

**THE CONTRIBUTION OF WILDLIFE MANAGEMENT AREAS ON WOMENS'  
WELL-BEING IN ENDUIMET DIVISION, LONGIDO DISTRICT, TANZANIA**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
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## ABSTRACT

Wildlife management and conservation in Tanzania has passed several stages from colonial management programmes, to the establishment of the Wildlife Act of 1974. In addition, Wildlife Management Areas were established in 2003 as a way of ensuring communities bordering wildlife areas benefit from them. The Wildlife Management Areas are expected to contribute to the well-being of the surrounding communities. This study was undertaken to assess the contribution of Enduimet Wildlife Management Area on women's well-being. Specifically, the study aimed at identifying the economic activities supported by it in the study area, assessing its contribution to women's well-being and to examine the challenges faced by the women who are engaged in it. The study employed multistage sampling whereby Enduimet was purposefully selected and simple random sampling was used to select the study wards, villages and the respondents. The study used a cross-sectional research design to collect data from 120 respondents from Olmolog and Tinga Tinga villages. The findings show that the main economic activities supported by Enduimet Wildlife Management Area (EWMA) include provision of financial grants, road construction support, and provision of torches for scaring crops destructive animals. The study finding further show that EWMA contributes significantly ( $p \leq 0.001$ ) to women's income at  $p=0.001$ . In addition, it also contributes to the women's social well-being through provision of water services, gender training, building of classrooms and provision of scholarships to some families. The main challenges found in this study include destruction of crops by wild animals, injuries, and death of people and livestock. The study concludes that EWMA contributes to women's well-being economically and socially. Based on the finding of the main challenges it is recommended that Wildlife Village Game Scout, District Game Officers, and Livestock and Extension officers should design, develop and advise communities on better methods of preventing destructive wild animals from destroying people's crops and livestock.

**DECLARATION**

I, SIA JEREMIA TEMU, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work done within the period of registration and that it has neither been submitted nor concurrently being submitted in to any other institution.

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The above declaration is confirmed by:

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**Date**

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## **DEDICATION**

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**LIST OF ABBREVIATIONS**

CBC	Community Based Conservation
CNRM	Community Based Natural Resource Management
DGO	District Game Officer
EWMA	Enduimet Wildlife Management Area
FGD	Focus Group Discussion
IGAs	Income Generating Activities
MDGs	Millennium Development Goals
MNRT	Ministry of Natural Resource and Tourism
PAs	Protected Areas
SDGs	Sustainable Development Goals
TAWICO	Tanzania Wildlife Company
TDV	Tanzania Development Vision
TGT	Tanzania Game Trekkers
TVD	Tanzania Development Vision
URT	United Republic of Tanzania
USAID	United State Agency for International Development
VGS	Village Game Scout
WeD	Well-being in Developing Countries
WMA	Wildlife Management Area
WPT	Wildlife Policy Tanzania
WWF	World Wild Fund

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background Information

Tanzania is the most wildlife-rich country in Africa in terms of large terrestrial mammals and this has played an important role in her political and economic development (Nelson *et al.*, 2006; Nelson and Agrawal, 2008). During the colonial administration, wildlife management practices generally continued to be reinforced by two fundamental strategies, which are legally ban or restrict wildlife uses and establishing parks and reserves to protect animal populations (Neumann, 1998). In 1974, Tanzania came up with the Wildlife Conservation Act which focused on centralized control over wildlife and the elimination of local use rights.

The focus of the wildlife conservation Act was aligned with the development plans as well as such as those focused on the Millennium Development Goals (MDGs) of 2000, especially those related to eradicating poverty and ensuring environmental sustainability (Pathak *et al.*, 2005). Nonetheless, the Act is also in line with the current Sustainable Development Goals (SDGs) whose vision is to ensure that humans live in harmony with nature (UN, 2015). Therefore, the SDGs now put a great emphasis on the fact that human development is closely connected to climate and environment, and that global development concerns not only developing countries but also, indeed everyone in the global society. Thus, goals addressing sustainable economic development, sustainable use of natural resources and environmental protection are now being pursued simultaneously with goals to end hunger, poverty and gender inequality especially SDG 1, 12 and 15 (UN Women, 2018).



However, the focus of Wildlife Conservation Act of 1974 was later found to create conflicts with the community as the latter was denied the right of using natural resources and benefiting from them as they were used to, hence affecting their well-being. It is claimed that before the 1974 Act, the neighbouring communities were benefiting from the natural resources in terms of meat (*kitoweo*), medicine, and fish (Sandi, 1996). Hence, poaching and other environmental destruction started to be rampant as the community were trying to regain their old rights of using wildlife and forest resources. This situation led to the failure of the protectionist approach or policy which the government took in managing natural resources and that led to the law enforcers to have conflicts with the community (Songorwa, 1999).

Based on the above, in the late 1980s the Tanzanian Government introduced Community Based Conservation (CBC) approaches that encouraged wildlife management at the community level by allowing local landholders to manage wildlife on their land for their own benefits (MNRT, 1998). These approaches were also supported by international organizations and development partners. The approaches main aim was to ensure that communities do benefit from the natural resources surrounding them including wildlife hence, support their well-being (UNDG-GEF, 2004; Pathak *et al.*, 2005; Shyamsundar *et al.*, 2005; USAID, 2013). In this way the expectation was that there will be equitable benefits between the government and the community from the natural resources endowment, and poaching and illegal hunting will be eliminated.

Later in 2003, the government introduced the establishment of Wildlife Management Areas (WMAs) with the same aim of enhancing conservation and poverty alleviation through sustainable utilization of natural resources (Mwakaje *et al.*, 2013). However, one of the rationales of these WMA was to have strong economic benefits to the community

(Humphries, 2013). Therefore, in this case the premise that if local people participate in wildlife management and economically benefit from it in a “win-win” situation, then wildlife will be conserved and at the same time the community’s welfare will be improved (Stephanie, 2014).

As such, today numerous pilot WMAs projects have been initiated with the expectations that their economic contributions, in terms of business and finance should benefit the rural livelihoods while wildlife conservation interests are taken care of (Kaswamila, 2012; Southwick Associates, 2014).

According to Williams (2017), Tanzania has progressive land and natural resource management policies and laws, which provide a comprehensive framework for enabling local communities to varyingly administer, manage and sustainably utilize their land and natural resources. These laws can be conceptually divided into two: (i) Foundational laws which provide the legal framework for village governance and land administration and (ii) Sectoral laws which regulate the management of forest, grazing and wildlife resources and which variably endow communities with user rights over these resources (Williams, 2017). Therefore, WMA are established based on the regulations that give rights to communities to participate and benefit economically from the natural resources including wildlife. However, these benefits have to be measured to see whether they are obtained according to the agreement and if not what should be done to rectify the situation.

There are several approaches that are being used to measure expected benefits that communities get from community based conservation programmes such as the WMA. For example, Songorwa (1999) argue that community based wildlife conservation are also not effective as compared to protectionist approaches but they did not propose an alternative

solution. However, there are other proponents of community based wildlife management areas who argue that these approaches are beneficial to the community as well as resulting into sustainable use of natural resources (UNDP, 2015).

Furthermore, measuring WMAs contributions to local economic development does not just mean taking key macro-economic growth indicators, such as output and employment, but also multiplier impacts such as both formal and informal sector employment creation, improved infrastructure and public services, wealth creation, food security, child health and more benefits such as women's empowerment (Ashley *et al.*, 2002; Homewood *et al.*, 2015; Pailler *et al.*, 2015). Hence, the current study goes beyond community benefits by assessing those expected by women through participation in WMA. The study focuses on women because despite of their role in household production, they are the ones who are marginalized and benefit less from development programmes such as the WMAs.

## **1.2 Problem Statement**

Wildlife Management Areas (WMAs) are claimed to have contributed to economic development of local communities through provision of employment to the local people both permanently and temporarily (Tynnerson, 2009; Kaswamila, 2012). However, despite the fact that women are mostly affected negatively by wildlife management interventions (Nabane, 1994; Espa, 2017), it is claimed that their roles in the WMAs have been ignored by the Community-Based Conservation (CBC) approaches. For example, according to Loveless (2014), injuries and deaths to people and livestock and damage to crops from wildlife cause greater concerns to women than men. Therefore, it can be argued that women are rarely informed, and hardly involved about WMA activities (Espa, 2017). This situation limits their participation or capacity building activities targeted at them by such projects (Tynnerson, 2009). Furthermore, for those women who happen to be engaged in

WMA their expected benefits are also not known. In addition, information on how their well-being is being enhanced by participating in WMAs is also not available. This is because information of such benefits are important since rural women rely heavily on crops, livestock, land, water, fuel and building materials from the neighbouring natural resources in order to take care of their families (Espa, 2017). Hence, they should also be part and parcel of benefits accrued from the WMAs established in their areas.

Moreover, although some studies on WMAs have been done in Tanzania, for examples include, Mwakaje *et al.*(2013) who assessed WMA in terms of opportunities and challenges Wilfred *et al.* (2010) who assessed WMA in terms of sustainable uses and problems faced, little debate on WMA has been reported in the literature (*Maliasili Initiatives*, 2013; Homewood *et al.*, 2015; Benjaminsen *et al.*, 2016; Bluwstein *et al.*, 2016; Moyo *et al.*, 2016; Salerno *et al.*, 2016). These past studies assessed the economic and social viability of WMAs and found that the viability depends on participatory planning and local support. In addition, it found that tourism potential is through interest, earnings and revenue to and distribution within local communities has been proven to compensate for opportunity costs of the participants.

In addition to the above, Pailler *et al.* (2015) assessed the impacts of Community-Based Natural Resource Management on wealth, food security and child health in Tanzania. Their main findings were that none of CBNRM governance regime demonstrates consistently different welfare outcomes than others. Furthermore, their findings show that wealthy households benefit more from CBNRM than poor households and CBNRM benefits appear to increase with longer periods of implementation. Perhaps evidence of CBNRM benefits is limited because CBNRM has not been around long enough to yield

demonstrable outcomes (Pailler *et al.*, 2015). Nonetheless, achieving demonstrable benefits to rural populations will be crucial for CBNRM's future success in Tanzania.

According to ESPA (2017), CWMAAs were designed to create a win-win situation for people and wildlife outside government-run national parks and game reserves. However, their findings suggest that CWMAAs are failing to deliver for people, while their effects on wildlife are yet to be assessed. Hence, despite the aforementioned studies done in relation to WMA, their focus was on social and economic viability, food health and security and if CWMAAs are benefiting communities. Therefore, none of the studies assessed the well-being effect from a women's perspective. Therefore, it is imperative to assess how women and especially those living adjacent to the WMAs are benefiting by engaging in these programs. Moreover, according to WWF (2014), it is claimed that the overall employment impact to the local communities in the WMAs is very small, and is limited only to men who pose as guides or porters hired during the hunting seasons only.

### **1.3 Justification for the Study**

Development interventions in natural resource management which also engage the communities such as the WMA have been found to improve income of the many rural poor men and women who are living adjacent to national parks or game reserves. However, uninformed interventions can cause disagreements or misunderstandings with such communities if they are not well informed on their expected benefits and on their participation in such conservation approaches such as WMAs. Therefore, the significance of this study is that it does provide information to policy makers and development partners who may then design and implement informed interventions in managing natural resources in Tanzania and other parts of the world where such approaches are practiced. Such information include income, education and other social services benefit to the

women beneficiaries involved in management of natural resources such as those involved in WMAs.

In addition, information generated by the study will show how the government through establishing WMA will meet SDG 1 and 15. In addition, the study is in line with Tanzania's Development Vision (TDV) 2025 and in particular the first target which focuses on high quality livelihood. Moreover, findings from the study could be useful during the review of Tanzania's Women and Gender Development Policy of 2000 (URT/MCDGC, 2000) and the National Strategy for Gender Development of 2005 (URT/MCDGC, 2005) which do not accommodate the current issues of development.

## **1.4 Objectives**

### **1.4.1 Overall objective**

The overall objective of the study was to determine the contribution of WMAs on women's well-being in Enduimet Division in Longido District.

### **1.4.2 Specific objectives**

Specifically the study aimed to:

- i) Identify the economic activities supported by the WMA in the Enduimet Division Longido district;
- ii) Evaluate the contribution of the Enduimet WMA to women's well-being<sup>1</sup> and
- iii) Examine the challenges faced by women involved in WMA's in the study area.

## **1.5 Research Questions and Hypotheses**

The study was guided by the following research questions:

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<sup>1</sup> Well-being has five dimensions of career, social, financial, physical and community (Rath, 2010). However, this study will not focus on the career and physical dimensions.

- i) What economic activities are supported by WMA in the study area and their magnitude in Enduimet WMA?
- ii) How do women benefit from WMAs supported economic activities in the study area?
- iii) To what extent does EWMA contribute to women's general well-being?
- iv) What are the challenges facing women engaged in the WMA's activities?

This study was also guided by the following hypotheses

- H<sub>1</sub> There is no statistically significant change in women's income after participating in WMA
- H<sub>2</sub> WMA social support programmes in education health and water services statistically influence women income in the study area, and
- H<sub>3</sub> There is no statistically significant change in women's participation in household decision in EWMA after their involvement in EWMA.

## **1.6 Organization of the Dissertation**

This dissertation contains five chapters. Chapter one presents the study's background information, statement of the problem, justification for the study, study objectives, research questions and hypotheses. Chapter two presents literature review the study's theoretical and conceptual framework and the knowledge gap being bridged. Chapter three presents the approach and methodologies used by the study, study's limitation and description of the study area. Chapter four presents the findings and their discussion. Chapter five presents the study's conclusions and recommendations.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Conceptualization of Key Concepts

##### 2.1.1 Wildlife Management

Wildlife management can be defined as the manipulation of wildlife populations and habitat to achieve a goal (Sargent and Carter, 1999). The purpose of wildlife management is to maintain populations of wild animals at levels consistent with the best interest of wildlife and the public (URT, 2007).

##### 2.1.2 Wildlife Management Areas (WMAs)

WMAs are approaches of Community Based Natural Resource Management (CNRM) aiming to involve local communities by giving them authority of managing the natural resources and to have a sense of ownership (WWF, 2014). WMA in the context of this study are areas set aside by village governments to enable local communities to benefit from wildlife resources and at the same time conserve these areas which are crucial as wildlife migratory routes and/or dispersal areas (Kaswamila, 2012).

##### 2.1.3 Well-being

Improving the well-being of citizens is a stated priority of many governments (Summers *et al.*, 2012; Bache and Reardon, 2013; Austin 2016). However, there is no singular definition of individual well-being (La Placa *et al.*, 2013) but, it is generally associated with multi-dimensional phenomena related to quality of life (Bache and Reardon, 2013; Austin, 2016), and going above and beyond simplistic measures of health status or the absence of disease (World Health Organisation (WHO), 1946). Conceptually, individual



well-being derives from physical, psychological, social and spiritual components (La Placa *et al.*, 2013; Boarin *et al.*, 2014; Taylor, 2015; Austin 2016); and it is context specific; and can vary over time (Kapteyn *et al.*, 2015; Woodhouse *et al.*, 2015).

Well-being is defined as “a state of being with others, where human needs are met, where one can act meaningfully to pursue one’s goals, and where one enjoys a satisfactory quality of life” (Austin, 2016). There are five elements of well-being according to Rath (2010) which are:

- Career well-being—how you occupy your time and liking what you do each day;
- Social well-being—having strong relationships and love in your life;
- Financial well-being—effectively managing your economic life to reduce stress and increase security;
- Physical well-being—having good health and enough energy to get things done; and
- Community well-being—the sense of engagement and involvement you have with the area where you live.

Therefore, the study adopted Rath’s (2010) modified dimensions or elements of well-being. However, the issue of career was dropped based on the assumption that none of the women beneficiaries from the study villagers are employed by WMAs.

#### **2.1.4 Women**

Women in the context of this study are any females above 18 years of age either married or not.

### 2.1.5 Economic activities associated with WMAs

The main economic activities are divided into several activities such as trophy and resident hunting, game cropping, photographic tourism, and beekeeping.

- (i) **Trophy and resident hunting:** Villagers have almost no control over tourist hunting, and the benefits generated are limited to cash which the hunting companies choose to give (they are not mandated to do so) directly to the communities to ensure their cooperation. However, few hunting companies have established special programs to provide direct benefits to the villagers in their hunting blocks. For example, Robin Hurt Safaris and Tanzania Game Trekkers (TGT) were among the first to establish such programs, charging their hunter clients a 20-percent surcharge on the game fees (Christophersen *et al.*, 2000). The surcharge is dedicated to village development programmes that the companies manage directly. In addition, 25% of the game fees collected by the government are remitted to the District Councils for supposed redistribution to the villages. Further to the above, villagers do also receive some indirect benefits in the form of routine public services such as construction of schools; health centres (Christophersen *et al.*, 2000). Currently, Homewood *et al.* (2015) argue that in 2012/13, Enduimet WMA received USD 129,000 as its share of revenues following State and district government taxation, which top slices roughly one-third of game viewing and half of hunting income.
- (ii) **Game cropping:** Game cropping is the commercial harvest of wildlife for meat, hides and other products. It is another consumptive economic opportunity carried out by visitors who are hunting under permits issued by the Wildlife Division (Christophersen *et al.*, 2000). Ideally, it is used as a mechanism to ensure that certain

species of wildlife do not exceed the carrying capacity of their habitat. The side benefits include game meat supplied to the communities and restaurants. The markets for the meat however, are not yet well developed in Tanzania. The Tanzania Wildlife Company (TAWICO) had a monopoly on game cropping in Tanzania until 1999. The future status of this arrangement is uncertain because TAWICO is currently being privatized and the policy is under review. Moreover, currently, TAWICO pays the government a fee for each animal harvested and sells the meat, hides and other products in urban and rural areas. (Christophersen *et al.*, 2000; Homewood *et al.*, 2015).

- (iii) **Photographic tourism:** Photo-tourism means all non-consumptive tourism-related activities, and it presents a clear economic opportunity for WMAs (WWF, 2014). However, actual potential could vary considerably, as it is a function of several factors such as accessibility, proximity to other major tourist attractions (such as national parks or Ngorongoro Conservation Area), the visibility of the WMA's wildlife and the presence of other attractions such as scenic vistas, etc. (Stephanie, 2014). Therefore, one of the main reasons for the increasing demand for photo-tourism development in the WMAs is that tourists can engage in walking safaris and night tours (Honey, 2008).
  
- (iv) **Beekeeping:** Beekeeping is an activity that is usually compatible with wildlife conservation and is usually allowed in WMAs. Beekeeping plays a large role in socio – economic development as well as in environmental conservation. Its honey, pollen and brood are a source of food; it provides raw materials for various industries, medicine and income for beekeepers. It is a source of employment,

provides income to the people, and is a source of recreation, ecotourism and foreign exchange earner (Christophersen *et al.*, 2000; Wilfred, 2010).

## **2.2 Communities Participation in Wildlife Management**

### **2.2.1 Policy and legal framework in community-based conservation**

The Tanzania's Wildlife Policy (WPT) of 2007 recognizes the responsibilities of the various institutions and actors concerned in wildlife conservation and their responsibilities in its implementation (URT, 2007). It further stipulates that, 'the overall executive and overseeing responsibility for the wildlife sector in Protected Areas (PAs) devoted to wildlife conservation and wildlife outside PAs and providing those communities with direct and indirect benefits from wildlife utilization. The strategies encourage local communities with viable wildlife populations to establish Community-Based Conservation (CBC) programmes through development of Wildlife Management Areas (URT, 2007).

The WMA regulations in 2002 became a new subsidiary law under the WCA of 1974. The government of Tanzania enacted the first WMA regulations in 2002 (revised in 2005), which detailed the process for establishing WMAs, and this was replaced by the 2012 WMA regulations. The process initiated the first WMAs on village lands and was a start point for the utilization of the Wildlife Policy's objectives. The regulations state that WMAs are areas set aside by the local communities to conserve and manage wildlife resources, and that the villagers are granted full responsibility. The goal is to empower the communities, so that they can take advantage of the benefits that come with wildlife resources and that complies with the policy (MNRT, 2002; 2003, 2005; URT, 2007).

### **2.2.2 Community's effective participation in wildlife management**

Fetterman (2005) and Shyamsundar *et al.* (2005) consider local community empowerment to have a direct influence and control on decisions that affect them. According to the above, empowerment is a process of giving someone and/or community power or authority while participation is its effective utilization. Kinyashi (2006) further argues that, power may be political, financial or psychological. Therefore, effective participation in wildlife management is a process in which communities are equipped with sufficient and necessary knowledge, skills, authority, psychological power and resources. However, Kinyashi (2006) argues that, participation is best defined according to the activity in which it is engaged to escape the difficulties inherent in defining the term itself. Kinyashi (2006) argues further that, genuine participation is the process where the local communities take part as a development partner and not as an object to change. Normally, the main concern in wildlife management is to achieve sustainability while the interests of the rural poor are taken on board (Songorwa, 1999).

### **2.2.3 Economic opportunities of WMAs**

In Wildlife Policy of 2007, the WMA clause provides for user-rights to local communities to engage actively in wildlife conservation and entrepreneurship while ensuring protection and conservation of the resources for their own benefits. It was envisaged that the WMAs would effect and encourage community-based conservation through involvement of rural communities and other stakeholders in taking joint responsibility for and investing in the sustainable management of wildlife and other natural resources. Additionally, the wildlife management area would devolve user rights for wildlife resource to local communities so that they can capture the economic benefits such as revenues from tourist related investments, tourist hunting, meat sales, and subsistence hunting, among others (MNRT,

1998; URT, 2007). Therefore, it is important for all the stakeholders to recognize that the economic opportunities will vary between different WMAs. Some will be well endowed with wildlife and other resources, while others less. Therefore, implementation of different economic opportunities will generate different levels of profitability and the WMAs will not be equally profitable.

#### **2.2.4 Communities mandate and functions in WMAs**

Establishment of Enduimet WMA aimed at devolving management responsibilities of wildlife resources to the local people and enabling them to benefit from wildlife through various business ventures such as consumptive and non-consumptive wildlife utilization while guaranteeing sustainable wildlife conservation. Generally, the WMAs aim at changing the attitude of local communities towards conservation, lower the cost of law enforcement and provide useful intelligence information regarding illegal activities (Nahonyo, 2005; Kideghesho, 2006; Brockington, 2007). Therefore, WMA is expected to be responsible in increased accountability and transparency in decision making towards management of wildlife. Also, it ensures effective management of the wildlife and more benefits to the local communities through tourism activities (Mpunde and Roskaft, 2011).

#### **2.2.5 A review of WMAs in Tanzania**

WMAs represent a new approach to wildlife management in Tanzania that has its roots in the late 1980s. In the country, this new approach emerged from the perceived failure of past, traditionally centralized wildlife management policies and practices (USAID, 2013). WMAs emerged during the reform process in the 1990s as a framework for communities to manage and benefit from wildlife. This strategic shift towards a community-based

conservation framework was enshrined in the 1998 Wildlife Policy of Tanzania. This policy promoted wildlife management at the village level by allowing;

“rural communities and private land holders to manage wildlife on their land for their own benefit” and “decentralizing management responsibility of the settled and areas outside unsettled PAs (protected areas) to rural people and the private sector” (USAID, 2013).

A Wildlife Management Area is an area of communal land set aside exclusively as habitat for wildlife by member villages (WWF, 2014). Involving local community in wildlife conservation became a new conservation approach worldwide after the failure of fortress approaches to conservation (Holmern, 2003). Local community participation in wildlife conservation came after realizing that conserving wildlife will not be possible if it will not involve local people. The main objective of the strategy was to involve people in conservation at the same time to help them to meet local livelihoods (Wapalila, 2008). The main objectives of the WMA process are to as follows: increasing participation of local communities in the management of wildlife resources, enabling local communities to derive benefits from wildlife resources and enhancing the conservation of wildlife resources (URT, 2013).

WMAs began to be formally implemented in 2003, following WMA Regulations first issued in 2002, and the first WMAs were gazetted in 2006. In 2009, Parliament approved a new Wildlife Conservation Act which enshrined WMAs in the overarching sectoral legislative framework. New WMA Regulations under the 2009 Act were issued in 2012, which contain a number of key changes, including strengthening the communities involvement and influence over trophy hunting concession allocations in WMAs, as well as providing greater clarity around benefit-sharing. These were critical improvements to the devolution of authority to the WMAs (USAID, 2013). This WMA approach began with 16 pilot WMAs. Five of these pilot WMAs became first formally registered in 2006-

07 (Ngarambe-Tapika, Mbarang'andu, Uyumbu, Burunge and Idodi-Pawaga), and by the end of 2012, 17 WMAs were gazetted with 21 more moving toward formal registration. From 2006 to 2012, the areas under WMA management nationwide grew from about 6700 to 27430 km<sup>2</sup> (>3% of the country's land area). Currently, there are 148 villages with a population of more than 440 000 people participating in WMAs (WWF, 2014). WMAs started as one of the tools in managing natural resources located within communities' land for their economic development because they have rights for wildlife conservation (Songorwa, 1999). Generally, the WMA innovation approach is about the transfer of managerial authority over benefits and capture of valuable wildlife resources to communities.



### **2.3 Theories Underpinning the Study**

Theories underpinning the study include the “social science theory of cognitive approach” (Pierce *et al.*, 2001) whereby the argument is that people will engage in wildlife conservation programmes in terms of perceived value, attitude and their norms. That is creating a WMA is a community-led effort. The process is designed to be transparent and involve many local residents representing all local interests. It is also, however, lengthy, bureaucratic, and costly. Communities will not likely be able to accomplish it without extensive outside expertise, facilitation, and funding. This module is designed mainly to let community members and leaders know what to expect for both process and results.

Another theory is that of “economics or natural resource management” whereby there are private properties or open access resource in natural resource/wildlife management. In natural resource management, an economic value, which, is defined based on human preferences is defined as a measure of what the maximum amount an individual is willing to foregone in other good and service or state of the world (Callan and Thomas, 2004). From this context there are four characteristics of economic value i) products or services have value only if human beings value them, directly or indirectly ii) Value is measured in terms of trade –offs and is therefore relative iii) Typically, money is used as a unit of account. iv) To determine values for society as a whole, values are aggregated from individual values.

Therefore, management of natural resource in Tanzania before Independence were under public goods concept whereby individuals were free to hunt animals freely, allow collecting firewood, cultivating in the wildlife areas without being questioned by anybody. This management approach resulted in depletion of wildlife and environmental degradation. After Independence the government introduced the wildlife Act which prevented the community from using freely wildlife resources. So it changed the use of

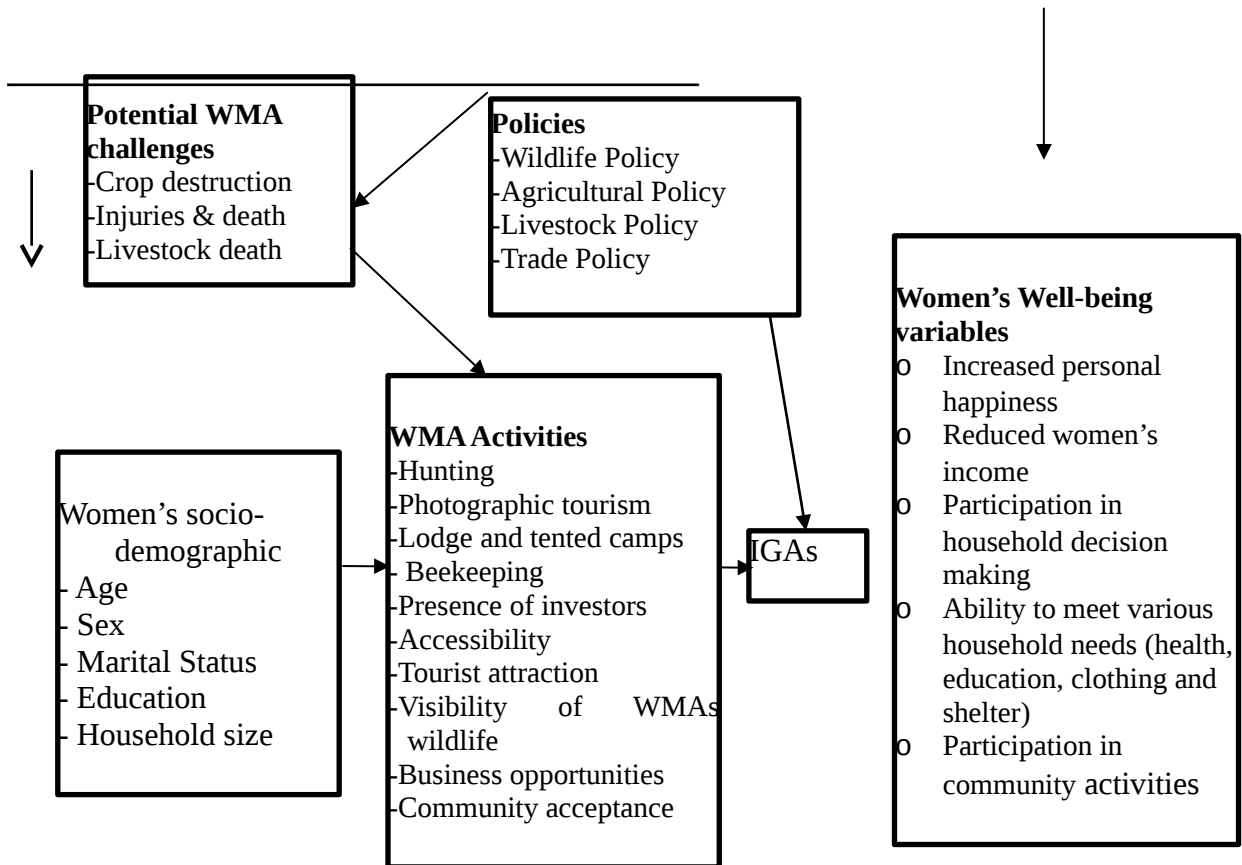
wildlife resource from being public goods to a private resource managed by government. This situation led to people to react and start to poach animals. However, this protectionist policy failed and thereafter government introduced community based conservation approach which transferred some of benefits back to the people. This study therefore tries to assess how these transferred benefits are reaching women through WMA as one of the community based conservation approach.

The third is the “psychology theory of well-being” whereby there are five elements which are career, social, financial, and physical and community (Rath, 2010). Moreover, in the psychology theory of well-being it is argued that it can either be subjective, objective and eudemonic (Anand, 2016). For subjective, the main issue is ‘happiness’ and this can be measured through hedonic measures such as momentary feelings, i.e. positive or negative, satisfied or not being satisfied and being happy or not. For objective well-being, the main issues are based on external items such as having basic needs and for the third domain of eudemonic, well-being is based on fulfilling ones desires based on human potentials (Anand, 2016). The theories are multifaceted criterion whereby humans perceive (what is in it for me), then decide to join but guided under natural resources management principles such as either private or public. This is because people cannot decide on their own to manage the WMA. At the end, they expect improvement of their wellbeing through either social, financial, physical or community benefits. Therefore, in this case one theory alone cannot hold due to peoples’ perception and expectations.

#### **2.4 Conceptual Framework for the Study**

The study’s conceptual framework (Figure 1) shows that women’s well-being can be influenced by the presence and proper functioning of EWMA in terms of social, financial, physical and community perspective. WMAs contribute to women’s social well-being by

influencing strong relationships within the family; financially by reducing economic insecurity; physically by ensuring good health and in community by ensuring strong engagement and involvement in community matters (Rath, 2010). All the benefits could be direct examples of funding from EWMA or indirect from revenue obtained from different economic activities such as agriculture, handicrafts, livestock keeping and through employment opportunities (village game scouts) paid salaries or through community supported projects in the area by WMAs example provision of water services and scholarship.



**Figure 1: The conceptual framework for the study on WMAs and women's well-being**

Therefore, it is expected that the success of the WMA's in contributing to women's well-being depends on the presence of an investor, accessibility, location of the WMA, visibility and abundance of wild animals. Furthermore, the performance of WMA is also influenced by the Wildlife Policy of 2007 (URT, 2007) which advocates for participatory

community conservation programme. Therefore, if women are involved in this community conservation programs then their well-being will be improved. Also, the Tanzania agricultural policy of 2015 (URT, 2015) has private sector development marketing and rural finance as one of the main component. So if government support these areas it also reaches rural women in the WMA's. This support will improve women's well-being. Livestock policy focuses on improving well-being of people whose principal occupation is livestock keeping. Therefore when commercializing this sector, it is vital to recognize women engaging in livestock keeping because, the effect of commercialization will also improve women's well-fair (URT, 2006). Trade policies also discuss about reduction of tariff and duties such that if women are involved in trade whose tariffs and duties have been reduced it means they will earn more from their business, hence their well-being will be improved (Emerton, 2001; URT, 2007). Generally, good policies and laws can motivate villagers and communities to engage in conservation activities through establishing own economic activities and being employed by investors in those businesses (Sanchirico and Siikamaki, 2007). Hence, all the activities are expected to open the market for environmental goods and services and thus, create incentives for sustainable and equitably sharing of WMAs benefits. These create an effective rural development programme through wildlife management.

The study, in determining the contribution of EWMA to women's well-being, used income as its proxy. It is expected that the income of WMA beneficiaries can increase through participation or engagement with WMA activities (Fontana and Natali, 2008). In addition, households income may also be improved through women's reduction of cost of social services such as health, education, water, through WMA support in those areas. For example, increase in water points can lead to a decrease in water costs. Or, the family's income may also be saved through education and health support programs under WMAs and be used for other life improvement expenses. However, despite the above benefits

there are possible challenges that may hinder WMA contributions to women's well-being these include crop destruction, injuries, livestock deaths and human deaths caused by wild animals (Loveless, 2014). These challenges can thus reduce opportunities that women will get from the WMA's. Nonetheless, by participating in the WMA related economic activities, women's well-being and their household's well-being can be improved through increased happiness, reduced income poverty, participation in household decision making, meeting household's needs and/or participation in community activities (Mariki, 2016). However, household size may affect well-being whereby large households will have more demand for resources example food when compared to small sized households (Emanuel, 2013).

## CHAPTER THREE

### 3.0 METHODOLOGY

#### 3.1 Description of the Study Area

The study was conducted in Enduimet Division in Longido District on the land basin of the Western foothills of Mount Kilimanjaro where the Enduimet Wildlife Management Area (EWMA) was established in 2003. The land for the WMA was allocated by nine villages of Kamwanga, Irkaswa, Lerng'wa, Kitenden, Olmolog, Elerai, Tinga Tinga, Ngereyan and Sinya and it covers an area of 1 282 km<sup>2</sup> out of which 86% was set aside as a WMA (WWF, 2014). The remaining 14% of the land is still under individual village jurisdiction. EWMA is predominantly occupied by the Maasai pastoralists and a few agro-pastoralists on the more heavily cultivated lands.

There are also other ethnicities such as the Chagga, Pare, Meru and Waarusha (Trench *et al.*, 2009; Mariki, 2016). Generally, extensive farming is practised in Enduimet Ward on the lower slopes of Mt. Kilimanjaro, and exclusively pastoralist land use is found in the arid lowlands around Sinya and Tinga Tinga. Therefore, selection of EWMA was based on ethnic diversity and presence of business investors (Sulle *et al.*, 2011), and the area being a wildlife corridor for the movement of wildlife between several National Parks of Kilimanjaro and Arusha in Tanzania and Amboseli in Kenya (Kikoti, 2009). Also, this is one of the four pilot WMA's, hence, the need for an evaluation as to how it contributes to women's well-being.

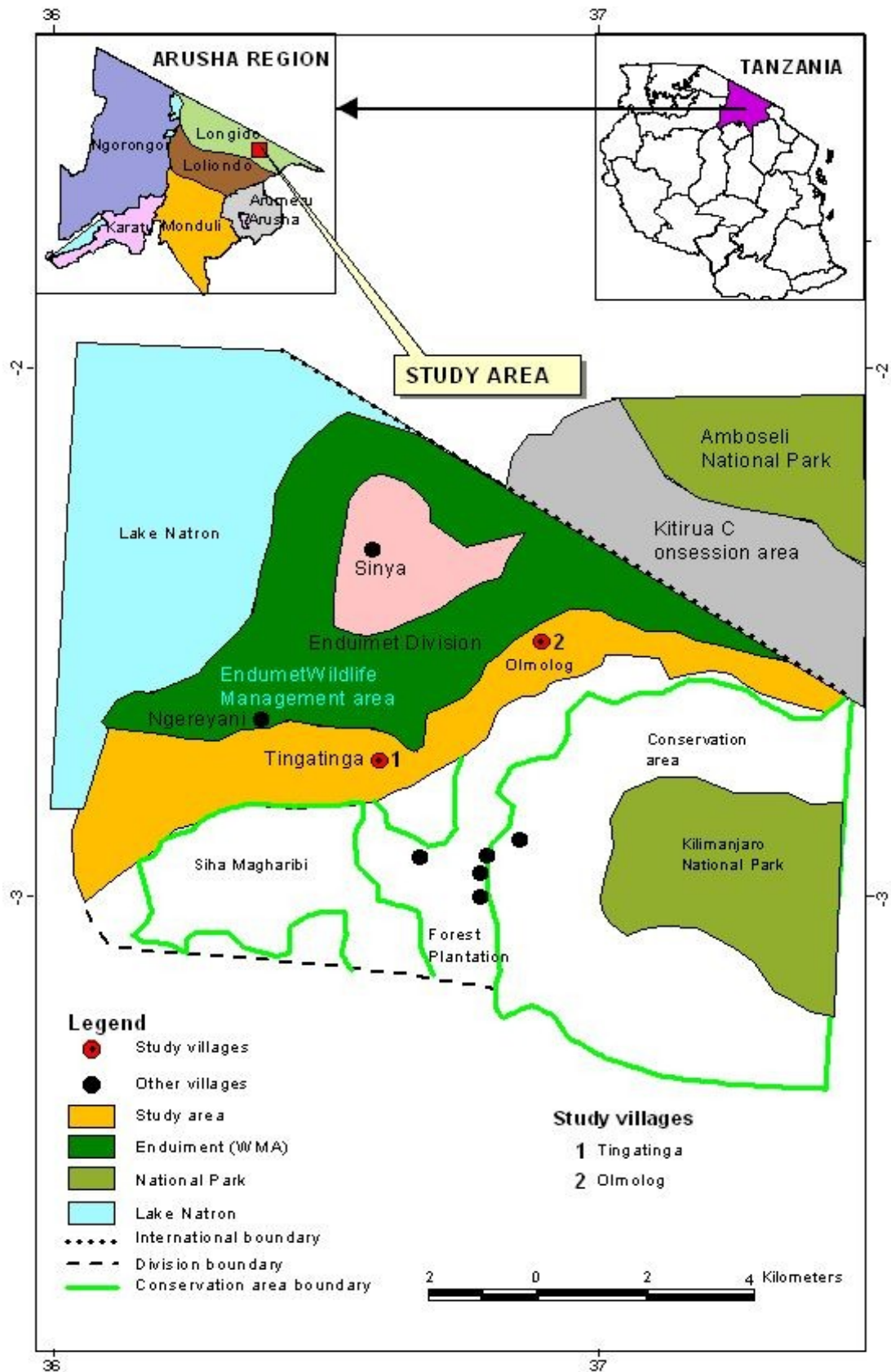


Figure 2: Map of Longido district showing the study area (EWMA)

**3.2 Research Design**

This study used a cross-sectional research design which allows data to be collected at a single point in time without repetition (Pandis, 2014). The reason for the choice of the design was that, it is appropriate for a descriptive study and for determination of relationship between and among variables (Thornhill *et al.*, 2009).

**3.3 Sampling Procedure and Sample Size**

The study adopted a multistage and simple random sampling technique whereby in the first stage, Enduimet was chosen purposefully from the first four pilot areas registered as WMAs. The second stage involved a random selection of two wards which were covered by EWMA of Olmolog and Tinga Tinga. The third stage involved a random selection of two villages one from each of the beneficiary wards. These villages were Olmolog and Tinga Tinga. The fourth stage involved random selection of the households from the study villages. Lastly, women were selected randomly from the identified households in order to reduce sampling bias.

**3.4 Sample Size**

The targeted sample was 161 respondents whereby in Olmolog village the target was 81 women and in Tinga Tinga the target was 80 women. The sample size was established based on the following formula by Singh and Masuku (2014):

$$\frac{Z^2 \times P(1-P)}{E^2} \dots \dots \dots (1)$$

Where:

Z = Value of Z, which is 1.96 at 5 % level significant

P = Proportion of women in the village

E = Margin of error which is equal to 0.1

N = Village population



The response rate was 73% for the Olmolog and 76% for the Tinga Tinga (Table 1).

**Table 1: Study response rate**

<b>Village</b>	<b>Targeted sample</b>	<b>Actual sample</b>	<b>Response rate</b>
<b>Olmolog</b>	81	59	73%
<b>Tinga Tinga</b>	80	61	76%
<b>Total</b>	161	120	74.5%

In addition, data was collected from four focus group discussions (FGDs), two from each village. The FGDs were made up of 6-8 people, hence, making a total of 32 participants. The study's unit of analysis is an individual woman.

### **3.5 Data Collection**

Primary data for the study were collected using a structured questionnaire (Appendix 1), a checklist (Appendix 2) for key informant interviews (KIIs) and a focus group discussion (FGD) guide (Appendix 3). The structured questionnaire was administered through face by face interview and telephone survey. FGDs were conducted with women who are farmers cultivating small plots of land. The following characteristics were considered when selecting participants for the FGDs: marital status, sex, age (elders, youth, and adults). The selection criteria were considered so as to get diverse information from experienced respondents about contribution of EWMA on women's well-being. In selecting some of the key informants age and sex were also considered. Older individuals were preferred for their historical experiences and changes in the EWMA. Two key informants' interviews were conducted in each village with village leaders and Natural Resources Committee regarding contribution of EWMA on women's well-being whereby females' respondents were selected in each study village. Opinion leaders/key informants included people who hold key administrative positions at village and district level. At the village level these included village chairpersons, Village Executive Officers (VEO),

Community Development Officers (CDOs), wildlife officials, natural resource conservation officers, tourism officer etc. Besides these officials, the study also identified some village members who were well informed about wildlife and natural resources conservation, management and tourism. The in-depth interviews aimed at generating information on the historical establishment of the WMA, expected and current benefits and those aimed for future generations, livelihood improvement after establishment of the EWMA and social support provided.

**3.6 Data Analysis**

**3.6.1 Quantitative data analysis**

***Objective 1:*** Data variables which answered objective one were analysed using SPSS for descriptive statistics i.e. frequencies, percentage and means to show the identified economic activities in the study area. This objective was further analysed using chi-square statistic

***Objective 2:*** First, a Paired sample T-Test analysis was done to test whether there was significant change in income before and after establishment of the EWMA. Secondly, regression analysis was done to find out if the change in income (as a measure of well-being) was influenced by access to education, health, and water.

$$\ln Y = +\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots$$

... (2)

Where;

$\ln Y$  = log of income

$X_1$  = Scholarship

$X_2$  = Distance to health facility

$X_3$  = Distance to water facility

$X_4$  = Household size

$X_5$  = Respondent's marital status

$X_6$  = Respondent's age

$X_7$  = Respondent's education level

$e$  = Error term

The study also assessed the change in household decision making before and after participation in WMA.

***Objective 3:*** Data related to objective three were analysed using descriptive statistics i.e. frequencies and means were determined to show the challenges faced by the women involved in EWMA. This analysis was carried out using SPSS version 20.

### **3.6.2 Qualitative data**

Qualitative data obtained from field observation, key informants and focus group discussions were transcribed, summarized and analysed through content analysis.

### **3.7 Limitations of the Study**

This community involved in the study were pastoralists, hence some members of the community were out of the villages looking for pastures so could not be found and

interviewed. However, a follow up was done, hence, they were interviewed through telephone.

## **CHAPTER FOUR**

### **4.0 FINDINGS AND DISCUSSION**

The study findings and discussion are presented in this chapter based on the specific objectives which are to identify the economic activities supported by the WMA in Enduimet division; assessing the contribution of Enduimet WMA to women's well-being and to examine the challenges faced by those women involved in WMA's in the study area. The chapter starts with the respondents' socio economic characteristics.

#### **4.1 Respondents Socio-economic Characteristics**

##### **4.1.1 Respondents' sex**

Since the research aimed at determining the contribution of WMAs on women's well-being in Enduimet Division in Longido District, the study only involved women respondents.

##### **4.1.2 Respondents' age**

The summary of findings as presented in Table 2 shows that respondent's age ranged from 21 to 65 years of whom 37.8% were well- off and 62.2% are not well-off. For example, those in the age category of 36-55 years 43.3% of them were well- off and 56.7% were not. As for the final age category of 56-65 years 75% were well off and the rest not. This indicates that most of the women covered by the study were still in their middle age and are likely to be receptive and active to conservation activities and can afford to carry out various productive activities as they engaged in economic activities done in the EWMA and own resources in their household (Mmasa, 2013). However, the well-being of the

middle aged women is less than that of older women. Suggesting that in addition to their involvement with WMA activities the older women might enjoy other sources of income from activities which they are engaged in. Furthermore, in relation to income earnings, it shows that there is a statistical significant ( $p \leq 0.016$ ) relationship between age and income (Table 4). On the other hand the high percentage in the category of 56 years and above of age is clear indication that a high percentage of the women in the study village are aged and dependent. A similar finding was observed by Emmanuel (2013) in the respondents' age structure. The group above 60 was considered to be of high dependency ratio, thus are treated economically as a less productive age group.

#### **4.1.3 Respondents' marital status**

Since the purpose of this research was to determine the contribution of WMAs on women's well-being, it was important to investigate whether respondents were married or not. The respondents who were married are about 100% and included those that are well-off and those who were not. This indicates that the majority of the women respondents were married (Table 2). The observation is a common phenomenon in most rural areas in Tanzania (Muywanga, 2004),

It was observed that marital status has a significant association with income earnings among the Maasai community, especially after the establishment of EWMA in the study area. It was found to be highly statistically significant ( $P=0.001$ ) (Table 4). As pointed above most of the respondent were married. This suggests a possibility of more labour availability i.e. in terms of children and spouses hence, a large labour force compared to those not married. Moreover, in marriage there is a possibility that for the married women each member can engage in more than one income generating activity which cumulatively

can raise their total household income. Therefore, participation of women in Enduimet WMA could be based on the need to gain income to supplement or complement other family income sources.

Moreover, the influence of marriage are also reported by Emmanuel (2013), who argues that marriage has an effect in population activities as it affects the availability of labour in the household, which in turn is associated with the possibility of engaging in forest management and utilization. Married women play an important role in educating their family and friends as they associate with many aspects such as socio-economic activities. According to Muywanga (2004), married women participate in various economic activities mainly to supplement their husband's income. However, despite the fact that marital status has influence on income earnings, it was found that more than half (54.5%) of the women were not well-off, which implies that household income earnings might have been controlled and owned by the males or by their husbands. This phenomenon is common in the Maasai community whereby the patriarchal system is rampantly practiced (Mariki, 2016).

#### **4.1.4 Respondents' education level**

Education and training equip learners with skills and knowledge which enable them to live and positively contribute towards the development of their society and environment (Nshobemuki, 2009; Woodroffe *et al.*, 2005; Milner *et al.*, 2014). Education is always valued as a means of liberation from ignorance. However, results of this study (Table 2) show that the majority (54.5%) of respondents with no formal education were well-off compared to 40.9% and 43.8% of the respondents with some education i.e. standard 2-5 and those who had completed primary school respectively. This shows that the association of education with the well-being of the respondent is yet to outpace the impact of lack of

formal education. These findings suggest that less educated individuals could be facing the challenge of getting formal employment, hence opt for WMA activities. Furthermore, in most Maasai communities female literacy rate is low (Mariki, 2016). This is attributed to the Maasai culture of forcing girls into early marriage, or sometimes giving them heavy workloads, and low support for girl's education (Mariki, 2016).

Furthermore, Kamwenda (1999) argues that level of education is considered as important factor in relation to natural resource utilization and conservation. Generally, an increase in education level does increase options of respondents to identify livelihood options (Mayeta, 2004). In addition, Maro (1995) and Murphree (2009) argue that primary education can foster human creativity, community readiness to integrate innovation, into sustainable use of natural resources and management. Moreover, Munishi *et al.* (2007) and Kideghesho *et al.* (2007) claim that better educated residents have access to better employment and that education has a direct influence towards people's participation in conservation activities. Furthermore, education creates awareness, positive attitudes, values and motivation for better natural resources management among the people.

#### 4.1.5 Respondents' household size

Results show that 53.4% of the respondents who had household size ranging between 2-7 members were well-off, whereas only 23.5% of households with 8 members and above were well off. However, about half (46.6%) of the households with lower household size of 2-7 members are not well-off compared to over three quarters (76.5%) of the large households. The observation suggests that in this community the household size has influence on the well-being of the households (Table 2). The study's observations is in line with the debate in literature that household economic and social status is influenced by the household's size.

Furthermore, it is argued that smaller households have a better economic stand than the large sized ones due to increased dependency. The larger the household, the more the struggle on how to satisfy their basic needs. Therefore, large households' may face challenges in meeting household basic needs in terms of food, housing, education costs among others. Hence, it may be forced to engage in various economic activities such as those offered under EWMA. Thus, women are placed in such a dire position to support the dependents through these activities such as farming, livestock keeping, horticulture and tourist related trading.

**Table 2: Respondents socio-economic characteristic and women's well- off status (n=120)**

Characteristic	Well-off		Not well off		
	Freq		Freq		
<b>Age (years)</b>	21 – 35	14	(37.8)	23	(62.2)
	36 – 55	29	(43.3)	38	(56.7)
	56 – 65	12	(75)	4	(25)
<b>Education level</b>	No formal education	18	(54.5)	15	(45.5)
	Some primary (2-5)	9	(40.9)	13	(59.1)



	Completed Primary	28	(43.8)	36	(56.3)
	Secondary education	0	(0)	1	(100)
<b>Marital status</b>	Married	50	(45.5)	60	(54.5)
	Single	0	(0)	1	(100)
	Widowed	4	(80)	1	(20)
	Separated/Divorced	1	(25)	3	(75)
<b>Household size</b>	2-7	55	(53.4)	48	(46.6)
	8 <sup>&gt;</sup>	4	(23.5)	13	(76.5)

NB: Numbers in the brackets indicate percentage

#### 4.1.6 Respondents main occupations

The respondents' main socio-economic activities in the two villages included agriculture, livestock keeping, and selling curio goods. These opportunities, if properly supported and managed, could help households in the EWMA earn substantial incomes towards improving their livelihood. Agriculture being the backbone of most of rural communities is the major economic activity and main contributor to poverty reduction. The above economic activities are similar to those reported by Mmasa (2013), who argued that the agricultural sector in Tanzania is characterized as female intensive, meaning that women provide labour force in agriculture. Agriculture also comprises a greater part of women's economic activities than men's. About 81% of women, compared to 73% of men are engaged in agricultural activities (Ellis *et al.*, 2007). As shown in Table 3 respondents who engaged in wage (2) and farm casual activities (3) were found to be in the well-off category. As regards other income earning activities there is almost equal proportion between the well-off and non-well off groups. Very few women were engaged in small-scale business, or public employment for instance the income earned from those women who were found to be engaged in some employment and casual farm labour was statistically and significantly ( $P \leq 0.05$ ) higher than those of the other respondents. The observation seems to suggest livestock keeping and farming may not be the only sources of livelihood for the Maasai community.

Based on the above WMA's could promote or encourage the Maasai community to actively engaged in non-farm activities to reduce pressure on land. Moreover, women's involvement in business enabled them to properly employ themselves and "reduce dependency on family members". The study's observation is in line with previously reported work of Jamali (2009) who also found that, the pursuit of financial independence motivated women entrepreneurs to engage in business in order to take control of their life and career. The quote below is a testimony to the above.

*".....For some of us, earning from tourist related business is enable us to improve wellbeing by access to better diet, medical services, and pay school fees for our children."*

(A 49 year old female respondent Tinga Tinga Village 6/12/ 2018)

Generally, money obtained from business enables women to provide support in terms of covering basic needs for their household life status. The study's findings are also supported by Datta and Gailey (2012) who argue that women are generally motivated to engage in entrepreneurial activities because the resultant incomes enables them to provide good education to their children.

#### **4.1.7 Respondents residence history**

The majority (52.8%) of the respondents who were born in Enduimet are well-off while the rest are not. For those who were not born in EWMA most (78.6%) are not well-off (Table 3). The observation suggests that those born in the EWMA could benefit more due to having sufficient knowledge of the area thus, the possibility of engaging in the relevant

economic activities that allow them to earn extra income. Most of those not born in the EWMA migrated to the area because of family matters such as marriage.

**Table 3: Occupation of the response and residency status (n=120)**

Characteristic	Status	Well-off		Not well off	
		Freq	(%)	Freq	(%)
<b>Occupation</b>	Farming	55	(46.2)	64	(53.8)
	Livestock keeping	54	(46.2)	63	(53.8)
	Small business	7	(35)	13	(65)
	Selling curio goods	45	(48.4)	48	(51.6)
	Wage from employment	2	(100)	0	(0)
	Casual farm worker	3	(100)	0	(0)
<b>Native to Enduimet</b>	Yes	56	(52.8)	50	(47.2)
	No	3	(21.4)	11	(78.6)

*NB:* Number in brackets indicate percentages

**Table 4: Comparison of women income status before and after EWMA**

Characteristic	Estimated income								P-Value
	F	%	F	%	F	%	F	%	
	<=500,000		500,001-1,000,000		1,000,000-1,500,000		1,500,001-2,000,000		
<b>Age</b>									
21-35	23	19.2	13	10.8	0	0.0	1	0.8	0.016
36-55	38	31.7	26	21.7	3	2.5	0	0.0	
56-65	4	3.3	10	8.3	0	0.0	2	1.7	
<b>Household size</b>									
0-4	20	16.7	12	10.0	1	0.8	1	0.8	0.990
5-8	30	25.0	23	19.2	2	1.7	1	0.8	
9-12	14	11.7	13	10.8	0	0.0	1	0.0	
>=13	1	0.8	1	0.8	0	0.0	0	0.0	
<b>Education</b>									
No formal education	15	12.5	14	11.7	2				0.702
Not completed pr. school	13	10.8	9	7.5	0	1.7	2	1.7	
Primary school	36	30.0	26	21.7	1	0.0	0	0.0	
Secondary school	1	0.8	0	0.0	0	0.8	1	0.8	
						0.0	0	0.0	
<b>Marital status</b>									
Married	60	50.0	4	39.2	1	0.8	2	1.7	0.0001
Single	1	0.8	0	0.0	0	0.0	0	0.0	
Widowed	1	0.8	1	0.8	2	1.7	1	0.8	
Separated	3	2.5	1	0.8	0	0.0	0	0.0	
<b>Income earning activities</b>									
Farming (current)	64	53.3	49	40.8	3	2.5	3	2.5	0.837
Farming (previous)	113	94.2	5	4.2	1	0.8	0	0.0	0.974
Livestock keeping (current)	63	52.5	48	40.0	3	2.5	3	2.5	0.963
Livestock (previous)	111	92.5	5	4.2	1	0.8	117	97.5	0.922
Small business (current)	13	10.8	5	4.2	1	0.8	1	0.8	0.363
Small business (previous)	18	15.0	2	1.7	0	0.0	0	0.0	0.329
Casual labor (current)	0	0.0	3	7.9	0	0.0	0	0.0	0.214
Casual labor (previous)	3	7.9	0	0.0	0	0.0	0	0.0	0.671
Hand craft (current)	48	40.7	42	35.6	1	0.8	2	1.7	0.131
Hand craft (previous)	90	76.3	3	2.5	1	2.5	0	0.0	0.085
Wage from employment (current)	0	0.1	1	2.5	1	2.5	0	0.0	0.021
Casual farm labor	1	2.5	1	2.5	0	0.0	0	0.0	0.019

#### 4.1.8 Respondents major income sources and amount earned

The findings as presented in Table 5 below show the respondents major income sources and average annual income earned. Table 5 shows that more than a half (57%) of the respondents are self-employed, whereby their income sources include farming, activities, livestock keeping and few (3.3%) from tourism related business. The results of the present study are similar to those reported by Sulle *et al.* (2011) demonstrated that in the case of Enduimet in Northern Tanzania villages have set aside over 90% of village land where 90% of community livelihoods come from farming and herding. Further to the above findings, the study shows that the average annual income generated by more than half (53.3%) of the women in EWMA ranges between 500 000 and 1 000 000 TSh. as shown in Table 5.

**Table 5: Respondents major income sources and amount (n=120)**

<b>Characteristic</b>	<b>Frequency</b>	<b>Percentage</b>	
<b>Major sources of income</b>	Farming	69	57.5
	Livestock keeping	45	37.5
	Hand craft for selling	4	3.3
	Wage employment	1	0.8
	Casual worker	1	0.8
<b>Average Annual income (Tsh)</b>	Less than 500 000	50	41.7
	500 000 – 1000 000	64	53.3
	1000 0001 – 1500 000	3	2.5
	1500 001 – 2000 000	3	2.5

#### 4.2 Economic Activities Supported by Enduimet WMA

The study findings as presented in Table 6 show that about 31.7% of the women in Enduimet WMA mentioned financial grants support. Others mentioned road construction support, provision of torches for scaring wildlife to avoid destruction of field crops and support of collection poles for household construction. The study findings further showed that EWMA provides capital for business start-up whereby women in the villages organised themselves into groups and thereafter receive seed money of TSh. 700 000 to

support various economic activities in their groups. It was also noted that these groups were established mainly to assist women reap the benefits of the growing tourism activities in their areas.

Observations from the FGDs and key informant interviews show that besides capital, the women were also trained on business skills, improvement of design style of baskets, mats and other weaved products. In addition, women were also trained on marketing of their products which were targeted to both the local community and tourist who visit Enduimet. Surprisingly, it was observed that over two thirds (68%) of the respondents were not aware of the support, the study is of the opinion that the support given to the community has assisted the women play a significant role in poverty alleviation at household level, hence to improve their well-being (Fedderke *et al.*, 2006).

Observation from the study show that, despite the efforts done by the EWMA in trying to support reduction of field crops destruction by wild animals through offering of torches, the impact of this support has not been significant due to the fact that large numbers of the wild animals are not easily chased away using these torches.

#### **4.2.1 Infrastructure support**

The study findings (Table 6) show that EWMA constructed roads for the community. This support has simplified women's movements from their farms to the market places to sell their produce. According to the literature (Fedderke *et al.*, 2006) access to markets can be one of the areas that assist in poverty reduction through income growth obtained from crops sales. In addition, the roads also eased the passage to women's daily fetching clean water. During the FGDs conducted in Tinga Tinga and Olmolog, it was observed that

infrastructure support has simplified women's movements from their farms to the market places to sell their produce. The study's finding is similar to that of Fedderke *et al.* (2006) who argued that infrastructure provision has an important link with productivity, economic growth and finally the well-being of the people.

**Table 6: Specific socio economic support provided by WMA (n=120)**

Socio-economic support provided by WMA	Response	Frequency	Per cent
Financial grants to women group	Yes	38	31.7
	No	82	68.3
Road construction support	Yes	105	87.5
	No	15	12.5
Provides torch for prevention of wild animals	Yes	105	87.5
	No	15	12.5
Support of collecting poles for construction	Yes	108	90
	No	12	10

*NB:* The totals in the table could exceed 120 due to multiple responses

#### 4.2.2 Women's response on economic activities supported by EWMA

The findings from the study show that about three quarters (74%) of the respondents claimed to collect firewood, poles and fetch grass for household construction in the areas under the WMA. In addition, they also fetch water from sources conserved under the EWMA (Table 7). All these benefits help to meet their basic needs hence, improve their livelihoods. Moreover, fuel wood is used as one of the main sources of energy in many Tanzanian household, in rural areas it is used not only to cook meals but also to provide warmth and lightning when needed (Fontana and Natali, 2008).

Other products collected around EWMA are poles for immediate household construction and building of fences around the homesteads. The poles are also used in manufacturing of beds and storage facilities for harvested crops. Therefore, from the economic point of view, pole collection minimizes cost that could be spent on buying furniture (beds, chairs

and tables) and steel fences. Moreover, trees stems and poles are also used on farms preparation and making farm boundaries to protect crops from wild animal and sometimes act as wind breakers. Observation from the focus group discussions in Tinga Tinga and Olmolog show that women depend directly on access to natural resources such as fuel wood and fodder, poles and grasses for their livelihoods including the sale of such products. The observation is supported by literature (Fontana and Natali, 2008) whereby it has been reported that an estimated 1.6 billion people in the world depend on natural resources in part, or totally for their livelihood and food security requirements. The findings are also in line with those of Marshall *et al.* (2006), who found that non-timber forest products, poles, honey and wild fruits, contributed to poverty reduction in Mexico and Bolivian Central America.

Furthermore, the provision of water and firewood by the WMA has helped women especially those from low income households and has decreased their work load resulting into increased resting time and enough time to attend domestic chores, reduced harassment and gender violence, reduced conflict thus, helping them manage their families. The above can greatly lead to improve their well-being. The results are similar to those of Mariki (2016), who reported that women in Nepal walk over 20km per day in search of firewood. Moreover, these women claim that access of water reduces the long walking distance in search of these resources. Another study done by Ellis *et al.* (2007) and Charle *et al.* (2016) pointed out that Tanzanian women spend more time and effort than men overall when it comes for providing water and firewood to their households. Furthermore, Zambelli *et al.* (2017) claim that the collection of water and fuel (such as firewood) are the most physically demanding and time consuming care tasks that women regularly undertake. Moreover, Fontana and Natali (2008), claim that millions of hours could be saved through improvements in infrastructure involved in water collection, fuel collection



and food preparation time. Consequently, the saved time could then be spent on more productive work or devoted to more rest and recreation (Fontana and Natali, 2008) which will then lead to improved livelihoods and ultimately to women's well-being.

**Table 7: Activities done by respondent's in the EWMA (n=120)**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
Firewood collection	Yes	89	74.2
	No	31	25.8
Collection of building materials	Yes	82	68.3
	No	38	31.7
Fetch water	Yes	120	100
	No	0	0

#### **4.2.3 Business activities undertaken by women in EWMA**

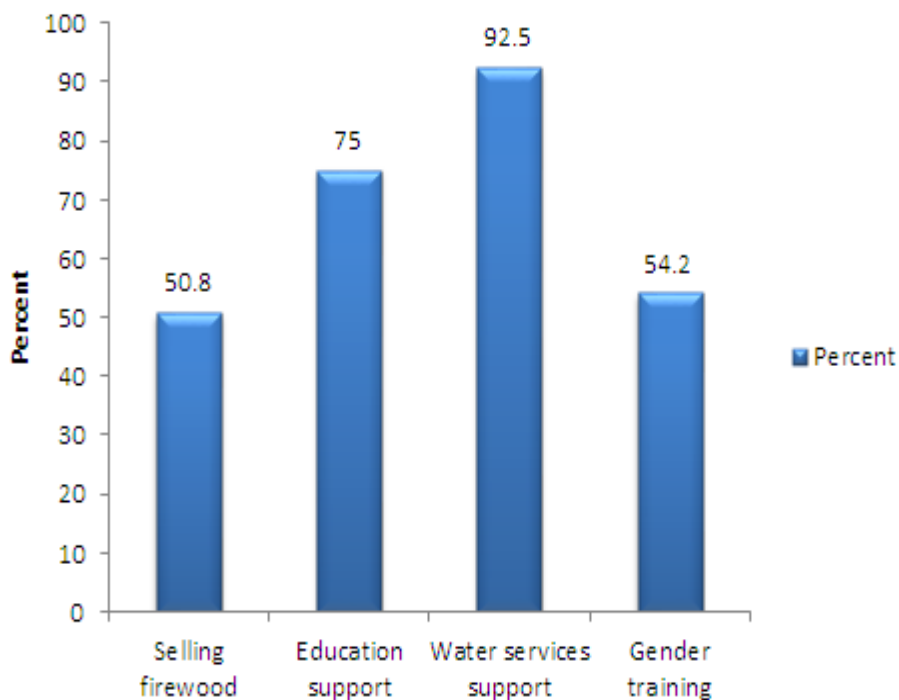
The study findings show that half (50%) of the respondents in EWMA are engaged in selling firewood as an economic activity based on their involvement in WMA activities (Fig 3). According to the respondents, selling firewood assists them to generate income which sometime is used to meet their households other basic needs. In addition, availability of firewood enables their households to save on fuel cost hence, more income to meet other household needs (Fontana and Natali, 2008).

#### **4.2.4 Social benefits obtained through engagement with EWMA activities**

Study findings as presented in Fig 3 show that most (92%) of the women in EWMA claim that water services provision, educational support such as building classrooms and scholarship to students of both primary and secondary, and gender training were among the social benefits obtained through from the EWMA. Generally, the provided social benefits for example water services near the village reduce women's workload in terms of walking distance to fetch water. Therefore, allowing women more time with their families.

So it will allow the women to have recreation time hence, improving their well-being. Moreover, educational support such as building classrooms and the scholarships offered enable some of their children to attend school at least to have primary education, secondary education and even higher levels of education for those who progress. Therefore, families save money which would have been paid as school fees. Therefore, the saved money can be used as capital for their small business and to buy other household requirements, hence improving their livelihoods. Discussions with key informants, village and WMA leaders in Olmolog and Tinga Tinga revealed that a significant portion of the money is committed to a large number of community social services depending on the preferences in that year. Such services include health services, schools, construction of village office, students' scholarship and supply of water. A similar observation has been reported by Kaswamila (2012), that funds from the WMAs to villages were mainly used for provision of social services construction of classrooms, dispensary and village government offices payment for allowances to WMA staff during meetings and seminars, bursary to students and in supplementing to village government revenues.

Training in gender issues is also considered as a social benefit as many women do not know their rights. Therefore, through the trainings they could be empowered and be better placed when it comes to their participation in household decision making. However, despite gender training being provided by EWMA, some women are still dominated by their husbands who normally make all the decisions for the households. This finding is similar to what has been reported by Mariki (2016) that in patriarchal communities, women are generally regarded as inferior thus, lack property ownership rights, and power to make decisions on their own lives.



**Figure 3: Economic and social benefits accrued by women from EWMA**

#### 4.2.5 Satisfaction with EWMA support

According to the study findings in Table 8, about 77.5% of the respondents were satisfied with the support provided by EWMA. The reasons for the satisfaction include the EWMA’s ability to conserve the natural resources for future generations. Other reasons include the ability of EWMA to assist them to improve their livelihood, increased income source and property (farms) security. During the FGDs, women reported that they are satisfied with EWMA support as the same improved their livelihoods and led to better conservation of natural resources, as shown in the quote below:

*“...Generally, we are satisfied with the support provided by EWMA, for example such as provision of poles for construction, provision of torches for scaring wild animals to avoid destruction of field crops. Moreover the majority of us do not have enough money to buy material.”*

(A 38 year old female respondent at Tinga Tinga village Longido district 5/12/2018)

The study's observation confirms to what has been reported by other researchers (Stephanie, 2014; Pailer *et al.*, 2015). According to Stephanie and Pailer *et al.*, (2015), local people participate in wildlife management and economically benefit from this participation, such that wildlife is conserved and at the same time the community welfare is improved.

**Table 8: Respondents' Satisfaction with EWMA (n=120)**

	<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Respondents' satisfaction with EWMA	Yes	93	77.5
	No	27	22.5
	Increase income	25	26.9
Reasons for satisfaction with WMA	Conserves resources for future generations	93	100.0
	Improve livelihood	69	74.2
	Provide access /security to resource property	33	35.5

### **4.3 Contribution of EWMA to Women's Well-being in the Target Villages**

#### **4.3.1 Contribution of Enduimet WMA to women's income**

Generally, the Enduimet WMA supports the agricultural sector, infrastructure and small business development. Other support provided include poles for house construction, animal feeds and training in community empowerment. Further to the above, the study's tested whether there is a statistically significant difference in women's well-being before and after establishment of EWMA, average household income before EWMA establishment was TSh. 292 375. However, after EWMA establishment of EWMA the income increased to TSh. 587 083, the differences between the two averages is TSh. 294 708. The difference was found to be statistically significant at 95% ( $P=0.001$ ), as shown in Table 9. Due to the income changes it shows that EWMA has contributed to improving women's income which in turn improves their well-being. Discussions with FGDs in Tinga Tinga and Olmolog showed that before EWMA was established women's incomes

were low because the majority were involved in farming and livestock keeping only. However, after establishment of EWMA women's income increased as women started to engage in small businesses i.e. hand craft like making beads, matts, and jewellery, selling horticultural products to the campsite near EWMA which allows them to generate more income and meet their household's basic needs.

The study findings are similar to those reported by Kari and James (2010) from a study conducted in Longido district in Elerai, Kimoukuwa, and Tinga Tinga that more than two thirds of households earned some income from livestock sales and 20-25 per cent earned over TShs 500,000 in 12 months. Generally, EWMA has to some extent improved women's well-being from the income perspective.

**Table 9: Comparative income among the family before and After WMA**

	Paired Differences		t-Test	Degree of Freedom	Significance. (2-tailed)
	Mean	Std. Deviation			
Estimated annual income for the family currently - Estimated annual income for the previous	294 708.3	161 042.2	20.047	119	.000

The study finding as presented in Table 10 show that EWMA contributes to household well-being in terms of scholarship. Table 10 shows there is a significant ( $p < 0.001$ ) influence change in the household income. It implies that household who benefit from WMA scholarship has 29.5% higher chances of increased income.

#### **4.3.2 Factors influencing income of the women participating in EWMA activities**

The study also assesses factors that influence the income of women who are participating in EWMA. These factors are health, water points and education. The findings as presented

in Table 10 show that access to a health centre that has been supported by EWMA significantly ( $P \leq 0.099$ ) influence women's income. This implies that increase in distance to a health centre reduces a household's income by about 9%. Hence, the longer the distance to the health centre, the costly it becomes to access the service, hence affecting women and their households well-being. On the other hand, households living closer to the health centres do enjoy higher benefits or contribution from the WMA (Pailler *et al.*, 2015).

The findings as presented in Table 10 also show that access to a water point has positive influence on changes in household income at 2.4%. That is, as WMA reduces the distance from the households to their water fetching points, the more income is available for other household needs. This suggests that households benefiting from WMA water access have higher income savings than before. Therefore, the savings can then be used to meet households needs and thus improving their well-being (Fontana and Natali, 2008).

In addition, marital status has positive influence (0.016) whereby married women have higher chances of saving income targeted to education since their children may directly or indirectly benefit from WMA sponsored scholarship.

**Table 10: Regression analysis results of the assessment of contribution of WMA activities on women's well-being**

Variable	Coefficient	Std. error	t-value	Sig
(Constant)	11.656	0.291	40.087	0.000
Child benefit from WMA supported scholarship	0.295	0.085	3.477	0.001***
Access to health centre measured in Km	-0.099	0.058	-1.713	0.090*
Access to water point measured in Km	0.024	0.040	0.598	0.551
Household member	-0.019	0.017	-1.160	0.248
Marital status	0.016	0.063	0.263	0.793
Respondent age	0.014	0.005	2.967	0.004**
Education level	-0.038	0.051	-0.744	0.459

\*Slightly significant (0.1); \*\*significant (0.05); \*\*\* highly significant (0.001)

### **4.3.3 Women's involvement in household decision making and income spending choices**

The study shows that most (62%) of the surveyed women are not equally involved in the process of household decision making. These findings are similar to those reported by Ngoitiko (2008) and Mariki (2016) that Maasai women are generally regarded as inferior thus, leading to their lack of property ownership rights and power to make decision on their own lives. Furthermore, women are only responsible for domestic tasks including building their bomas (huts), collecting water, looking for construction materials. In addition, women are required to collect firewood for cooking, taking care of the children and growing crops for basic household food supply.

### **4.3.4 Women's participation in community decision making**

The study findings (Table 11) show that under a third (30%) of the surveyed women in EWMA participate in village meetings. In addition, 87% of the women in the study did not participate in decision during the village meetings, generally the women stay quite during these meetings, only a few (13%) of the women do air out their opinions during these meetings. The above is mainly due to the fact that most women fear oppression from the men, who do not want the women to speak during village meetings (Mariki, 2016). Observation from the study also shows that more than three quarters (85%) of the women in the study area attend meetings. However, attendance in the meetings does not clearly show if they do participate in decision making and airing their voices. Generally, the patriarchal system in the Maasai society limits women from speaking or airing out their opinions and voices and this can be worse due to their low levels of education. These two factors lower women's confidence to speak out in public. However, in order to reduce this

setback Maasai women normally select one or two of their colleagues to speak on their behalf (Mariki, 2016).

**Table 11: Surveyed women’s involvement in decision making at community household levels**

		<b>Frequency</b>	<b>Percent</b>
Respondents’ involved in decision making	Yes	46	38.3
	No	74	61.7
Who determines how income generated is spent	Husband	69	57.5
	Wife	6	5.0
	Both	45	37.5
Respondents’ participation in village meetings	Yes	37	30.8
	No	83	69.2
Village meetings and make decision	Yes	15	12.5
	No	105	87.5
Able to participate in influence policy	Yes	102	85
	No	18	15

*NB:* Responses may exceed 120 due to multiple responses

#### **4.4 Challenges Faced by the Women Involved in EWMA**

According to the study, the respondents claimed that destruction of crops by wild animals was a major constraint. Other constraints encountered by women in EWMA are as injuries and deaths of livestock due to attacks by wild animals. These findings are also supported by literature (Loveless, 2014; Homewood *et al.*, 2015) who argue that challenges faced by women in EWMA include injuries and deaths of people and livestock. However, damage to crops from wildlife causes greater concern for women than for men, because women are the ones who are engaged much in agricultural activities to provide food for their families. FGD participants from Olmolog and Tinga complained about destruction of crops by wildlife which results to crop loss before harvest. To emphasize on this, one FGD participant said:

*“Crops destruction due to wildlife causes more hardships such as crop loss, property damage fear, and sleepless nights.”*

(members of an FGD, in Olmolog village Longido District, 8 Dec 2018)



Further to the above, during the key informant interviews with village and WMA leaders it was reported that, common human-wildlife conflicts include livestock loss to predators, environmental and crop destruction by elephants attack on humans and crop farmland destruction to be major challenges to both EWMA and the surrounding communities. These results concur with what has been reported in literature (Ferraro, 2002; Brockington and Igoe, 2006; Kideghesho, 2006; Mackenzie and Ahabyona, 2012; Homewood *et al.*,2015) which shows that further hardships suffered by local communities include human-wildlife conflicts such as crop loss, property damage, livestock predation, human deaths, injury and fear, sleepless nights while guarding crops from wildlife, hence, affecting women's general well-being in terms of food insecurity, increased fear, loss of income, and psychological torcher.

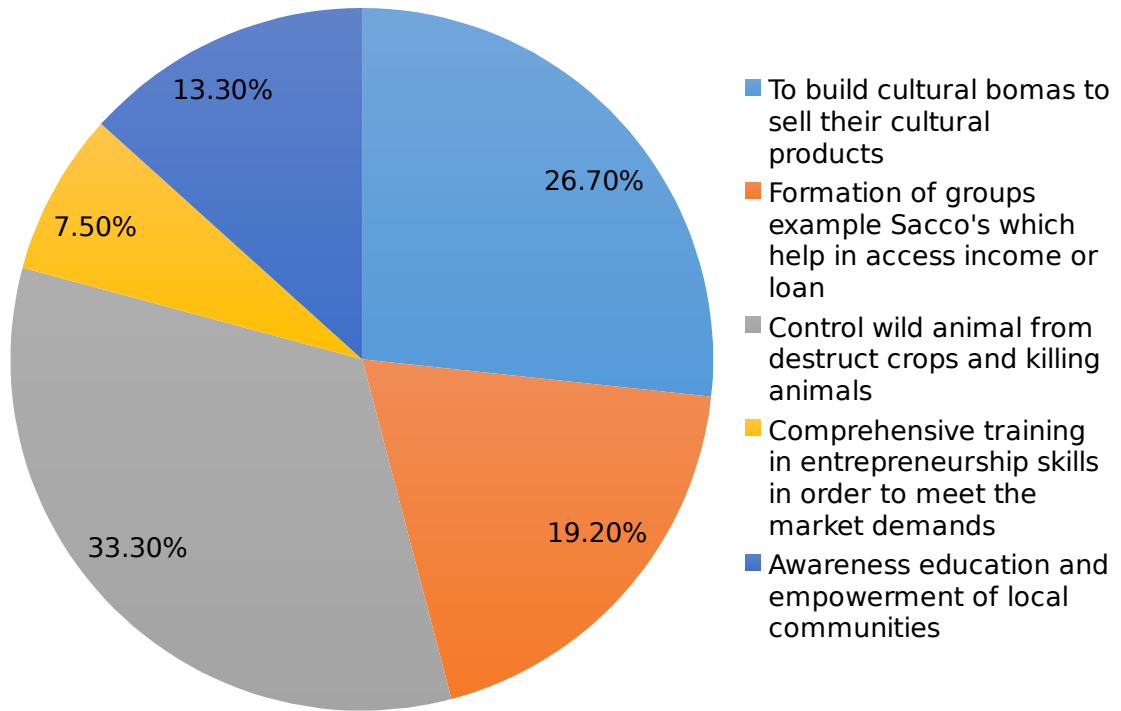
**Table 12: Respondents' challenges due to the existence of WMA (n=120)**

<b>Respondent challenges due to existence of WMA</b>	<b>Frequency</b>	<b>Percentage</b>
Wild animal attack	73	60.8
Destruction of crop by wild animals	120	100.0
Misunderstanding between villagers and investors	21	17.5
Erodes traditional authority	73	60.8
Too many regulation	30	25.0
Diseases transmission from wildlife to livestock	57	47.5
Loss of agriculture or grazing land	32	26.7

#### **4.4.1 Suggested solutions to enable Enduimet WMA to contribute more towards women's well-being**

Study findings as presented in Fig. 4 show that one-third (33.3%) of the respondents mentioned controlling wild animals as a major solution that could lead to women's well-being as this will lead to reduced crop losses, lack of fear and psychological torcher, hence, better well-being. About 26.7% suggest that cultural bomas should be introduced to

enable women sell their cultural products to generate more income to meet their households needs.



**Figure 4: Suggestions on how to improve EWMA**

## CHAPTER FIVE

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

The study assessed the contribution of Enduimet Wildlife Management Area (WMA) on women's well-being in Enduimet Division in Longido District. Specifically, it aimed at identifying the economic activities supported by the EWMA in the study area, assessing the contribution of EWMA to women's well-being using income as its proxy and to examine the challenges faced by the women involved in EWMA's activities.

Based on the study it is concluded that EWMA does contribute to women's well-being i.e those involved in one way or the other with EWMA related activities. It is also concluded that the main economic activities supported by EWMA are provision of financial grants, road construction support, and provision of torches for scaring wild animals destroy their crops, allowing collection of construction poles and business training. In addition, EWMA has contributed socially to women's well-being through provision of water services, gender training, and building of classrooms and provision of scholarship to both girls and boys in primary and secondary schools. For the case of specific objective two the study found that the presence of EWMA significantly contributes to women's income. In addition, due to the social services such as health, water and education services, supported by EWMA household were able to save cash that would have been used to pay for the same thus saving income for other household uses.

It can also be concluded that women's involvement in EWMA activities has significantly contributed to their increased participation in decision making both at the households and community levels.

Lastly, it is concluded that the main challenges faced by women were destruction of crops by wild animals, and death of livestock attacked by wild animals which in turn reduce households income earnings hence, affecting women's general well-being in terms of loss of income required to meet their needs. Nonetheless, EWMA contributed to women wellbeing in Enduimet division economically and socially despite the challenges faced.

## **5.2 Recommendations**

### **5.2.1 Recommendations to EWMA**

Based on the research findings and conclusions, it is recommended that, in addition to the current support to the communities, EWMA should seek to improve further in the following areas in order to further improve the well-being of women in the surrounding areas:

- Design, develop and provide advice on better methods of preventing destructive wild animals from destroying peoples crops and livestock. This should be addressed by the District Game Officer, WMA village Game Scout, Agricultural Livestock Extension Officers.
- The management of EWMA need to come up with new innovative economic activities such as businesses photographic safaris, game viewing, animal filming, campsites and cultural boma tourism. Doing the above can allow the households generate more income hence, improvement of women's well-being. Therefore, EWMA, management needs to work closely with Investors and the Village Government to achieve this.

### **5.2.2 Recommendations to village leadership**

The study recommends that women should be encouraged to participate in conservation activities which in turn will give them more benefits from the EWMA. Doing the above will allow for sustainable use of resources and protection of the environment.

### **5.2.3 Areas for further research**

The current study only focused on the contribution of EWMA to women's well-being. Therefore, there is need for other studies which can among other things focus on how income from EWMA activities is spent and who makes decision on its use.

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**Appendix 1: Questionnaire for the Study on the Contribution of Wildlife  
Management Area's to Women's Well-Being**

**SOKOINE UNIVERSITY OF AGRICULTURE**

**DEPARTMENT OF POLICY PLANNING AND MANAGEMENT**

My name is Sia Temu from Sokoine University of Agriculture I am here to conduct a study which aims at assessing the Contribution of Wildlife Management Areas (WMA) to women's well-being in Enduimet Division, Tanzania. This area has been selected for the study due to presence of the wildlife corridor that attracts tourism activities. The interview will last for about 45 minutes and collected information will be used only for the purpose of the study. In addition, your identity and answers will be kept confidential. When answering these questions, remember that there are no correct or wrong answers. Your honest opinion is most important and highly needed. Do you consent to participate in the study? Yes /No. If Yes please sign in the provided space.

Participant Name.....

Signature.....

Mobile number.....

Date.....

**PART A: Introductory information (Fill the blanks)****Sehemu A: Taarifa za awali (Jaza nafasi iliyo wazi)**

Questionnaire Number: (Number ya dodoso) ..... Date of interview:  
tarehe ya kuhojiwa .....

Village:(Kijiji) ..... Ward: (kata).....District (wilaya):  
.....

Name of respondent: .....

Relationship of the respondent with the household head: ..... (1= Head 2=  
Spouse)

**PART B: Socio-economic characteristics of the respondents**

1. Respondent's sex
  - i) Male
  - ii) Female
2. Respondent's year of birth/age.....
  - i) Don't know
  - ii) No response
3. Number of persons living in your household.....
4. Actual years of schooling.....
5. Respondent's marital status :
  - 01) Single
  - 02) Married
  - 03) Separated
  - 04) Divorced
  - 05) Widowed
6. What is your main occupation that brings you an income?
  - i) Cash crop farming
  - ii) Food crop production
  - iii) Livestock keeping
  - iv) Small business
  - v) Hand craft for selling (curio goods selling)
  - vi) Wage employment
  - vii) casual worker
  - viii) Beekeeping
  - ix) Others
7. What is the estimated annual income for each of the above mentioned economic activities.....
8. Were you living in this village before the EWMA was introduced?
  - i) Yes
  - ii) No

If not why did you move to this village?

  - i. Farming

- ii. Business
- iii. Employment
- iv. Policy (villagelization policy)
- v. Family & friends
- vi. Others.....

9. How long have you lived in this village
- i) Less than one year
  - ii) 1-4 years
  - iii) 5-9 years
  - iv) More than 10 years

10. In your opinion do you think men and women share equally processes of decision making in the household?
- i) Yes
  - ii) No

Who usually determines how income generated by the household should be spent?

- i) Husband
- ii) Wife
- iii) Both

12. Do you participate in village meetings and make decision after EWMA established?
- i) Yes
  - ii) No

13. Do you participate in influence policy in the village meetings after EWMA established?
- i) Yes
  - ii) No

**PART D: WMA contributions to women**

14. What specific economic support is provided by WMA to women?
- i) .....
  - ii) .....

- iii) .....
- iv).....
- v) .....

15. What specific social support does EWMA provide to women?

- i) .....                      ii) .....
- iii) .....                      iv).....
- v) .....

16. Which activities are you involved in EWMA?

- i) .....                      ii) .....
- iii) .....                      iv) .....

17. What are the economic benefits that you as a woman are obtaining by engaging in WMA activities above mentioned

- i) .....                      ii) .....
- iii) .....                      iv) .....

18. What social benefits do you as a woman obtaining through your engagement with the WMA activities mentioned in (14) above?

- i) .....                      ii) .....
- iii) .....                      iv) .....

19. Is your child benefit from WMA supported scholarship?

- i) Yes
- ii) No

20. What is the distance to the old health centre in Km?.....

21. Distance to the WMA supported health centre in Km.....

22. Distance to the old water point in Km?.....



23. Distance to the WMA supported water point in Km.....

**PART E: Challenges faced by women involved in EWMA**

24. Are you satisfied with the support provided by WMA in your village?

01) Yes

02) No

If yes, why?

1) Increased income

2) Conserves resources

3) Reduce conflicts

4) Improve livelihood

5) Provide access /security to resource property rights.

6) Others (specify) .....

If no, why?.....

25. Are there any problems being faced due to the existence of WMA in your village?

i) Yes

ii) No

If yes, Explain your answer

- i. Wild animal attack
- ii. Destruction of crop by wild animals
- iii. Misunderstanding between villagers and investors
- iv. Disagreement on benefit sharing
- v. Erodes traditional authority
- vi. Inequality
- vii. Too many regulation
- viii. Diseases transmission from wildlife to livestock as constraint to people

ix. Loss of agriculture or grazing land

25. What suggestions do you have that may enable EWMA to contribute more towards women's well-being?.....

**Appendix 2: Checklist for key informants**

**THIS IS THE END OF THE INTERVIEW AND THANK YOU FOR YOUR  
COOPERATION**

Site Location: ..... Date: ..... Time: ..... am/pm

Interviewee Name: ..... Age: ..... Gender: .....

Job Title: .....

Years at Current Job: ..... Years at Current Residence: .....

Responsibilities: .....

**Village leaders and Natural Resources Committee (VNRCs)**

1. Why was EWMA established in this area?
2. How is EWMA operated in this area?
3. Who are the key players in NRM in your area?
4. Contribution of wildlife resources to household income before and after WMA

<b>Wildlife resources</b>	<b>Before WMA</b>	<b>After WMA</b>
<b>Firewood</b>		
<b>Charcoal</b>		
<b>Wild animals</b>		
<b>Grazing land</b>		
<b>Honey</b>		
<b>Jobs</b>		
<b>Building materials</b>		
<b>Student sponsorship</b>		
<b>Women's income</b>		

5. What are the sources of revenue of WMA?

Can you say something on the trend of WMA revenue?

6. What are the benefits gained from EWMA?

How are EWMA benefits shared within the community?

7. Are there any women specific benefits from WMA's activities?

8. What are the challenges facing management of WMA in your area?

9. What are your views on the future EWMA?

10. How can women benefit more from EWMA?

### Appendix 3: Focus group discussion guide

1. What was the main reason(s) for establishment of EWMA?
2. Contribution of wildlife resources to household income before and after WMA

<b>Wildlife resource</b>	<b>Before WMA</b>	<b>After WMA</b>
<b>Firewood</b>		
<b>charcoal</b>		
<b>Jobs</b>		
<b>School fees</b>		
<b>Building materials</b>		
<b>Students sponsorship</b>		
<b>Women's income</b>		
<b>Grazing land</b>		
<b>Wild animals</b>		
<b>Honey</b>		

3. What are the benefits gained from the existing EWMA?
4. What are the benefits gained from EWMA?
5. Are there any women specific benefits from WMA's activities?
6. Are there any credit institutions in your area/nearby area? i) Yes ii) No
7. What are your views on the future EWMA?
8. How can women benefit more from EWMA?