: Tujereng, West Coast Region

The Gambia was chosen as a case study to examine CBC, as the author has had previous research experience in the country. Past experience laid the groundwork for the present research, which was further facilitated by previously established local contacts. Additionally, The Gambia's CFP has received international recognition for its ingenuity as a combined conservation and development policy to be emulated (FAO, 2011). There has been a considerable amount of government and independent research conducted on the CFP in general (Schroeder, 1999a) and on specific outcomes of individual community forests (CFs). However, the majority of the assessments of individual CFs have focused on either the original pilot communities or communities that have been particularly successful, often due to outside funding and/or training programmes (Dampha & Kanimang, 2005; Thoma & Camara, 2005; Norikane, 2007). This research is invaluable in terms of evaluating pilot projects for future implementation that could lead to the amelioration of the programme. However, the present research sought to examine a case that was not an original pilot community nor had it received outside funding or additional training other than that provided by the CFP. It was also important to examine a community that had completed all three phases of the programme, in order to analyze the resulting benefits without obstruction from external influences. The rationale was that the case study should attempt to represent a CF that was a product of basic CFP training, funding and services and that had been established based on community motivation. In this way, local reasons and rationales for participating in forest conservation and the CFP could be investigated. Tujereng in particular was chosen as it fit the above criteria in addition to the fact that the organization facilitating the research (NSGA) had previously

worked with individuals from the community. In turn, these community members assisted with requisite introductions and ensured that local customs were respected as well as provided invaluable knowledge and insight into community life as key informants.

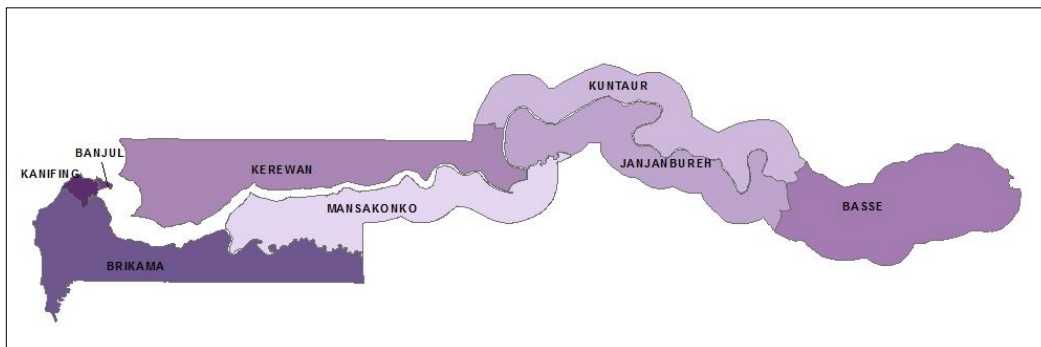
The Gambia is divided into six administrative divisions that were later divided into eight local government areas (LGAs), named according to their capital. The majority of the LGAs remained the same as the previous divisions with the exception of the Central River Region and the Greater Banjul Area, which were divided into two LGAs (see Figures 5.1 and 5.2). Tujereng is located in the Kombo South district of the Western Coast Region (WCR) of The Gambia (Figure 5.3). According to the 2013 census report, the 'Brikama' LGA (previously known as the WCR) was found to be the most densely populated after the Banjul LGA. However, from 2003 to 2013 this area experienced the largest increase in population with an average annual growth rate of 6.1 % (The Gambia Bureau of Statistics, 2013). This spike in population has been attributed to urbanization, which was occurring at a rate of 3.63% annually in 2011 (CIA, 2014). Many people from within and outside the country have been particularly migrating to the WCR districts of Kombo North, South and Central in particular (The Gambia Bureau of Statistics, 2013). This rapid population growth has placed increased pressure on regional forest products (NEA, 2010), impacting deforestation in the region. According to the most recent available census data for the community of Tujereng, in 2003 the total population was 1,121 (The Gambia Bureau of Statistics). If applied to the average annual growth rate of 6.1% for the region it is estimated that in 2013 Tujereng's population was around 2,031. Table 5.1 shows the percentage change in population by LGA.

Figure 5.1 Administrative Divisions of The Gambia



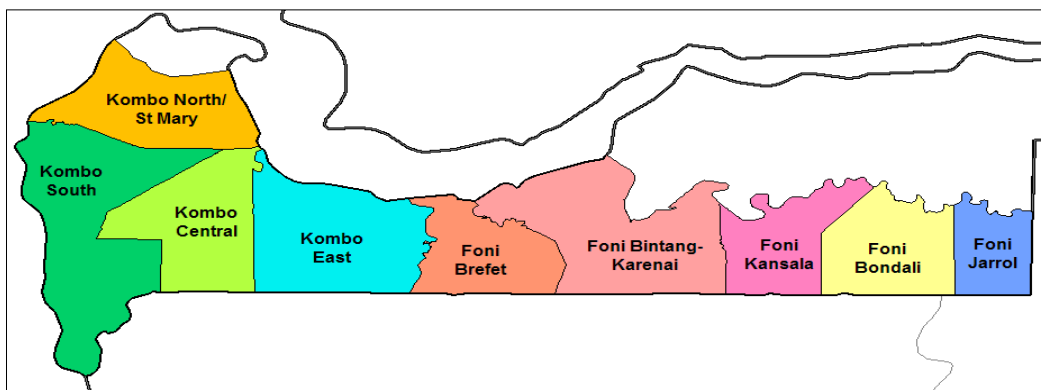
Source: Wikimedia Commons, 2012

Figure 5.2 Local Government Areas of The Gambia



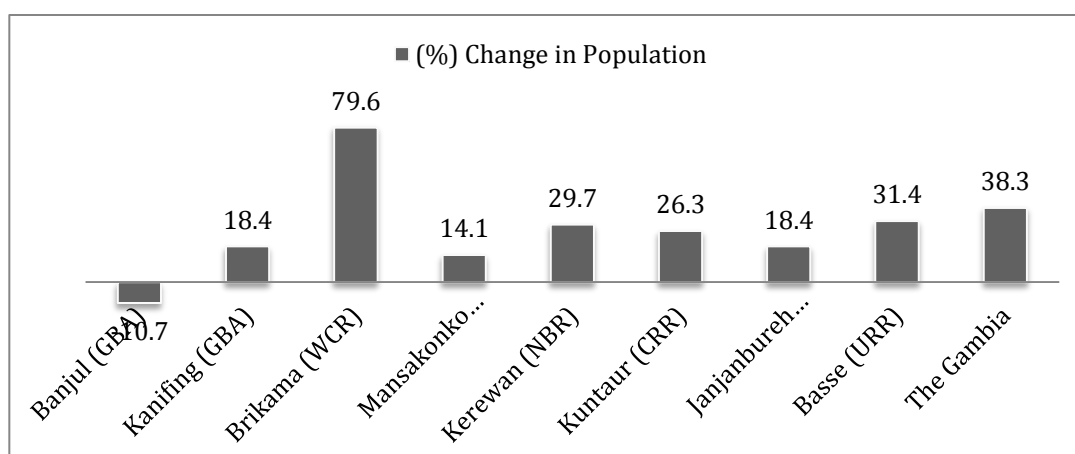
Source: Adapted from The Gambia Bureau of Statistics, 2013, p. i

Figure 5.3 Districts of the West Coast Region (WCR) / Brikama LGA



Source: Wikimedia Commons, 2006

Table 5.1 Changes in Population by Local Government Area (2003-2013)



Source: Adapted from *The Gambia Bureau of Statistics, 2013, p. 8*

Tujereng is one of numerous communities in The Gambia threatened by forest loss and degradation. As identified in the previous section, population growth as well as urbanization in the WCR in particular has contributed enormously to deforestation in the area. Specific causes of deforestation identified in and around Tujereng include: land clearing for settlement and agriculture, increased need for forest resources such as firewood (the primary source of energy in the country), illegal charcoal production, unsustainable harvesting of medicinal and edible plants, bushfire (accidental or on purpose for forest access, hunting or honey harvesting), as well as fish smoking and processing. All of these causes have been augmented due to a rising population in this region. Illegal logging or firewood harvesting was noted as an especially harmful practice that was driven by the moderately high demand for fuel-wood in the neighbouring town of Tanji, as a consequence of the fish smoking and processing. This industry supports a large portion of households in the area economically. In addition to fish and fish products,

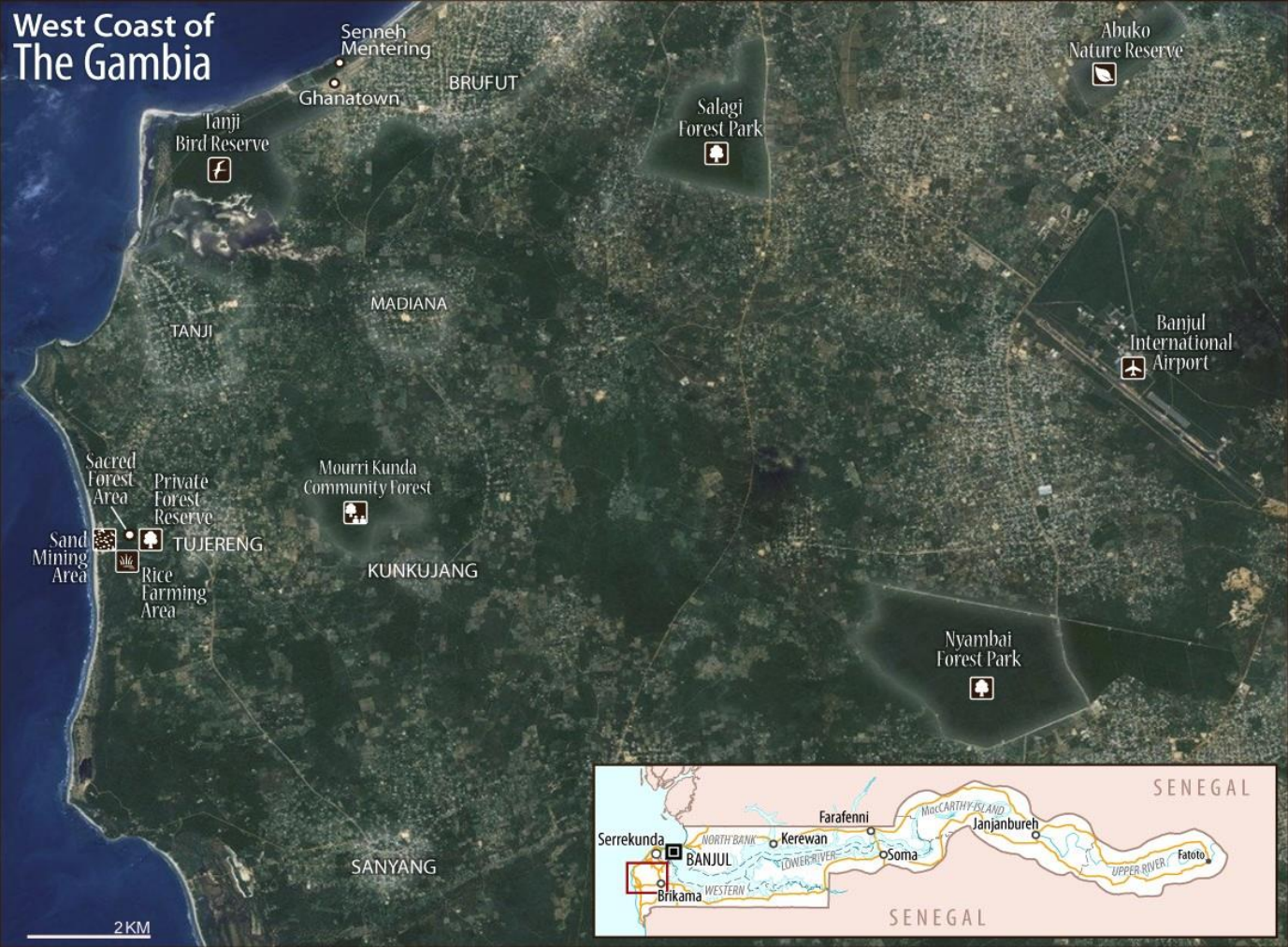
such as fish fertilizer, firewood and charcoal (imported or illegally produced) are also major commodities sold in Tanji.

Case Study 5.1

Enforcement challenges, due to a lack of funding and manpower together with fairly high incidences of illegal logging and fuel-wood harvesting, were remarked in several interviews. The specifics of this issue were discussed in detail in an interview with a Mori Kunda CF committee member. He identified a particular entry point for illegal harvesting as well as a driving cause of this activity. He said, “*the most difficult period is the Banyaka area at the Madiana end because those people are the ones who are going there, encroaching into the forest, cutting there and taking it to Tanji. You know, for this smoking of fish. Because there is no forest at that area now. [...] We are thinking if we have enough [money] we will try to provide pegs at the northern side of it [the CF] because that is where people encroach into the forest.*” (A-4, Personal Communication, December 17, 2013)

In an attempt to protect local forest reserves, community members in Tujereng pursued the government’s community forestry programme (CFP). At present Tujereng’s community forest (CF) is the largest remaining forest in the area—24 hectares in total—that is not a forest park or nature reserve. During an interview with a government official for the Department of Forestry, who is also a Tujereng resident and Mori Kunda member, it was noted that the MKCF is endangered because “it is the only forest in the region, so many people want to take the resources” (A-8, Personal Communication, December 18, 2013). It was also revealed that there had been another CF in the area put forward a different clan (*Jaban Kunda*), however, it only reached the first phase of the CFP, before the ‘community’ decided to parcel off the land due to internal conflicts. Figure 5.4 is a map of the greater Tujereng area with limited digital imagery of the surrounding forestlands.

Figure 5.4 Map of Tujereng and Surrounding Area



Source: Will Flanagan, 2015b

5.3 The Community Forestry Programme in Tujereng

5.3.1 ‘Community’ Structure in Tujereng

Like most villages in The Gambia, Tujereng is organized based on the traditional kabilo system (discussed in Section 3.5), with a well-respected alkalo and council of elders. Every Sunday the council of elders holds a ‘community court’ where local disputes can be brought to the attention of, and mediated by, community members. Although illegal activity conducted within the CF is normally brought to the attention of the police, smaller issues, including land disputes, can be brought to the community court. In many cases, it is an entire village that puts forward communal land to be certified as a CF, however, the programme is not limited to this definition of ‘community’. Individuals, families or even clan groups can also apply for CF status. In the case of Tujereng’s CF it was the *Mori Kunda* clan that put forward the land—hence the name *Mori Kunda Community Forest* (MKCF). There are four main clan groups in Tujereng: the Mori Kunda, which is the largest, the Tanba Kunda, Jaban Kunda and Baduma (A-11, Personal Communication, December 20, 2013).

Case Study 5.2

When asked to elaborate on the meaning of ‘community’ within the context of the CFP a government official with the Department of Forestry explained, “

In Tujereng, it’s a different. It’s a community forest but then the term ‘community’ it doesn’t mean the whole village. The whole village can own a community forest; one clan can own a community forest. Okay? One family can own a community forest. But in Tujereng, it’s a Kabilo, not the whole village... Kabilo means like, if your surname, lets say Jatta, your brother, your sister, your own—all those family members. Cousins, distant relatives, everything. That family membership is called Kabilo... Individually, you can have a community forest. Yes. If all is clear that the land belongs to you, or belongs to your father and you inherited it from your father, you passed through all those legalities, got all the required documents; you can make it a community forest. (A-7, Personal Communication, December 18, 2013)

The Mori Kunda clan is a grouping of extended families that are known to be religious scholars and traditional healers, or Marabouts. They are versed in the Qur'an and/or also have been taught the practice of traditional healing using medicinal plants (i.e. leaves, bark, roots) derived from local forests. Tujereng's previous alkalo (the present alkalo's father) was said to be a traditional healer well known in the area, who passed on his knowledge to various members of his family. A traditional health centre has been established near the community courtyard and the alkalo's office in Tujereng, which is solicited by people from the surrounding villages. See Figure 5.5 for a map of Tujereng. The Imam in Tujereng also runs a health facility out of his home where he instructs numerous students on the art of traditional medicine.

Case Study 5.3

A resident of Tujereng described the Mori Kunda clan as the following. She said, "*they call them Mori Kunda. Mori Kunda is like scholars, like Marabouts. Like in a village, you know, you find this sect or this group of people—they are religious scholars. They teach other children or they have families all learned people on the Qur'an. So they teach them on the Qur'an; everything that is religious related things. And you find another sect that is like—they are either cobblers or blacksmiths. This one is like Marabouts, or Mori Kunda; they are like scholars.*" (A-1, Personal Communication, December 17, 2013)

A member of the Mori Kunda clan who had been practicing traditional medicine for almost 50 years further elaborated on how the art had been passed down through the clan. He said, "... *that was the time he started, then, when his uncle was alive. That was the [present] alkalo... his father. It's his [the traditional healer's] uncle. It was his uncle who taught him how to treat people. [...] He is also teaching people now. Some are from the family and there are others outside. Even girls.*" (A-18, Personal Communication, January 6, 2014)

Figure 5.5 Map of Tujereng



Source: Will Flanagan, 2015c

Although social systems are changing as a result of various influences, such as globalization, global market integration, information and communication technology as well as population pressure and urbanization, The Gambia remains a relatively communally oriented society. Saine provides an example of this communal ethos, which he refers to as the principle of *teranga* (or *tedungal* in Fula) in Gambian culture, which roughly translates to ‘hospitality’. He explains this concept as a “willingness to meet the needs of strangers or visitors even when they themselves go without” (2012, p. 142). Saine goes on to describe a common socialization process shared by age sets, or age groups that potentially contributes to the communal orientation of society. He notes that boys and girls born within a few years of each other, or who have been circumcised (or “entered the bush”) in the same year are secluded and taught the lore and values of their specific ethnic group, gaining age and gender specific responsibilities within the community as they emerge. Often these new “graduates” remain close, forming a type of informal support group, helping each other throughout different stages of life (Saine, 2012). Other examples include the kabilo structure, the council of elders, the community court system and the common land arrangements (sacred forests and communal farming areas) present in many communities. Communal living arrangements where extended families live in collective households or compounds, or even the presence of polygamy can also be seen as fostering communal tendencies as the family unit is extended.

5.3.2 Implementation

The MKCF completed all three phases of the CFP and was officially certified in 2004 (A-4, Personal Communication, December 17, 2013). Following the standard

procedure, the first phase began with a letter of intent and an inspection of the area by the Department of Forestry (site identification), followed by the foundation of a CF committee. The second phase consisted of the signing of Statement of Neighbouring Villages as well as the Statement of the District Chief, where the Mori Kunda's traditional claim over the land in question was confirmed. The community court would have been instrumental in ensuring the Mori Kunda's claim to traditional tenure over the land put forth as a CF. These documents are signed to avoid land conflicts. Then, the Preliminary Community Forest Management Agreement (PCFMA) was drawn up by the community and signed by the Department of Forestry—concluding the second phase of the CFP. For the next few years the MKCF was managed according to the management plan outlined in this agreement, ensuring that the area was free of bushfires and outside encroachment and that more trees were planted. At the end of this trial period an evaluation was conducted by the Department of Forestry assessing the community's progress. It was deemed acceptable, so they moved on to the third transition phase, moving towards land ownership. Here, the Community Forest Management Agreement (CFMA) was finalized. Once this was done it was signed by the government and the MKCF was gazetted, solidifying tenure rights and certifying ownership of the MKCF.

Constraints/Challenges

Conservation efforts were quite passionate following owner transfer and various committee members served as conversation 'champions'. These members took it upon themselves to either initiate tree planting projects, organize water retention initiatives, increase awareness through different sensitization programs or ensured the diligent

monitoring and patrolling of the community forest. However, certain incidents dampened efforts significantly. Different cases of illegal logging or harvesting of forest resources was seen as a major issue. For example, fast growing gmelina trees had been planted in the MKCF as a part of the CFP that were to be harvested and sold as timber. However, people from outside the ‘community’ had gone in and cut these trees. These individuals were caught and the wood was seized by the CF committee but the trees were cut before reaching maturity, which decreased the income received from the sale of the timbers. During a focus group some of the village youths other challenges that were mentioned included: non-permitted cashew harvesting, illegal firewood collection, as well as cases of bush fires from non-permitted hunting and honey harvesting (FG-1, Personal Communication, January 10, 2014).

Case Study 5.4

The following challenge was identified by a village youth when discussing the various constraints faced by the MKCF. He said, “*The Mori Kunda forest is the biggest forest in Tujereng. The main challenge which they have is in the rainy season when the cashew trees are ripe. So, you know, people need cashew seeds because it’s money. So thieves go there and steal. So that’s the time they have main problems; in the rainy season when the cashew are ripe. So they need the cashew seeds to gain money. So people also steal.*” (FG-1, Personal Communication, January 10, 2014)

Lack of funding was another issue that was mentioned in nearly every interview conducted. It was noted that certain CFs had been more successful than others in generating their own funds to support conservation efforts within the CF. This success was said to be due to the fact that these CFs had received external funding through various projects³⁹, which helped to implement small income generating activities such as bee keeping, handicraft production and eco-tourism. It was mentioned that at one time a

³⁹ The Global Environment Fund (GEF) small grants were often noted as an important source of funding.

certain individual had been working with the MKCF committee to submit a proposal to a grant offered by Africell (a local mobile phone network), however it did not come to fruition (A-4, Personal Communication, December 17, 2013). Enforcement, along with a need for fencing, was also one of the primary challenges or constraints noted throughout the interviews conducted with community and village members. Several Mori Kunda members noted that the resignation of a long-term and efficient volunteer CF guard a few years back was as a major loss to the CF, as those who have followed have not been nearly as diligent and successful (A-4, Personal Communication, December 17, 2013). Again, a lack of funding, as well as different social constraints, was mentioned in this regard; as the position is voluntary therefore it often comes as a secondary priority for those who must support a family. Finally, the decline and loss of native plant and wildlife species in the area was also noted as a general challenge.

Case Study 5.5

A Mori Kunda member described the following with regards to the present lack of efficient enforcement personnel. He said, *“Two or three years ago the protection given to that forest [MKCF] was more than the protection today because two or three years ago there was one man that was very effective. If he has his breakfast in the morning, he’s there. Even at night he would go around because some people would go at night to cut down trees and they transport them before daybreak. So he would even sacrifice to go at night. If he discovered anything he would rush or use his mobile phone, they would get the police then people would join the police to go. Today, a man like him is not available because he is no more here. He left. So you see, it’s difficult to get somebody like him.”* (A-18, Personal Communication, January 6, 2014)

One of the village youth also brought up some of the social issues faced by the Mori Kunda forest guards. He said, *“I am going to say about the guardians of the forest, what they encounter. Because if you are a guardian of the forest you will not have no friends because when people go there they want to do bad things and you stop them. They will say you are enemy of them. So when you go to the village, when you need things people will not give you because you will not be allied to anybody. They will all look at you as an enemy. While you are doing something good, you are keeping the forest for the future, but they will not know that. They will say you are wicked and bad.”* (FG-1, Personal Communication, January 10, 2014)

Progress

It was noted in several interviews that progress regarding the CF had been stunted for close to three years, due to lack of community involvement as a result of a rumour believed to be true by the village. It was not certain exactly when and by whom this information came to light but someone had said they had spotted a tiger, possibly with cubs, in the MKCF, which sparked fear in the community. As a result all activities (both positive and negative) decreased or even stopped periodically. However, no one from the clan had actually seen the tiger and as a result after a few years, activity in the CF slowly resumed. A government official for the Department of Parks and Wildlife working in Tanji said to his knowledge tigers had disappeared from The Gambia years ago. However, he mentioned that although very rare and highly uncommon in the WCR in particular, leopards still exist in the country, which could have been mistaken for a tiger, but again he thought its presence in the area was highly unlikely (A-16, Personal Communication, January 6, 2014).

Case Study 5.6

When asked about special beliefs regarding the MKCF one clan member (via translator) said, *“There was a time these past two years that people had heard there is a tiger that lives in that forest with its babies. So people were scared, so they abandoned the forest for the past two years. Nobody dared to get near that forest. So it’s just this year that they started going back to protect the forest. They work on it and collect the wild fruit... but they don’t go deep into the forest still. But they haven’t seen it.”* (A3, Personal Communication, December 20, 2014)

The tiger was also mentioned in a second interview with another Mori Kunda member, as a source of protection for the forest. He said, *“In fact there was a time that we had this tiger. You know, they have this bird watch at Brufut. You know when the place is so secure and so calm there was one tiger that moved to the area and in fact it helped us to secure the area more because when people saw it they were afraid, most of the people ran away. That dry season we had no problems of encroaching, encroaching onto the land. People ran away. But you find that when the young ones [cubs] got bigger, at just by the night they traveled back to that area, back to that bird watch. It traveled. Because you find out that we were unable to maintain very much monkeys there because of lack of water. They just come seasonal and go. Then, that was the time when this project was fading but it has not come to an end.”* (A-4, Personal Communication, December 17, 2013)

In an attempt to address some of the challenges noted above, such as the decline in native plant species, a substantial tree planting initiative has been undertaken relatively recently by the clan, which was started or facilitated by one female Mori Kunda member in particular. She has been promoting and gaining support from other women and young people in the clan to plant more trees in the CF, which was said to have been quite successful (A-13, Personal Communication, December 20, 2013).

Future Plans

Although all three phases have been completed, the MKCF committee meets regularly to discuss future plans and have recently attended a workshop, in September 2013, put on by the Department of Forestry in an attempt to revitalize the programme (A-4, Personal Communication, December 17, 2013). The conservation process is ongoing as new ways to sustain and expand local conservation efforts were being sought. Some examples of future plans include: bee keeping, bird watching excursions, fencing, nearby road creation to entice tourists. Furthermore, in order to try and tackle the issue of declining wildlife species, especially birds and monkeys, current initiatives include the digging of holes or ponds during the rainy season to retain water and keep various species that leave due to a lack of water within the MKCF during the dry season. Future plans include additional water retention projects such as digging a well and the creation and strategic hanging of clay pots around the forest to attract birds, bats, monkeys and other animals. The rationale is that these water sources will also facilitate photography opportunities, which is a favourite pastime of visiting bird watchers. Bird watching is a major activity highly promoted in the tourism industry, which could lead to income

generating activities for the CF through future eco-tourism initiatives. Furthermore, birds and bats were thought to play an important role in insect control for both agricultural (i.e. pest reduction) as well as health purposes (i.e. to reduce mosquitos and thus malaria).

5.4 Indicators of Development

As outlined in Section 5.1, the terms of analysis for both development and conservation were based on a specific set of criteria, which can be found in Table 5.2 below. Development was investigated and analyzed based on two determining factors: participation and benefit. In order to determine the level and equitability of participation in the CFP in Tujereng, three general questions had to be addressed. The first was: who participates in the CFP—who is being referred to when using the term ‘community’ in the context of the programme? The second was: what does the community participate in—what types of conservation or socio-economic programmes are they involved with? The third was: to what extent do community members participate—are they decision-making, implementation, labour provision etc.? Benefit, on the other hand, was assessed based on the type of benefit (i.e. social, economic or political) as well as the distribution or allocation of these benefits amongst members of the community (i.e. the Mori Kunda clan) as well as the village as a whole.

Table 5.2 Terms of Analysis			
	CONSERVATION	DEVELOPMENT	
		Participation	Benefit
1	Forest Cover (i.e. rates of deforestation and ability to protect or conserve local forestlands)	Who participates? (i.e. what is meant by 'community')	Social (i.e. non-monetary benefits: training, education, health)
2	Environmental Awareness (i.e. presence of environmental education/ awareness programmes, stewardship groups/organizations and local movements)	What do they participate in? (i.e. types of social, environmental, economic programmes)	Economic (i.e. timber, firewood and non-wood forest product sales, honey production, handicrafts)
3	Involvement in Conservation (i.e. incidence of sensitization and conservation programmes, tree planting activities and sustainable harvesting)	To what extent do they participate? (i.e. decision-making, implementation, labour provision)	Political (i.e. land and resource ownership transfer; property titles: inclusion/exclusion)

5.4.1 Participation

As previously mentioned, the term 'community' in the context of the CFP has a somewhat malleable definition, as various groups of people or even individuals can designate a 'community' as long as they have traditional claim over a piece of land and follow proper procedure. For the MKCF specifically, it was determined that clan members are the only ones involved in the management and conservation of the CF, which is headed by a committee, appointed by the clan (A-13, Personal Communication, December 20, 2013). The committee consists of a president, vice-president, treasurer and secretary as well as a women and a youth representative (Department of Forestry, 2004). Although village members do partake in conservation activities (see Section 5.5.3) such as tree planting in various areas of Tujereng, they do not participate in management and conservation activities occurring within the CF. An exception however, is in the dry season when there is an excess of dry wood that is collected for firewood as a fire

prevention method as well as a means of generating income for the CF. The clan is given priority over firewood collection, however, the community is also given the opportunity to collect (and pay for) firewood from within the MKCF. The funds generated from this activity are then circulated back into the CF to be used at the discretion of the committee (A-4, Personal Communication, December 17, 2013).

The Mori Kunda clan participates in different social, environmental and economic activities related to the CF. Past social (i.e. health and education) activities have included attending training and educational workshops conducted by the Department of Forestry as well as learning about alternative treatment techniques and different health benefits from various medicinal plants from visiting herbalists (Case Study 4.6). Herbalists from outside the community who are knowledgeable on sustainable harvesting methods come either to instruct people on these methods or to go with individuals who have approached the Mori Kunda committee and requested certain medicinal plants from the MKCF (A-4, Personal Communication, December 17, 2013). The environmental or conservationist activities that the community participates in have included tree planting, usually conducted before the rainy season as well as fire-belt clearing, where a belt of approximately ten meters is cleared around the forest to prevent bushfires; this takes place at the end of the rainy season. As previously discussed, large holes are dug to retain water with the objective of wildlife retention after the rainy season, which is another activity carried out by the clan. Although relatively limited, economic activities undertaken by the Mori Kunda have included the collection and sale of firewood and

timber as well as other forest resources such as wild fruit and a certain type of bark, which is used for boat building (A-13, Personal Communication, December 20, 2013).

Case Study 5.7

When describing various sustainable harvesting methods for medicinal plants, this Mori Kunda member explained the following process used to help people collect medicinal plants as well as encourage conservation and promote environmental stewardship. He said, “*There is a method that we allow, if not it can kill the plant. It will. So that is why people who are not used to [these methods] cannot [harvest themselves]. Not every Tom, Dick and Harry can go there and take anything that is medicinal. That’s why we have certain people who come. Like, we have one man who comes from Funyi Kunda, he’s a herbalist. He knows how we do these things. So we allow it and then we try to gather knowledge on how he’s treating, on how he’s giving medicine and how it’s medicinal. You see, we allow it. [...] Such medicinal things we don’t [charge] because we are trying to encourage it, so if people see the importance, those people too they don’t want people to destroy that vegetation because at least they are benefiting from it. But we don’t sell it.*” (A-4, Personal Communication, December 17, 2013)

As was explored throughout the literature in Chapter Two, participation comes in many shapes and sizes, as there are different levels and degrees of participation. With regards to the implementation of the CFP, initial community participation in the programme is voluntary. The programme is widely advertised and it is the community who expresses interest. The core structure of the CFP (i.e. the three phases and the required documents) is pre-determined; however, the committee is chosen by the community and each management plan is created by the individual community (see Case Study 4.7). Thus, the community (in this case the Mori Kunda clan) is not responsible for the conception of the programme but they do participate in tailoring the projects to fit local needs and desires. The Department of Forestry is there throughout the three phases of the programme to provide support (i.e. advice, training, seedlings and other materials); however, all decisions concerning the management plans and committee organization are made by the community. Furthermore, once all three phases have been completed and

land ownership has been transferred, this support system wanes significantly. A member of the Department of Forestry explained, “with the community forest programme when you get to the final stage the government doesn’t support you anymore. We continue to monitor you, maybe give you technical advice, but in terms of implementing your activities—because now you’ve gained the ownership—it’s your responsibility now. You should stand on your own” (A-7, Personal Communication, December 18, 2013).

Case Study 5.8

When asked to describe the process used to decide the MKCF committee one member explained, “*No, it’s not like you are chosen. Anybody from the clan, you make sure it’s your responsibility. Every one of the members takes care of that forest because it belongs to the clan.*” (A-13, Personal Communication, December 20, 2014)

In another interview another member elaborated on this process by saying, “*obviously people living together know each other, they know the people who can do it. [...] Okay, if you are asked to pick, you always pick the best... Like if you put peanuts in this cup and you are asked to pick from those peanuts, obviously you will pick the good ones because those are the ones you’re going to eat. You leave the bad ones. So the community will also pick the good people to take care of the forest because there are other people, if you pick them, and they go to the forest they will be the very first to cut down some of these trees to their own benefit.*” (A-18, Personal Communication, January 6, 2014)

All members of the Mori Kunda clan community, both men and women, were said to have equal opportunity to participate in conservation activities as well as decision-making via the CF committee (A-4, Personal Communication, December 17, 2013). The degree of individual participation was further explained as voluntary and therefore if any individual came forward and expressed an interest in wanting to take on a given CF responsibility (i.e. initiating a project or even becoming a committee member) these requests would normally be granted, as volunteerism was seen as an act of self-awareness of ability to perform the task at hand. One village member explained, “someone who volunteers, we have the belief that they will be able to do it. As long as you volunteer to

do anything, you should be able to do that” (A-4, Personal Communication, December 11, 2013). However, on a larger scale, equality of opportunity in The Gambia is also influenced by larger social, cultural and political structures, such as gender norms and class divisions in society. Chapter Six provides further analysis on the different challenges and constraints to ensuring equitable participation within the CFP. Table 5.3 below summarizes the participation findings with regards to the ‘community’, meaning the Mori Kunda clan, the wider village of Tujereng as well as the CFP in general.

Table 5.3 Summary of Participation

Terms of Analysis <u>'PARTICIPATION'</u>	'Community' (Mori Kunda)	Village (Tujereng)	CFP (The Gambia)
<p>WHO PARTICIPATES? Define 'community'</p>	<ul style="list-style-type: none"> • Clan members -Traditional healers -Religious scholars • Committee -Men, women, youth -Chosen by the clan • Volunteers 	<ul style="list-style-type: none"> • "Customers" -Monetary -Non-monetary 	<ul style="list-style-type: none"> • Divisional Forest Officers
<p>WHAT DO THEY PARTICIPATE IN? Types of activities</p>	<ul style="list-style-type: none"> • Conservation efforts • Future plans -Development -Conservation • Enforcement • Finances 	<ul style="list-style-type: none"> • Dry wood collection • Sustainable harvesting • Buying forest products • Other non-CF related conservation activities • 	<ul style="list-style-type: none"> • Training • Provide Materials • Monitoring • Evaluation • Technical guidance
<p>TO WHAT EXTENT DO THEY PARTICIPATE? Level of participation</p>	<ul style="list-style-type: none"> • Initiation • Land provision • Established committee • Decision-making • Management plans • Implementation • Labour provision 	<ul style="list-style-type: none"> • Minimally, if at all 	<ul style="list-style-type: none"> • Programme conception • Coordination

5.4.2 Benefit

There were three primary types of benefits that were observed throughout the research: social, economic and political in addition to generalized environmental benefits. In terms of social benefits, Mori Kunda community members received certain educational opportunities from training sessions with the Department of Forestry as well as visiting herbalists that they would not have had if it were not for their involvement in the CF. Indirect health benefits were also recalled by the clan as well as the wider village, as the MKCF was seen as an area which was preserving important medicinal plants that contributed to the health of the village and the surrounding area. One of the village youths recalled, “I was sick three months ago and I got medicine from the Mori Kunda forest. I didn’t even go to the hospital. So I have the medicine from the forest and it cured my disease, so I personally think it’s very important for us” (FG-1, Personal Communication, January 10, 2014). Aesthetic beauty and cultural benefits (i.e. ceremonial spaces) were also mentioned (FG-1, Personal Communication, January 10, 2014). One village member explained, “Sometimes you can go to the forest and feel like a tourist and just go and look at the wild animals” (A-19, Personal Communication, January 6, 2014). Various village members also noted general environmental benefits, such as the forest’s contributions to generating oxygen, carbon sequestration and climate control (A-11, Personal Communication, December 20, 2013). However, two separate village members who live next to forest areas pointed out some negative impacts they experienced due to their proximity to the forest.

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Negative effects of the forest were identified on two separate occasions. The first was mentioned by a village youth who said, *“I have two things about the forest because I live just next to a forest. The forest has a positive and a negative effect on us in our family. Because there, when we need medicine, we go to the forest. And when we need some fruits. But we cannot farm, we cannot grow crops in our compound because when you grow there, there are monkeys who get from the forest to our compound and destroy all our crops. So in this case, me, I would like the people who are having forests to fence their forest so that the wild animals there do not travel. Because even my mother she would not like her door to be open because there are a lot of snakes around where we live. So that is very difficult for us. And those are negative effects of forest on us because we live just about ten meters from a forest, so it is very difficult.”* (FG-1, Personal Communication, January 10, 2014).

The second village member to mention the negative effects lived in a private forest reserve, where herself and her husband served as the caretakers for foreign owners. She explained (via translator), *“She is a farmer and she likes to grow things but her problem here is there are a lot of monkeys in the forest here. So anything that you grow, they come and destroy it. So that’s why she doesn’t do any gardening or anything. Like the wild monkeys and other stuff in the forest comes and destroys it.”* (A-17, Personal Communication, January 6, 2014)

Physical access to the MKCF is open to anyone, as there is no fence restricting entry. However, the forest resources are restricted to Mori Kunda community members, unless the committee has granted an individual permission to harvest a specific resource. However, it was frequently mentioned that illegal or non-permitted harvesting or logging occurred quite regularly. That said, according to the local CF by-laws unless otherwise determined the clan members are the only ones who should gain direct economic benefits from the MKCF. Any profits derived from the forest, from timber or firewood sales for example, are placed in an account managed by the committee to be used either for conservation or development projects for the community. However, it was stated that up to this point the income generated from the CF had been minimal (A-4, Personal Communication, December 17, 2013). This is not an abnormal trend for many participants in the CFP. As of 2005, the majority of CF committees had not yet initiated any significant amount of forest resource commercialization (Thoma & Camara).

Furthermore, all income derived from CFs is supposed to be reported and a 15% tax is to be submitted to the government, for what is referred to as the National Forest Fund (NFF)⁴⁰ (A-7, Personal Communication, December 18, 2013). This tax benefits the forestry department, as it is used to circulate back into the CFP. However, the author did not determine the exact revenue generated from this tax.

Many of the indirect financial benefits identified were related to the health sector, as several Mori Kunda members were involved with traditional medicine and depended greatly on access to forest resources to support their practice. However, it was unclear how much, if anything, was charged for these services. One Mori Kunda member said (via translator), “For him, for his profession, the forest is the most important thing in his life—more important than anything. Because all what he uses to treat is from the forest. So without the forest he would not be able to treat. So it means everything for his life” (A-18, Personal Communication, January 6, 2014). Smaller-scale economic activity was also reported such as sale of wild fruit as well as tree bark used for specific construction purposes, which yielded monetary benefits. Other benefits included access to forest resources, for firewood, timber and other construction materials, medicinal plants and herbs, wild fruit, nuts and honey, as well as various tea varieties, which was acknowledged as an important source of non-monetary income for their household, as although it was not sold it reduced the financial burden of having to buy these products.

⁴⁰ According to Thoma and Camara (2005), the NFF was established in 1996 with the goal of promoting the protection, development and sustainable use of forest resources as well as creating incentive for the CFP.

Although the village of Tujereng does not receive any direct financial benefits, they do at times receive certain non-monetary economic benefits. For example, when there is a village gathering oftentimes the clan will provide the firewood necessary to prepare to food for the occasion. Another example that was highlighted by one of the local teachers was the donation of fencing material for a local football [soccer] field. He explained, “Yes, I think I can say that the whole youths of this village benefit from it [the MKCF] because I remember when we wanted to have a football match. Because the football field is not fenced, so they took permission from them to go and cut the palm frond leaves so that they can fence the whole perimeter. You know, so that youths can do their football activities. So I would say I definitely benefitted in that way” (A-11, Personal Communication, December 20, 2014).

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When discussing benefits derived from the MKCF a clan member explained (via translator), “She said, her personally, she hardly buys it [firewood]. She will collect her firewood and then it’s not even for sale; she uses it for cooking. And sometimes there is this visitation of the Qur’an, that’s a village function, so where people will need to cook, she will contribute. She will take some of her firewood there for people to use to cook... She mentioned also, that there’s a particular tree in the forest that they will take the skin of that tree and then they sell it to the people who are using the boats—the fishermen. So they will use that to fill between the [cracks]. You know when you have a boat, the gaps there. They use that to work on their boat. So that’s another important tree that they go into the forest to collect. And you can even have income out of it.” (A-13, Personal Communication, December 20, 2013)

In addition to the possibility of earning economic returns from the commercialization of forest resources, land and resource ownership transfer was another major incentive used to attract community participation in the CFP. To accommodate this transfer, certain precautionary steps were built into the different phases of the CFP, which include obtaining consensus from the surrounding communities or kabilos on the

traditional ownership of the land (Statement of Neighbouring Villages) as well as the required consent of the district chief (Statement of the District Chief). After completing all three phases of the CFP, ownership over the land and resources—both above and under ground—become property of the community. It was explained that, “...it’s definitely unique in The Gambia. Unlike other countries, they will tell you okay we are giving you only the trees, but the other mineral resources inside the ground, or underground no. But in The Gambia, as long as community forest is concerned, whatever is found within that community forest belongs to the community” (A-13, Personal Communication, December 20, 2013). However, to participate in the programme the ‘community’ must have a pre-existing claim over a piece of land for the “ownership” to be transferred from the State to the community. This is where what can be referred to as a tenure paradox can be identified, as two coexisting tenure systems are both claiming ownership over a given piece of land: the traditional system and the State system.

When a Forestry Department official was asked to clarify who originally owned the land he explained, “traditionally, we say I own this place, but constitutionally all land belongs to the State. But you know the State ownership is more powerful. Because it’s constitutional that all land belongs to the State. That’s why the State has the power to use any land, anywhere” (A-7, Personal Communication, December 18, 2013). Although legally the government claims ownership over all forestlands, when both community and village members were asked who were the original owners who put forward the land for the CF, there was widespread consensus that the land came from the Mori Kunda clan.

Case Study 5.11

When asked to recollect the process of how the MKCF came to be, one clan member explained, “*there was a group that came [the Department of Forestry], who wanted to start a forest here. And they [the Mori Kunda] had been the custodians of a particular piece of land where the forest is. They [the Mori Kunda] decided they were going to offer that land to these people [Department of Forestry] because of the importance of the forest. So when they started with these people to set up this forest, after some years, the forest was progressing, they were all planting, helping them to plant and helping them to take care of the forest. Then they [the Department of Forestry] came back to them [the Mori Kunda] and said, since we’ve started this and its progressing, there has been progress in it and we see that you guys are taking care of the forest, we want to hand over the forest to you [the Mori Kunda]. So that’s how they clan was able to own that forest. Because they [the Mori Kunda] provided the land for this forest to start. And when those guys [the Department of Forestry] left they decided as a clan to select—because the elders cannot do that. So they selected both young men and women to be responsible for the forest. Whereby they can be going to the forest to check in to see if anything is happening there that is not, you know, harming the trees, so they can protect them.*” (A-13, Personal Communication, December 20, 2013)

As was identified in the literature, this difference in opinion can be attributed to the way in which forest conservation was set up in The Gambia. For example, State forest parks and wildlife reserves were first established by absorbing large plots of fallow land as well as traditional forest areas that reserved resources for the domestic necessities of local communities (Sonko & Camara, 1999). In this way, forestlands were taken by the State without consideration for traditional tenure rights over forest lands and resources, which led to mistrust and a lack of legitimacy and respect for State conservation efforts. Although there was a clear disagreement over original ownership, the opportunity to obtain a legal land title over local forestlands was of great importance to the community.

Furthermore, there are two components to forest tenure in The Gambia: land ownership and tree (resource) ownership. However, land ownership does not necessarily imply ownership over trees and vice versa. According to national law all naturally growing trees and forests belong to the State, whereas land is owned according to

customary or traditional tenure—with the exception of all land located in the Greater Banjul Area annexed by the State in 2002. However, local communities can secure ownership over *both* land *and* trees by participating in the CFP. Therefore, there is a political aspect to ownership transfer, as access and consequently power over resources is granted to a relatively small number of people based on pre-existing traditional hierarchies. Thus, community members receive a certain amount of resource autonomy or security that would be otherwise unobtainable. Although the CFP results in certain benefits for community members, the strategy itself requires a degree of exclusion as non-community members do not have the same access to forest resources or receive any direct monetary benefits from the CF. This could mean that non-members are less likely to be motivated to abide by the community's conservation efforts. Examples include the illegal or non-permitted harvesting and logging occurring in the MKCF. For further analysis on the challenges regarding benefits see Chapter Six. Table 5.4 summarizes the benefits as they relate to the 'community', village and CFP.

Table 5.4 Summary of Development Benefits

Terms of Analysis 'BENEFIT'	'Community' (Mori Kunda)	Village (Tujereng)	CFP (The Gambia)
<u>SOCIAL</u>			
Education	<ul style="list-style-type: none"> • Training • Workshops 	<ul style="list-style-type: none"> • No direct benefits 	<ul style="list-style-type: none"> • Legitimizing conservation
Health	<ul style="list-style-type: none"> • Medicinal plants • Herbalist training • Food Security 	<ul style="list-style-type: none"> • Access to forest resources (permitted) 	<ul style="list-style-type: none"> • No direct benefits
Culture	<ul style="list-style-type: none"> • Clan identity • Local history 	<ul style="list-style-type: none"> • Local history 	<ul style="list-style-type: none"> • No direct benefits
<u>ECONOMIC</u>			
Monetary (sale)	<ul style="list-style-type: none"> • 85% of revenue 	<ul style="list-style-type: none"> • No direct benefits 	<ul style="list-style-type: none"> • 15% NFF tax
Non-monetary (access/use)	<ul style="list-style-type: none"> • Wood products • Non-wood products • Non-monetary source of income 	<ul style="list-style-type: none"> • Village events/needs (i.e. firewood, fencing) • Permitted harvesting 	<ul style="list-style-type: none"> • Reduced costs • Wider reach • Less staff
<u>POLITICAL</u>			
Land ownership	<ul style="list-style-type: none"> • Official land title 	N/A	<ul style="list-style-type: none"> • Decentralization
Resource ownership	<ul style="list-style-type: none"> • Legalized rights • Resource autonomy • Power 	<ul style="list-style-type: none"> • Exclusion of non-members 	<ul style="list-style-type: none"> • Decentralization

5.5 Indicators of Conservation

There were three primary areas that were investigated in order to determine the conservation outcomes of the CFP in Tujereng. The first was: forest cover, which examined rates of deforestation as well as the community's ability to protect or conserve local forestlands. The second was: involvement in conservation, which explored the incidence of sensitization and conservation programmes, as well as tree planting and sustainable harvesting activities. Finally, the third was: environmental awareness, which observed the presence of environmental education and awareness programmes as well as stewardship groups, organizations and local movements.

5.5.1 Forest Cover

Specific data regarding exact rates of forest loss and degradation for Tujereng as well as the MKCF were unavailable; however, the previously discussed national as well as regional data that was available provides an impression of local trends in deforestation. A local elder (approximately 70 to 80 years old) recalled high rates of deforestation during his childhood, which helped to corroborate trends in the national data from 1946 to 1968. When asked about changes he's noticed in the forest in his lifetime he said, "... but as the forest is disappearing, these animals, most of them have disappeared. He even heard of this when he was a child [...] there were things that were living in the wild here before. But then, there wasn't enough forest. [...] That was the time they started [when he was a child] cutting down the trees" (A-18, Personal Communication, January 6, 2014). Furthermore, recollections provided by a village member of his participation in a thriving local charcoal industry as a young adult and the decline in local forestlands than ensued,

also served to support trends in the national data, which revealed another steep decline in forest cover in the early 1980s (A-2, Personal Communication, December 11, 2013).

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Village members provided the following descriptions of local deforestation trends. One man explained, *“We have really seen very big changes in the forest areas because, one—it started with ourselves cutting down all the big trees, making them charcoal, selling them. Because we were realizing some money out of it so we kept on doing it. We were not having advice to the harm it was going to cause to us. Everybody was going in for it just to earn money. At the end of the day, now we have started to regret that. Yeah, because now its difficult to get firewood when it used to be only a question of minutes to go to the backyard to cut some dry branches and bring it to your mom or your sister to cook. Now, you have to go and search for this for hours before you can have a big bundle to bring to your house. Or you have to go and buy it, which is more expensive.”* (A-2, Personal Communication, December 11, 2013)

Another woman elaborated on the causes and effects of deforestation on their local scared forest areas. She said (via translator), *“yes, they used to have certain forests that would leave for initiation. That are either for men or for women will have they own kind of a forest that they will take girls for initiation. But now, because of this development we are talking about, population is growing, people are building houses, so some of those areas are all now gone. So, they end up even having those practices in their homes instead. At first everything was done there... Like, even trees, if it is the season for wild fruits in the forest that they will say nobody will touch this. Now all those trees are disappearing because people are building houses. You know, even between Tujereng and other villages, that is satellite villages that surround, there are forests there. But they are all disappearing because the village is expanding and that village also is expanding and they are all coming together. So, that’s why it’s disappearing.”* (A-1, Personal Communication, December 11, 2013)

In terms of the community’s ability to conserve local forestlands (i.e. the MKCF), there was consensus amongst community and village members as well as government officials on the successful preservation of this area, despite the challenges discussed in Section 5.3.2. It was mentioned that the preservation of 24 hectares of forestlands in an area experiencing high rates of population growth and resource strain was a remarkable accomplishment. One government official said, “In the greater Banjul area, land is a problem. People are definitely grabbing land everywhere. So that’s why we find it very difficult to have the WHOLE village having a particular community forest. Because

people shared their land. They divided the whole area and everybody gets their own. [Whereas in the past large plots of land would have remained in the family, now they have been parcelled off]. So most people prefer to sell their land and get money, you know, use it for other things. Definitely for Tujereng it's exceptional. Comparing to the location and the demand for land in the area, but they are able to maintain that forest still now. They're very committed. If you look at the area now, that is the only place where you can have most forest resources that one can need—firewood, name them, and other materials. It's the only place that whole region you can get it now. So there's a lot of pressure on them" (A-7, Personal Communication, December 18, 2013).

5.5.2 Conservation: Sensitization Programmes and Activities

Throughout the interviews several different sensitization or educational programmes that had taken place in the community were mentioned. Three months prior to when the interviews were conducted, there had been a workshop put on by the Department of Forestry regarding conservation activities and techniques that could be beneficial to the MKCF. However, the Health and Environment Youth Group mentioned that it would be beneficial for these programmes to be either extended to the wider village of Tujereng or to have separate educational seminars to provide the village the opportunity to learn more about the programme. One member said, "...but also site visits is going to very important... Site visits by the people of Tujereng and the forest department to also come and see and educate the people on ways to manage their forest properly" (A-4, Personal Communication, January 6, 2014). As previously mentioned, it was also a somewhat regular occurrence for visiting herbalists to educate interested Mori

Kunda members on their healing practices and sustainable harvesting techniques, which was a community-led conservation education initiative. At the time of the research the author and another colleague as well as two environmental studies teachers, together with a partner organization—the Nova Scotia-Gambia Association (NSGA)—held an environmental education training session, which covered various conservation issues, with Tujereng’s Peer Health Educators (PHEs). The PHEs are a group of upper level high school students who are part of an after-school programme that learn about various health and environmental issues, which they then disseminate to their peers as well as the larger community through sensitization activities often involving performing drama skits on the different topics learned. After the training the PHEs then took it upon themselves to perform skits on the information they learned for their entire school as well as community. Finally, it was also mentioned that in the past (2004) there had been a visiting researcher from Holland, in conjunction with the Department of Forestry, who spent six months conducting research on the CF. However, no results were ever shared with the community, which was said to have had led to negative sentiments regarding research participation (A-4, Personal Communication, December 17, 2013).

Although activities within the MKCF had been stunted for a few years, there had been a recent revival of conservation activities around the CF. One activity that was mentioned as quite successful was a women-led tree planting initiative. When asked about the involvement of women in the MKCF and the different conservation activities occurring in the CF one Mori Kunda committee member commented, “In fact the last tree planting was most of the job done, tree planting, was done by women. You see? [Name

of woman] in Mori Kunda was the one who chaired the women to do the planting there. So that everyone believes she's part of the community. She was very active. Even the last meeting/workshop she was very vocal. [...] Yes, she is there... they will tell you she is this lady. She is one of the most active" (A-4, Personal Communication, December 17, 2013). Seedlings were also grown in the school garden and then transplanted by students around the community (A-12, Personal Communication, December 20, 2013). Yearly fire-belt creation around the forest, as a bushfire prevention technique, was another local conservation activity done by the community. A member of the Health and Environment Youth Group explained, "We also belt. Belting also is a method too. You clear the sides of the forest. Like if the surrounding area has been cleared off. So it will prevent firebreak out going directly into the forest. The surrounding needs to be taken down; the group does that" (A-4, Personal Communication, January 6, 2014).

Case Study 5.13

In terms of involvement in the project the woman who has been running the project explained, "*the [Mori Kunda] clan is the biggest clan in Tujereng. So they have a lot of young people and also they have other women that join them. Like, as a clan, to help and work hand in hand with the young, to make sure that they take care of the forest and they grow more plants. So, it's not like a small clan that you think of that you need extra hands from other people. They take care of their own thing*" (A-13, Personal Communication, December 20, 2013). While explaining local conservation activities she also mentioned the clearing of fire-belts that took place each year, which she explained took place both around the MKCF as well as around people's homes. She said, "*even us, even in the compounds, after the rainy season, because firebreak can come, you belt your compound around. That's the practice to protect fire from burning anything. So in the forest even if you grow a tree, or anything you plant, within the end of the rainy season, you go and then clear it around so that when fire comes it will always stop. That's the traditional way of protecting the forest.*" (A-13, Personal Communication, December 20, 2013)

Traditional Forest Management and Conservation Practices

Various traditional methods of conservation as well as beliefs surrounding the forest, which had different conservation outcomes, were recalled throughout numerous interviews with community and village members. The examples provided were either past methods, which had largely disappeared, or contemporary conceptualizations of traditional methods. Fear and respect had been noted as key techniques used in the past as a means of conservation. Case Study 5.13 below provides an example that illustrates this point. The tiger spotting (discussed in Section 5.3.2) is another contemporary example of where fear, whether intentional or not, resulted in conservation outcomes.

Case Study 5.14

When discussing the local traditional beliefs regarding the forest an elder from the village recounted the following story from his childhood. He said (via translator), *“Before, his ancestors were able to preserve the forest because you have maybe a village of only maybe 100 or 200 people and you have a vast area of forest. So obviously there are other parts of the forest that we don’t touch for years. People don’t have anything to do with those areas. And there are certain areas that are kept for spiritual beliefs. When he was a child, he himself knows about special forest around that area, this part of the village towards Tanji. The area is called Sanjo Ba Tandaki. Tandako means a place where you grow rice. Sanjo Ba is a name of a person. This forest is named after that person... This forest, nobody dares to go in there and cut a tree. If you do they have a spiritual belief that you don’t live long. So most of the people who tries to test whether this is true, all of them will die. You go there, you cut a tree, you come home that very day you get sickness. Before two or three days, you are gone. So that place was avoided completely. He says this is a special area still now. People of course cut down the forest all around that area except that small piece of land there. Nobody wants to touch it because still people have that belief. Nobody wants to test whether that’s true or not.*

When he was a little age there was one man who lived here before but was a citizen of [somewhere else] but he had a compound here, he lived here for years. When he heard about this forest, he went to his uncle [the Imam’s uncle, the current Alkalo’s father who would have been the Alkalo at the time] and asked his uncle to give him part of that forest, to cut it down to make it a farm. His uncle said to him, but you know about that forest. He said, yes just give it to me. They permitted him to go, so he went with somebody who has this other means of protection, thinking that he would do that and they would be protected from this spiritual belief, so they can do anything. So they made something, they also made something spiritual like juju and dug it. This man Sanjo was the one digging and burying it all around that area so that if there is any spirit or anything that is attacking people, the juju will have powers.

After he buried this juju all around the forest he came back home. But he went with the man

who requested for the land. This juju man went with the man who requested. Now this juju man came home and before daybreak, at night, he had a very serious pain on his two hands. He cannot sleep, crying all night. His hands were swollen. The hands that buried that juju got swollen! And he was crying throughout the night. So the following day, the man who requested for the land went back to this land to check on the jujus, whether they were still there buried. He found his jujus all out. All the jujus were out, laid on the ground and a very good chain for whipping was put on top of the juju. Meaning it's a warning. If you come back here, this whip will be used on you. So this man came back to his uncle and said, no, no, I don't want the forest. Take it back!

So those are beliefs that were existing here. And its still that part of the forest is still there. Another thing is part of the forest that was cleared out is used for a graveyard. Yeah, the people who live in that area, because it's far from the main cemetery here, so they use it as a cemetery. If people die around that area, they are taken to that place to be buried.” (A-18, Personal Communication, January 6, 2014) The creation of a cemetery in a traditionally protected area can be seen as adding contemporary relevance to a past practice.

Other traditional methods that continue to be used include: fire-belt creation, the use of a town crier to alert the community when certain fruit from the forest are not to be picked (A-1, Personal Communication, December 11, 2013). Juju, explained in Chapter Three, is another form of protecting the forest as it is believed to provide physical protection as juju is believed to be endowed with spiritual powers and also serves as a fear tactic, as some people put “fake” juju on their fruit trees or in their orchards and gardens to keep intruders, especially small children, from stealing the fruit (A-19, Personal Communication, January 6, 2014). Case Study 5.15 illustrates the Kankurang Masquerade, mentioned in Section 3.3, used in Tujereng for conservation purposes.

Case Study 5.15

When discussing local traditional conservation practices a village member explained the following. *“Yeah, the community is doing that [using traditional conservation practices]. Sometimes they will organize traditional dance with the Masquerade and they will go around to the village. If the tree starts fruiting but they are not yet ripe, at that time, especially small children, they will always cut them and then destroy them. So they tie something on the tree and they will say if anybody touches this you will get sick. So everybody is scared. Because we all know Masquerade he always scares a bit. They are like people like, Kankurang... Yes. So, they will say okay, this one is already protected, nobody should touch it. There are certain areas also where we do in manhood, like there is circumcision. There are certain forests*

where the community should say this place is only for that. When ever you want to have... you want to circumcise our children we enter into this forest. Because that forest is just like a means of protecting the children; those that are circumcised. So if you enter inside those forests, even if you are passing by the road, you cannot see inside. So the secret there is never revealed outside. So it should be, that place should always be preserved. (A-20, Personal Communication, January 7, 2014)

Sacred forests were also traditionally well respected and conserved. Although it was noted by several individuals that some still exist in the community they also remarked that most have disappeared. Some attributed this to land clearing for settlement and agriculture due to increases in population (A-1, Personal Communication, December 11, 2013). Others attributed their disappearance to changes in belief systems. One village member explained, “Nowadays we don’t have that belief, we don’t even go there to visit those places because our religion [Islam] teaches us that you can’t go and worship at those places. If you want to worship, go to the mosque or in your house... nowadays people don’t have that place. Of course, some elders among us now still want us to preserve the area. So this is why nobody is cutting there, nobody is farming on that piece of land. It’s there still” (A-2, Personal Communication, December 11, 2013).

5.5.3 Non-Community Forest Related Stewardship

Several education and awareness programmes as well as stewardship groups and organizations not directly related to the CF were also identified, revealing a growing concern for environmental issues and an existing sense of local stewardship. For example, Tujereng Upper Basic and Senior Secondary School has a strong environmental education programme, which teaches students about local environmental issues affecting their community. The school also offers a Peer Health Education after-school programme

in collaboration with the NSGA, where students conduct sensitization programmes at school as well as in the community using drama as a means of spreading awareness.

Case Study 5.16

While discussing the different challenges of spreading environmental education during a focus group with Tujereng's PHEs, one member noted the importance of drama as a sensitization tool. He said, *"The sensitization programme, I in my own thinking, we need to sometimes entertain because I believe African's can only be sensitized through entertaining. Yeah, it is very important. [...] Entertaining, if we are having, for example, the film show, many people were not interested only to tell them the dangers of the climate. But since they see some sketches and making them laugh... for many people that drags their concentration on to standing and watching that film. I have been observing that there was someone who asked me, what are you doing here today? I told him we are having a cinema show, sensitizing people about the dangers or the malpractice of climate changes. He decided to move but I convinced him by telling him we will be having some drama sketches, funny ones. That made him stay and watch our sensitization. That is why I said that entertainment is very important when sensitizing."* (FG-1, Personal Communication, January 10, 2014)

Other stewardship groups that were active amongst the community included the previously mentioned Health and Environmental Youth Group, which consisted of older youth around the ages of 20 to 30, who volunteer to help with different projects around the community. Past projects included helping with the construction of the health centre, clearing the local informal dumpsite and creating awareness around waste management as well as tree planting, specifically gmelina and neem trees⁴¹ during the rainy season. Seasonality was specified as important in terms of strategic sustainability, as water resources in the area are relatively scarce and planting at this time of the year would mean that new transplants would be rain-fed and require less maintenance, thus helping to ensure the survival of the plants (A-19, Personal Communication, January 6, 2014).

⁴¹ Gmelina trees are used for timber sales and Neem trees are valued for their medicinal properties in the bark, leaves, fruit, seeds and oils.

The Village Development Committee (VDC) in Tujereng is involved with development activities in the community and is consulted when major projects, such as the MKCF, are initiated within the village. VDCs are groups commonly found in most villages in The Gambia. Finally, the council of elders, in consultation with the alkalo, is another group or institution that deals with any major decisions or conflicts within the community. People present issues to the council on Sundays when they hold a community court and they help to find suitable solutions as well as people within the community to help with different projects that need to be conducted. For example, it was highlighted that a few years back concerned members of the community brought the issue of sand mining to the council as the large-scale removal of sand was endangering local rice fields as there was only one remaining dune separating the ocean from the freshwater areas where the community's rice was grown. The issue was then presented to the National Environment Agency (NEA) and the mining area was moved to a different location outside of the community (A-2, Personal Communication, December 11, 2013). Although not all of the groups or groups or projects mentioned are directly related to the MKCF, they are important to recognize as they illustrate a strong sense of communal leadership and an existing sense of stewardship within Tujereng. See Chapter Six for further detail on the challenges to conservation. Table 5.5 provides a summary of conservation outcomes with regards to the 'community', village of Tujereng and the CFP.

Table 5.5 Summary of Conservation Outcomes

Terms of Analysis ‘CONSERVATION’	‘Community’ (Mori Kunda)	Village (Tujereng)	CFP (The Gambia)
FOREST COVER Deforestation rates Conservation ability	<ul style="list-style-type: none"> • 24 hectares • Maintained cover • Improved density 	N/A	<ul style="list-style-type: none"> • Increase in cover (1981/82-1998/99) • Decrease in cover (1998/99-2009/10) • Owner transfer *Achieved: 12% transfer *Policy goal: 75% transfer
ENVIRONMENTAL AWARENESS Education programs Stewardship groups Local movements	<ul style="list-style-type: none"> • FD training • Herbalist training • MKCF Committee • Tree planting committee • Radio broadcasts 	<ul style="list-style-type: none"> • Other non CF related groups, programs and movements • Stewardship 	<ul style="list-style-type: none"> • CFP awareness campaign (all) • Training workshops (communities) • Tree planting
INVOLVEMENT IN CONSERVATION Sensitization Conservation efforts	<ul style="list-style-type: none"> • Tree planting • Fire protection • Fire-belt clearing • Patrolling • Water retention • Sustainable harvesting • Traditional methods (sacred areas, fear, superstition) 	<ul style="list-style-type: none"> • Dry wood collection (fire) • Sustainable harvesting • Traditional methods • Other non-CF related sensitization and conservation efforts 	<ul style="list-style-type: none"> • Divisional Forest Officers: • Training • Monitoring • Materials

CHAPTER SIX

Community-Based Conservation: Implications for Conservation and Development

6.1 Introduction

The data presented in the previous chapter was analyzed using a Social Ecological Systems (SES) framework, which allowed for an understanding of the complexities of local forest conservation efforts and their impact on development in Tujereng. This systems perspective is conducive to the idea of sustainability and participation, which were discussed in the literature review and found to be foundational principles of community-based conservation (CBC). With these concepts in mind, the analysis sought to be as holistic as possible by considering several aspects of development and conservation at the local and national level. The methodology used for the analysis can be found in Chapter Four and the terms of analysis that informed the findings and recommendations are outlined in Chapter Five. It was found that in the case of Tujereng's *Mori Kunda Community Forest* (MKCF) CBC has the potential to contribute to advancing both development and conservation outcomes. However, the extent of the outcomes is highly dependent upon different variables, such as motivation for conservation and participation; community structure and values; scope of training, funding and available resources; incentives such as land and resource ownership rights

and the possibility for economic returns; existing sense of environmental stewardship; as well as competing industries (i.e. fish processing), poverty and unemployment.

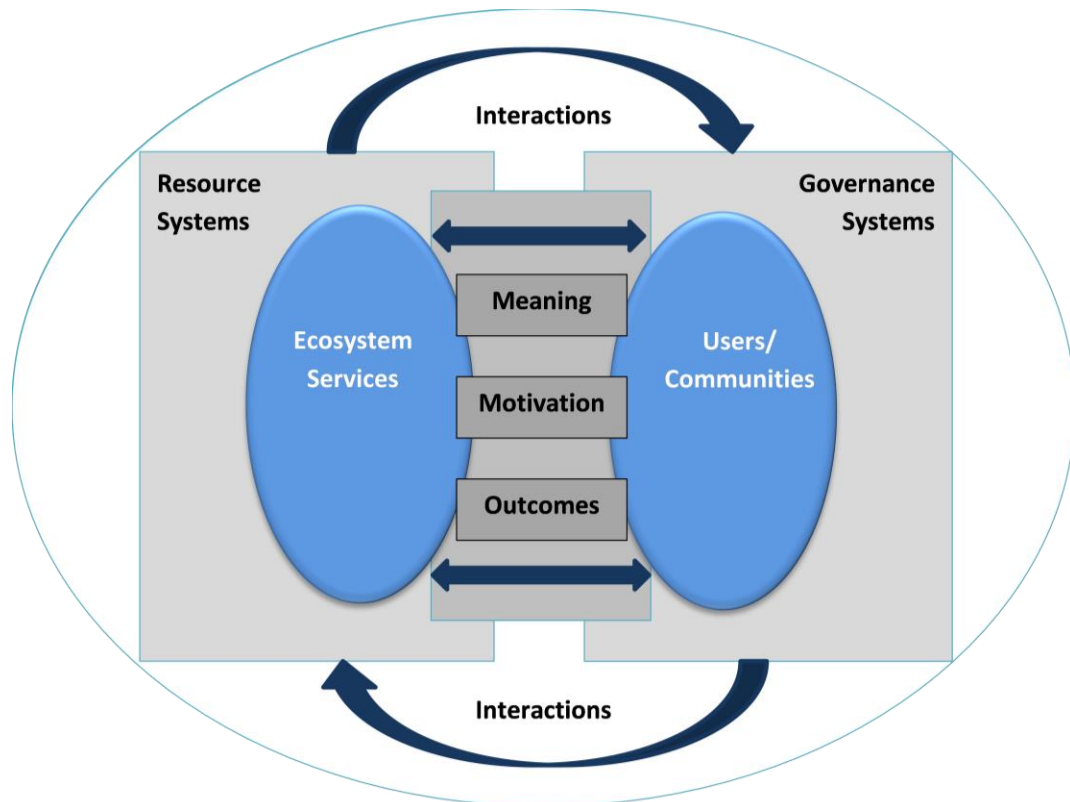
Development is a multi-faceted concept with economic, social, environmental and political aspects that can be constrained or encouraged depending on different external as well as internal influences. These factors can have varying effects on development and conservation outcomes in different contexts and scales. The overall purpose of the research was to examine the case study in such a way as to gain a better understanding of past and present forest conservation initiatives as well as the various factors inhibiting or contributing to development and conservation outcomes within the context of the Community Forestry Programme (CFP) in Tujereng, The Gambia. However, the case study was not examined in isolation, rather it was explored with the larger national context in mind in order to tease out the broader implications of the CFP.

6.2 Social-Ecological Systems Analysis

A Framework for SES analysis has been developed by the Community Conservation Research Network (CCRN), which identifies four key themes (i.e. meaning, motivation, outcomes, and governance) necessary to better understand what leads local institutions to foster environmental stewardship and develop successful natural resource management practices. The centrality of these themes to understanding the feedback relationships between natural resources (i.e. forest resources and ecosystem services) and resource users (i.e. communities), including the multi-level or multi-scale governance structures that dictate their use, is shown in Figure 6.1. This diagram, produced by the

CCRN, illustrates a model of a SES framework, which highlights important feedback relationships between governance and resource ‘sub-systems’. An overview of community forestry in Tujereng using the outlined framework will be presented below, followed by a breakdown of the different diagram components related to the case study.

Figure 6.1 Social-Ecological Systems Framework for Community Conservation



Source: Berkes et al., 2014

A SES perspective can provide new insight into local forest resource use and management practices. Important social-ecological linkages can then be identified, which can help to inform future adaptive management strategies both at the local and national level. In the case of community forestry in The Gambia, the CFP allows communities the flexibility to tailor management plans to local needs and desires—informed by local

social-ecological feedback relationships. The localized adaptive management plans can in turn inform national policies and programmes based on the outcomes generated from individual communities. Therefore, the governance structure of the CFP lends itself well to adaptive management, building upon local ecological knowledge (LEK) and traditional management practices. The following examination of the MKCF in Tujereng uses a SES framework as a means of presenting the research findings and learned knowledge of the case study. This involves paying particular attention to the integrated nature of SES (including governance structures) as well as to the multiple scales and levels at which management occurs⁴² (Berkes *et al.*, 2014).

Gambian social systems have been intrinsically linked to local ecological systems for centuries. This is evident in the human dependence upon forest resources for social, cultural, economic and even political needs. In the case of Tujereng specifically, people have historically relied on forest resources to fulfill livelihood needs for subsistence as well as economic benefit. Local forestlands have been a source of food security (i.e. meat, honey, fruit, tea), health (i.e. medicinal plants), shelter (i.e. construction materials, hiding place during colonial times), as well as income (i.e. timber and firewood sales). Sacred forest areas, used for various ceremonies, were noted as remnants of an ancient belief system, which is still very much an important as a part of personal as well as collective Gambian culture and history. The forest also represents an important element in place-based identity. For the Mori Kunda clan in particular, who identify themselves as religious scholars and traditional healers, the forest not only serves as a source of

⁴² Many frameworks and approaches share common SES characteristics; however, they differ slightly in their categorizations of various sub-systems. Different examples are highlighted in Appendix 3 of the CCRN's SES Guidelines (Berkes *et al.*, 2014).

livelihoods but also as a source of identity, as the forest produces the resources necessary to pursue the art of traditional healing, passed down from generation to generation.

Firewood and charcoal production became a major industry in the West Coast Region (WCR) of The Gambia around the 1970s to early 1980s. Although charcoal production was eventually banned in 1980, firewood and (imported or illegally produced) charcoal remain the primary sources of domestic energy in the country to date. Many people in the area took part in this industry to reap the financial benefits, and declines in regional forest cover quickly ensued. This, together with increases in population and urbanization over the years as well as changes in land use for settlement and agricultural purposes placed increasing pressure on local forest resources, which led to widespread deforestation in the region. Bushfires, accidental and intentional, have also been recognized as a major contributor to yearly deforestation. Relative poverty and unemployment, thought to be linked to a recent downturn in the agricultural sector, are other indirect factors that have resulted in deforestation, as forest resources (even illegally harvested) can generate much needed income for households. Dwindling forestlands in the surrounding area, in addition to demand for firewood for household consumption as well as to feed a local fish smoking and processing industry in the neighbouring village of Tanji, have put increasing pressure on the MKCF. The relatively high value and desirability of land for other uses such as settlement, agriculture and infrastructure development have also impacted regional forestlands. A contributing factor to these high migration rates could be the lack of available land in the Greater Banjul Area. Population density is proportionately high and all lands in this area were annexed

by the State in 2002, thus more and more people are moving to the surrounding areas in the WCR. Furthermore, the Department of Forestry has observed a low acceptance rate of community forestry in the Kombo South district specifically (where Tujereng is located), as many communities have parceled off their communal land to sell to estate developers rather than embark on forest conservation (Camara & Dampha, 2008).

In 2002 the Mori Kunda clan took action to protect their local forestlands by putting forward 24 hectares of communal land, known as the *Basiaki* Forest—over which they held traditional claim—to become a certified CF. Following the steps and requirements laid out by the Department of Forestry, the MKCF became certified, receiving an official land title in 2004. A pre-existing sense of environmental stewardship was identified in the community of Tujereng. Past local conservation initiatives, such as the lobbying and resulting closure of a local sand mine as well as traditional practices linked to conservation outcomes, including the use of fear, juju, sacred groves and fire belt clearing, were given as examples. Interaction with high-level policy through the CFP helped to nurture this established sense of local stewardship, resulting in the conservation of one of the largest non-State forest areas in the region. The MKCF faces particular challenges dictated by its proximity to the coast, the relative scarcity of forestlands in the area as well as high rates of poverty and unemployment, which have resulted in relatively high incidences of illegal logging and harvesting. However, the ‘community’ (the Mori Kunda clan) have taken action in several ways. Examples of local initiatives include: tree planting, patrolling, fencing, meetings with the alkalos of the surrounding communities

and radio programmes conducted by committee members to spread awareness of local conservation efforts as well as educate people on the importance of forests.

Although certain traditional conservation practices continue to be used (i.e. the use of fear, jujū and the preservation of sacred groves) the efficacy of these methods is dwindling along with the traditional belief system, discussed in Chapter Three. However, the remnants and variations of the traditional practices that have resulted in contemporary conservation outcomes, such as the use of fallow lands and the implementation of seasonal or species specific harvest restrictions, reveal a longstanding social connection to local ecological systems. The feedback relationship between resource users and resources has resulted in adaptive forest management based on LEK of the waning and waxing of resources. The enduring direct dependence on forest lands and resources indicates that local people have been very much a part of the forest ecosystem for many years. Therefore, conservation efforts should not view human interaction with the forest as something to be eliminated from the ecosystem (i.e. through protectionist conservation methods); rather, local people should be seen as an indispensable part of that ecosystem.

6.3 Meaning

The terms ‘conservation’ and ‘stewardship’ can mean different things to different groups of people based on the actions taken by these groups. Governments, NGOs and communities, for example, may define these concepts in terms of policy measures, governance arrangements and community initiatives (Berkes *et al.*, 2014). In the case of the MKCF in Tujereng conservation and stewardship can be conceived of as community

initiatives, such as tree planting, enforcement and education and awareness programmes. However, there is also an element of participation in a broader network of multi-level governance arrangements and policy measures. Local community members have collectively achieved conservation outcomes by using the governance systems in place, such as lobbying their local government to stop harmful sand mining practices in their village and to protect local forestlands by partaking in the CFP. Furthermore, the concept of sustainability, or conserving the environment (i.e. indigenous plants and wildlife) to ensure its existence for future generations was a recurring trend consistently mentioned by community and village members when discussing conservation.

Although this framework is designed to look at the meaning of conservation and stewardship, it is also important to define what is meant by ‘community’ as well as ‘participation’ in a given context, as it was identified in the literature review that these concepts are also major elements of CBC. Within the confines of the case study ‘community’ was defined as the Mori Kunda clan. However, considering conservation efforts and stewardship groups outside those related to the MKCF, the village of Tujereng as a whole can also be seen as a community. It was noted that participation, with regards to the CFP and the MKCF in particular, was largely determined on a voluntary basis or individuals were unofficially elected—where people who were thought to be especially suited to a position were offered the opportunity at which point they could then choose to participate or not. Participation was understood as equitable, as all members of the ‘community’ were said to have indiscriminate equality of opportunity to participate in conservation activities and decision-making via the CF committee. It was observed that

volunteers were highly regarded in Tujereng society. Volunteering was seen as a way of looking after the collective wellbeing of the community in addition to one's own, which is consistent with the communal essence of Gambian society. It was explained that it is up to an individual to decide if they are able and qualified to pursue a volunteer position and as such anyone who comes forward to volunteer would not be turned away.

Equitable participation, however, does not necessarily mean equal participation on the part of all members, as this discounts the importance of free choice. For example, although all members *can* participate equal participation would also mean that all members *must* participate. Although it was explained that it is the duty of all clan members to participate in the conservation of the MKCF in some form, the degree to which they participate depends on the will of the individual. Therefore, participation can be seen as equitable in the sense of equality of opportunity. However, there are certain larger social, cultural and political constraints that also factor in to the true equality of opportunity. For example, as the basis of the CFP works hand in hand with the traditional community structure of Gambian society, this means that existing traditional hierarchies, which are frequently gender biased, as power positions in society are mostly dominated by men, are often left unchallenged. This is not to say that gender biases do not exist, or are necessarily challenged in other social systems, just that although the Gambian community structure offers much strength, it also retains certain barriers to equitability.

6.4 Motivation

The majority of Gambians directly depend on forest resources for subsistence, economic and livelihood needs. However, increasing rates of deforestation threaten the security that these resources provide. In turn, this resource dependence together with other factors such as population growth and high rates of unemployment also perpetuates this cycle of forest loss and degradation. In an attempt to break this harmful cycle, the government looked to CBC as a strategy to bring about both conservation and development outcomes. Thus, national motivation is closely linked to development goals, such as poverty reduction. Of course international concerns, such as climate change and desertification, also factor in to the government's motivation for forest conservation.

At the local level, forest conservation efforts are motivated by the desire and/or need to secure resources for local needs, such as food security, health, income generation, and the preservation of culturally important areas. The Mori Kunda clan, specifically, places significant importance on local forest lands and resources, as they are directly tied to the profession associated with the clan—traditional medicine. The desire to preserve and protect the forest is therefore also thought to be linked to the clan's desire to protect the community's identity as traditional healers. Two primary motivations for community participation in the CFP specifically were identified. The first is the possibility for economic benefit from the sustainable commercialization of forest resources. With regards to the MKCF, the community's continued conservation efforts were fuelled by their aspirations to commercialize forest resources through future eco-tourism ventures

and honey production. The second is ownership transfer and the official certification of forest land and resource rights as a result of community participation in the CFP.

6.5 Governance

When discussing conservation, ‘governance’ can be conceived of as a system of rules, institutions, organizations and networks that have been established “to steer societies towards preventing, mitigating, and adapting to global and local environmental change” (Biermann *et al.* 2009, as cited in Berkes *et al.*, 2014). Governance systems, which consist of multiple levels and scales, are an important part of the SES framework. Stewardship groups, organizations, institutions, policies and frameworks that focus on conservation outcomes—from the local to the international—that play an integral role in shaping approaches and strategies used to achieve conservation outcomes and thus greatly impact the way resource users interact with resources. Therefore, from a SES perspective, resource systems should also play a role in shaping governance structures in a two-way feedback relationship—through adaptive (and appropriate) management practices that promote sustainability. The CCRN has identified several factors that can contribute to successful adaptive management practices, including: “(i) the presence of ‘multi-level institutions’, (ii) partnerships among state and non-state actors, (iii) appreciation of diverse perspectives and knowledge, and (iv) shared learning and social processes that provide opportunities for adaptability” (Berkes *et al.*, 2014). This section analyzes the various governance structures at play within the CFP to determine what aspects of these governance arrangements have been successful in promoting conservation and development objectives in order to achieve relative sustainability

between social and ecological needs. The issue of scale and multi-level governance, where community-government interactions and linkages through policy and programmes result in positive outcomes, are also explored.

As a result of the many downfalls of past top-down protectionist approaches to conservation, the Gambian government adopted a CBA to forest management and conservation in the early 1990s. There were many benefits expected from this decentralization process, such as a reduction in overall costs of forest management and increased legitimacy of conservation efforts by involving local communities through participatory forestry management (PFM) practices. The active participation of local people also helped to improve local relations with the Department of Forestry and ease pressure on the department's limited resources and personnel. The promotion of community benefits from participation together with an increased focus on development and poverty reduction—in addition to conservation outcomes—also became central goals of the government's CBC efforts. The government established a legal and institutional framework, involving a series of legislation, policy as well as management concepts and programmes, aimed at facilitating and enabling communities to sustainably manage and conserve local forestlands in such a way as to also increase development benefits from these resources. The government, through the Department of Forestry, has also forged vital relationships with outside organizations such as, the German Agency for Technical Cooperation (GTZ) and the Food and Agriculture Organization of the United Nations (FAO), among other NGOs, which provided invaluable technical and financial support.

The Department of Forestry has also worked hand in hand with local communities. In fact, the ease of implementation of the CFP can be attributed to the traditional community structure in The Gambia. The Gambian government is structured as a republic with both central and local government. At the local level, the traditional system is remains prevalent. This is a remnant of the British colonial system of indirect rule, which, due a relatively small number of officials, solicited local rulers and practices into the Gambian system of governance, where local chiefs were used to govern smaller areas under the control of colonial officials. There are three tiers of local government including, area councils, ward development committees and village development committees (VDCs). In many instances VDCs are directly involved in the management of local CFs. In the case of Tujereng, however, the ‘community’ is defined along more traditional lines, as rather than being managed by the VDC the CF is managed by a kabilo, or clan (see Sections 3.5 and 5.3 and Case Study 5.2). Different layers of community membership and governance structures can be identified in Gambian society, which can be defined in terms of ethnicity, castes, clans and kabilos. The Mori Kunda community, defined along clan or kabilo lines, for example, can be seen as a community within the larger village community of Tujereng. Thus, the CFP incorporates multiple levels of governance institutions and partnerships between State and non-State actors.

This structure is conducive to adaptive management, as communities have the ability to tailor management plans according to their specific wants and desires that are based on local knowledge of the community’s forest lands and resources. Local knowledge of the state of the resources within the MKCF is based on the direct

relationship of resource users with local resources (i.e. traditional healers and medicinal plants), which helps to inform management strategies. For example, it was noted that although the majority of trees planted were gmelina, teak and cashew trees, from which the community could derive economic benefit, there was also an effort to preserve existing indigenous species. In this way the Department of Forestry can learn from local strategies that have yielded both positive and negative outcomes and adjust their practices accordingly. Thus, local traditional practices, or time and place specific knowledge, can be incorporated into the CFP along with the scientific methods promoted by forestry officials, which allows for multiple perspectives and ways of knowing to be integrated into local strategies.

Tenure and land rights have been an important part of the governance systems associated with community forestry in The Gambia. As was mentioned, increased land rights and ownership transfer were major motivators for participation in the CFP; however, traditional claim over land was a prerequisite for participation. As such, the structure of the CFP, which is based on traditional land tenure arrangements, can be seen as exclusionary, as landless or marginal members of society that do not have access to, or traditional claims over land cannot participate in the programme. Furthermore, in areas of the country that still abide by the caste system, for example, one's caste would play a significant role in determining access to land and thus participation. Gender norms in society could also impact access to the land necessary to participate in the CFP, as access to land through inheritance is not the same for men and women. According to Saine,

Today, almost all ethnic groups in The Gambia trace their decent on the father's/male line even though in pre-Islamic times, the Wolof, Serer, Fula, and Lebou practiced a matrilineal kinship system ... in a patrilineal system, an individual could only inherit land or other properties from his/her father, whereas in matrilineal systems one inherited property from one's maternal side of the family. While women and girls enjoy inheritance rights, they normally receive a smaller portion, and married women may receive even less. Shari'a law is generally followed closely when it comes to inheritance, with men often receiving double the share of women and girls. (2012, p. 111)

Gender can affect the equitability of participation in the CFP, as the programme does not challenge gender norms or power relations inherent to the traditional system. In the case of the MKCF, the CF belongs to the kabilo as a whole, so gender is not a factor in the sense of land ownership, as ownership in this situation is communal. However, as mentioned before, gender norms can be a factor in determining higher-level decision-making roles and thus participation within the kabilo. Issues of exclusion aside, land rights have been beneficial in enhancing motivation for conservation and generating increased participation in the CFP, resulting in various ecological (conservation) and social (development) benefits, which are explored in the following section.

6.6 Outcomes

The achievement, or not, of various outcomes of CBC efforts can be used as a measure of 'success'. As identified in the literature review, the general objective of CBC is to yield both development and conservation outcomes. As such, the case study examined outcomes in both areas by using the terms of analysis defined in Table 5.2. Considering the above SES analysis, this section will summarize the outcomes and research findings by returning to the central research question, which was: does

community-based conservation have the potential to contribute to advancing both forest conservation and development outcomes in Tujereng, The Gambia? The terms of analysis derived from this question will also be concluded upon.

6.6.1 Conservation Outcomes

According to the terms of analysis, conservation outcomes were conceived of as: forest cover, involvement in conservation initiatives and environmental awareness. In terms of forest cover, including both quality and quantity, it was found that based on an assessments conducted by the Department of Forestry the Mori Kunda clan has successfully retained the integrity of the original 24 hectares of forestland. This was done by creating annual fire belts along with seasonal removal of dry wood to avoid bushfires, patrolling the area and enforcing local by-laws to avoid encroachment, as well as installing strategic pegs along the parameter to prevent donkey carts from going into the CF so large loads of timber could not easily be hauled away. However, a recent follow-up interview with a committee member revealed that eleven people—all from Tanji—had been arrested in the rainy season alone for illegal logging or non-permitted harvesting in the MKCF. As result, MKCF committee members met with the alkalos from the surrounding areas to discuss the issue. However, it was identified that these illegal activities may have been the result of a much larger unemployment issue (B-5, Personal Communication, December 5, 2014). In the past, radio broadcasts were used to spread awareness of the Mori Kunda's conservation efforts as well as the importance of the forest to local communities, which was thought to have been beneficial. The CFP in general together with the Mori Kunda's environmental awareness building and

consciousness raising efforts are also not to be understated. They greatly contributed to an important educational aspect of the programme, which helped to inform the local and general public on the shared responsibility of forest conservation in The Gambia.

Furthermore, conservation efforts also targeted the quality of forest cover through local tree planting initiatives, prohibiting the cutting of ‘green’ trees and enforcing sustainable harvesting methods. Environmental awareness and education was also a major outcome of the programme, which helped to nurture an existing sense of environmental stewardship in the community. Various workshops on different conservation methods, tree species and sustainable resource extraction methods were conducted by the Department of Forestry in addition to non-formal sensitization of sustainable harvesting methods conducted by local and visiting herbalists. In summary, original forest cover has been maintained and enhanced through various conservation initiatives. Although conservation projects experienced a lull for a few years as a result of fear of predatory animals in the area, efforts have regained momentum over the past couple years and efforts to increase environmental awareness have been rejuvenated by the Department of Forestry as well as the community through different education and training programs. Therefore, it can be determined that the CFP in Tujereng has resulted in increases in conservation outcomes as defined by the terms of analysis.

6.6.2 Development Outcomes

As previously discussed, participation and benefit were key factors in the analysis of the development outcomes of the CFP in Tujereng. It was determined that the definition of ‘community’ as it relates to the CFP varies from case to case and can take

the form of a village, clan or kabilo, family or even an individual. The primary stipulation for participation in the CFP is traditional land ownership, rather than fitting a specific ‘community’ criteria. In the case of the MKCF, the Mori Kunda clan constitutes the ‘community’. An examination of the traditional and contemporary social system in The Gambia revealed that the community structure together with the communally oriented disposition of Gambian society has been extremely conducive to CBC in general and the CFP specifically⁴³ as it aligns with the lived local reality. In its design, the CFP played to the community-oriented strengths of the country, which helped increase the legitimacy of conservation as many people were given the opportunity to actively participate in and benefit from forest conservation.

Community participation was further explored by examining the different types of activities that community members participated in as well as the level and degree to which they participated. The different levels of participation involved with the CFP can be broadly categorized as follows. The first level was programme conception, which was primarily undertaken by the Department of Forestry together with the GTZ and later the FAO. Individual communities, including the Mori Kunda, did not directly participate in this aspect of the CFP. The second level was the decision to partake in the CFP and the selection of land to put forward. This was a choice made by the community through consultation between various group representatives within the community. The third level was the foundation of a CF committee and the conception of a preliminary and then final CF management agreement, which outlined a plan of action and commitment to be

⁴³ The Kabilo community structure has been successfully involved in past community-based public health education initiatives in The Gambia—a CBA which has been dubbed the *Kabilo Approach* (Save the Children/Agency for the Development of Women and Children, 1996 as cited in Luck *et al.*, 2000).

undertaken by the community. The consultation process within the kabilo was described in much the same way as the village structure, where representatives, including elders, men, women and youth, discussed various matters pertinent to the community. However, it was determined that CF responsibilities could not be adequately fulfilled by community elders and so younger members deemed to be suitable for the position were presented with the opportunity to take a leading role as a part of the MKCF committee. The inter-generational consultation process between men and women in the community was thought to be an important part of participation. The Department of Forestry provided guidance and support; however, the community ultimately made all decisions regarding the CF. From there the MKCF was officially certified and ownership was transferred to the community after undergoing different stages of evaluation conducted by the Department of Forestry. From this point on the CF committee managed all conservation and development efforts, finances as well as challenges.

It can be determined that although the structure of the CFP was pre-defined, the community took a central role in initiation and implementation. Once ownership transfer was complete, the Department of Forestry greatly reduced its role and the community assumed all responsibility for the CF, which is consistent with department policy. The department followed up on CF progress periodically and conducted intermittent information/training sessions for committee members and provided technical services and assisted in dispute resolution. Although the community now has full rights and responsibilities and has been very successful in conserving their local forestlands, it was determined that training up until this point, together with a lack of necessary resources

and materials, was not adequate to pursue any major resource commercialization initiatives. Furthermore, particularly successful CFs identified by government officials and community members, including Brefet, Tumani Tenda, Kartong, Kalagi and Batteling, were said to have received external funding and training from agencies such as GTZ, GEF, UNEP, UNIDO, and FAO, which was thought to be directly related to significant financial gains. Thus, external assistance and funding is thought to play a key role in expediting economic returns from CF projects, as the baseline skills and resources obtained at the point of ownership transfer do not leave communities sufficiently set up for success in this regard. This is not to say that just because MKCF did not receive any external funding they did not receive any benefits from their participation in community forestry, as several development outcomes were identified. Some financial returns have also been realized, however, they have been relatively minimal as income-generating projects have been primarily based on the sale of unprocessed primary forest products and no major commercialization projects had yet begun.

Economic benefits were generated by the sustainable harvest of timber (mostly gmelina and teak trees) and construction materials as well as the sale of firewood and small-scale forest produce (i.e. fruits and nuts), which resulted in minimal revenue for the clan. The seizure and subsequent sale of illegally logged and harvested forest resources was also mentioned as a source of revenue. This reveals little to no processing or marketing of local forest resources, which could potentially raise the amount of income generated from these products. Individual households are not given direct monetary benefits from the CF; rather funds are used to produce collective benefits through

improved village and community infrastructure. However, the examples provided by the community highlighted development benefits that resulted from forest resources directly—such as access to construction materials for the fencing of a local soccer field or village health center as well as access to firewood provided for local gatherings—rather than improvements financed through CF revenue. As a result of the low levels of financial revenue derived from forest resources, it was noted that committee members have personally incurred certain management costs, such as paying wages for CF enforcement personnel. Clan households do, however, receive non-monetary income benefits (i.e. firewood, food, medicine, construction materials) as a result of their access to forest resources. Again, as access is granted based on clan membership, which is determined along traditional lines. This means that the transfer of ownership also provides community members with benefits in the form of resource security. Social benefits (i.e. health and education) also include access to medicinal plants and learning opportunities from workshops and training sessions.

6.6.3 Community-Based Conservation

Based on the above findings and analysis it can be determined that CBC does have the potential to contribute to advancing various conservation and development outcomes. However, the extent or reach of these outcomes, especially the development outcomes, is dependent upon different variables, some of which are identified below. Motivation for conservation and participation was a key variable. Needs or desires for immediate versus long-term returns (i.e. land sales or community forestry) were observed to greatly impact motivation for participation. Conservation was positively influenced by

alternative or additional motives such as the Mori Kunda's link to the forest for professional and personal needs (i.e. traditional medicine and identity). The community structure, organization and values were also observed to be essential variables, as the importance placed on community consultation, communalism and volunteering in Tujereng added to the success of the programme. Incentives, such as ownership transfer, increased land and resource rights, enhanced resource security as well as the possibility for economic returns helped to nurture an existing sense of environmental stewardship as well as foster new environmentalism. External funding, resources and training opportunities were also seen to positively enhance the scope of various outcomes. Finally, external influences, like poverty and unemployment, also impacted conservation and development outcomes, as efforts were often hindered by the illegal logging and harvesting of key income generating resources that would be used to benefit the CF and the community.

6.7 Recommendations

The MKCF's lack of economic sustainability was identified as an area in need of improvement, as it was revealed that a lack of funds hindered the community's ability to preserve existing resources as well as expand towards future projects. The voluntary nature of participation and the resulting challenges to enforcement also highlighted the need for employment opportunities and job creation within the MKCF. Past and present efforts have focused on conserving local forestlands to retain wildlife, especially bats, birds and monkeys, as well as native plant species with the intention of attracting tourists and embarking on eco-tourism ventures, as well as bee keeping, in the future to generate

increased revenue from the CF. At present, however, the funds generated from the CF were not enough to provide the start-up capital necessary to embark on these aspirations, nor are the necessary resources and training opportunities available to this community. With these systemic limitations in mind, small-scale expansions of their current efforts could include the following. It was observed that different organizations had started various plant nurseries in other areas of the country, some of which were specifically for indigenous trees species that supported tree planting projects. Based on the importance of medicinal plants to the Mori Kunda clan, a future project could include starting a nursery for medicinal plants. These plants could then be used to support local needs and the excess could be sold to other healers and health centers that do not have access to forest resources. Although this would most likely not generate significant financial benefits, it would help to secure social as well as non-monetary economic benefits. Furthermore, interest in bee keeping was also expressed as a possible future endeavour. There is a local NGO called BEECause⁴⁴ that helps communities in The Gambia embark on bee keeping, honey harvesting and wax processing, distribution and product marketing. Collaboration with this organization could present future opportunities.

On the larger scale, although some communities put forward local forestlands simply to gain land titles in order to claim legal rights over forest areas, many communities wish to also benefit economically from the commercialization of forest resources, as is the case in Tujereng. Standardizing the MA&D approach, currently being explored by the Department of Forestry and the FAO, could allow communities the opportunity to partake in the advertised economic benefits of community forestry.

⁴⁴ For more information on BEECause in The Gambia visit www.africabeecause.org

However, just as initial participation in the CFP is a choice, it must also be a choice to embark on forest-related economic enterprises or not. Currently, communities are required to outline their rights and responsibilities in terms of specific conservation efforts and sustainable resource development strategies in their management agreements. By further emphasizing economic sustainability as an additional desired outcome, management plans could be adapted accordingly. For example, for those communities that choose to incorporate resource commercialization in their CFs, an additional section could be added to the management agreement detailing a small-scale business plan with a focus on sustaining conservation and development efforts. This would require additional training provided through inter-departmental cooperation or solicited cooperation with NGOs and other non-State actors. The establishment of a resource bank or access center could also help to provide resources and guidance in this area. This may involve higher initial start-up costs and time; however, it could help increase sustainability and reduce the financial and logistical burden on the Department of Forestry in the long run. After all if CFs are generating income it also means increased income for the Department of Forestry from the 15% tax paid to the National Forestry Fund (NFF).

Marketing strategies, including labeling, could also be used to enhance revenue obtained by CF products. For example, if common CF products such as cashews, honey and handy crafts were marketed as ‘eco-friendly’, ‘sustainably harvested’ or ‘CF certified’ they could potentially raise the prices of these products and earn higher revenue, which could then be recycled back into CF projects. Eco-tourism is an increasing trend in The Gambia and thus if these products took advantage of this growing

market, it could help to spread awareness of the country's forest conservation efforts as well as increase economic benefits. Price inflation of CF products does raise concerns about excluding local consumers from the market; however, this could be mitigated by reserving set percentages of food products for subsistence consumption or local sales.

It was also mentioned that the exclusion of non-'community' members was creating, or had the potential exacerbate local tensions. For example, non-members living near the forest area had to deal with some of the negative aspects of the CF, such as animals invading their crops, without reaping any of the direct benefits from the forest. Additionally, it was noted that the educational component and training sessions were limited to 'community' members. It was thought that if these educational sessions were opened up to the wider village, or additional information sessions were conducted, it would help to increase awareness and reduce possible conflicts. The local broadcasts conducted by the Mori Kunda committee members could be explored as a potential avenue to increase awareness and education. This strategy could also be adopted by the Department of Forestry as a national strategy. Another possible means of avoiding potential conflict and helping with dispute settlements could involve the inclusion of neighbouring communities in CF committees. Looking at the Tanji Bird Reserve for example, the committee is made up of members from all of the neighbouring villages with a different percentage of seats allocated based on land ownership claims. Although this forest area uses a slightly different management model, the concept could be integrated into the community forest concept. If applied to the case of the MKCF, specifically, this could involve adding a place on the committee for a representative from

the village of Tujereng as well as Tanji and any other appropriate 'communities'. Of course the majority of decision-making power would remain in the hands of the Mori Kunda clan, however, the other communities could provide valuable feedback and possible collaboration opportunities as well as remain informed on the clan's conservation and development efforts.

Finally, increasing attention has been paid to mangroves in The Gambia especially in the last five to ten years. There are certain examples of CFs that are primarily mangrove forests, such as the Buram CF in the WCR, as well as jointly managed forests, such as the River Gambia National Park. Successful conservation efforts, undertaken by various government sectors as well as numerous NGOs, have included education programmes on sustainable harvesting methods of mangrove resources, especially oyster harvesting. However, these programmes have been relatively case specific, meaning these efforts have not been streamlined across all mangrove areas (NEA, 2010). Although conservation efforts are increasing, mangroves represent a significant gap in the literature produced by the Forestry Department with regards to community forestry specifically. Mangroves are categorized as 'forests' and as such they fall under the control of the Department of Forestry, who is mandated to manage all State forestlands, which according to law consists of all naturally growing trees and forests in the country (Camara & Dampha, 2008). Further promotion of mangrove conservation within the CFP could present a unique opportunity for the Department of Forestry to produce both conservation and development outcomes for many coastal and riverfront communities. Mangroves produce specific resources not available from other types of

forests, such as oysters, shrimp and fish, which if harvested sustainably could help enhance local food security and generate income, adding to the economic sustainability of community (mangrove) forests. This could result in unique conservation benefits in terms of fish populations, erosion and water quality. Increased focus on mangroves conservation under the CFP could serve as a means of expanding the framework and enhancing the self-sustainability of the programme, as the more income generated by CFs, the more revenue the department receives in taxes. However, as traditional land ownership is a prerequisite for the CFP, the expansion of community mangrove forests would require further research to investigate the specific tenure arrangements for mangrove areas, as much of the coastal land is State rather than community owned.

It was revealed that there was a mangrove forest near the seaside area (Batokunko) of Tujereng. However, due various activities such as natural erosion, sand mining, logging and land clearing for rice and vegetable farming, the mangroves have been severely degraded to the point that they have almost disappeared. It was stated that mangrove resources had been important to local livelihoods. Oysters (*buso*) were an importance source of food and mangrove wood was particularly revered for the construction of homes as fences as it was said to be especially resistant to termites. A Mori Kunda committee member stated that the clan had no plans or interest in expanding the CF to include mangrove conservation and restoration, as it was perceived as an especially complex endeavour. Although more research on current activities in the area (i.e. agriculture) and the potential impacts of mangrove conservation on the community is necessary, the existence and severe degradation of mangroves in Tujereng present an area

for future CF expansion in the village. It also opens the door for a community other than the Mori Kunda clan to participate in the CFP in Tujereng, which has the potential to derive benefits from oyster harvesting and other aquaculture activities. Furthermore, several local fishers and village members noted declining fish population as a major concern and thus there may be interest in pursuing mangrove conservation to help increase fish spawning grounds.

Finally, it was noted that Tujereng's sacred forest area, which is culturally important for different ceremonial purposes is not legally protected, as it does not fall within the boundaries of the MKCF. Although it has been reduced in size over the years, this communal area, or scared grove, remains forested thanks to traditional conservation methods such as respect, fear and superstitions among others. Although dwindling, these sacred areas are common in many villages in The Gambia and present a unique opportunity to expand upon the CFP framework. Although these areas constitute relatively small forest areas, if incorporated into the CFP they could serve to preserve these culturally and historically important places in The Gambia by adding legal conservation rights to the already present traditional methods.

6.7.1 Future Research

Not all trends observed in the data were immediately relevant to the present research; however, they did highlight areas for future research. First, land grabbing was noted as an obstacle to community forestry, as traditionally communal land was being divided amongst family members. It was stated that in many cases, especially in the Greater Banjul Area and the WCR, the present generation was increasingly concerned

with receiving immediate financial benefits from land sales, rather than embarking on community forestry ventures that did not provide a guaranteed financial return. Future research on land rights with regards to forest conservation in general would be helpful. Second, government officials and community members often mentioned the involvement of various grassroots volunteer youth groups in taking action on different environmental issues. Future research could target youth specifically and investigate their motivations for conservation and/or stewardship initiatives. Third, eco-tourism, including conservation tourism⁴⁵, where conservation activities such as tree planting and beach clean ups have been promoted as eco-tourist activities for the betterment of the local environment. This type of conservation tourism is gaining momentum in The Gambia. Future research on the outcomes of this trend would be beneficial. Finally, several community members and government officials noted that various sacred or culturally important areas were being lost due to resource pressure, changes in land use and environmental degradation. At present, certain culturally important or sacred areas, such as the Stone Circles of Senegambia or the Kachikally Crocodile Pool, are protected. However, many local sacred areas, including the ceremonial forest areas in Tujereng are disappearing. Future research is needed on the possibility of expanding the CFP to include the protection of ‘cultural forests’ or ‘sacred areas’ under local by-laws through the Department of Forestry.

⁴⁵ Conservation tourism is similar to volunteer tourism, or “voluntourism”, in the sense that tourists are interested in partaking in activities that will benefit the local people and/or environment rather than, or in addition to, mainstream tourist activities.

6.8 Final Thoughts and Lessons Learned

Community forestry has provided an alternative to past exclusionary state-led protectionist conservation efforts, which has resulted in many beneficial outcomes. One of the most important effects of the CFP was that it helped to work towards legitimizing conservation efforts in the eyes of local communities, as past practices had severely damaged trust between the government and local communities. This had a negative impact on conservation, which resulted in increases in national rates of deforestation, threatening forest resource security and thus development. CBC efforts have worked to reverse this trend by incorporating local people and knowledge into the process.

Politically, The Gambia's Community Forestry Policy has been internationally recognized as one of the world's most innovative policies, as forest cover has been increased in certain areas and as of 2011 12% of local forestlands have been transferred to community ownership and management. Furthermore, it has been reported that the incidence of illegal logging and bush fires in CF areas has been reduced and new markets for forest resources and services are being developed. Although these are positive improvements, according to the 1995-2005 Forest Policy objectives 75% of forestlands should have been transferred to community management and ownership (IPSI, 2012; Department of Forestry, 2005). Because this goal was not achieved, it has been extended to the 2010-2019 policy period. Poverty alleviation and social empowerment are also recognized as key forest policy goals. It is clearly stated in the 2010-2019 Forest Policy that the "[i]mprovement in the living standards of the citizenry through poverty reduction and forest resource enhancement initiatives" is a top priority (Republic of The Gambia,

2010, p. 6). As of 2005, however, it was identified that, in general, very few communities had embarked on the commercialization of forest resources, which was thought to be a primary incentive for the program (Thoma & Camara, 2005). As a result, very little financial revenue was generated and thus the reintegration of funds back into the community forests (CFs) was also limited. However, since 2005 this trend has begun to change with the integration of the FAO's MA&D programs in specific communities as well as individual project funding obtained from external sources. Although these projects aim to be self-sustaining, meaning the funds generated from the sale of forest products are used to further conservation and development outcomes, the projects have been largely dependent upon external funding and/or training, rather than simply a product of participation in the CFP. Consequently, recommendations were made to integrate MA&D approach into the CFP, however, as of yet it is limited to select CFs.

From the community perspective, the MKCF reflects some of the average national statistics, as they have successfully conserved the integrity of the original CF area, however, they have not yet managed to fully embark on any significant resource commercialization. This is affecting their ability to be financially self-sustaining, which also impacts the potential tax revenue received by the Department of Forestry. Although no major loss has been incurred on the part of the department or the community, without tax revenue, start-up costs cannot be repaid and thus less money is technically available for future CFs, which perpetuates the programme's dependence on external funding. On another note, it was determined that anticipated development outcomes, such as poverty reduction from the commercialization of forest resources as well as resource security

through ownership transfer, helped to foster motivation for conservation. Due to the previously mentioned widespread direct reliance on forest resources as well as the relative poverty throughout the country, the development aspect of community forestry greatly contributed to conservation efforts, which are almost always secondary concerns to local livelihood needs. Furthermore, the community structure in The Gambia was determined to be a key factor in the success of CFP implementation. The incorporation of traditional structures into development and conservation programmes can be an extremely valuable in terms of logistics, cost saving and working within local norms, customs and cultures. However, these structures can also exclude marginalized members of society, based along gender, caste and/or ethnic lines, for example. Therefore, extra efforts to maximize the equitability of participation must be structured into the programmes conception and implementation.

Returning to the central research question, the objective was to look at the CFP's potential to contribute to advancing the core objective of CBC, which is the achievement of *both* conservation *and* development outcomes. The Gambia's CFP can be seen as a relatively successful example of CBC applied on a national scale, as it incorporates different sources of knowledge by enticing local communities to participate through incentives, including land rights and socio-economic benefits. Furthermore, the programme approaches conservation by viewing people as an integral component of the ecosystem and vital to the success of sustainable conservation and thus development. However, in the case of the MKCF, the research showed that conservation outweighed development outcomes. This does not mean, however, that the program failed, just that

increased focus on the development aspect is required. Overall, the CFP served as a means of pursuing what Immanuel Kant referred to as a ‘regulative idea’—meaning something that may never be perfectly achieved but acts as a goal to aspire to, which regulates behaviour. In terms of CBC, the ideal is to achieve a sustainable balance between conservation and development. The CFP did not achieve this perfect balance but it is headed in the right direction. Looking at the case study from a SES perspective, the loss of autonomy over local lands and resources led to a social-ecological disconnect, which was reflected in forest management practices. Social systems in The Gambia have played a major role in shaping conservation and consequently forest resources in the country. However, direct forest resource dependence together with increasing resource insecurity also influenced the way people interact with the forest. By shifting towards CBC, the government enabled national management practices to better react and adapt to local resource shocks by enhancing the adaptive management capacity at the local level. In conclusion, by enticing local communities to participate using incentives, such as ownership rights and benefits, the CFP helped to amplify an existing sense of stewardship and enhance social-ecological connections.

APPENDIX A

Interview Schedules

Table A.1 Primary Interview Schedule				
Interview #	Demographic Information	Language/Translator	Location	Date/Length (mins.)
A-1 (Group)	2 Woman ~ 50-65 y/o 1 Man ~ 65 y/o (Village Members)	Mandinka (K. Suso)	Tujereng (Market Area)	Dec. 11 th 2013 (21:51)
A-2	1 Man ~50-60 y/o (VDC Member)	English (N/A)	Tujereng (Market Area)	Dec. 11 th 2013 (20:29)
A-3	1 Woman ~25-30 y/o (Village Member)	Mandinka (K. Suso/ M. Sarr)	Tujereng (Market Area)	Dec. 12 th 2013 (19:04)
A-4	1 Man ~55-65 y/o (MK Committee Member)	English (N/A)	Serrekunda (Nusurat Senior Secondary School)	Dec. 17 th 2013 (50:00)
A-5	1 Woman ~40-45 y/o (Gov't. Official)	English (N/A)	Kanifing (NEA Office)	Dec. 18 th 2013 (20:56)
A-6	1 Man ~35-40 y/o (Gov't. Official)	English (N/A)	Kanifing (NEA Office)	Dec. 18 th 2013 (34:23)
A-7	1 Man y/o ~40-45 (Gov't. Official)	English (N/A)	Bajul (Forestry Dept.)	Dec. 18 th 2013 (44:17)
A-8	1 Man ~35-45 y/o (Gov't. Official)	English (N/A)	Bajul (Forestry Dept.)	Dec. 18 th 2013 (N/A)
A-9	1 Woman ~30-35 y/o (PhD Student)	English (N/A)	Abuko (DWR Lab)	Dec. 19 th 2013 (11:12)
A-10 (SR)	1 Man ~35-45 y/o (Gov't. Official)	English (N/A)	Banjul (DWR)	Dec. 19 th 2013 (49:18)
A-11	1 Man ~30-40 y/o (Village Member/ Teacher)	English (N/A)	Tujereng (Upper Basic and SSS)	Dec. 20 th 2013 (27:08)
A-12	1 Man ~30-45 y/o (Village Member/ Teacher)	English (N/A)	Tujereng (Upper Basic and SSS)	Dec. 20 th 2013 (28:15)

A-13	1 Woman ~45-55 y/o (MK Member)	Mandinka (K. Suso)	Tujereng (Main rd. Area)	Dec. 20 th 2013 (37:11)
A-14	1 Man ~40-45 y/o (Gov't. Official)	English (N/A)	Kanifing (NEA Office)	Jan. 2 nd 2014 (15:32)
A-15	1 Man ~20-25 y/o (Staff Member)	English (N/A)	Tanji (Eco-camp)	Jan. 7 th 2014 (04:25)
A-16	1 Man ~40-45 y/o (Gov't. Official)	English/ Mandinka (K. Suso)	Tanji (Bird Reserve)	Jan. 7 th 2014 (20:49)
A-17	1 Woman ~30-40 y/o (Village Member/ Private Forest Caretaker)	Wolof (K. Suso)	Tujereng (Seaside)	Jan. 7 th 2014 (14:05)
A-18	1 Man ~70-80 y/o (Village Elder/ MK Member)	Mandinka (K. Suso/ K. Bojang)	Tujereng	Jan. 7 th 2014 (33:54)
A-19 (Group)	3 Men ~20-30 y/o (Youth Group)	English (N/A)	Tujereng (Meeting Area)	Jan. 7 th 2014 (21:09)
A-20	1 Man ~30-40 y/o (Village Member)	English/ Mandinka (K. Suso)	Tujereng	Jan. 7 th 2014 (14:46)

*Interview conducted via a secondary researcher (SR)

*Department of Water Resources (DWR)

*Mori Kunda (MK)

*Years old (y/o)

Table A.2 Focus Group Schedule

Focus Group #	Demographic Information	Language/Translator	Location	Date/Length (mins.)
FG 1	15 Boys 16-18 y/o	English N/A	Tujereng (Upper Basic and SSS)	January 10 th 2014 (51:40)
FG 2	15 Girls 16-18 y/o	English N/A	Tujereng (Upper Basic and SSS)	January 10 th 2014 (31:47)

*Years old (y/o)

Table A.3 Secondary Interview Schedule

Interview #	Demographic Information	Language/ Translator	Location	Date
B-1	1 Woman (Staff Member)	English N/A	Kanifing (WWF Office)	Jan. 15 th 2014
B-2 (Group)	3 Men (Gov't. Officials)	English N/A	Kiang West National Park	Jan. 16 th 2014
B-3	1 Man (Batteling CF Committee Member)	N/A	Batteling CF, Kiang West	Jan. 16 th 2014
B-4	1 Man (Batteling CF Committee Member)	N/A	Kalagi	Jan. 22 nd 2014
B-5	1 Man (MK Committee Member)	English N/A	Tujereng	Dec. 5 th 2014
B-6	1 Man (Gov't. Official)	English N/A	Bajul (Forestry Dept.)	Dec. 8 th 2014
B-7	1 Man (MK Committee Member)	English N/A	Tujereng	Dec. 11 th 2014

*All of these interviews were conducted via a secondary researcher

*Community Forest (CF)

*Mori Kunda (MK)

*Years old (y/o)

APPENDIX B

Interview Question Guide

Existing Environmental Organizations

1. At present, are there any governmental, non-governmental or community-based organizations that deal with environmental issues such as conservation or resource management in Tujereng?
2. If so, who are they? / If not, do you think this is a problem?
3. What sort of work or projects do they do?
4. Have these projects been successful? Why? / Why not?
5. Is the community involved in these projects or decisions? How? Is everyone in the community able to participate?

Community Action

6. To what extent are people organized around environmental issues in Tujereng?
7. What could be done to make it better?
8. Is the community involved? Why? / Why not?
9. Is community involvement in environmental conservation and resource management important?

Resource Management

10. What are the rules around environmental conservation and resource management? (Cultural, religious, governmental)
11. What are the struggles with regards to conservation and resource management?

Village Development Committee (VDC)

12. Is the VDC an efficient committee to deal with development issues?
13. Why? / Why not?
14. Does the VDC deal with environmental issues?
15. If so, what do they do? / If not, why not; what other issues do they deal with instead?
16. Is the community equally represented in the VDC?
17. Do you feel that you personally could participate or are adequately represented in the VDC?

Importance of Environmental Issues

18. Are people concerned with environmental issues in Tujereng?
19. Why? / Why not?

20. Do you think it's important to conserve the environment and manage resources sustainably?
21. If so, why? / If not, why not; what issues take precedence?
22. Are there any benefits to environmental conservation and resource management?
23. If so, what are some examples?

Environmental Degradation

24. Is environmental degradation a problem in Tujereng?
25. If so, what are some of the major problems?
26. Do you see yourself as part of the problem?
27. What do you think could be some solutions?

Climate Change

28. Does climate change affect the environment?
29. If so, why? If not, why not?
30. Is climate change a problem in Tujereng?
31. Why? Why not?
32. Do you think it's important to look for mitigation strategies?

Traditional Conservation and Management

33. Can you recall any traditional methods of environmental conservation or resource management that you or your ancestors (parents, grand parents, great-great grand parents) took part in to protect the environment?
34. If so, what did these practices entail?
35. Were these practices effective?
36. What members of the community took part in these practices?
37. Who were the decision-makers?
38. Are these practices still used by any members of the community?
39. If not, do you think they could be beneficial today?

Environmental Education

40. Have you ever learned about environmental issues from school, the radio, the newspaper, books etc.? If so which ones?
41. If yes, what types of things did you learn?
42. Are there any public forums to learn about or discuss environmental issues in Tujereng?
43. Do children learn about the environment at school?
44. If so, is this important? If not, why not?
45. In the past, how did people learn about the environment?
46. Who was responsible for teaching others about environmental conservation and resource management? (Formal/informal education)

Culture and the Environment

47. Does the environment hold any special cultural significance to you or your heritage?
48. Are there important or special beliefs about the environment in The Gambia?
49. What is the importance of the environment in your life? (eg. cultural, economic, spiritual/religious, political importance)

*Translation was conducted primarily by Kebba Suso with the assistance of Momodou Sarr and Karamo Bojang.

APPENDIX C

Information Cover Letter



SMU REB File #: 14-060
Meagan Symington / Dr. Cathy Conrad
Department of International Development / Geography
Saint Mary's University, 923 Robie Street, Halifax, NS B3H 3C3
Phone: 001-1-902-420-5400 (as dialled from The Gambia)

TITLE OF RESERACH

A Community-Based Approach to Environmental Conservation and Resource Management: Using Local Structures to Facilitate Education and Enhance Motivation for Environmental Stewardship in Tujereng, The Gambia

INTRODUCTION

My name is Meagan Symington. I am a graduate student in the department of International Development at Saint Mary's University. As part of my Masters thesis, I am conducting research under the supervision of Dr. Cathy Conrad with financial contributions from the Community Conservation Research Network (CCRN). You are being invited to take part in an interview concerning community-based approaches to environmental conservation and resource management in The Gambia.

PURPOSE OF THIS RESEARCH

The purpose of my research is to gain an understanding of past and present local environmental conservation and resource management practices in The Gambia. The goal is to better facilitate environmental management by incorporating local knowledge community management councils into public environmental education programs.

ELIGIBILITY AND PARTICIPATION

I am looking to interview men and women over the age of 16. Participation is voluntary (there is no financial compensation) and involves a 30-40 minute individual interview regarding general questions about local environmental conservation and resource management practices (both past and present). Some example questions include: local forms of environmental conservation and management, the existence or non-existence of environmental groups and the role and importance of the environment in daily life.

Participation is confidential; information will not be shared with anyone outside of the interviews themselves. No personal information will be recorded. You can verbally accept or decline prior to, during, or at the end of the survey without penalty. If you decide at any time that you do not want to answer any specific question you can simply skip the question or stop the interview. If you don't want your answers submitted, your information will be destroyed. However, due to the fact that no names are recorded, once the interview is over and we part ways, it will no longer be possible to withdraw your answers, as there will be no way of distinguishing between participant responses. There are no foreseeable risks associated with the study; however, should any questions or concerns arise please feel free to contact Dr. Cathy Conrad or myself.

To facilitate note taking, I would like to use an audio recorder to tape the interview, so you will need to indicate whether or not you consent. Again, the information provided will be kept confidential. Once the interview has been transcribed, the original audio recordings will be deleted.

POTENTIAL BENEFITS OF THIS RESEARCH

There are no direct benefits to participants. However, this research hopes to indirectly benefit the community by providing local organizations with information regarding local knowledge and concerns for the environment. It will also look for viable solutions to strengthen environmental stewardship using locally relevant strategies for environmental conservation and resource management. This information could be valuable as it could be incorporated into local environmental education programs.

If you would like more information about this study or a summary of the results, please let me know by providing me with your e-mail address below and when the study is complete, I will forward it to you. In addition, the results of the study (in the form of a Masters thesis) will be sent to the Nova Scotia-Gambia Association's (NSGA) main office in Banjul. The NSGA's contact information can be found at the bottom of this page. The study is expected to be completed by December 2014 and will also be available in the Saint Mary's University library.

Questions, comments or concerns can be addressed to:

Meagan Symington: m_symington@hotmail.com or
Dr. Cathy Conrad: cconrad@smu.ca

NSGA contact information:

Address:

GTUCCU Building,
Kanifing Industrial Area, PMB 706,
Kanifing, The Gambia

Phone: 391-8394 (The Gambia)

E-mail: info@novascotiagambia.ca

1574 Argyle Street, Suite 17,
Halifax, Nova Scotia
Canada B3J 2B3
001-902-423-1360 (Canada)

Certification:

This research has been reviewed and approved by the Saint Mary's University Research Ethics Board. If you have any questions or concerns about ethical matters, you may contact the Chair of the Saint Mary's University Research Ethics Board at ethics@smu.ca or 001-1-902-420-5728 (as dialed from The Gambia).

E-mail: _____ Date : _____

You are welcome to keep a copy of this letter for your records

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