Exploring the Existence of Women's Emotional Agency in Climate Change Livelihood Adaptation Strategies: A Case-study of Maasai Women in Northern Tanzania

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Ashley N. Doria
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by

ASHLEY N. DORIA

has been approved for

the Department of Geography

and the College of Arts and Sciences by

E. Edna Wangui

Associate Professor of Geography

Robert Frank

Dean, College of Arts and Sciences
ABSTRACT

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Director of Thesis: E. Edna Wangui

The subject of climate change and adaptation strategies in sub-Saharan Africa is at the forefront of the conversation of poverty and its close link to environmental degradation. Climate experts argue that poverty and natural resource based livelihoods coupled with the low adaptive capacities of those living in sub-Saharan Africa make the region one of the most vulnerable to environmental disruptions associated with climate change. Sub-Saharan African women are viewed as the most vulnerable to climate change because their daily reproductive responsibilities rely heavily on a changing physical environment. Current research into climate change and sub-Saharan African women has prioritized women’s short-term vulnerabilities and has, therefore, failed to explore the role of women’s agency in long-term livelihood adaptive strategies. This thesis will use a hybrid of feminist political ecology framework and emotional geographies to identify the manifestation of women’s emotional agency in climate change livelihood adaptation strategies. This thesis will highlight research gathered as part of a case study of Maasai women in Kirya sub-village of Northern Tanzania. Semi-structured interviews with the Maasai women of Kirya sub-village were used as the primary method of data collection. In Kirya sub-village the women’s adoption of irrigated farming practices, creation of their own small business, and the working of paid
laborers to neighboring farms were the predominant methods of livelihood adaptation strategies. Emotional agency can be clearly identified throughout women’s participation in livelihood adaptation strategies. Emotions act as key motivators in navigation of space. Women in Kirya sub-village found motivation in the anger they experienced related to their inability to meet their reproductive responsibilities. This emotional agency ultimately manifested itself through women’s participation in livelihood adaptation strategies, as they are able to mobilize their anger to access new livelihoods. With effects of climate change on natural resource based livelihoods only expected to intensify it is essential that sub-Saharan African women be seen as active and motivated participants in livelihood adaptation strategies.
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CHAPTER 1: INTRODUCTION

The impacts and risks associated with climate change are an unequal reality facing nations across the globe (Adger et al., 2003). Developing nations are expected to bear the brunt of these impacts due to their low adaptive capacities (Agrawal and Perrin, 2008; Gentle and Maraseni, 2012; Hedger et al., 2008; IPCC, 2001a; Pounds et al., 1999). Countries in the developing world are expected to experience the effects of climate change more intensely because of their already politically and economically marginalized status (Eriksen, 2011). Current research paints a bleak picture for women in the developing world closely linked to their environmental conditions. These women are largely constructed as the “victims” of climate change because of the added labor that they will experience with environmental disruptions (Backstrand, 2011; Glazebrook, 2011; IPCC, 2007; Terry, 2009; UNPF, 2009). This is especially true for women in sub-Saharan Africa, as they are seen as the most vulnerable to changes in climate.

One of main reasons for concern within the study of climate change and the developing world stems from heavy reliance on the changing physical environment within local communities’ livelihoods (Agrawal and Perrin, 2008; Gentle and Maraseni, 2012; Paavola and Adger et al., 2003). Communities that practice natural resource dependent livelihoods, such as crop cultivation and livestock keeping, are expected to face increased hardships in the wake of climate change. As a result of these impacts and communities’ responses, serious social structure ramifications are expected to occur (Eriksen, 2011; Adger et al., 2003). One way in which these social ramifications are manifested is through climate change livelihood adaptation strategies. Livelihood
adaptation strategies demand the reconfigurations of social structures because of communities’ social structures close ties to their historic primary livelihoods.

One such population with historic social structure linkages to their primary livelihood is the Maasai of East Africa. The social structure of the Maasai is closely tied to their pastoral livelihood (Hodgson, 2001; Spencer, 1993; Talle, 1988). Despite the Maasai’s close connection to livestock keeping, recent impacts associated with climate change have forced the Maasai to further diversify their pastoral way of life to include new livelihoods. In recent decades, the Maasai of East Africa have begun to practice livelihood adaptation strategies in the form of crop cultivation, paid labor, and market enterprise (Fratkin, 2001; Zaal, 2011; Goldman, 2003; Nelson et al., 2009; May & McCabe, 2004; May & Ole Ikayo, 2007). The social structure of the Massai has also been altered in response to the participation in new livelihoods. This is especially true in Maasai gender roles that have historically been closely connected to livestock keeping (Talle, 1988; Spencer, 1988). In the wake of livelihood adaptation strategies new constraints and opportunities have been created for Maasai women. The Maasai women of Kirya sub-village are used as a case-study to explore women’s experiences associated with climate change livelihood adaptation strategies.

Emotional geographies are an essential aspect to understanding the individual experiences of the Maasai women of Kirya sub-village related to climate change livelihood adaptation strategies. An emotional geographies framework allows for further insight into the emotions associated with navigation of space and explores the “interactional quality” of emotions within space (Davidson and Milligan, 2004). In
circumstances of natural resource access understanding the “interactional quality” of emotions within space is paramount in obtaining a deeper insight into the situational complexities acting within a space (Sultana, 2011). Exploring the emotional aspect of climate change livelihood adaptation strategies allows for a clearer picture of the role of emotions within decision-making behavior to emerge.

1.1. Objective

This thesis sought to identify the presence of women’s emotional agency in climate change livelihood adaptation strategies of the Maasai of Kirya sub-village. Through the use of qualitative methods women’s personal narratives surrounding reproductive responsibilities, effects of climate change and motivating factors to participate in livelihood adaptation strategies were collected. In order to allow for the possibility of emotional agency, special attention was paid to the gathering of the women’s accounts on the emotional state associated with their decisions to participate in climate change livelihood adaptation strategies. The prioritization of emotions in data collection allowed for a unique look into the motivating nature of emotions in the lives of the Maasai women of Kirya sub-village. The manifestation of emotional agency in climate change livelihood adaptation can be seen in chapter 5, which highlights the personal accounts of the women of Kirya sub-village.

1.2. Significance of Research

The hybridization of feminist political ecology and emotional geographies creates a unique theoretical lens that is able to look past the dominant narrative of sub-Saharan African women as “passive” victims in climate change (Backstrand, 2011; Glazebrooke,
2011; IPCC, 2007; Terry, 2009; UNPF, 2009). This unique theoretical lens allows for the examination of Maasai women’s experiences and manifestation of emotional agency related to climate change livelihood adaptation strategies. Despite the separate application of feminist political ecology and emotional geographies to issues of natural resources, Sultana (2011) work in unsafe waterscapes in Bangladesh, is one of the only other examples that utilizes the combination to explore issues of natural resource access. Feminist political ecology would be better able to understand the role of emotions in natural resource related issues through the utilization of emotional geographies (Sultana, 2011). In addition to the theoretical contribution of this study, this research also explores the role of women in long-term climate change adaptation. Current scholarship on women and climate change largely focuses on their role in short-term coping strategies with little attention paid to long-term adaptation (Lambrou, 2006; Sultana, 2011). Despite the emergence of climate change literature and pastoralists few examine the emotions and motivations associated with women’s role in livelihood adaptation strategies (Homewood et al., 2009). This study works to fill this void while also contributing to scholarship surrounding the changing role of women as a result of climate change livelihood adaptation in the Maasai. In addition, this thesis offered a unique opportunity to explore issues of gender and pastoralism in the never before studied Maasai community of Kirya sub-village.

1.3. Outline

The remainder of this thesis is divided into 5 distinct chapters. Chapter 2 focuses on the literature review of the study, which highlights the theoretical hybridization of
feminist political ecology and emotional geographies. Chapter 2 also discusses the
literature surrounding women and climate change, and highlights the lack of literature on
women in climate change in long-term livelihood adaptation. Chapter 3 of this thesis
explores the study area of the research, which focuses on the physical and cultural
components of the area within the national context of Tanzania. The chapter goes on to
explore the complexities of Maasai social structures and gender roles. Finally,
highlighting current livelihood adaptation strategies practiced by the Maasai and a
discussion of Kirya sub-village. Chapter 4 of this thesis highlights the qualitative
methodology that was used to conduct this research and focuses on the methods of
individual interview, key-informant interviews, and participant observation. Chapter 5
explores the results and discussion of this thesis that focus on women’s personal
narratives of climate change livelihood adaptation strategies. This thesis concludes in
chapter 6 with a summary of key findings, reflections on methodology, and
recommendations for further research and policy.

1.4. Clarification of Terms

For the scope of this study it is important to clarify the application of several
terms used throughout this thesis. The definitions for these terms come from the IPCC
Working Group II 2014 report. Adaptation strategies refers to the way in which human
systems work to respond to mitigate impacts of climate change. Adaptive capacities
refers to ability or inability to effectively overcome challenges associated with climate
change while maintaining a sustainable level equal to that of pre-challenges.
Vulnerability refers to predisposition to be negatively affected by climate change this can be due to a variety of elements.
CHAPTER 2: LITERATURE REVIEW

In this chapter I outline the literature that was utilized as the basis for this thesis. I begin by highlighting the theoretical frameworks of feminist political ecology and emotional geographies that are used as the basis of this thesis. In the following section, I explore the literature surrounding the impacts of climate change on livelihoods and livelihood adaptation strategies. Finally, I highlight the scholarships surrounding the role of women in climate change adaptation strategies.

2.1. Theoretical Framework

2.1.1. Feminist Political Ecology

Feminist political ecology (FPE) draws on the larger field of political ecology by focusing on the notion of difference. FPE follows the dynamics of difference as it is expressed into different rights, wages, and reproduction responsibilities for different genders, races and nations (Ge, et. al, 2011; Duvell, 2003). Current FPE incorporates Judith Butler’s work of performativity (1997) which focuses on how the “meaning of gender is produced out of bodies as well as discourses” (Nightingale, 2011, p. 154-155). In this theoretical framework, emphasis is placed on the internal workings that are responsible for creating and maintaining the social norms surrounding gender (Nightingale, 2011; Butler, 1997). The study of daily activities becomes essential to FPE because of the personification of these internal workings that occurs through everyday tasks (Ge et al., 2011).

Another key component of FPE found in Butler’s work (1997) is the concept of intersectionality, which is expressed through the interaction of race, class, ethnicity and
cultural perceptions with gender that is responsible for creating difference across social spectrums. Basing her argument on Butler’s theory of performativity (Butler, 1997), Nightingale argues these social differences are created and reproduced continually out of daily activities, which highlights “how subjectivity is ultimately a contradictory achievement with subjects exercising and internalizing multiple dimensions of power within the same acts” (Nightingale, 2011, p. 155). The subjectivities that are materialized through daily activities provide insight into the culturally specific construction of, “moral hierarchy that mediates contradiction between individual and community,” which is derived from a melting pot of ethnic traditions across multiple spatial scales (Elmhirst, 2011, p. 174).

FPE pays close attention to the formation of social differences through daily activities within space and across scales (Truelove, 2011). A crucial element within the discussion of FPE is the impact that social construction plays in the formation of space and the constant reformation of space by means of the social interactions that occur throughout it (Nightingale, 2011). The argument that space is not neutral enables us to examine its role in how difference develops across cultures and its impact in replicating or challenging repressive social norms. This particularly is helpful in understanding the connection between social and power dimensions to commonplace activities and the impact of space and the meanings associated within it on gender construction (Truelove, 2011).

The physical environment is the obvious scope of “space” in FPE with particular focus on the environment’s role in the development of subjectivities especially in terms
of interactions between gender and the environment (Nightingale, 2011). Through the acknowledgement of the symbolic meanings associated with space, traditions, and bodies that are constructed through commonplace activities a deeper understanding of possible environmental or social impacts can be achieved (Nightingale, 2011). This argument challenges the notion of fixed universal realities, which undermine the current prescription that women are universal passive “victims” of climate change. Following the reasoning of FPE, women’s experiences related to livelihood vulnerability cannot be universal across spaces; therefore, resolutions to women’s increased livelihood vulnerability due to climate change may also not be universal. The role of women in livelihood adaptation strategies must be examined in relation to the cultural/ social context of the space in order to provide the most accurate depiction of natural resource issues related to climate change.

One of the most unique elements of FPE is the discussion of agency within the theoretical framework. FPE builds on structure and agency literature that explores the existence of agency within institutional frameworks. This literature recognizes that individuals still can exhibit agency despite the limiting nature of larger social and political structures. Elmhirst builds on this earlier discussion of agency with reference to Rutherford (2007) and Rose (1999) when she refers to “subject formation as a productive process” created through “techniques of the self involving management, self-surveillance and regulation of behavior,” (Elmhirst, 2011, p. 174). Elmhirst goes on to reference Rose (1999) in her discussion of the creation of subjects through “moral-ethical regimes” that aid in individuals’ comprehension and ultimately dictate their daily actions (2011, p. 174-
The link from individual’s comprehension of environmental issues and daily activities is illustrated through Agrawal’s (2005) work on community conservation efforts in India where failed environmental management translated into changes in villagers’ daily activities and perceptions in relation to arrangements surrounding resources (Elmhirst, 2011).

While the theoretical framework of FPE readily acknowledges the existence and emergence of women’s agency, the application of FPE in case studies often fails to highlight the active emotional element which is central to the discussion of agency. Current case studies pay little attention to the strong connection between women’s behavior changes expressed through their daily activities stemming from their reproductive roles. The incorporation of emotional geographies to FPE will call attention to the active role women play in their understanding of issues in livelihood related to climate change. Emotional geographies will highlight women’s ability to actively respond through behavior changes in the form of livelihood adaptation strategies.

2.1.2. Emotional Geographies

Bolstering this argument of the existence of women’s agency in climate change livelihood adaptation strategies is emotional geographies. An emotional geographies framework allows further insight into differences and symbolic meanings across space and bodies and raises an interesting point about the “interactional quality” of emotions themselves (Davidson and Milligan, 2004). The interactional quality between emotions and space means that each individual navigates within a landscape differently forming “unique personal geographies” (Davidson and Milligan, 2004). This is why Davidson
and Milligan explain that it is so difficult to understand the emotions and differences embedded within a space and that it is, “sensible only in the context of the particular place and that the place must be felt to make sense” (2004).

A clear picture of the existence of emotional agency and its impact in navigating space begins to emerge from the discussion of interactional nature of emotions. Davidson and Milligan capture this sentiment, “We live in worlds of pain and pleasure; emotional environments that we sense can expand or contract in response to our experience of events” (2004). Expanding on this idea of interactional qualities of emotions Davidson et al. argues that a blurring of lines occurs because of emotions in “the construction, maintenance, and disruption between bodily interiors and exteriors” (2005). Davidson et al. suggests that it is “productive to think of emotions as intrinsically relational” because they are embedded in the decision making process (2005). Urry adds to the notion of emotional agency within his discussion of the interactions between emotions and landscape within the context of mobility.

Central to this discussion of emotional agency is the ability to recognize “mobility and relocation as having emotionally significant outcomes, that foster reflexivity” (Urry, 2005, p. 81). Woven into the interactions between an individual and a landscape are “affective outcomes” which “refers to the shifts in the energetic capabilities of a body in a manner which transcends but nevertheless remains attentive to the shifting contours of feeling” (Urry, 2005, p. 81). While Urry works within the context of mobility between landscapes, shifting between livelihoods can be conceptualized in a similar manner in the discussion of livelihood adaptation strategies. Both Davidson and
Urry discuss the ability of emotions to transcend the body in the form of self-conscious action in an effort to act upon these emotions. It is this conscious transcendence that emotional agency is born from. Women engaging in livelihood adaptation strategies exhibit similar emotional agency as they navigate through one clearly defined use of landscapes in regards to a previously practiced livelihood to different uses of the same landscapes through their adoption of a new livelihood. The transcendence of emotion to self-conscious action is essential as women learn to develop tools to navigate and re-navigate through landscapes with the practice of each new livelihood or effectively straddle multiple livelihoods within the same landscape.

Sultana brings emotional geographies and emotional agency into the realm of environmental disruption and resource access by examining the, “ways resources and emotions come to matter in everyday survival struggles” (Sultana, 2011, p.163). Sultana builds on current FPE citing Davidson’s explanation of emotional geography, as a way to grasp the feelings associated with arbitration and personification of social interactions within space (Sultana, 2011). These emotions refer to the emotions of the “space” that are produced out of the interactions between individuals and the space which underlines the importance of context in the discussion of natural resource issues (Sultana, 2011). Emotions are key to discussions of livelihood adaption strategies because they impact the “outcomes of practices and processes of resource access/use/control” (Sultana, 2011, p. 164).

A physical and economic assessment of the role of women in climate-related livelihood adaptation strategies completely discounts the strong motivational power of
emotions in terms of their response to disruptions (Hays-Mitchell, 1999). Women’s daily activities are deeply rooted in their reproductive roles charging them with the responsibility of their family’s proliferation. Davidson and Milligan explore the concept of emotional pain as a motivator, “the frustrations and humiliations experienced may nonetheless work as an incentive toward activism and perhaps enable a different sense of achievement” (2004, p. 524). What Davidson and Milligan argue is that this emotional pain is internalized and then processed by the individual into actions in the quest to improve one’s emotional state. Sultana provides an example of the strong motivational power of fear and worry in the context of resource access for women in successfully providing for their families in the example of unsafe waterscapes in Bangladesh. The emotions of “fear and worry when children are consuming unsafe water is accompanied by joy and relief at being able to provide arsenic-free and safe water,” is successful in illustrating the role that emotions hold as a driving force in taking action (Sultana, 2011, p. 168). Sultana’s example clearly illustrates Davidson and Milligan’s argument that individuals’ actions are influenced by their drive to improve their emotional state.

The existence of women’s agency in livelihood adaptation strategies can build strength from the combined arguments of FPE and emotional geographies. Combining FPE and emotional geographies allows us to avoid the shortcomings of using a broad brush when looking at the role of women in climate change livelihood adaptation strategies. Conceptualizing women as “passive victims” hinders our ability to identify women’s capacity to mobilize the emotions associated with the consequences of climate change on livelihoods and translate them into self conscious action in the form of
livelihood adaptation strategies creates a clear argument for the existence of women’s emotional agency. Women in livelihood adaptation strategies must be viewed as, “active agents of social change who make choices, have critical perspectives on their own situations and think and organize collectively and, second, that their daily activities are a conscious effort to affect their economic and social environment” (Hays-Mitchell, 1999, p. 253). Emotions and their ability to act as a motivating factor to those who experience them should not be discounted in the larger context of climate change and resource access. It is important to note that while the focus of this case-study is on the emotional experiences of the women of Kirya sub-village men are also emotional beings. This identification of women’s emotional agency allows us to form a deeper understanding in the realm of natural resource access. The theoretical framework discussed in this section will be used as a lens in the assessment of women’s emotional agency in climate change livelihood adaptation strategies.

2.2. Climate Change Impacts on Livelihoods and Livelihood Adaptation Strategies

In order to understand the vulnerabilities associated with livelihoods one must first understand the dynamics of vulnerability in the larger scope of climate change. Vulnerability in climate change is often simplified into a homogenous prescription despite the experiences being “varied across space as well as across social groups” (O’Brein, 2000, p. 224). Despite the homogenous approach to climate change resolutions in the developing world a standard understanding of what constitutes, as vulnerability does not exist. O’Brien references both Bohel et al. (1994) and Liverman (1994) in her discussion of the inconsistencies surrounding vulnerability. O’Brien highlights Bohel et
al. (1994) definition of the “most” vulnerable as ones, “who are most exposed to perturbation, who possess a limited coping capacity, and who are least resilient to recovery” (O’Brien, 2000, p. 224). O’Brien’s use of Liverman’s (1994) explanation highlights the variable dynamics that exist in assessing vulnerability. Alternate “definitions of vulnerability focus on concepts of marginality, susceptibility, adaptability, fragility, and risks” (O’Brien, 2000, p. 224). Despite the inconsistencies, these technical definitions of vulnerability create an oversight of possible social issues that affect populations’ ability to effectively respond to climate change (Tschakert, 2007). In addition these inconsistencies and oversimplification of understanding surrounding climate change vulnerability paints an inaccurate picture of local communities adaptation strategies. This is why the simplification of vulnerability overshadows the fact that numerous African communities have been responding to variability to climate for decades and have developed valuable adaptation strategies by their learned experiences (Tschakert, 2007).

The discussion of livelihood vulnerability in rural Africa centers around the impacts of climate change on natural resource dependent livelihoods (Tschakert, 2007; Ziervogel and Zermogolio, 2009). The question of successful responses in livelihoods to climate change is cemented in communities’ adaptation strategies. Successful adaptation strategies should “aim to secure well-being in the face of climate variability, climate change and a wide variety of difficult to predict biophysical and social contingencies” (Ziervogel and Zermogolio, 2009, p.134). An essential part of climate change adaptation hinges on communities and individuals abilities to change their behavior especially
around resource management (Omolo, 2010). This is of obvious concern for communities whose livelihoods depend on unadulterated access to natural resources.

The success of adaptation strategies in livelihoods lies in the ability to diversify assets and to gain or access knowledge from learned experiences. Diversification of assets becomes imperative to adaptation strategy in livelihoods. These livelihood assets do not just include financial capital but also natural capital, social-political capital, human capital, and physical capital (Lambrou, 2006). One example is smallholder farmers in Mexico rely on income diversification with non-farm and livestock activities to supplement their crop incomes in times of stress (Bee, 2013). Examples of livelihood adaptation strategies related to climate change in the Maasai of Northern Kenya include: “remittances from relatives, transformation of pastoralists into agro-pastoralists, sale of animals and animal products, engaging in (new) businesses, and selling of firewood, charcoal and local alcohol” (Omolo, 2010, p. 7). Households’ ability to diversify their incomes, maintain a job source, perfect job skills, and dictate decisions over economic means become essential to successful livelihood adaption (Lambrou, 2006).

2.3. The Role of Women in Livelihood Adaptation Strategies

One way in which climate change manifests itself is through increased climate variability resulting in added instances of natural disasters. Communities affected by increased climate variability will respond through natural disasters coping and adaptation strategies. Currently, there is little attention given to the role of women’s agency in existing literature on climate change adaptation strategies. There are however, numerous studies that look at the role of women’s agency in responses to natural disasters. While
women’s agency in natural disasters focuses on coping techniques for short-term survival, it can be used as a point of reference in the larger discussion of women’s agency in livelihood adaptation strategies. The close connection between climate change and natural disasters makes literature focusing on women’s agency in natural disasters relevant to the conversation of women’s agency in livelihood adaptation strategies.

The vulnerable depiction of women in climate change often discounts women’s ability to act as active agents in response to climate disruptions. Women’s responses to environmental disasters may be linked directly to immediate survival or on a more long-term scale as income diversification activities. Women have been found to be skillful in securing food and water for household survival in times of environmental pressure (Omolo, 2010). Sultana builds on this idea when she refers to Enarson and Morrow’s work (1998) who she describe women as “resourceful agents who cope with disasters and play important roles in rebuilding, rehabilitation, care-giving and mitigation (2010, p. 46). Household survival is directly linked to women’s ability to provide successful coping strategies to natural disasters (Sultana, 2010). The invaluable role of women in response to natural disaster is illustrated through the following passage from the Pan American Health Organization, “though often against men’s wishes, women have been willing and able to take an active role in what are traditionally considered “male” tasks. This can have the effect of changing society’s conceptions of women’s capabilities” (PANHO, 2001, p. 1). These coping strategies in the case of floods can include, “making portable stoves, saving footstock and fuel in dry places, tying possessions to trees and
huts, lifting belongings to platforms create just under the roof and learning to love on thatched roofs when the floods are too high,” (Sultana, 2010, p. 46).

The benefits of women’s adaptation efforts are not only felt at the household level but also at the community level. Women are the “most effective at mobilizing the community to respond to disasters” working to organize groups to meet the most crucial needs of their locality (Lambrou, 2006, p. 19). Through women’s response to natural disasters they are developing alternative expertise in areas of “natural resource and agricultural management” which coupled with appropriate power structures could lead to additional income for women (Lambrou, 2006, p. 19). In an effort to diversify livelihoods, women will enter into new income generating activities such as commercial weaving and the running of small shops in the example of the Turkana of Northern Kenya (Omolo, 2010). In the same example of Turkana in Northern Kenya larger percentages of women participated in livelihood diversification activities such as selling livestock products and weaving baskets (Omolo, 2010).

### 2.4. Research Questions

The goal of this study was to examine the ways in which women’s emotional agency manifests in the context of climate change livelihood adaptation strategies among the Maasai of Kirya sub-village. Specifically, to examine the emergence of Maasai women’s agency in their pursuit to meet their reproductive responsibilities in the changing climate of Kirya sub-village. To do this, explicit knowledge of constraints experienced by the women of Kirya sub-village related to livelihood adaptation strategies
and how these women work to overcome these constraints were identified. In order to achieve these objectives, this study was guided by the following research questions:

- *How do Maasai women in Kirya sub-village meet their reproductive responsibilities in the context of climate change?*

  This question serves several purposes for the scope of this research project. Its main purpose is to have the Maasai women of Kirya sub-village identify what they see as their reproductive responsibilities, but it also focuses on what resources, material or knowledge, that they need to meet these responsibilities. The transfer of knowledge was also examined as part of this project as individuals were asked about how the received the knowledge they needed in order to meet their reproductive responsibilities.

- *What opportunities and constraints do Maasai women in Kirya sub-village face as they seek to meet their reproductive responsibilities?*

  This question was posed to identify livelihood adaptation strategies currently being employed by the women of Kirya sub-village. This question also determines the ways in which the Maasai women of Kirya sub-village have had to alter the ways in which they meet their reproductive responsibilities over time. This question also touches on the complex kinship networks and gender dynamics that exist as part of the Maasai way of life. Individuals were asked to identify how others in their homestead assisted or hindered in the meeting of their reproductive responsibilities.

- *How does Maasai women’s agency in Kirya sub-village work to overcome these constraints and create opportunities?*

  This question was posed to pinpoint the active role that women’s agency plays in
climate change livelihood adaptation strategies in Kirya sub-village. This question also served in the identification of motivating and emotional factors as individuals were asked specifically about the motivation behind their behavior changes and the emotions involved as it related to the meeting of their reproductive roles.
CHAPTER 3: STUDY AREA

In this chapter I will discuss the study area for the scope of this research. I begin with a description of the study area in its larger geographic context of the East African country of Tanzania and highlight the effects of climate change on the country. In addition, I provide a historical background of Maasai pastoralism and detail the social structure of the Maasai by focusing on the age-set system and gender roles of the Maasai. I also discuss the marginalization of the Maasai by the Tanzanian government. In the final section I explore the specifics of Kirya sub-village.

3.1. The National Context: Climate Change in Tanzania

Tanzania obtained its independence from Britain in 1961 and emerged as nation soon after in 1964. Including its major coastal islands of Mafia, Pemba, and Zanzibar, the total land cover of Tanzania is 947,300 km$^2$, and shares borders with Burundi (589 km), Democratic Republic of Congo (479 km), Kenya (775 km), Malawi (512 km), Mozambique (840 km), Rwanda (222 km), Uganda (391 km), Zambia (353 km) (World Factbook, 2014). Additionally, Tanzania maintains an expansive coastline with its eastern boundary (1,424 km) bordering alongside the Indian Ocean. The country’s climate varies from tropical coastal areas to temperate highlands because of its complex landscape stemming from the East African Rift (Rowhani et. al, 2011). Temperature and rainfall patterns vary widely throughout the country and are closely tied to location and altitude. The study site is located within the northern portion of Tanzania which experiences bimodal rainfall patterns with long rains occurring from March to May and
the short rains occurring from October to December (Agrawala, 2003). Tanzania experiences a fair amount of natural disasters that take the form of floods and droughts.

Concern over climatic variability and increased instances of drought have been at the forefront of discussions of climate change in sub-Saharan African countries, like Tanzania. Hulme et al. and Paavola have published climate predictions for Tanzania and expect to see an increase in the average temperature by 2-4 °C by 2100 with the majority of warming occurring in the dry season. They anticipate that inland areas of Tanzania are expected to experience increased instances of drought with an estimated 20% reduction of annual perception and prolonged dry season (Hulme et al., 2011; Paavola, 2008). One of the main reasons for these concerns is the close connection between local livelihoods and the physical environment (Agrawal and Perrin, 2008; Gentle and Maraseni, 2012; Paavola and Adger, 2003).

Presently, Tanzania boosts a population of approximately 49.2 million that includes those living on the coastal island of Zanzibar with a 2.6% growth rate (The World Bank, 2013). Accordingly to The World Bank, an estimated 76% percent of Tanzania’s population lives in rural areas. UNICEF estimates that 36% of the population is living below the poverty line under $ 1.25 USD a day. In addition, Tanzania has one of the lowest GDP per capita worldwide at $ 1,900 USD (The World Bank, 2013).

According to a recent report from the Ministry of Agriculture Food Security and Cooperatives of Tanzania, the country’s economy is centered on agriculture with roughly 77.5% of the working participating in some form of agricultural activity. The main agricultural crops of Tanzania include: coffee, sisal, tea, cotton, pyrethrum, cashew nuts,
tobacco, cloves, corn, wheat, cassava, and various types of fruits such as bananas. (Tanzania’s Ministry of Agriculture Food Security and Cooperative, 2010). Tanzania’s agricultural sector also boosts a large livestock component with the most popular being cattle, sheep, and goats. According to The World Bank, 3 out of 5 households in rural Tanzania are dependent on livestock to generate income with an estimated 22% of rural income coming from various livestock activities (The World Bank, 2013).

Currently, the majority of those residing in rural Tanzania act as smallholder farmers and are dependent on agriculture as their primary livelihood (Rowhani et al., 2010). In the context of climate change many concerns exist in situations where agriculture acts as a dominant livelihood. Developing countries, like Tanzania, that have a long standing reliance on agriculture are thought to be at greatest risk to the climatic variability associated with climate change because of their inability to readily adapt (Adger et al., 2003; Agrawal and Perrin, 2008; Gentle and Maraseni, 2012; Hedger et al., 2008; IPCC, 2001a; Pounds et al., 1999). The IPCC’s Fifth Assessment report projects that occurrences of poverty are expected to increase in instances where individuals’ livelihoods are dependent on the physical environment. Pastoralist communities throughout East Africa have been feeling the effects of increased and prolonged droughts on their livestock populations for decades (Campbell, 1999; Homewood et al., 2009). The difficulties experienced by the pastoralists of East Africa are further exacerbated by national polices that demand a more sedentary lifestyle of those previously semi-nomadic in nature (Homewood et al., 2009).
3.2. The History of Maasai Pastoralism & Recent Adaptations

The history of the modern day Maasai can be traced back to around the first millennium AD when ancestors from southern Sudan began their migration through the semi- arid Rift Valley of central Kenya and Tanzania, a region that is now known as Maasailand (Spear and Waller, 1993). In order to overcome the challenges associated with living on the semi-arid plains of the Rift Valley they specialized as pastoralists, keeping livestock as their primary livelihood. Until recently, the Maasai of East Africa lived a semi nomadic lifestyle migrating with their livestock based on the seasonal changes of the region (Talle, 2003). Under the pastoral way of life livestock became an important part of Maasai economies and social structure and continues to play an important role today.

Despite the historical importance of livestock the Maasai in more recent decades have begun to pursue a diverse range of income generating activities not connected to livestock (Hodgson, 2011; Homewood et al., 2009; McPeak et al., 2011). Most notably and widely studied of the Maasai’s livelihood adaptation techniques is crop cultivation (Galvin et al., 2002; Homewood et al., 2009; McCabe, 2003; McCabe et al., 2010; McCabe et al., 1992). Despite Maasai crop cultivation dominance in existing scholarship it is not the only form of livelihood adaptation that is practiced throughout Maasai communities of East Africa. Other forms of livelihood adaptation include participation in market activities, conservation, tourism, and migration to more urban areas for paid labor opportunities (Fratkin, 2001; Goldman, 2003; Nelson et al., 2009; May and McCabe, 2004; May and Ole Ikayo, 2007).
3.3. Maasai Social Structure

Maasai social structure is largely dictated by patrilineal clan organization and the male age-set system. While the patrilineal clan organization of the Maasai is complex it is important to note that populations are divided into several clans that are then further subdivided into subclans and lineages. Lineage plays a significant role in daily life with individuals living in large homesteads or “bomas” with up to 50 or 60 related people as seen in Figure 1 (Hodgson, 1999). The importance of livestock to Maasai life can also be seen in, Figure 2, which shows the structural organization of their bomas with livestock pens situated in the center for protection from wildlife and homes or “nyumba” situated on the outside of the homestead. Also seen within the organization of the homestead is the unique family structure of the Maasai.

Adding to the complexity of Maasai kinship networks is polygamy, which is frequently practiced in Maasai communities. It is common for Maasai men with financial means to marry several wives. Marriage signifies the transfer of the woman from her own ancestry line to that of her husband and almost always involves the wife settling within her husband’s family homestead (Talle, 1988). A hierarchy among the wives is established by the order of the women’s marriages with the first wife, in most instances, being the most powerful. The hierarchy of the wives also dictates the location of their home or “nyumba” in the boma with the first wife’s home being to the right of the gate into the settlement and the second wife’s home being to the left. The right and left subdivision of the wives homes creates two matrilineal groups that are important for inheritance and social identity (Hodgson, 2001).
Figure 1. Houses in Maasai homestead or “boma” in Kirya sub-village. Photo by: Author
Figure 2. Livestock pen in the middle of a Maasai homestead or “boma” in Kirya sub-village. Photo by: Author

3.4. The Maasai Age-set System

The age-set system is critical in the dictation of Maasai social life. Maasai gender roles and interactions between generations adhere to the social structure created through the age-set system (Talle, 2003; Hodgson, 2001; Spencer, 1988; Talle, 1988). The age-set system is imperative to establish decision-making power and is solely applied to Maasai men. Although Maasai women are disregarded in the age-set system, women are still expected to follow rules and practices related to the age-set of their husbands. The male population is divided into “corporate age-groups which are arranged hierarchically within a framework of authoritative positions and rules of appropriate behavior, and through which men advance linearly in a highly ritualistic atmosphere” (Talle, 2003, p.
The age-set system dictates decision-making power over everything from property rights to sexual relations (Spencer, 1988). Maasai women’s absence from the age-set system translates into inability to practice decision-making power over property or their own bodies.

3.5. Maasai Gender Roles

Gender roles within the Maasai context are closely tied to the age-set system and the pastoral livelihood (Talle, 1988; Spencer, 1988). Men must reach elder age-set status to be considered capable of making decisions over property and family (Spencer, 1988). While men inherit cattle and other property through their fathers, women are granted access to resources through their husbands (Talle, 1988). The importance of livestock to the Maasai economy means that much of daily life is centered on livestock-related responsibilities. The majority of a Maasai woman’s work is centered in the confines of the homestead where she is able to exhibit some decision-making power (Hodgson, 2004). Maasai women are generally responsible for milk production, reproductive responsibilities associated with child rearing, and keeping up with the household (Brockington, 2001; Hodgson, 1999; Wangui, 2008). As part of their daily activities, Maasai women are responsible for collecting water, firewood, and fodder for livestock, in addition, women are also responsible for building their homes (Talle, 2003). Daughters are expected to assist their mothers in the daily tasks of the homestead. One of the ways women are able to access decision-making power is through the sale of milk products (Wangui, 2008). Additionally, Maasai women have also been known to sell animal hides, herbal medicine, and beadwork as well as vegetables from their small-scale farms.
(Brockington, 2001; Coast, 2002; Grandin, 1988; Hodgson, 2011; Little et al., 2001; Talle, 1988). Recently, women in some Maasai communities have expanded their income generating activities to sell new items (Smith, 2015).

The gender role of the Maasai man is closely connected to the caring and maintenance of livestock (Hodgson, 2000; Talle, 2003). These responsibilities include grazing and watering the cattle as well as moving with the animals. In addition, men are also responsible for the vaccination and castration of their herds. While it is often young men that are responsible to the day-to-day management of the herds it is the older men that maintain decision-making power over the cattle and bring them to market to sell (Talle, 2003). The adult men maintain power over any finances obtained from the selling of the cattle. While Maasai men’s responsibilities often surround livestock keeping, Maasai women also play a large part in the successful keeping of livestock (Hodgson, 2000). This is especially true in Maasai communities that participate in crop cultivation. Recent studies have found that men become heavily involved in the initial establishment of crop cultivation, which leaves women to take a more active role in livestock keeping (Wangui, 2008). Despite the division of labor within the Maasai the survival of livestock is central to Maasai society often requiring the help of all family members.

3.6. Marginalization of the Maasai

The Maasai of East Africa are far removed from the national governments and their policies. For decades, the Maasai have been marginalized through the national policies of Kenya and Tanzania. This marginalization most often comes in the form of land tenure policies that force Maasai from their ancestral lands or conservation policies
that bar access to historical grazing lands (Goldman, 2003). The current state of the Maasai in Tanzania is unpromising with Maasai communities experiencing increased instances of impoverishment and disempowerment at the hands of the national government (Coast, 2002; Galvin et al. 2001; Goldman, 2003; Homewood and Brockington, 1999) Despite this national narrative of a marginalized people, the Maasai continue to adapt to their changing surroundings.

3.7. Kirya Village: An Overview

The study site for this research project is Kirya village in the district of Mwanga that is located in the Kilimanjaro region of Northern Tanzania. The Kilimanjaro region borders Kenya to the north and lies in the north central part of Tanzania. Mwanga district is one of six districts located within the Kilimanjaro region with 75% of population living in rural areas (URT, 2002). The majority of Mwanga experiences a high degree of climate variation due to the presence of the North Pare Mountains that run through the center of the district. The infrastructure of Kirya village is extremely poor and has the lowest density of roads in the district. Coupled with the diffused nature of the population distribution of the area it makes Kirya village one of the most rural areas within the Kilimanjaro region (URT, 2002). Agriculture and livestock keeping are the predominant livelihoods of the district with an estimated 71,000 heads of cattle living in the area (Lovell, 2011). Kirya village is situated in the southwestern quadrant of Mwanga district (Lovell, 2011). The livelihoods of Kirya village are also predominantly agricultural and livestock based that are heavily dependent on the runoff from nearby Mt. Kilimanjaro (IUCN, 2003). Kirya village is further divided into three the sub-villages of Emangulia A,
Emangulia B, and Kirya sub-village. While the village of Kirya is diverse in population, Maasai pastoralists are the predominant faction of the population in both Emangulia B and Kirya sub-village (Lovell, 2011).

The population of Kirya sub-village is made up of predominantly Maasai pastoralists. Much like the Maasai pastoralists of Emanguli B, the Maasai of Kirya sub-village began participating in agriculture when an irrigation canal was constructed throughout the larger Kirya village in 1974 (Smucker et al., 2015). Diversification in the historical pastoral livelihood to include crop cultivation has become common in the Maasai of East Africa (Galvin et al., 2002; Homewood et al., 2009; McCabe, 2003; McCabe et al., 2010; McCabe et al., 1992).
CHAPTER FOUR: RESEARCH METHODOLOGY & METHODS

In this chapter I outline the qualitative methodology and field methods that were used to conduct the research for this project. I begin with a description of the qualitative methodology that I used as a cornerstone for the research design. I go on to explain the data needs of the research and detail the qualitative research design. In the next section I highlight the data sources and sampling techniques used for this research. Following the discussion of sampling techniques I highlight the various qualitative methods that were utilized to conduct this research. In the following section I discuss the data coding and analysis process used for this thesis. Finally, I describe the limitation to the research design and methods experienced during fieldwork.

4.1. Qualitative Methodology

I choose a qualitative methodology approach for this research because of its ability to examine both social structures and individual experiences (Sayer, 1992). The hybridization of feminist political ecology and emotional geography demands a methodology that allows for the examination of both social structure and individual experience within human and natural environments. Another reason why I choose qualitative methodology was because of the marginalized status of Maasai women. Research conducted in a qualitative tone has the faculty to provide a platform for the participation and better understanding of marginalized voices (Winchester and Rofe, 2005). Examining a marginalized population under a feminist inspired lens demands special attention be paid to the impact of power dynamics on the research between the researcher and the study population. Qualitative methodology offers scrutiny in the form
of critical reflexivity, which allows for “constant, self-conscious” examination of the researcher and research process (Dowling, 2010, p. 31). Another reason for the decision to use a qualitative methodology was its ability to aid in conducting research across cultures. I was able to utilize qualitative methodology as a way to engage local voices in my research process in order to expand my capacity to understand the experiences of the Maasai women of Kirya sub-village (Howitt and Stevens, 2010).

4.2. Data Needs & Research Design

The goal of this research was to identify the manifestation of women’s agency in climate change livelihood adaption strategies. The data needs were centered on the identification of women’s reproductive responsibilities, livelihood adaptation strategies and the role of women in livelihood adaptation strategies in the context of climate change. Paramount to the need of the identification of reproductive responsibilities were determining the resources needed to meet these reproductive responsibilities and how these networks of access had been altered in the wake of climate change. As part of the exploring of the livelihood adaptation strategies of the women it was essential to determine the constraints and opportunities associated with the new strategies. Key to the identification of the role of women in livelihood adaptation strategies were exploring the motivations and emotions associated with women’s decision-making.

Intensive qualitative research, in the form of a case study, was chosen as the research design. This decision was made because of the case study’s ability to meet the data needs within the hybrid lens of feminist political ecology and emotional geographies. According to Platt (1988), intensive research (qualitative) allows for the
opportunity to understand participants and their decision-making behavior within their own environment. The case-study design allowed for the study of the examination of the “contextual influences and explanations” of the manifestation of women’s agency in the context climate change livelihood adaptation strategies to be explored (Baxter, 2010, p. 81). To complement the intensive nature of case study design a variety of qualitative methods were employed including: individual interviews, key informant interviews, and participant observation.

4.3. Data Sources & Sampling

In accordance with the intensive nature of a case study the Maasai women of Kirya sub-village acted as the predominant source for information. The Maasai community in Kirya sub-village was visited several times by me and a local research assistant prior to the start of interviews. Purposive sampling was used in order to identify women who could contribute to the data needs at an individual level (Creswell, 1998). Criterion sampling was utilized and women village elders were recruited to identify women of the community who were still actively seeking to meet their reproductive responsibilities during preliminary visits (Bradshaw and Stratford, 2010). These women were identified based on their ability to participate in daily reproductive responsibilities. This eliminated women who were not participating in daily reproductive responsibilities due to disability or age. This decision did not bar women of short-term or long-term alignments as long as they were still physically able to meet their reproductive responsibilities. This decision allowed for the larger contextual influences of Kirya sub-village and explanations of climate change livelihood adaptation strategies to be explored.
without the added complexities of a woman’s physical disability in meeting her reproductive responsibilities (Baxter, 2010). Among those identified by the women village elders, eighteen women were ultimately selected. This selection encompassed all criteria meeting women within Kirya sub-village that were willing and able to participate in the research process. Participants for the key informant interviews were selected based on the recommendations of the eighteen women and their knowledge of resource access within Kirya sub-village.

4.4. Rapport Building & Postionality

I first visited the Maasai community of Kirya sub-village on July 7, 2014 that corresponded with the Tanzanian holiday of “Saba Saba.” Since it was “Saba Saba” all of the members of Kirya sub-village and neighboring villages of Emangulai A and Emangulai B were all present. This was helpful in establishing rapport because my research assistant had previously done research in Emagulai A and Emangulai B. The individuals immediately recognized my research assistant because she had conducted interviews within Emangulai A and Emangulai B. These individuals introduced my research assistant and I to the elders of Kirya sub-village and explained to them it was acceptable to speak with us. My research assistant and I spoke with one of the elder women in Kirya sub-village and she invited us to return the next day.

When my research assistant and I returned the next day the elder took us to each of the bomas to introduce us to the women of the village. The introductions took place over a period of four days. During each introduction my research assistant and I drank tea with each set of women. The initial introductions acted as an informal focus group

because the women offered a wide array of information pertaining to life in Kirya sub-village. I was able to use the information I gathered during the informal focus groups to better tailor my individual interview protocol. My research assistant played a large role in establishing rapport within the community of Kirya sub-village. She was well respected among the neighboring villages, which helped in putting the community members of Kirya sub-village at ease. Another strength of my research assistant was that she is half Maasai and was able to greet each person in Kimaa.

4.5. Data Collection

Fieldwork for this research occurred between June 30, 2014 and July 23, 2014 in Kirya sub-village of the Kilimanjaro region of Northern Tanzania. Data collection utilized individual interviews, key-informant interviews, and participant observation for the purpose of this study. Individual interviews were advantageous in obtaining Maasai women’s personal narratives pertaining to climate change livelihood adaptation strategies. Key informant interviews and participant observation were helpful in providing context and deeper understanding of the situation in Kirya sub-village.

4.5.1. Individual Interviews

A semi-structured interview protocol (Appendix 8.1) was in used in conducting all eighteen interviews with the Maasai women of Kirya sub-village because of its content–focused and participant–driven approach (Dunn, 2010). Individual interviews were chosen because they allow for the examination of decision-making behavior and an opportunity to gather diverse experiences (Kruger, 1994). In order to engage local voices in the creation of the interview protocol, I enlisted the knowledge of the women village
elders (Howitt and Stevens, 2010). The women village elders helped in the identification of important subject matter related to reproductive responsibilities and livelihood adaptation strategies in the context of Kirya sub-village. All interviews were conducted within Kirya sub-village but the exact location differed based on the participant. Locations and times were chosen by the participant in an effort to minimize the burden of work to the participant.

A research assistant experienced with working in the large community of Kirya was recruited with the help of my advisor and trained by me. While I was conversational in Kiswahili the well-established rapport between the research assistant and the community of Kirya sub-village meant that the research objectives were better served through the conduction of interviews by the research assistant. The research assistant conducted the interviews in Kiswahili and when necessary two local Maasai women were recruited and trained to assist in the translation of the interview protocol between Kiswahili and Kimaa. In an effort to maintain consistency in translation I attempted to use the same Maasai woman from the local community, but because of reproductive responsibilities or marital constraints this was not always possible. I only had to depend on the second Maasai translator a handful of times; one local woman did the majority of the translation between Kiswahili and Kimaa.

4.5.2. Key Informant Interview

Through the individual interviews with the Maasai women of Kirya sub-village, I identified the Village Executive Officer (V.E.O) as a key informant because of his knowledge in accessing land and the irrigation system. Tremblay (1957), suggests that
interviews with key informants are valuable to the research process because of their deep understanding of the study population. The V.E.O was the only individual interviewed in an official capacity relating to accessing land and the irrigation system because he was the only government employee who is a member of the village council. The village council is responsible for making decisions on land access and allocation. The information gathered from his semi-structured key informant interview (Appendix 8.2.) was used to understand resource access in Kirya sub-village.

4.5.3. Participant Observations

Participant observation occurred as a result of my time spent in Kirya sub-village recruiting and speaking with individual interview participants. Participant observation allowed for a greater understanding of reproductive responsibilities, livelihood adaptation strategies, and dynamics of kinship networks within the Maasai community of Kirya sub-village. Emerson et al. (2011) highlights the advantages of observation in qualitative research in the deeper understanding of participants. Through participant observation the researcher is able to, “seek a deeper immersion in others’ worlds in order to grasp what they experience as meaningful and important….. In this way, immersion gives the fieldworker access to fluidity of others lives and enhances his sensitivity to interaction and process” (Emerson et al., 2011, p. 3). The value of participant observation is further strengthened if as the researcher we are able to examine the meanings associated with each interview space. Elwood and Martin (2000), discuss the micro-geographies that exist within each interview space that allows for a deeper understanding of the participant’s experience. Through my observations of the micro-geographies of the
interview space I was able to gain insight into the participant’s experience in relation to others was able to experience first-hand the impact of multiple actors power dynamics within the space (Elwood & Martin, 2010). Observation was particularly valuable in understanding the interactions between co-wives within a home space.

4.6. Data Coding & Analysis

The narratives from the 18 Maasai women of Kirya sub-village collected from the individual interviews were translated and then transcribed with the use of Insqribe transcription software. The transcribed data was then open coded by-hand. Through open coding, codes focuses on reproductive responsibilities, livelihood adaptation strategies and their associated constraints and opportunities were established. In addition, open codes associated with women’s agency and emotions were also created. All 18 individual interviews and open codes were then uploaded to the qualitative software program Nvivo 10. Through the Nvivo software, data was separated from its individual context and focused and axial codes were created. Focused and axial codes were organized and minimized along the main themes of reproductive responsibilities, livelihood adaptation strategies, related constraints and opportunities, the way and emotions associated with the overcoming of constraints and creation of new opportunities.

4.7. Research & Methods Limitations

Although the methods used in this research project were formulated with cultural complexities of interviewing within a Maasai community in mind, there were a number of limiting factors. One limitation that affected success in recruiting a number of
interview participants was land tenure issues occurring within Kirya sub-village. During the same period as fieldwork (June 30, 2014- July 23,2014) discussions between the districts of Kirya and Same over the ownership and boundary of the Maasai portion of Kirya sub-village had just started. This created uneasiness in the Maasai bomas directly bordering the boundary between Kirya and Same. It is because of these land tenure issues that men from several bomas on the bordering area of Kirya did not allow their wives to be interviewed. Despite this limitation, I feel that I collected meaningful data from the Maasai women who participated. Another issue I experienced during my fieldwork was with working with the local Maasai women as translators. Originally, I recruited and trained one woman for this position but on some occasions her husband insisted she stayed home to fulfill her daily reproductive responsibilities. This created additional challenges in the scheduling of interviews, which ultimately led me to make the decision to recruit and train an additional woman to act as a Kimaa translator. I feel that I was able to minimize the differences between translators through their training.
CHAPTER 5: RESULTS & DISCUSSION

This chapter outlines the emergence of women’s emotional agency through climate change livelihood adaptation strategies by the Maasai women of Kirya sub-village. The beginning of the chapter focuses on the impacts of climate change on Kirya sub-village and the residual effects on daily life. Also part of this discussion is the added stress that climate change has on daily reproductive responsibilities. Through exploring women’s narratives associated with meeting their daily reproductive responsibilities a clear picture of the associated constraints and opportunities begin to emerge. It is through the exploration of these associated constraints and opportunities that women’s emotional agency can be seen.

5.1. Respondents

The women that were interviewed for the scope of this research all resided in the Maasai village of Kirya sub-village. The women’s ages ranged from early 20’s to mid-50’s. All of the women lived in bomas with one or less co-wives and had at least two children of their own. A small amount of the women, who were interviewed, either had been widowed or their husbands were too elderly to work. The majority of the women had responsibilities that pertained to livestock and participated in small-scale farming. Many of the women experienced hardships in providing fodder for their cattle and resources for their children.

Before the start of many of the interviews the women would be sitting with a large group of other women and children. They would ask me to relocate with them to more private location near their home. My research assistant and I were offered tea, food,
and a hand carved stool to sit on by most of the women that were interviewed. During the majority of my interactions with the women of Kirya sub-village many of them tended to their children or household duties while being interviewed. It was not uncommon for the women to be peeling potatoes or making tea while they were asked questions. In addition to cooking, women also spent time cutting their children’s hair or washing clothing in large tubs. On a few instances my research assistant and I conducted the interviews with the women during their search for fodder for their livestock. It was also common for the interviews to be interrupted several times by individuals greeting us.

5.1.1. Respondents Understanding of Climate Change

Many of the respondents had been exposed to the concept of climate change or “Tabia ya Nchi” through Tanzania’s national policies and media. Individuals in Kirya sub-village were also familiar with climate change because of the NSF funded Local Knowledge and Climate Change Adaptation Project that occurred in the neighboring villages of Emangulai A and Emangulai B. Individuals that were not familiar with the term “Tabia ya Nchi” still conceptualized climate change as long-term climatic changes to their environment. Although the majority of the respondents spoke about the impacts of climate change on their life it is important to note that it is difficult to define these challenges as mutually exclusive to climate change. In a community where individuals are constantly facing social and political pressures it is difficult to tease out what challenges and experiences are purely climate change based.
5.2. Climate Change and Its Impacts on Daily Life in Kirya Sub-Village

The women of Kirya sub-village are astutely aware of the impacts of climate change on their daily lives. As their physical environment changes as a result of climate change so too must their navigation of their space. The changing nature of Maasai pastoralism in the wake of climate change has pushed those living in Kirya sub-village to begin to diversify their livelihood in order to meet their reproductive responsibilities. During interviews women indicated an increasing difficulty in meeting of their reproductive responsibilities in the wake of increasing climate variability. The most common conceptualization of climate change by the women of Kirya sub-village focused on the impacts that the lack of rainfall and increased periods of drought had on their cattle populations. Pion, a woman in her 20’s, describes the impacts of climate change on her life:

I’ve seen the effects of climate change on my life. There use to be rainfall, but now there is no rainfall and the droughts last for so long. Our cows are dying and it makes the lives for people here [Kirya sub-village] very difficult.

The difficulties associated with climate variability experienced by the men and women of Kirya sub-village are a common reality for pastoralist communities throughout East Africa (Wangui, 2014; Omolo, 2010). Women in Kirya sub-village often spoke of how “bad the situation” had become and the additional costs incurred as a result of the climate variability of the area. Women, who had grown up in Kirya sub-village their whole lives, described recent “life as very difficult.” Kirya sub-village is unique from other Maasai communities because of the long-standing presence of small-holder farms
in the village since the 1970’s (Smucker et. al, 2015). While smallholder farms originally acted as a livelihood adaptation strategy for the Maasai of Kirya sub-village the rainfall variability and increased complications in access to irrigation channels have now started to add to the hardships of the area. Lankenua, a young mother and wife in her 20’s, speaks about the changes she has seen over her lifetime in Kirya sub-village:

In the past the rains started very early. Now, the rains start very late when the crops have already died. The changes in the climate affect our lives because we incur extra costs like replanting the crop [maize] after it dies. We have to replant it again.

Rainfall variability of the area also contributes to difficulties experienced by Kirya sub-village’s livestock populations. Liloe, a mother of 2 in her 30’s, discuss the impacts that the changes in rainfall have had on livestock keeping in Kirya sub-village:

The rain is insufficient so there is less fodder. They [cattle] are sick, and the milk is not the same because of the fodder. Nowadays we can’t do business because there is no milk to sell. When you take the cow to the market they are so cheap because they are so thin.

5.3. Reproductive Responsibilities in the Context of Climate Change

These difficulties described by Liloe are far reaching into the lives of the Maasai living in Kirya sub-village that translate into obstacles in their daily life. Examining daily life allows for a better understanding of the impact of these obstacles on traditional Maasai gender roles and reproductive responsibilities. Reproductive responsibilities self-defined by the women of Kirya sub-village were used as the working definition in the
scope of this study. Women described their main reproductive responsibilities as collecting water, searching for fodder for livestock, collecting firewood, and raising children.

Maasai women’s ability to meet their reproductive responsibility of collecting water is directly related to their ease in accessing a water source. Women in Kirya sub-village have relatively straightforward access to water because of their close proximity to River Ruvu. Many women mentioned carrying water on their heads from the river in a large jug when describing their patterns in collecting water. Although through my observations in Kirya sub-village I noticed that many women depended on donkeys to carry multiple jugs of water from the river to their homes. I also noticed through my observations that many young girls helped their mothers in the collection of water.

Women’s responsibilities in obtaining firewood were also met with relative ease. All of the women interviewed in Kirya sub-village mentioned obtaining firewood from the nearby bush. I also witnessed the role of young girls in helping their mothers collect firewood by carrying smaller bundles of wood on their backs. In both instances of collecting water and firewood women mentioned learning the skills to obtain the resources and locations of the resources from their mothers. Simu, a young wife in her early 20’s, describes her experiences in learning how to obtain water and firewood:

When I was a girl I would go with my mother into the bush looking for water and firewood. We didn’t have any donkeys so I was responsible for carrying the lighter jug on my head. I also remember my mother showing me how to wrap the wood so it was easier to carry on my back…. When I moved here [Kirya sub-
village] after I married my mother-in-law showed me the closest access point to the river.

An interesting point to mention is that some women’s self-definition of reproductive responsibilities included constructing their homes and partaking in agriculture. This conceptualization that the construction of the home and the partaking in agriculture is a reproductive responsibility is excluded from the majority of scholarship surrounding reproductive responsibilities. Naramal, a young woman with an elderly husband, speaks about her reproductive responsibilities:

For my daily home responsibilities I spend time collecting firewood, fetching water, milking cows, cooking, and I am the one who builds the house.

Historically, Maasai gender roles have been closely related to the pastoralist livelihood, where men’s roles are centered on livestock keeping and women’s are focused around the household (Kipury, 1989; Talle, 1993; Hogdson, 2001). A clear manifestation of the gendered division of labor in daily life became apparent through the chronicles of the women in Kirya sub-village. Women spoke of meeting their reproductive responsibilities without any assistance from their husbands. One woman Naisaruru joked about the idea of her husband helping:

I cook, I go searching for firewood, fetching water. (pointing) Do you see our houses that are about to fall down? We are the ones who go to collect the poles and make them. (Laughing) If you can’t build a house your husband will say to you sleep in the tree.
5.4. Constraints Reported by Women of Kirya Sub-Village

While similar narratives of women’s reproductive responsibilities included collecting water, searching for fodder for livestock, collecting firewood, and raising children existed within Kirya sub-village. Interviews also revealed stories of hardships related to meeting their reproductive responsibilities because of climate change. One of the dominant narratives of the women of Kirya sub-village was the mention of the added complexities in raising their children in a changing climate. Most of the women discussed the origin of their difficulty in effectively providing for their children from the decreased production of milk by drought-affected cattle. Women depend on the sale of their cattle’s milk as a steady form of income (Hogdson, 2011). However, the increased periods of drought within Kirya sub-village have negatively impacted cattle’s ability to regularly produce milk. Many of the women interviewed described the same issues as Liloe when it came to the more recent lack of milk from cattle. The inability for women in Kirya sub-village to depend on cattle for a steady supply of milk creates challenges in providing for their children. For women in Kirya sub-village the sales from milk are an important economic resource in the quest to meet their reproductive responsibilities especially in terms of child rearing. Many of the women described their dependence on the sale of milk in order to afford medical costs and education for their children.

Kiserian, a young woman in her early 20’s with 3 children, describes the impacts of the lack of milk on her family:

We have many challenges because of the lack of rainfall. We used to sell milk but now there is no milk to sell. I use to send my children to school but now I don’t. I
used to be able to sell the milk in order to send my children to school, but now there is no milk so they are no longer able to go to school.

Women experienced similar difficulties in collecting fodder for livestock. Throughout the interviews with the women of Kirya sub-village numerous narratives revealed instances of hardships related to the search for fodder for livestock. Many of the women’s accounts referenced the difficulty and frustrations associated with locating enough fodder for livestock. Many of the women described how the ease in locating enough fodder had changed in recent years to become increasingly difficult. Liloe’s earlier account highlights the connection between the inability to provide fodder and lack of milk production in livestock. Kiserian, provides further insight into the difficulty in securing fodder for livestock in Kirya sub-village:

There is no fodder. If you go and ask for fodder from the people at the nearby farms, they are only able to give us very little. Sometimes there is no fodder at all.

Naisaruru, describes daily schedule where she spends the majority of her day in search for fodder:

I wake up very early in the morning. Everyday at 5 in the morning I start my search for fodder. Most days, I am not able to return until 2 or 3 in the afternoon.

This narrative is common throughout the experiences of the Maasai women of Kirya sub-village supporting the notion that environmental disruptions related to climate change will further increase women’s burden to meet their reproductive responsibilities (Arora-Jonsson, 2011; Glazebrooke, 2011; IPCC, 2007; Terry, 2009; UNPF, 2009).
Despite the difficulties in securing fodder for livestock none of the women spoke of increased difficulty or increased travel time in obtaining firewood or collecting water. In my time in Kirya sub-village I observed the women’s regular access to River Ruvu to collect water. I also witnessed women collecting firewood from several close proximity locations. This point is particularly noteworthy because of women’s narratives throughout Maasai communities of East Africa and in the neighboring villages of Emanguli A & B who reported increased hardships in collecting firewood (Wangui, 2014; Smucker AAG, 2015). Similar instances of readily available water have also been mentioned by the Maasai women of Kajiado (Wangui, 2014).

5.5. Manifestation of Women’s Agency in Climate Change Livelihood Adaptation Strategies

5.5.1. Long-standing Participation in Agriculture

The physical environment is central to women’s ability to access the resources needed to meet their daily reproductive responsibilities. In Kirya sub-village, women look to the natural landscape for materials to build their home, for wood to build fires, and for fodder to feed their livestock. This is similar in other Maasai communities throughout East Africa (Wangui, 2014; Hogdson, 2001). In addition the Maasai also depend on the physical environment for their livelihoods. Agriculture is widely practiced as a livelihood adaptation strategy by the women of Kirya sub-village and has been the highlight of scholarship surrounding livelihood diversification/adaptation and the Maasai (Wangui, 2014; Galvin et al., 2002; Homewood et al., 2009; McCabe, 2003; McCabe, Leslie, & DeLuca, 2010; McCabe et al., 1992).
A clear example of women’s agency in Kirya sub-village can be seen through women’s missions to access the knowledge needed to diversify their livelihoods. An important part in accessing these natural resources is obtaining the knowledge to do so. For the women of Kirya sub-village knowledge sharing between women is central to their ability to meet their reproductive responsibilities through the adaptation of livelihoods. While instances of knowledge sharing between Maasai men and non-Maasai farmers have been observed in the initial adoption of agriculture little scholarship exists surrounding the Maasai and agriculture focus on the transfer of knowledge between women (Wangui, 2014). The manifestation of knowledge sharing between women provides insight to how the knowledge sharing systems surrounding agriculture change as agriculture has become more established in the community. This knowledge sharing between the women of Kirya sub-village occurred both over generations from family to daughter and between women in a boma. These shared knowledge networks were commonly referenced in the women’s interviews when describing their participation in agriculture. Namelok, a young woman with a new baby, described her learning of farming from her parents at a young age:

I learned [how to farm] from my mother when I was very young. After I married my husband and came here [Kirya sub-village] I was able to continue doing it.

Many of the women mentioned the role that other women, already participating in agriculture, had played in their own ability to successfully partake in agriculture. Agriculture can be extremely material intensive especially in instances where irrigation is needed. Women in Kirya sub-village are dependent on their husbands to access the land
needed for agriculture. This dependence of Maasai women on their husbands in order to
gain access to land is seen throughout the Maasai of East Africa as Maasai women
navigate their relationships with their husbands in order to gain access to other resources
(Talle, 1987). Under the land system of the village office of Kirya sub-village, land is
parceled off to members of the community for agricultural practices. Despite the fact that
the village office of Kirya sub-village mentioned that gender played no role in those who
received the land, almost all landholders in the Maasai community of Kirya sub-village
are men. In addition to accessing land, having access to seeds, hand hoe, and pesticides,
women also need to be able to access the pipe, fuel, and generator need for irrigation
because the women must move water from the lower area of the river to the higher lands
of their crops. Women’s ability to successfully navigate their relationships in order to
gain access to the resources needed to participate in agriculture is a clear indication of
agency that exists within the women of Kirya sub-village. While the knowledge sharing
referenced in the women’s interviews mentioned actual farming practices it also included
sharing expertise in navigating the complex system of accessing water and tools for
irrigation. Kiserian, recounts how she was able to learn how to farm from other women
in her husband’s boma:

I have been farming and harvesting crops for the last three years. Challenges in
my life forced me to learn farming. One day, I decided to pick up the hand hoe
and learn how to farm. I had seen other women in the boma participating in
farming and I learned from them.
Kiserian’s account of her experience in learning to farm reflects the presence of necessity to adapt in her life. Farming has become central to supplementing the pastoral way of life in many Maasai communities throughout East Africa (Wangui, 2014; Galvin et al., 2002; Homewood et al., 2009; McCabe, 2003; McCabe, Leslie, & DeLuca, 2010; McCabe et al., 1992). Additionally, Kiserian account also showcases her ability to alter the way in that she navigates her space. The manifestation of women’s agency can be seen through this altered navigation. This example clearly reflects Davidson & Milligan’s (2004) discussion of emotional agency that suggests our experiences within a space affected how we act within it. However, in other Maasai communities it has been predominantly men who have changed their predominant livelihood from livestock grazing to cash crop farming (Wangui, 2014).

5.5.2 More Recent Livelihood Adaptation Strategies

While participation in agriculture was the most widely utilized and long standing livelihood adaptation strategy in Kirya sub-village women also discussed the emergence of business and casual labor in response to difficulties in farming. Similar instances of knowledge sharing were also mentioned in women’s accounts of learning how to participate in the new forms of livelihood adaptation strategies of running a small business and starting to work as skilled labor to neighboring farms. Simaloi, explained the importance of her ability to participate in business in order to help meet her reproductive responsibilities:

I am not able to do any labor intensive work because my shoulder was injured from a run in with a buffalo at the border [of Kenya and Tanzania] so I depend on
being able to do business. I decided to do business because of my mother, I
learned from her. I started my small business last year after I gave birth to my last
child. I decided to learn so when my mother is no longer here, I am still able to
feed my children.

Simaloi’s account highlights her ability to recognize the benefits associated with
participation in small business. Encased in Simaloi’s recognition in the benefits
associated with participation in business is the manifestation of agency. This example
showcases Simaloi’s ability to mobilize her realization that her mother will not always be
able to assist her with providing for her children into participation in a new livelihood.

The women of Kirya sub-village idealized participation in small business, such as
the selling of sugar or cooking oil, in their discussions of adaptation to climate change.
Women’s interviews most commonly discussed their desire to participate in small-scale
business. The women’s accounts surrounding small-scale business revealed their
conceptualization of business as the most stable response to climate change. Despite
women’s overwhelming desire and recognition of benefits associated with participation
in small-scale business women reported the greatest difficulties in sustaining capital to
fund their enterprises. Often times women would mention their success in raising the
initial capital for their business but then illness of a child would cause them to use the
entirety of their profits to obtain medical treatment for their child. This was a common
narrative throughout the interviews in Kirya sub-village. Simaloi’s account highlights the
difficulties in maintaining a constant flow of capital to sustain her business:
I need capital for my business. Sometimes my mother or I do not have enough money to feed my children so I have to use the money in order to provide food for my children.

While women’s ability to participate in small-scale business was idealized as the preferred long-term strategy of livelihood adaptation casual local labor was mostly utilized as a way to raise capital for their own farming or business. Women’s interviews also discussed casual local labor as a vehicle for meeting their reproductive responsibilities. Many women of Kirya sub-village mentioned instances of participating in casual labor or “kibarua” to neighboring farm as a way to make money to provide food and medical care for their children. It was not uncommon for women to work at both neighboring farms as a casual laborer and their own on the same day. Another interesting point is that households where women reported participating in casual local labor it was only the women who partake in the activity. The participation of women in casual labor shows their ability to alter their previously underproductive navigation of space into a more productive form of navigation that creates income. The manifestation of women’s agency in Kirya sub-village is clearly shown through this alternate navigation.

5.6. Women’s Mobilization of Emotions

An interesting discussion surrounding emotions emerged from women’s accounts of livelihood adaptation strategies. Women were asked to detail the motivating factors that influenced their decisions to participate in their recently adopted livelihoods. As part of this discussion, women were asked to describe the emotions that they associated with their decisions. The women’s accounts of motivating factors in participation in livelihood
adaptations revealed that women’s feelings of anger, frustration, fear, and worry had a strong influence on their decisions to learn new livelihoods. Emotions as motivating factors in livelihood adaptation were conceptualized around the inability to meet reproductive responsibilities. Women’s frustration and anger associated with the inability to meet reproductive responsibilities centers around difficulties in providing for their children. Alcohol use in the men of Kirya sub-village emerged as the common cause for increased difficulties in providing for their children. The link between men’s alcohol use and difficulty in providing for children surrounds the men’s control of the selling of livestock, the main source of income for the Maasai (Goldman, 2006). Many of the women interviewed spoke of their frustration and worry towards their husbands’ inability to provide money to them from the sale of their cattle. Women’s frustrations arise from men’s extensive spending on alcohol on the day that the cattle are sold. Due to the men’s control over the selling of cattle and women’s dependency on the income this extensive spending has far reaching implication into the lives of women in Kirya sub-village.

Liloe, a woman in her early 40’s, speaks about the emotions associated with the situation with her husband:

For us Maasai women, life is very difficult. My husband will go to market and sell a cow for 200,000 tshs. Instead of coming home to me with the money he will go with the other men to eat meat and drink alcohol and soda. He’ll come home late from a day of eating and drinking with his friends and passes out in the house. All I get when he sells the cows is one can of maize and one kilogram of sugar.
Nkasiogi, a woman in her early 20’s, discusses similar difficulties in obtaining finances from her husband:

My husband will come home for the day and he if I ask him for money he will tell me to borrow the money from my sugar business and he will pay me back. But when I go to ask him for the money he tells me to go away or else he will hit me. If I ask him for money to help me with my soap business, he’ll say, “Did you give me the money? Go, away.”

During the interviews women described instances where they were able to harness their emotions as motivation to adopt new livelihoods. Women most commonly discussed emotions as a motivator in situations where they began their own small-scale businesses. Women mentioned their involvement in new livelihoods as part of their ability meet their reproductive responsibilities independent of their husbands. Many of the women interviewed discussed their involvement in small businesses as a means to purchase food, clothing, and medicine for themselves and their children. Nkasiogi discusses her reasons for starting her small business and the benefits she has received from her small business:

I decided to start my own business so I could afford things for my children. I needed things for my children like soap, clothing, school uniforms, and school supplies. If I asked my husband for these things he would tell me he had no money. That is why I decided to start my own business, so I could afford these things. I don’t want to have to ask him for money anymore. [Pointing] Do you see those cows standing over there? They are only called your cows but you don’t actually own them. Sure, you can get the milk from the cows but when they are
sold at market I never see the money. And if I tell my husband I need money to feed our children he’ll tell me to keep him out of my problems. He doesn’t even bring food home when he does sell the cows. I am the one responsible for figuring out how to get money for food for our children. I have to find food for them or else they will suffer.

Another interesting point that comes from Nkagosi’s account is the overarching ownership of livestock by Maasai men. Despite the fact that women may also care for livestock it is the Maasai men whom maintain the decision-making power over livestock because of their ownership of the livestock (Wangui, 2014; Hodgson, 2012; Kipuri, 1983). Coupled with instances of alcohol use women’s lack of ownership of cattle in Kirya sub-village creates a difficult situation for women to access a steady flow of finances from the pastoralist lifestyle.

Women in Kirya sub-village are able to overcome these difficulties by mobilizing their emotions into livelihood adaptation strategies of farming, participation in “kibarua,” and the creation of small-scale businesses. This mobilization of anger encompasses Davidson and Milligan’s argument that, “… frustrations and humiliations experienced may nonetheless work as an incentive toward activism and perhaps enable a different sense of achievement” (Davidson & Milligan, 2004, 524). The sense of the achievement experienced by the women in Kirya sub-village is related to their ability to meet their reproductive responsibilities through their own adoption of new livelihoods. This sense of achievement experienced by women’s ability to provide for their children has also been seen in Sultana’s work in unsafe waterscapes of Bangladesh. Sultana describes the
changes in emotional state of the women, “… fear and worry when children are consuming unsafe water is accompanied by joy and relief at being able to provide arsenic-free and safe water” (Sultana, 2011,p. 168). Women are able to mobilize their anger and the emotional distress of their children to navigate their existing landscapes in new ways. Just as women in unsafe waterscapes are motivated by their children’s emotional distress to access clean water so too are the women of Kirya sub-village. These women are able to internalize their emotional states in order to renegotiate their existing landscape to be able to participate in new forms of livelihoods. This renegotiation of existing their landscape elicits new and different emotional responses to the same space. Pion, a woman in her late 30’s who works in “kibarua” and has her own small business, discusses how participating in new livelihoods have impacted her life:

Since starting my own small business of selling sugar my life has become better. I feel like I can go on living. I am able to earn money to buy things for my family. Anger is what motivated me to start my own business, but now I am happier because I can provide food for my children.

While the discussion of emotions in the lives of the women of Kirya sub-village appear to have a forward positive motion, negative emotions also have the ability to negatively impact an individual’s navigation of their space (Davidson and Milligan, 2004). An example of the negative impact of emotions on individual’s navigation of space in Kirya sub-village is the occurrence of extensive alcohol use in men associated with the selling of cattle. Not only does extensive alcohol use impact the individual participating in the behavior it also impacts the women of Kirya sub-village because of
their dependence on the associated income. This negative emotional response that is translated into extensive alcohol use contracts the women’s ability to effectively navigate their space to meet their reproductive responsibilities.

In addition to women’s ability to mobilize their own emotions women of Kirya sub-village also reported recognizing the positive emotions of other women engaging in non-traditional forms of livelihoods. This recognition of benefits associated with non-traditional form of livelihoods encourage the women in not ideal financial to develop the social capital to learn how to engaged in the activities themselves. Naisianoi, a young woman in her 20’s, describes her initial reasons for wanting to start her own small business:

My friend has her own small business and told me I should start my own. I wasn’t sure at first, but after seeing how my friend was able to buy a new sofa and new kitchen equipment I decided to get involved too.

Naisianoi’s ability to recognize the positive emotions associated with her friend’s practice of small business is a clear example of emotional agency. Women’s recognition of the benefits associated with small business was a common narrative for the women of Kirya sub-village. Many of the women mentioned their friends’ success in their explanation of starting their own small business. A clear manifestation of women’s emotional agency can be seen through the translation of recognition of benefits to the action of obtaining knowledge and resources needed to start a small business.
CHAPTER 6: CONCLUSION

The process of climate change livelihood adaptation was a complex experience for the Maasai women of Kirya sub-village. Women’s decisions to participate in crop cultivation, casual labor, and small-scale business were met with a wide array of motivating factors and emotions. Women’s reflections on their decisions to participate in livelihood adaptation centered on efforts to meet their reproductive responsibilities and provide for their children. Adding to the complexity of the women’s experiences was the presence of alcohol use in the male population of Kirya sub-village. Women mentioned their anger associated with the impacts of their husband’s alcohol use on finances as a motivating factor in their decision to seek out the knowledge needed to participate in new forms of livelihoods. This mobilization of anger is a clear example of the manifestation of women’s emotional agency in Kirya sub-village. Bolstering this argument of the existence of emotional agency was the women’s discussion of their own distress related to the inability to provide food for their children and how that impacted their decisions to learn new livelihoods. Women also exhibited emotional agency through their recognition of other women’s positive experiences related to their participation in livelihood adaptation strategies.

Another interesting finding from this study was the emergence of shared knowledge networks between women in Kirya sub-village. Women heavily referenced the transfer of knowledge from woman to woman in the initial process of adaptation. Women wishing to participate in new livelihoods of crop cultivation, casual labor, or small-scale business described their experiences in relation to their dependency on the
expertise of the more established women in Kirya sub-village. This theme was especially true for women learning to participate in small-scale business, such as the sale of sugar or cooking oil. The women of Kirya sub-village viewed their ability to regularly participate in small-scale business as the most sustainable form of livelihood adaptation. Most women described their participation in crop cultivation or paid labor as a short-term solution to their challenges. It became clear through the women’s narratives that the women of Kirya sub-village idealized small-scale business as the answer to their lives’ challenges.

Throughout my research it became apparent that the term reproductive responsibilities was problematic. While the literature surrounding reproductive responsibilities focuses on child rearing and its associated responsibilities this conceptualization does not accurately portray the women of Kirya sub-village experiences. Women’s self-defined reproductive responsibilities revealed their own conceptualization to include building of their homes and farming. Current literature does not include house construction and farming in the scope of reproductive responsibilities. Applying a universal prescription of reproductive responsibilities becomes increasingly problematic in the setting of Kirya sub-village where women are responsible for constructing their own shelter and growing their own food. In order to gain further insight into an individual’s personal experiences it is essential to include the individual’s own conceptualization of their responsibilities and daily life.

The use of the theoretical hybridization of feminist political ecology and emotional geographies is what ultimately led to the recognition of the manifestation of
Maasai women’s emotional agency. It was through the examination of daily activities and the emotions pertaining to them that the emergence of emotional agency became clear. This conceptualization would not have been possible without the power given to nuance experiences in feminist political ecology and emotional geographies. The use of individual interviews allowed for the women of Kirya sub-village to share their personal narratives surrounding climate change livelihood adaptation strategies. Due to the complexity of the Maasai age-set structure and gender roles, I do not believe that women would have freely shared their emotional experiences related to these strategies in any other setting.

This study opens the door to examine the emotional experiences associated with climate change unaccompanied by the vulnerable victim prescription. Further research examining the role of emotions in natural resource access should be conducted. In addition, manifestation of women’s agency should be explored in other contexts of climate change adaptation. An emotional geographies evaluation has far reaching applicability in study of local communities and issues of natural resources. Furthermore, the clear emergence of emotional agency creates opportunities to overcome constraints related to climate change within local communities. In order to create sustainable solution to the challenges of climate change in the developing world national and international policies should reflect the opportunities associated with the emotional agency of local communities.
REFERENCES


APPENDIX: INTERVIEW PROTOCOLS

- Could you please tell me how the climate has changed in Kirya?
- Could you tell me about how this has affected your life in Kirya?
- Can you tell me what daily responsibilities that you participate in a day?
- Can you describe to me how this differs based on if it is dry or wet season?
- Can you describe to me what kinds of resources you need to meet these responsibilities?
- How do you go about obtaining these resources?
- Based on the changes in climate could you tell me how these responsibilities may have changed since you have been married, since you’ve moved here?
- How does this differ from other women in your homestead?
- How does this differ from other women in your homestead during the dry and wet season?
- Could you give me an example of how you interact with the other women in your homestead during your day?
- Ask only if not answered in warm-up. Could you describe me how your daily responsibilities have changed?
- You use to do this…, now you do this… what caused you to do this?
- Could you describe any activities that you and the other women in your homestead participate in together?
- Can you describe your role in this?
- Can you talk about any activities that you partake in individually to provide livelihood for yourself?
- Could you talk about how others in your homestead help you with this?
- How did you come to partake in that activity (for each mentioned activity)? When, where, how, what?
- Please describe the resources that you need in order to partake in this activity? Where found, how obtain it?
- Could you talk about the challenges that you have faced as you (for each mentioned activity)? When? How it was presented? Why the think they faced that?
- Can you tell me in what ways that you have overcome those challenges (for each activity mentioned)? When, Where, Why, How??
- Are there instances of challenges preventing you from partaking in other activities? What are those activities?
- Could you describe the benefits that you have experienced through your participation in these new activities? When, how,??
- How would you describe that your life has changed since participating in this activity (for each activity mentioned)?
- Could you talk about how climate has changed in Kirya sub-village over the last few decades?
- How has this impacted those living in Kirya sub-village?
- Could you please explain how land is allocated and allotted by the village office?
- How is it decided who get land? Does gender play a role? Does tribe?
- Could you talk about irrigation works in Kirya sub-village?
- How are individuals able to tap into the irrigation system?
- Could you describe the challenges people face while trying to access the irrigation scheme?
- How do you think the Maasai have been impacted by climate change in Kirya sub-village?
- Could you talk about the ways in which you have witnessed the Maasai adapting their livelihoods?