

# **Land Tenure and Water Accessibility**

*Identifying the Links between Land Tenure and Water  
Accessibility of Conservancies in Kenya*

**ARCHIE BAWO**

Feb, 2015

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**ARCHIE BAWO**

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*Dedicated to*

*my loving mother, Elsie T. Bawo, who pass away on the 19<sup>th</sup> April 2014, while I was following this MSc. Program, Mama thank you for not giving up on me.*

*And*

*All Health Workers who lost their lives battling the deadly Ebola Virus attack on Liberia.*

#### DISCLAIMER

This document describes work undertaken as part of a programme of study at the Faculty of Geo-Information Science and Earth Observation of the University of Twente. All views and opinions expressed therein remain the sole responsibility of the author, and do not necessarily represent those of the Faculty.



## ABSTRACT

The interactions between Land tenure arrangements and land use has significant impact on Water rights and accessibility. This is mostly due to the changes in land tenure arrangements and the laws and policies of the two almost indivisible resources, yet treated differently by different institutions and professionals. This study has three major purposes: (1) to identify the various tenure types and mode of protection within the legal framework in the study area, (2) to identify water rights of and accessibility by conservancies and pastoralists for livestock purposes and (3) to describe the interactions between water rights and accessibility in terms of tenure arrangements created by land owners and conservancies.

Studies have indicated that the interactions between land tenure rights and land use with that of water rights, and accessibility have a number of similar global phenomenal or basic purposes and features. Changes in tenure types impacts land use and the rights that exist thereof is integrated with that of water rights and accessibility. This is because water rights are embedded in social, political and economic relationships and changes in these relationships affect water rights relationship.

This study was conducted in the Maasai Mara Ecosystem which lies in south-western Kenya. Interviews were conducted to collect data and a review of the Constitution, Land and Water laws with a descriptive analysis to validate the assessment of findings from literature.

Although the rights to water and its accessibility is depended on certain variables as in availability, reachability and cost, the better land rights that exists creates better rights and access to water. These are further strengthen through the social relationship of the actors more than the legal arrangements.

An integrated policy framework with the efforts of the two sectorial cooperation and collaboration is necessary for and effective RRRs assessment of both land tenure and water accessibility.

**Keywords:** Land Tenure, Land Use, Water Rights, Water Accessibility, “Rights, Responsibilities, and Restrictions” Conservancies.

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# 1. INTRODUCTION

## 1.1. Background and Significance

The interactions between land tenure rights and land use with that of water rights, and accessibility has indeed a number of similar global phenomenal or basic purposes and features. However these rights themselves and the basis on which they are allocated, managed and administered are substantively quite different and sometimes difficult to draw a line hence, a need to develop the tools that would effectively assess these interactions of these rights at both local and regional levels. There is a need for effective and innovative ways to integrate water use, and land use. The review of the legal framework, policies, and the documentation and analysis of the effectiveness of alternative policies and practices cannot be over emphasized.

Absolute water shortage provide a serious hurdle to growth not only in inaccessible areas, but the failure to connect land use and water use will have a far reaching and increasingly consequences in many countries. This is a "governance gap", a gap where there is an absence of an integrated planning processes and a failure to scrutinize and link the consequences of both land use and water use choices at various levels of government (I. To, 2011). A better understanding or the actualization of an integrated land and water rights assessment or mapping process should begin with the review or and where necessary realignment or reform of the legal framework.

This research took into account the interactions or relationships between changes in land tenure and the rights or accessibility of water, and creating a method to map the bundle of rights both in land and water. The study took advantage situation in the Maasai Ecosystem situated Kenya, given the changes in land tenure in relations to the available water sources and points around the National Reserve. This interactions focused on conservation and access to water holes, barriers created to other land uses including pastoralism, grazing, wildlife and farming and the effects on the bundle of rights as the result of the establishment of conservancies.

Conservancy is a new development in rural areas which is being promoted by Community Based Natural Resource Management for wildlife conservation. Although wildlife is the property of the state, communities along with tourists institutions that form defined management units can register with the government as a 'conservancy' and receive conditional use right over wildlife(Ashley, 2000).

It specifically focus on the legal framework given the Constitution, Land statutes and policy, and the water act and draft policy. The issue being addressed is to identify the links between these legal instruments from both thematic areas (land and water) and whether or not they complement one another for the enhancement of socio-economic activities of the areas outside the main Maasai Mar National Reserve.

Land tenure changes outside the main national reserve was an attempt or process to provide for the legal rights or security of tenure to the Maasai who are predominantly pastoralists the replacement approach to the formalization of property rights was used because it assumes to be linked to the substantive reformation of customary rights towards the consolidation of holding and freehold tenure. It support the logic of market economies to make real property a freely tradable good. The replacement models highlight customary rights or tenure systems as being dominated by group rights and that it does not promote individual rights, which leads to tenure insecurity among individuals; it also purports that customary rights are inalienable and thus do not promote investment, thus hinder development and impede progress(Arko-adjai, 2011). As the result of this attempt to provide tenure security for these pastoralists the government converted these 'extra-legal into formal legal property rights to encourage investment where it would allow for the use of the titles as collateral, enter leases and facilitate the development of the market in the Maasai Mara.



Figure 1: *A survey beacon private land plots after sub-division found within conservancies*

As there are many questions to address the issues of the pressure on Land tenure and changes in land use and water rights and accessibility which are but not limited to the growing population, food security, climate change amongst other socio-economic activities. ITC is involved in an ongoing project through The Mau Mara Serengeti Sustainable Water (MaMaSe) Initiative a consortium project aimed at improving water safety and security in the Mara River Basin (MRB) to support structural poverty reduction, sustainable economic growth, and conservation of the basin's world-renowned ecosystems (Mara, Sustainable, & Mamase, 2014). This is due to the fact the water resource influences many aspects of socioeconomic development and environmental sustainability making it both a key component of future growth and also a limitation or challenge.

In order to achieve these stated objectives a recognized and clear security of tenure with assessment of both water and land RRRS is necessary. As such an opportunity for this study to be conducted six conservancies within the project locations formed the basis for this assessment tool to be developed.

## **1.2. Research Problem Definition**

Land tenure and land use change along with water rights and accessibility creates a complex issue of how to align these inseparable resources within a framework of an integrated assessment of RRRs. As the result of the complex elements such as the establishment of conservancies. Rangelands outside the Maasai Mara National Reserve haven changed significantly in recent years, thereby creating a relevant area of study. Because what were previously group ranches have been subdivided into private plots managed by individual families some of whom begun fencing their plots, thus eliminating some of the rights to access, use, manage or control previously existed from other community members. As a consequence, these rangelands and group ranches are now fragmented and animals' movements both livestock and wildlife restricted. Additionally, farming has begun to encroach on these dry lands, further limiting the available habitat for this predominant pastoral livestock husbandry and wildlife. This along with the growing settlements threatens both pastoral livelihoods, water access and areas for wildlife in and around the reserve.

Each year due to land privatization, expansion of cultivation, expansion of towns, an increase in the local human population, thousands of acres of wildlife grazing land, indigenous forests and pastoralists' corridors are being cleared along the edge of the Maasai Mara National Reserve. As the result Maasai Mara ecosystem is under treat due to loss of wildlife habitat from overgrazing and poorly managed grasslands (Wood, T; Wood, et.al, 2014).

The surrounding community and private lands around the reserve provide dispersal areas for food, water, security and breeding grounds for wildlife. According to Kenya Wildlife Service this happens because protected area systems in form of National Parks, Reserves and Sanctuaries covers 8% of the Kenyan landmass, which are insufficient for conservation of wildlife(Kenya Wildlife Service, 2012).

For the success of conservation activities, the cooperation of private owners and communities is essential because they control land outside the protected areas. This necessitated the formation of conservancies to help address some of the competing issues outside these protected areas which include human-wildlife conflict, space for wildlife, access to water and slow implementation of land use policies(Kenya Wildlife Service, 2012).



Figure 2: *Wildlife and livestock grazing*

The poorly managed grasslands encompasses the use of land as an economic phenomenal however, its link to other resources such as water enhances the economic viability. Like most resources attached to land water must also be managed sustainably. Because it is a resource which influences many aspects of socioeconomic development and environmental sustainability in the Maasai River Basin. Rains supporting the dry-season flow of the Mara River, on which people, cattle, and wildlife depend, are confined to only 10% of the basin headwaters of the Mau (Mara et al., 2014). Therefore, in order to manage water people must create access, ensure mode of access or be able to define water rights and these relationships to land rights or the bundle of rights. In effect a clear understanding of this relationship and how it is influenced by the changes in land tenure and or use is required. This research sort to develop a methodology for integrated assessment of the bundle of rights of land as well as water. The Masaai Mara happens to be an interesting complicated place given the changes in land tenure and the subsequent establishment of conservancies. An Ecosystem which is in dire need of such tools.

It is very difficult to find solutions that work in all circumstances given the complex system that water governance take place or interacts (Van Dervalk, 2011). The issue is that we do not have a clear understanding of how the existing social, legal, and administrative systems relating to water and land interaction in the Mara region. The question is how can we describe the interactions between the tenure types and that which is created by land owners and the lessee (conservancies) based on the legal framework on one hand, to that of water use and water accessibility on the other hand within the study area? This research has evaluated and identified the links between Land Tenure and water accessibility, and Land use

and water use. The definition of these links will help us understand the nature of land tenure and water accessibility in communities surrounding the Mara Reserve.

There is a need for effective and innovative ways to integrate water use, and land use. The review of several policy options, do more research, documentation and analysis of the effectiveness of alternative policies and practices cannot be over emphasized.

### 1.3. Conceptual Framework

The main concepts related to the problem statement are shown in the conceptual framework below. This framework focuses on access to water given the Water Act 2002, that instrument which determines water accessibility. It is based on the links or integrated aspects of both the legal framework of Land (Land Administration) and the Water Law i.e. The Constitution of Kenya 2010, Land Act 2007, the Water Act 2002. With the identification of these links there can be a clearly defined interaction between Land tenure types and Water accessibility, and that of land use and water use. Once these links are established water use by the various land uses requires access to water but water is controlled, managed and regulated by State (Water Act Cap. 372, 2002).

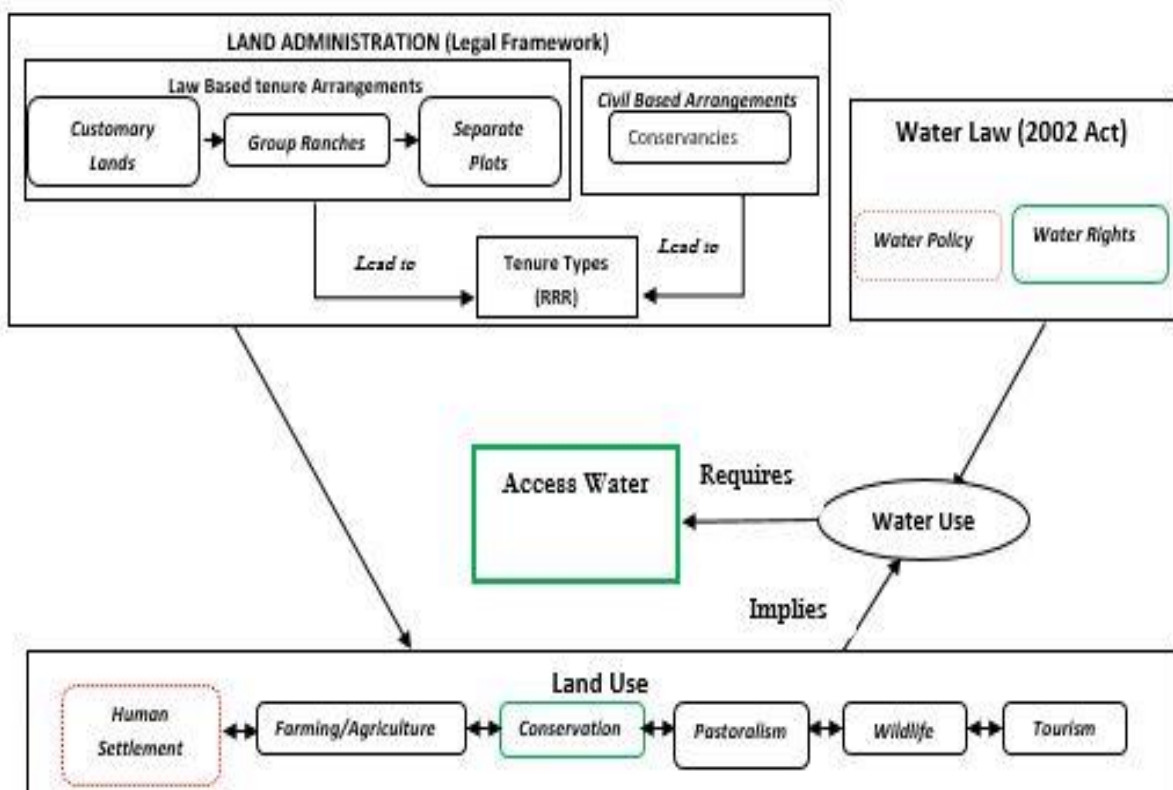


Figure 3: *Conceptual Framework*

### 1.4. Research Objectives

In order to develop an integrated assessment of RRRs for Land and Water rights or accessibility, specific objectives were created reflecting on the problem definition. These specific objectives took into consideration of individual resources access, rights and their location within the study area and an effort of answering questions related to issues to achieve these objectives. There after an integration of the answered questions of objectives would lead to the expected result of the main objective.

#### 1.4.1. Main Objectives and Sub-objectives

##### **Main Objective:**

The main objective of the study is *to define the interactions between the current Land tenure arrangements and Water accessibility by developing a methodology for an integrated assessment of RRRs of the two resources within the legal framework considering the Maasai Mara Ecosystem.*

##### **Specific objectives:**

The following specific objectives were formulated for the study which were the means in achieving the main objective of the research:

- I. To identify the various tenure types and mode of protection within the legal framework in the study area:
- II. To identify water rights of and accessibility by conservancies and pastoralists for livestock purposes:
- III. To describe the interactions between water rights and accessibility in terms of tenure arrangements created by land owners and conservancies.

#### 1.4.2. Research Questions

These research questions are developed in order to be able to arrive at answers to achieve the three specific objectives of the research.

##### **Questions that addressed Specific Objective 1:**

To identify the various tenure types and mode of protection within the legal framework in the study area:

1. What are the different tenure arrangements and where are they located?
2. What are the different types of land uses and where are they located?
3. How do the laws protect these tenures types and land uses?

*Explanation: In order to arrive at how tenure affects water accessibility, we will need to first understand how it affects the land use because it is from the land use that we will understand the water use and from water use we then arrive at water accessibility. Thus we say that "land use implies water use and water use requires water accessibility".*

##### **Questions that addressed Specific Objective 2:**

To identify water rights of and accessibility by conservancies and pastoralists for livestock purposes:

1. What are the water sources and where are located?
2. What type of water rights exist and how are they distributed?
3. Who owns and governs the water points?
4. How do the laws secure rights to use and access to water?

##### **Question that addressed Specific Objective 3:**

To describe the interactions between water accessibility and the tenure arrangements created by land owners and conservancies only one question was formulated.

What kind of land and water RRRs are posed by the arrangements created by land owners and conservancies to water rights and accessibility by pastoralists and other land users?

Output:

1. Matrix of RRRs of land and water and water access
2. Graphical relation between RRRs and freedom to water accessibility
3. Map showing these relations



*Explanations: Having identified the tenure types, land uses on one hand and water use and accessibility on the other and their associated legal implications in objectives 1 and 2. I now intend to do an overlay of both 1 and 2 in objective 3 to be able to describe their interactions.*

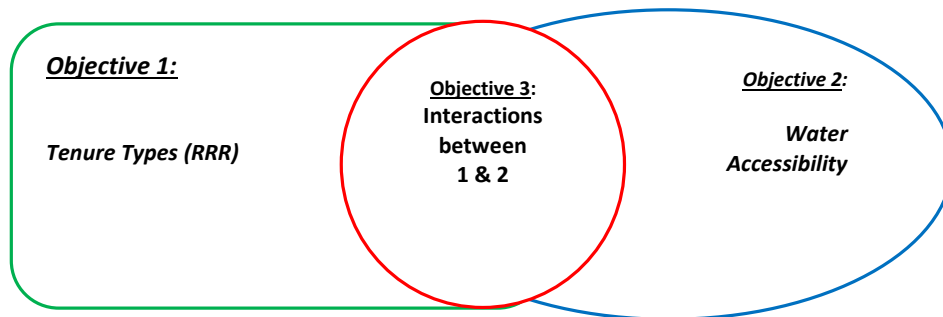


Figure 4: Overlay of Objectives I & II

## 1.5. Research design and method

This research was designed in three phases, i.e. the proposal or pre-research phase, Field work/Data collection phase and the Post Data collection phase. This design gives a description of the methods and process used by the study to address the research objectives and questions. It also gives an overview and description of the study area, data and collection sources (table 3), collection technique and processing and analysis technique.

### 1.5.1. Research proposal

This research follows an existing project that is partnered by ITC, University of Twente as such begins with the review of the project plan, documents discussions with ITC staffs involved with the project and followed by preliminary literature review. During this phase a problem is defined, objectives and research questions established to address the problem. It also included the proposed and approved methods and approach for data collection used based on the nature of the research.

### 1.5.2. Field work

In order to collect needed data especially the primary data a field visit has to be conducted. The primary purpose of this phase is to identify potential individuals, groups and institutions that would be able to provide reliable data on the ground through Interviews (Key informant & respondent), and experts' consultations. Another will be to generate GPS coordinates used to capture water points and make observations of Land Use activities to form part of the primary data.

As it relates to policies, laws and regulations, the secondary data collection will entail a continuous literature review of the constitution, statutes, Land Administration & Management Policies and Regulations and the Water Policy and regulations. The literature review will also make use of other books, journals, reports and webpages.

## 1.5.3. Operational Plan

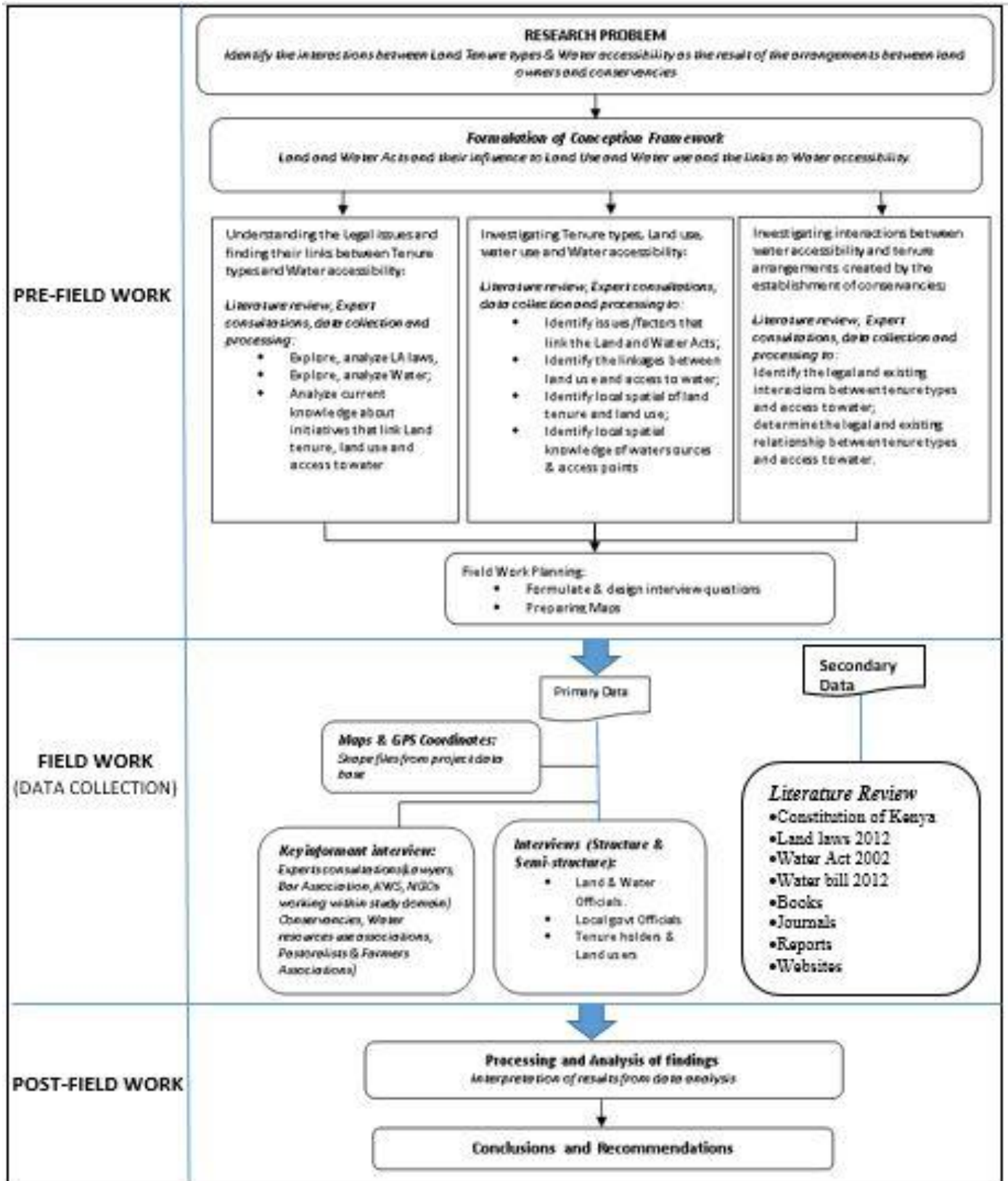


Figure 5: Operational Plan

## 2. LITERATURE REVIEW

### 2.1. Introduction

This chapter reviews existing literature related to land tenure, land use and water rights and accessibility. In order to define the interactions between the existing land tenure arrangements in the study area and water accessibility within the study area one would have to develop a methodology for and integrated assessment of the Rights, Responsibilities, and Restrictions (RRRs) of the two resources given the legal framework. However, the chapter is broken into sub-sections in accordance with the sub-objectives outlined in Chapter 1 to get an understanding from works and studies done by others in the form of books, journals, reports.

### 2.2. Land Tenure and mode of protection

The way in which interests in land are held or owned is referred to as Land tenure (Mitchell, 2011). Land tenure is a terminology used mostly in land administration which describes the mode by which land is held or owned or the human relationships concerning land or its products. These rules define how property rights to land are to be allocated within societies, how access is granted to rights to use, control and transfer as well as the associated responsibilities and restraints (Mitchell, 2011).

Rights including movable rights, such as livestock, and immovable rights such as buildings and trees are all part of a range of property rights to land and its associated natural resources (Mitchell, 2011). Livestock as a movable property right is in the view of how developing countries depend on a number of ways on cattle herders, fishermen, farmers, hunters earn their living directly from utilization of natural resources such as grazing areas, farm land, water forest (Heltberg, 2002). Many people may have overlapping rights that include use rights (rights to use the land for grazing and cropping, or to access water resources), rights to decide how the land should be used (control rights) and rights to sell or lease the land (transfer rights). These rights may be considered as a stick in the "bundle of rights" (Mitchell, 2011)

The phrase "Rights, Responsibilities, and Restrictions" of land tenure is used to describe all interests in land, public and private (Bennett, 2007). There are several objectives behind the understanding of these rights, responsibilities and restrictions of property objects. And some can be seen as Environmental conservation, social and equity, Economic growth and savings, tenure organization and legal procedure requirements, industry management and public safety and order (Bennett, 2007).

These RRRs objectives are in relations with crop growing restrictions, clearing of trees restrictions and carbon trading rights for environmental conservation. Public housing rights, protection of cultural landmarks or heritage restrictions for social conservation and equity and future interest protection of natural resources to generate wealth with respect to tax responsibilities, land ownership and transfer rights in the case of Economic growth and savings.

Private ownership, leases including conservancies (grouping of plots leased from landowners to tourist institutions register with the government and receive conditional use right over wildlife), of land are aspects of Land Administration and can be seen as the mode in which rights to land are held (Lengoiboni, M. 2011). The mode to which rights to land are held are in respect to indigenous land right or the control of communal land to the individualization of land right or private land and how these lands are acquired.

Looking at the transformation of property rights, early experiments with land tenure reforms in Kenya's rangelands were group ranches in Maasai territory in the late 1960s and 70s. A group ranch is land that has been demarcated and legally allocated to a group such as a tribe, a clan, section, family or other group of persons (Mwangi, 2005). It is composed of a body of members to whom legal title

has been jointly awarded, and a management committee elected by the body of members. The group as a corporate body also retains some rights such as control over grazing rights, tillage and water resources. These elected group representatives are expected to ensure that the rights of any person under recognized customary law are safeguarded in so far as that is compatible with the operations of the group (Mwangi, 2005). Rural land owners in arid and semi-arid lands in Kenya have found themselves in a historical period of unprecedented levels of change in the way land is held and accessed, range lands having undergone processes of fragmentation and enclosure attributed to transformations of land tenure from communal to individual private land holdings (Omosa, E. 2014).

Some of the effects of private land ownership is seen in figure 6 by the fencing of land, thereby excluding others who had originally had access to these land when considering customary or group ranches.



Figure 6: *Fences erected by some land owners*

### 2.2.1. Land Use

Land use is a complicated term, in that it is defined differently by various disciplines and professionals. The natural scientists define land use in terms of syndromes of human activities such as agriculture, forestry, tourism and building construction that alter land surface process including biogeochemistry, hydrology and biodiversity. Social scientists and land managers define land use more broadly to include the social and economic purpose and contexts for and within which lands are managed (or left unmanaged), such as subsistence versus commercial agriculture, rented vs. owned, or private vs. public land (Bonan, 2010).

In Sub-Saharan Africa, land tenure changes have significant influence on land use. Kenya's south which is largely semi-arid has undergone extensive changes in land tenure and use thus altering land use practices and the exploitation of the area's limited natural resources (T. George, 2014). Maasai, especially those of Talek (originally ranch land community now sub-divided) just within the proximity of the National reserve are traditionally semi-nomadic; they shift their herds and form temporary livestock enclosures during times of drought and also maintain semi-permanent home bases (Butt, B. et al, 2009), however wildlife numbers have drastically declined due to land uses changes over the past three decades (Nymasyo, S and Kihima, B. 2014). The main causes of this land use change were found to be changing in land tenure policy, politics human population dynamics and economic factors.

Changes in the national and international political economy impacts land use change. In Kenya extensive land expropriation for large-scale agricultural production and western settlement influenced changes in land use (Campbell, Lusch, Smucker, & Wangui, 2003). This change was influenced by the land tenure policy and political economy impact. The change in tenure from communal land tenure to that of private ownership policy and political economy of agriculture took pre-eminence of land use from subsistence farming and pastoralism to for a more economic value of land for large scale agriculture human settlements.

### **2.2.2. Legal Framework**

Land tenure systems is set by the land law in a given jurisdiction to form part of the legal regime or framework. Land tenure systems describe the relationships between people and land and that which is mandated, secured and enforced by the legal systems (Bennett, 2007). This can be achieved by formalized legislation, processes and institutions. The land tenure systems could as well be statutory, customary or a combination of both with multiple and overlapping rights (Cotula, 2007).

This legal framework could be by statute (written down and codified), common law (based on previous judgment as precedent) or customary (an assumption that the code is well known by all members of a given society) (Paul van der Molen, 2002). However, there may exist a mix of these systems in a country (legal pluralism). Land administration process is to support the implementation of land policy given the aspects of land management, its implementation is a joint responsibility of both private and public entities. However, for governance and on the basis of the 'rule of law' governments set an institutional framework within the context of a legal framework as the basis for the implementation of land management of land tenure (Molen, P. 2002). The institutional framework is the allocation of tasks and responsibilities within the public administration for land administration activities to include recordation and registration of land and or property rights, taxation and valuation and mapping. However, these form the basis or within an existing legal framework.

The legal framework which sets up the tenure systems also prescribes such system to be guided by a set of policy and regulations. These policies and regulations take into account human activities to define land use. Section 3.3.32 – 78 of the land policy of Kenya also defined Leasehold Tenure as; the right to use land for a defined period of time in exchange for the performance of certain obligations such as the payment of rent. Leasehold rights provide a flexible mechanism for transacting rights in land and for land use control (National Land Policy, 2007).

In this vein many group ranches in southern Kenya have subdivided their land thereby changing the dynamics of group ranches by vesting ownership within parts of the ranches to individuals. These plots are leased by individuals, who are now free to sell or lease their land for any use permitted by law (Georgiadis, N. et al. 2011).

### **2.3. Water rights and accessibility**

Water has several properties which means that water rights cannot be determined in the same way as land rights or other resources. Because of its mobility and given the concept of access as purported in their paper "A Theory of Access" (Ribot & Peluso, 2003), defined access as "the ability to derive benefits from things," thereby loosening up property's classical definition as "the right to benefit from things."

Rights over land are far easier to conceptualize, establish and administer than rights over water because land is a fixed and immobile resource whereas water is a fluctuating, fluid and ultimately fugitive resource (Hodgson, 2004).

However the general provision of the constitution of Kenya also defines "land" to include – (b) any body of water on or under the surface; (c) marine waters in the territorial sea (d) natural resources completely contained on or under the surface (Constitution of Kenya 2010).

Cap. 280 of the land laws covers government land where the framework of conservations of wildlife and biodiversity are incorporated into the legislation as government land for forest Cap. 385 and wildlife cap. 376. However, access to resources such as water within the government lands is somewhat flexible(Lengoiboni, M. 2011).

Section 29 of the tenants covenant prescribes full access to boreholes, water holes tenants in consultations with the Landowners Committee, indicating landowners have partial rights (because access to water points on the conservancies are in line with to the land), as section 31 of said covenant gives tenant (conservancy) right to exclude others, and section 3 to use the premises solely for the purposes identified in clause 3.1(see appendix D).

### **2.3.1. Water sources**

Water points are derive their water from ground aquifers or surface based processes. Nevertheless, the majority are ground based (68.5%) and comprise the boreholes and wells. The rest are surface based obtained water from rivers, surface runoff, springs or a combination of these. Earth dams normally collect surface run off during the wet season and store it for use during the dry season. Some wells are also constructed in a way to allow surface run off into them especially if their recharge rate is low(Kinuthia, 2009).

### **2.3.2. Water rights types**

Rights and ability are often interlinked, but a right is only one aspect of safeguarding the ability to benefit, while ability is embedded in a web of mechanisms or means, processes, and relations subject to the impacts and outcomes of social relations, to include forms of governance(Ribot, J. and Peluso, N. 2003).

Water rights type can be seen in two prospective given the allocation demand of water as indicated in the constitution and clarified in the water allocation guidelines of WRMA. These are shown in 2. And 4. Considering the four demands on water and figure 7.

1. Rights Based (Human Rights)
  - Looking at the analysis of the relationship between water resources and conflict, environment, gender or livelihoods.
  - The identification of threats to individual water rights  
To safe and clean drinking water

While Human Rights to water is significant, the focus of this study is that of the allocation rights to water. This is due to the fact that the study is about the rights and accessibility of water for livestock. However, I would note here that the challenge of meeting human rights obligations is indeed difficult in that the imperatives to meet basic human water needs are more than just moral, rather they are rooted in justice and law and the responsibilities of governments(Gleick, 1999).

2. Use and Allocation, (Right subject to... or conditional)
  - Abstraction, water use, efficiency and compliance with permits
  - To sustainability environmental conservation ecological integrity (Right to Manage after acquisition of water infrastructure, bore hole, dam, shallow well,

The allocation of water from a water body should take into consideration four demands on the water, namely:

1. The portion of the water resource required to meet ecological demands, which form part of the Reserve.
2. **The portion required to meet basic human needs (BHNs), which forms the other part of the Reserve as defined in the WRM Rules.**
3. The portion of water for which commitments have been made in international treaties and inter basin water transfers;
4. **The portion of water that can be allocated to individual uses by means of a permit.**

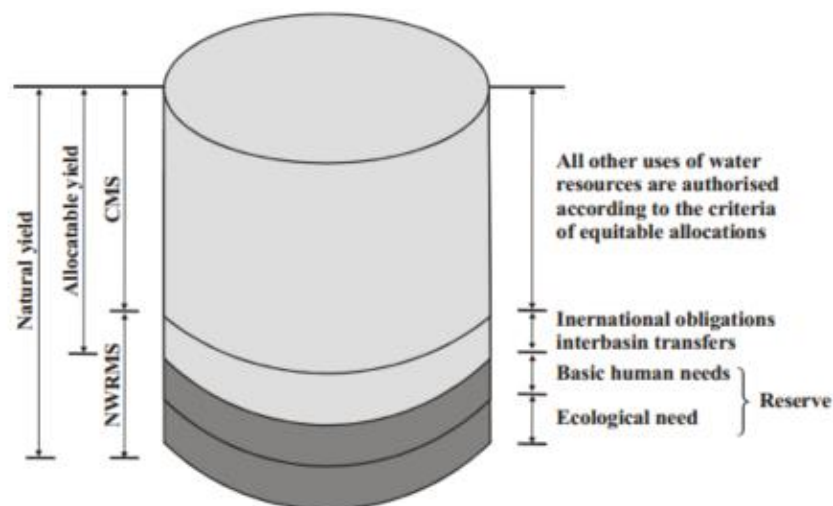


Figure 7: Four demands for water (source: Water allocation guidelines, WRMA)

Looking at figure 7, we point out 2 and 4 of the demands of water, but as stated earlier our focus for this thesis is 4 allocation to individual and this aspect is the basis of our water assessment model with respect to land tenure and water rights and accessibility in chapter 4 and discussed further in chapter 5.

### 2.3.3. Ownership and governance of water points

Fee-simple ownership or private ownership implies that the owner or designate (in case of a leasehold) has the right to benefit from the land as the owner sees fit, as well as the right to sell or develop the land, but these rights are usually constrained by regulations and land use designations(Herrera, P. et al. 2014). These may be created by and enforced at the local to national levels of governance they by shaping the ability to benefit. The concept of governance encompasses laws, regulations and institutions. However, it relates to governments policies and actions and has a networks of influences including international market forces, the private sector and civil society(Hall, P, et al. 2003).

In Kenya every water resource is vested in the state and is subject to any rights of user granted under the laws(Water Act, 2002).

Because water is defined as “public land” it changes its governance structure and government through its related agencies manages, control and regulate it. However Governance is much debated but is probably not familiar to the water community as compared to the land sector. Governance in effect is implementing socially acceptable allocation and regulation of resources. As such the governance of water points is a more inclusive concept than government per se; it has to embrace the relationship between a society and its government(Hall, P. et al. 2003). In so doing the Water Act of 2002 recognizes the setting up of community based organizations called the Water Resources Users Associations (WRUAS) to ensure efficient and sustainable water use and for good water governance.

#### **2.3.4. Laws that secure rights to use and access water**

Section 43. (1) (d) Every person has the right – to clean and safe water in adequate quantities. Section 56.(e), that the state shall protect minorities and marginalised groups to ensure they have reasonable access to water(Constitution of Kenya, 2010). This is a fundamental social right.

The Water Act of 2002 section 8(1)(a), mandates the Water Resource Management Authority “ to develop the principles, guidelines and procedures for the allocation of water resources”(WRMA, 2009). The water resource management authority uses water allocation to indicate access to. Section 2.1. (7), states that inequitable allocation or access to water resources provides fertile ground for water use conflicts. And it provides a remedy by providing a mechanism to mitigate these conflict with the participation of stakeholders.

#### **2.4. Interactions between water accessibility and tenure arrangements (change in tenure)**

Water rights and its accessibility usually focus upon the rights of the property right holder and ignores the contingent responsibilities of that holder in regard to others in society who may not share the rights. However, these rights need to be stressed in the discussion of governance. Thereby, water rights must take account of land use and land ownership as they are often closely linked(Hall, P. et al. 2003), sometimes formally through riparian rights.

The per capita water supply of Kenya is less than 647 cubic meters thereby making it a chronically “water scarce” country. According to United Nations a country is categorized as water scarce if its annual water supply is less than 1,000 cubic meters, the global standard benchmark for a country to be considered as adequately supplied with water(Ogendi & Ong’oa, 2009).

The web of social relations, as in the means, processes, and including forms of governance shape landowners and in some cases the lessee ability to benefit from the water resources within the conservancy (Ribot, J. and Peluso, N. 2003).

In Kenya, wildlife resources account of the gross tourism earning , 25% of the gross domestic product (GDP), and more than 10% of total formal sector employment in 2011( Nymasyo, S. and Kihima, B. 2014), yet the abundance and spatial distribution of the wildlife is highly related to availability of quality forage and water resources. Yet much of the wildlife in protected areas would not survive without seasonal access to adjoining private lands now conservancies(Georgiadis, N. et al. 2011), which is a major challenge for wildlife conservation thereby making it a profitable land use.

In classifying land, section 62. (1)(i) Public land is, all rivers, lakes and other water bodies(Constitution of Kenya 2010) thereby making access to these water bodies synonymous to



access to public land as such laws governing public land access will hold as defined by an Act of Parliament.

## **2.5. Summary**

Land tenure a terminology mostly used in the field of land administration to describe being the manner in which property rights to land are defined, access, use, control and transfer as well as the associated responsibilities and restraints. Changes in land tenure has impacted land use thereby altering land use practices and the exploitation of natural resources especially in south Sahara Africa.

Water rights and its access cannot be compared to that of Land though they are closely inseparable as the constitution of Kenya defined water as “public land”. For this reason at the centre of the governance of water resource is government’s responsibility to regulate, manage and control. However, water allocation or access may be viewed from two prospective with respect to human rights as in the right to clean safe water and Use/allocation rights which is subject to conditionality.

Though the two resources are intricately inseparable they are treated separately as different institution have different policies for access. In so much as the constitution defines bodies of water or water resources as public land, rights to or access to water are governed by the water institution and the Land Administration institutions do not record these water rights. Thereby creating a gap of the relevance of developing a methodology for an integrated assessment of RRRS of the two resources within the legal framework. In so doing the next chapter focuses on the study are and methodology for the research with the effort of identifying the links of land tenure and water rights and accessibility to bridge said gap.

### 3. STUDY AREA & RESEARCH METHODOLOGY

#### 3.1. Study area

The Republic of Kenya has an area of approximately 582,646 sq. km., which comprises of 97.8% land and 2.2% water surface. With only 20% of the land area classified as medium or high potential agricultural land whilst the rest of the mainly arid or semi-arid, forest, woodlands and national reserves and game parks account for the reminding ten percent (10%) i.e. 58,264 sq. km.

Kenya may topographically be divided into four distinct geographical and ecological regions or zones with different patterns of land use, namely: the coastal plain, the arid low plateau, the highlands, and the Lake Victoria Basin. With extremely varied rainfall patterns which generally follow those regions, with the Lake Victoria Basin receiving the heaviest and most consistent rainfall.



Figure 8: *Map of Africa, Kenya Highlighted*

Narok County is approximately 17,921sq.km and is the Local County for which the six (6) conservancies selected as the specific study area and are situated within the Maasai Mara Ecosystem. The Maasai Mara Ecosystem lies in southwestern Kenya and comprises approximately 12,840 square kilometers, of which less than 10% represents Maasai Mara National Reserve(Fig. 10), while the rest is the unprotected land inhabited by the Maasai pastoral community (National Council of Church of Kenya, 2014) and falls within the Lake Victoria South Water Catchment area which is one of the six (6) water catchments.

The Maasai Mara National Reserve (Fig. 10) provides dry season grazing habitat and permanent water sources of critical importance to a number of migratory and non-migratory wildlife species that then disperse out of the Maasai Mara National Reserve during the wet season and graze on the neighboring pastoral rangelands (Bedelian, 2012). Established in 1961 the Maasai Mara National Reserve (Fig.10) is a formal conservation estate and the land use is restricted to wildlife conservation and tourism. Rangelands surrounding the Maara Reserve contain year-round communities of resident

wildlife, however, migratory wildlife occasionally spill out onto them during the dry season (Serneels & Lambin, 2001). As such, the grazing resources are important to the Maasai pastoralists, their livestock and the wildlife alike.

The Lake Victoria South Catchment is in the southern part of Lake Victoria basin in Kenya and is approximately 31734 sq. km. With lake waters being 4128 sq. km it constitutes about 13% of the catchment area and a population of 5.7 million as per the 2009 census. A water catchment area is a zone which collects and filters natural water (rain, dew and snow). It is a zone where the rainwater or snow seeps and provide base flow to rivers, springs, lakes and recharge of groundwater.

Mean rainfall is estimated to be 1400 mm per year. The renewable surface water is estimated to 4773 MCM/year while groundwater is 2405 MCM/year giving a total of 7178 MCM/year (WRMA, 2013). (See figure 9). The Water Resources Users Development Circle Manual states “more than 50% of Kenyans still rely on traditional water sources as their primary source of water rather than an improved source” <http://www.wrma.or.ke/index.php/publications/wdc.html>.

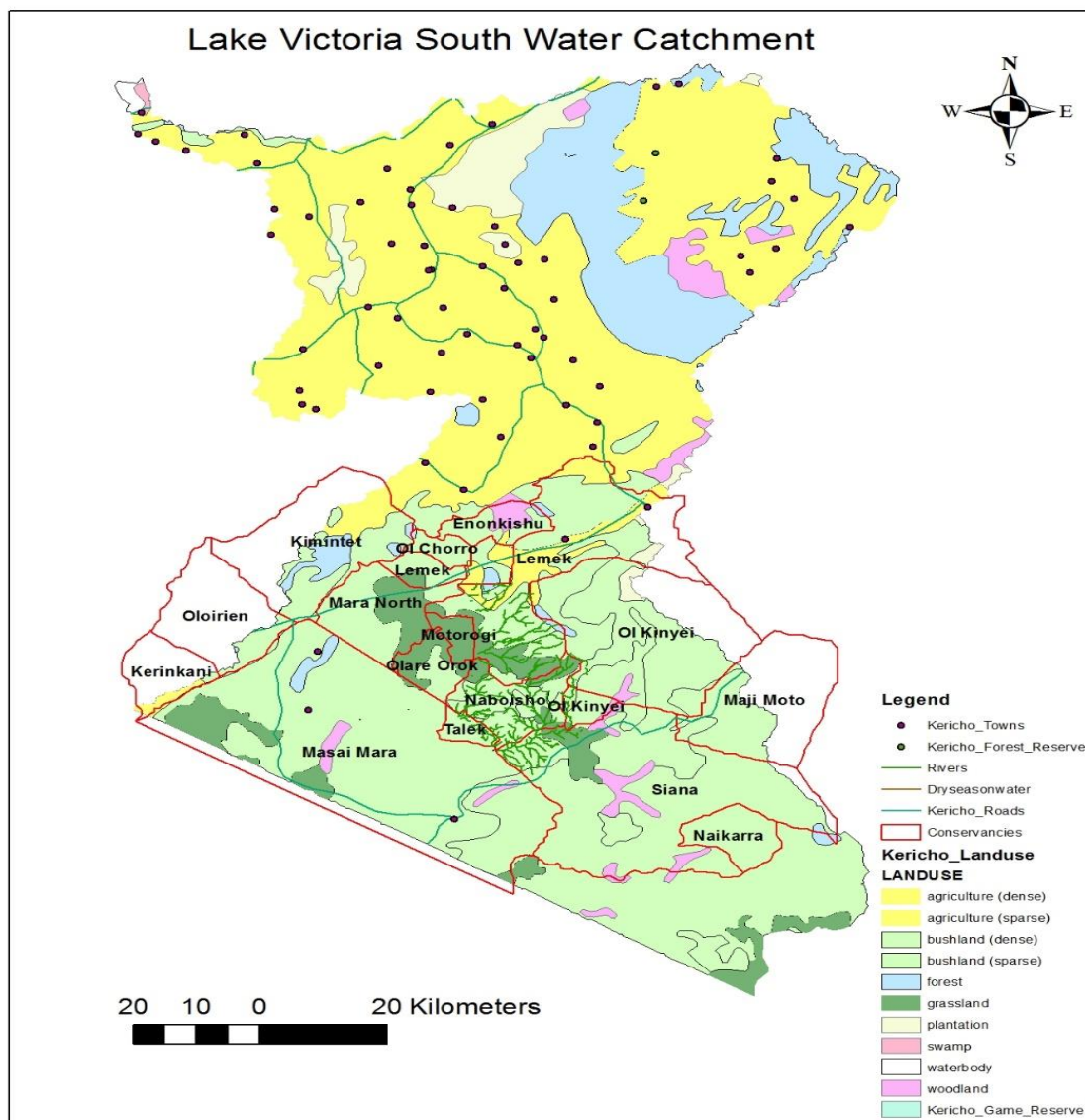


Figure 9: Map showing the WRUs Catchment area

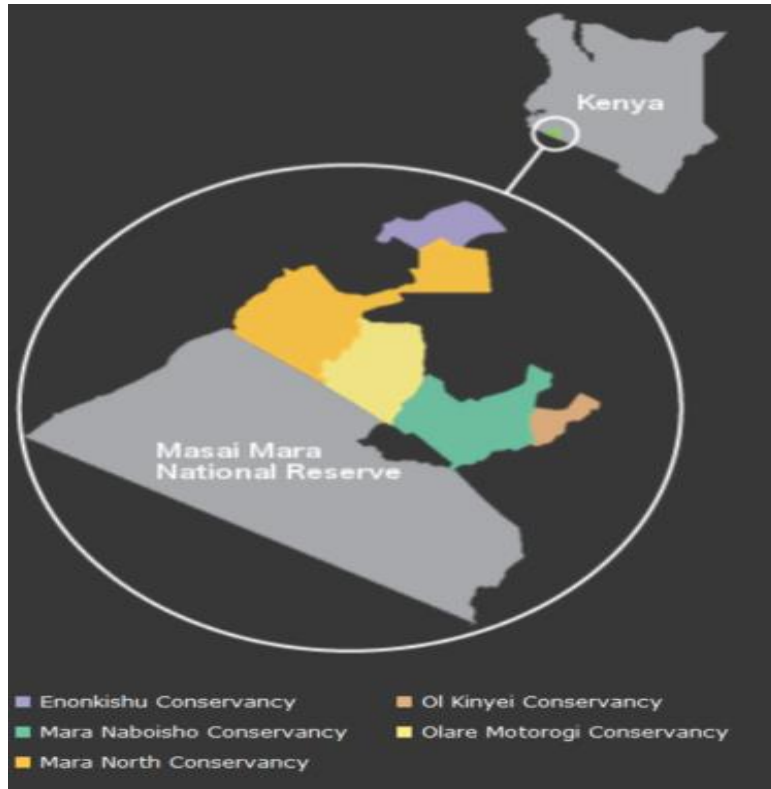


Figure 10: Main conservancies of study area (Source: <http://maasaimaraconservancies.co.ke/>)

Table 1: **Geo-statics of Study Area (6 Conservancies):**

Conservancies	Number of Land Owners (Members of Conservancies)	Percentage Of leases registered	Number Of Livestock Owned	Land Size (acres)
<b>**OlareMotorogi (OMC)</b>	277	80%	1,108	32,900
Mara North	788	90%	3,152	74,000
Naboisho	700	80%	2,800	50,000
Ol Kinyei	172	80%	684	17,500
* Enokishu	100	N/A	400	9,900
<b>TOTAL</b>	<b>2,036</b>		<b>8,144</b>	<b>184,300</b>

*\*The only conservancy with a different lease arrangement that is focused on grassland management as compared to tourism.*

*\*\* Combination of two Olare Orok & Motorogi Conservancies.*

Water is a key factor in the location of land acquisitions in some countries, with acquisitions focused in irrigable river basin and water catchment areas. Therefore, access to water is one of the key drivers of transnational land acquisitions. Land deals for irrigation agriculture may grant acquirers priority access to water, or even an entitlement to specified quantities of water, when this happens, water abstraction and enforceable water rights may adversely affect water access for other users (Anseeuw, et al, 2012). This in effect is a case study of investigating the RRRs of land and water, specifically, due to the concept of governance that is introduced when assessing water rights and water allocation.

### 3.2. Research Design Matrix

The sequential arrangement of the research including the research objectives, questions, methods to be carried out for data collection, data collection sources, data collection technique and Data analysis technique with the Expected results are given in this tabular research design matrix.

Sub-Objective	Questions	Data to be collected	Data collection sources	Data collection Technique	Data Analysis Technique	Expected Results
To identify the various tenure types in the study area?	What are the different tenure arrangements and where are they located?	1) Types of tenure arrangements (Rights, Responsibilities and Restrictions, or RRR) within the conservancies  1) Types of tenure arrangements outside the conservancies 2) Types of registered tenure types(conservancies)	Managers, Chairman/Secretary of the board of conservancies(guarded by the water points map) non-members of conservancies other land users/land owners at the peripheries of conservancies Records: copy of 'written contract' or agreement made by members of conservancies and managers of conservancies Kenya Wildlife Services (KWS) & Land Registry	Interviews with Managers/Secretaries of governing boards of conservancies individual interviews with occupants outside the conservancies GPS to locate the positions of the different data collection points Interviews with managers o	1) content analysis of and categorization of insights from verbal data on tenure arrangements (RRR) 2) Review of Rights, Responsibilities and Restrictions documented in the contracts 3) Review of Registration records	List of RRR (revealing bundles of rights) formed by members of conservancies and & managers of conservancies list of RRR (revealing bundles of rights) formed by members of conservancies and land occupants/owners outside the conservancies List of RRR as documented in the contracts GIS visualization of locations of various RRRs
	What are the different types of land uses and where are they located?	Land use types within the conservancies Land use types outside the conservancies	members of the conservancies Land users/land owners bordering conservancies Records of existing LU types (GIS) from KWS	1) Interviews with managers/secr etaries of governing boards of conservancies 2) Interviews with land owners outside the conservancies 3) GPS to locate data collection points 4) Documented Records/data on existing LU types (GIS) from KWS	1) content analysis (categorization and classification of data from interviews into various land uses) 2) spatial analysis (GIS) by overlaying interview data with existing LU data	GIS visualization of LU & in data collection locations presentation of proportion of land under conservancies proportion of land under different types of land uses
	3) How do the laws protect these tenures and land uses?	Type of Tenure security	Constitution, Land Laws, Expert consultations (Kenya Bar Asso, KWS, local officers of Ministry of water)	Literature review, Expert consultation and Interviews KWS, KBA	Descriptive Analysis	Tenure security table/Matrix.

2) To Identify water rights of and accessibility by conservancies and pastoralists for livestock purposes:	Where are water sources located? And who owns the water point?	An inventory of waterholes (shallow water wells/dams) i.e. shallow wells (or water holes) location of water points which water holes pastoralists access	Nasa Data using Aster Images Ministry of Water and Irrigation Kenya Managers/secretaries of governing boards of conservancies Owners of land outside conservancies	Generation own map of waterholes Interviews with Ministry of Water and irrigation officers in study area interviews with owners of water holes Interviews with managers of water resources use associations.	Spatial analysis on the distribution of water points Tabulations and ownership of water points tabulations of waterholes accessed by pastoralists	1) distribution of waterholes 2) ownership of the waterholes 3) Estimated proportion of pastoralists accessing specific waterholes
	What type of water RRRs exist and how are they distributed?	Types of water access arrangements (Rights, Responsibilities and Restrictions, or RRR) within the conservancies	1) members of conservancies 2) non-members of conservancies occupants at the peripheries of conservancies 3) Records: copy of 'written contract' or agreement made by members of conservancies and managers of conservancies	Individual Interviews with members of conservancies individual interviews with occupants outside the conservancies individual interviews with managers of conservancies	1) content analysis of and categorization of insights from verbal data on water access arrangements including Rights, Rules and Restrictions 2) Review of Rights, Rules and Restrictions documented in the contracts	List of water access arrangements formed by members of conservancies and managers of conservancies list of water access arrangements formed by members of conservancies and land occupants/owners outside the conservancies List of RRR as documented in the contracts GIS visualization of locations of various types of water access arrangements
	3) Who owns and governs the water points?	Type of access and ownership.	Water Resources use Associations	Maps generated with water holes, points. Interviews with local officers at Ministry of Water, managers water resources use associations	Review of documents from Water resources use associations and the Local office of Ministry of Water.	1) Water ownership table.
	4) How do the laws protect rights to use and access water?	Types of Water rights	Constitution, Land Laws, Expert consultations(Water Resources Use Associations)	Literature review, Expert consultation and Interviews KWS, water resources use associations.	Descriptive Analysis	Water rights, use table/Matrix.
3) To describe the interactions between water rights and accessibility in terms of the tenure arrangements created by land owners and conservancies	What kind of land and water RRRs are posed by the tenure arrangements created by land owners and conservancies in relation to accessibility to water?	Interactions between tenure types and arrangements created by land owners and conservancies to that of water accessibility. Relations between Tenure types (RRRs) and accessibility to Water (RRRs).	1) Data collected in objectives 1 and 2. 2) Conservancies, land owners outside conservancy arrangements & Water resources use associations.	1) Literature review 2) Individual interviews with Managers of Water Resources Use Associations, Managers/secretary to governing boards of conservancies. 3) Results about water arrangements (Question 2) 4) Results about tenure types in (question 1)	1) Use of Map, find water points. 2) review of legislation – provision of land policy and law 3) matrix water arrangements and legal provisions 4) matrix on land RRRs and legal provisions	1) A matrix of RRRs of land and water access 2) A graphical relation between RRRs and freedom to water accessibility; 3) A Map showing these relations.

Table 2: Research Design Matrix

**General Objective:** To define the interactions between the current Land tenure arrangements and Water accessibility in the Maasai Mara Ecosystem from a legal perspective.

### 3.3. Data collection method

In order to collect needed data especially the primary data a field visit was conducted from 6 October to 3 November 2014. The primary purpose of this field work was to identify potential individuals, groups and institutions that should be able to provide reliable data on the ground through Interviews

(Key informant & respondent), experts' consultations, and Local Spatial Knowledge. Another was the generation of GPS coordinates already in the possession of managers of conservancies used to capture water points and make observations of Land Use activities to form part of the primary data. However, I was able to collect data sets of Land Use activities Water Resources Management Authority (WRMA) local office in Kericho and shape files for water points and their attributes from two of the four conservancies visited (*see appendix field work diary*).

As it relates to policies, laws and regulations, the secondary data collection was conducted by a literature review of the constitution, statutes/Acts, Land Administration & Management Policies and Regulations and the Water Act of 2002 and Water Policy and regulations. The literature review also takes into account publications of related books, journals, reports and websites.

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### **3.3. Data Analysis Methods**

Upon the collection and organization of my primary data to include, Interviews, expert consultations and GIS data sets then embark upon labelling or coding the data especially the interviews and consultations into tables and graphs or to form classified data. This step is followed by a check for data quality ( ). Different analysis or interpretation of the classified data was use depending on the expected outcome and or the given sub-objective. Finally a check for data quality using triangulation to increase the validity of the findings, this triangulation was seeking evidence from the various range of sources and comparing findings from these sources.

**Content analysis** - the categorization of insights from verbal data on tenure arrangements (RRR), Review of Rights, Responsibilities and Restrictions documented in the contracts, Registration records, categorization and classification of data from interviews into various land uses, and categorization of insights from verbal data on water access arrangements including Rights, Rules and Restrictions,

**Spatial analysis** - the use of GIS software to overlay classified data from interview with existing Land Use data, distribution of water points in the various locations, Tabulations and ownership of water points, tabulations of water points accessed by pastoralists, and the overlay of various spatial data sets from the Water Resources Management authority on the Lake Victoria South catchment area and those of the conservancies.

**Descriptive Analysis** of rights, rules and restrictions documented in the contracts, policy documents from the Water Resources Management Authority (WRMA), and the Water Resources Use Associations.

## 4. RESULTS

### 4.1. Overview of field data collected

The contents of this chapter form the basic analysis of data of specific research questions that answer the objectives. These questions were broadened in the form of questionnaires to capture the relevant responses during interviews with landowners and managers, experts' consultations conducted with water officials and conservancies chairman and descriptive analysis of legal documents in relation to the requirements specified in the research design matrix.

The data for this qualitative analysis was collected from individual interviews (one-to-one), expert consultations and review of the legal instruments. The interviews were done by sitting with respondents and writing the response in a systematic manner. However, Managers interviews were conducted differently they were asked to questions structurally but initiated topics in a manner that they deemed relevant.

The data collected and analysis therefore report the findings of the three specific objectives leading the outcomes of the main objective. These results will identify in section 1 the various tenure types and the mode of protection given the legal framework, Identify the water rights of and accessibility by conservancies and pastoralists for livestock purpose constitute section 2 and finally section 3 will describe the interactions between water accessibility and the tenure arrangements created by land owners and conservancies.

Table 3: *Data Type and Collection Sources*

	Conservancy Members (Land Owners)	Conservancy Managers	Conservancy Chairmen	Water Resource User Associations (WRUAS)	Government Water Officials (WRAMA)	Total
<i>Interviews</i>	24	6		2		32
<i>Expert consultations</i>			2		4	6
<i>Water point Data set</i>		3			1	4
<i>Water Resource Users Associations (WRUAS) Guidelines</i>				1		1
<i>Lease Agreement</i>						1
<b>TOTAL</b>						<b>44</b>

### 4.2. Data collected for Land Tenure types, Land Use Types and Laws to protect tanure and use types

#### 4.2.1. The different Land Tenure Types and where they are located

Structured interview of 24 out of 2,036 land owners was obtained and served as verification of those obtained from the Managers of the conservancies. However due to the difficulty in locating land owners as the result of their engagement in other economic activities such as employed by conservancies or as businessmen and haired to rear their cattle in their absence I managed to collect these data. But most significantly the land owners were used to triangulate or verify the data collected from the Managers and review of the legal instruments. The land owners interviewed together own a total of 2605 acres of land (private land, after sub-division), which is 1.5% of the total quantity of conservancy land in the study area. All 6 conservancy mangers were interviewed in a semi-structured



interview with the lists of questions and respondents give the answers to the questions as we discussed the various topics outlined.

It also confirms the unavailability of customary land as there is no response for community land. Fences, trespassing boundary disputes indicate full ownership of land in the study area. These past tenure as in customary, group ranches and the present tenure arrangements as in leasehold by the establishment of conservancies are based on law as seen in the Constitution, land Act, and the Land registration Act.

Table 4: *Grazing outside the Conservancy*

Tenure Type	No. of Responses
National Park	10
Land owned by relatives	7
Friends/Age mates	3
Other parcel	2
Pasture leasing	1
Park/other parcel of land	1
No Response	1
Communal lands	0

The responses of land owners indicate that social relationship are still strong and important to the pastoralists' community. Accessing pastures when land owners cannot use the conservancy for grazing they access lands of friends, age mates and relatives. However, most people graze their livestock in the Maasai Mara National Park (see table 4) and respect their arrangements with the conservancy. Cultural value is also important in that during grazing period at the conservancies non-members are also allowed to graze irrespective of the membership to a given conservancy.

The only other tenure type around the study area is the Maasai Mara National Park (Government land), where 10 of the land owners graze exclusively when they are not allowed to graze in the conservancies. 7 graze on land owned by other relatives, 3 graze on land owned by friends or age mates, whereas 2 of the land owners acquire other parcels outside the conservancy where they graze and 1 uses either the National Park or land he acquired (see table 4). The following is the result of the land tenure types:

1. Public land      Maasai National Reserve
2. Private land    Total number of land owners who are also members of a given conservancy
3. Leasehold        Total number of lease agreements signed within the six (6) conservancies

Table 5: *Obstruction of Access to grazing area*

Obstruction type	No. of Responses
Fences	10
Trespass	9
Boundary Disputes	2
Long distance	2
No Response	1

Another question which confirms private tenure as the only tenure other tenure apart from the National Park (Public land), is that of the difficulties faced when taking their animals to graze where the Fences constructed by other land owners, trespassing boundary disputes and the long distances they cover to get to where to graze to circumvent these (see table 5).

**Table 6: Boundaries defined & types of spatial Information available**

		No. of Responses
Conservancies boundaries defined	Sub-division maps, Parcel Number	2
Spatial Information available	Boundary maps, water points datasets	4
	Boundary data available, working on other spatial dataset.	2

The six lessees (Conservancies) confirmed that between 80 – 90% of the lease agreements are registered at the land registry in Narok County and indicated the following challenges pose delay in concluding the registration of all leases are, the number of leases that have to be evaluated by the land registration board, the high cost of legal fees, stamp duties, property valuation and other cost associated to the lease registration are bore by the tenant.

#### 4.2.2. Types of Land Uses and where they are located

Land Use type is Conservation or the term conservancy is use to signify the hybrid tenure type created as the result of the combination of many private lands in a contractual agreement for the land use with investors. The major economic activities carried out on these conservancies are Tourism, rotational grazing, seasonal grazing, cattle rearing, business and grassland management. However, some land owners indicated that they are employed by the conservancies or other employers where as other also engage in businesses but they all still have livestock. I found this to mean that they use these as alternative livelihood or other occupation by land owners but not land use (see table 7).

Table 7: *Other Land Uses*

Answers	No. of Responses
Grazing	6
Tourism & Rotational grazing	3
Tourism & seasonal grazing	2
Grassland management	1
Employed	11
Cattle rearing	8
Business	6

The respondents indicated that other than conservation, tourism and grazing are the major land uses. Note that the lands were leased for conservation and tourism purposes, however grazing or cattle rearing is the traditional livelihood of the Maasai community as they are originally pastoralists. In fact in most cases they are done simultaneously, unless in the case of seasonal grazing where grazing depends on the tourist season, yet wildlife and livestock graze together. Seasonal grazing, grassland management, rotational grazing, and cattle rearing are similar in that they all use livestock but the method of controlled grazing are different in time, quantity of livestock and location of grazing at a given time. Figure 11 shows the various land use types of the six conservancies.

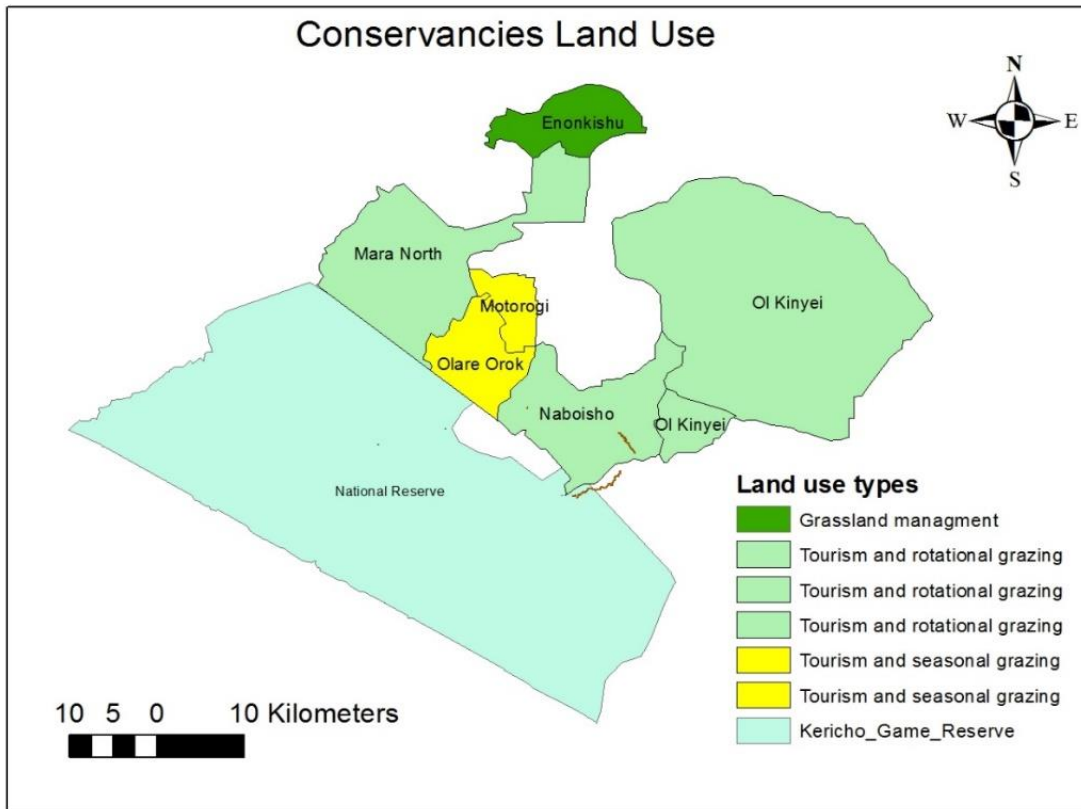


Figure 11: *Map indicating Land Use types*

#### 4.2.3. Laws that protect these tenure types and land uses

The tenure types are protected by both the Public and the Private/civil laws. This section provides a descriptive analysis of the public laws to include the 2010 Constitution of Kenya, the National Land Act of 2012, the Land Registration Act 2012, Land Control Act 2012(public law) and reviews the Rights, Responsibilities and Restrictions as documented in the lease agreements (see appendix D) (private/civil law) or arrangements between land owners and investors (lessee).

In table 8 the constitution provides the foundation for all other laws enacted and to construe as within the legal framework. It generalizes the definition of land, the categories of land and provides also the general right of ownership and acquisitions. Whereas, the Land Act, Land Control Act, and the Land Registration Act operationalize these legal aspects that are generalized in the Constitution.

Table 8: Descriptive Analysis of legal instruments

	<b>Legal Document Reviewed</b>	<b>Descriptive Analysis</b>
1	<i>Constitution 2010</i>	<ul style="list-style-type: none"> <li>✓ The Bill of Rights, Chapter 4, Article 65 states that every person, individually or in association with other can acquire and own property.</li> <li>✓ That land shall be held, used, managed and controlled with given principles (equitable access, security of land rights, management of land resources, etc);</li> <li>✓ Article 61, classifies land in three categories Public, Community or Private, thereby protecting private land;</li> <li>✓ Article 62 (1) (d) &amp; (e), Not public land.</li> <li>✓ Article 64 Private land could be land held by any person under freehold tenure, leasehold tenure or declared private land under an Act of Parliament (as the case of formalization of customary land to private/individual plots).</li> </ul>
2	<i>Land Act (2012)</i>	<ul style="list-style-type: none"> <li>✓ <b>Section 5 (1)</b>, speaks of the equal recognition and enforcement of land rights under all tenure systems and access to land.</li> <li>✓ <b>Section 7</b>, methods of acquisition of title to land (b) land adjudication, (g) transfers (h) long term leases created out of private land etc.;</li> <li>✓ Lists private, leases etc.</li> </ul>
	<i>Land Control Act Cap. 302 (2012)</i>	<ul style="list-style-type: none"> <li>✓ That act which provides for controlling transactions in agricultural land for which our study area falls under, in that the lands in question are not government land (public land) or urban private land/ leases;</li> <li>✓ This interpretation is of what is required to fall with in such category because such land are not within a municipality or a township;</li> </ul>
3	<i>Land Registration Act, Cap 300</i>	<ul style="list-style-type: none"> <li>✓ Section 25 describes a basic property right of a titled land held by the proprietor being free from other interests and claims unless subject to leases, charges and other encumbrances and restrictions, if any, shown in the register; noting that these rights and interests are required registration; Hence the purpose of registering the leases of the conservancies;</li> </ul>
4	<i>The National Land Policy 2007</i>	<ul style="list-style-type: none"> <li>✓ Recognizes and protects private land rights and provides for derivative rights.</li> <li>✓ <b>Section 67</b> designates Private land as land lawfully held, managed and used by an individual.</li> <li>✓ Defines Leasehold as a tenure and right to use land for a defined period of time in exchange for performance of certain obligations such as payment of rent.</li> </ul>

In table 8, the laws provide security of tenure to the rights holders. It provides authority of access and alienation thereby securing ownership and use. These laws also grant the management and

control to landowners and other interest in land. It also places for a greater economic value alienation and withdrawal rights.

Table 9: *RRR created by the Lease Agreement*

<i>The Lease Agreement</i>	<b>Rights</b>	<b>Restrictions</b>	<b>Responsibilities</b>
Land Owner	Alienate, Withdrawer, consideration(payment),	Use, Occupy, Partial Access	Manage, To Pay Taxes
Conservancy (lessee)	Use, Occupy, Access, Quiet Enjoyment, Withdrawer, Exclude, Terminate agreement on cause,	Alienate(convey),	Manage, control

Section 2 of the lease agreement, the land owner transfers his rights to the tenant (except to Alienate, subject to terms of purpose of land use) for a consideration (Rent) thereby posing restrictions to occupy and use which are in effect grounds for the tenant to exercise his absolute discretionary right to terminate this agreement. This absolute discretionary right to terminate the agreement is extinguished by the explicit covenants within the lease agreements. **Table 9** was derived from the coding of the various sections of the covenants, these codes were identified as Rights, Restrictions, Responsibilities, Joint Rights and Joint Responsibilities (see appendix D).

Table 10: *The bundles of rights associated with the position in the conservancy arrangement*

	Government	Land Owner	Conservancy/ Lessee	Authorized User/Member	Authorized Entrant/Non-member	
Access	Partial Rights		Full Rights	Partial Rights		
Withdrawal	Partial Rights	Partial Rights	Full Rights	Full Rights	Partial Rights	Full Rights
Management		Partial Rights	Full Rights	Partial Rights		
Exclusion			Full Rights			
Alienation		Full Rights				

Table 10 access the bundles of rights associated with the positions in given the conservancy arrangement as regards to the laws and lease agreement. Although the tenure in consideration is private property and or leasehold the government has access and withdrawal rights given the constitution due to the existence of Water and other resources in and around the land, Article 62(1) (g), (l), Article 260 (b), but because of Article 62 (1) (d) and (e) we conclude that these rights of government are partial.

Land owner transfers his access rights to the Lessee (conservancy) for a consideration (rent) for a 15 year term, given the leasehold. But maintains the right to alienation because that right can only be extinguished if he passes the full title as in conveyance or inheritance and will have to be recorded (updated) in the registry, section 30, Land Registration Act. He has partial right as in Withdrawal and management are given in several sections in the agreement/covenant, sections 1.1.9, 1.1.12,

Sections 2, 3 and 4 of the agreement the lessee (conservancy) right of Access, Withdrawal, Management and Exclusion (section3.29). See Appendix D. But cannot alienate give the terms of a leasehold.

### 4.3. Data collected water rights and accessibility by conservancies and pastoralists for livestock purposes

The data collected on the water rights and accessibility by both the conservancies and pastoralists for livestock watering ranged from interviews, experts consultations, water points data sets and the classification of these water sources and points. Data show the level of water rights in a water rights matrix as the result of the arrangements created by the land owners and the lessees (conservancies).

#### 4.3.1. The water sources and where they are located

Table 11: *Access to types of Water Points by landowners*

Water points	No. of landowners
River	9
Public bore hole	8
Own borehole	3
Dam	1
Piped Water	1
Water Pan	1
NR	1

Also see figure 12, distribution of water points.

Table 12: *Water use and demand*

Water Use	No
Livestock	19
Livestock/Home(domestic)	3
Livestock, Agriculture/irrigation, Home(domestic)	1
Home	1

22 of the 24 land owners responded **YES** that there exist water point on their land, and 21 of them also claim to have access to these water points (see figure 12). However, all of the respondents or landowners take their livestock to the water points on their land or other water points within the conservancy. But their access to these water points on the conservancy also relates to the time set aside for grazing by grazing management committee. Majority of the land owners use these water points for livestock, few for both livestock and domestic, less of the land owners for combined use with agriculture (indication that less of the Maasai are interested in agriculture and less for domestic use only).

There exist water points on majority of the land, respondents all have access to these and other water points within the conservancies. However, these access are limited according to the lease agreements and must be done according to the grazing plan made by the land owners committee. The major use of these water points is for livestock whereas most domestic use of water is from points found in the settlements.

Table 13: *Classification of available Water sources/points and location*

	<b>Water Point Type</b>	<b>Naboisho</b>	<b>OlareMotorogi (OMC)</b>	<b>Total</b>
1	Borehole	5	12	17
2	Dam	4	71	75
3	Seasonal river	195	0	195
4	Permanent River	8	12	20
5	Water Tank	1	0	1
6	Stream	1	12	13
7	Wells	0	13	13
8	Spring	0	66	66
9	Others	0	23	23
10	<b>TOTAL</b>	<b>214</b>	<b>209</b>	<b>423</b>

#### 4.3.2. The types of water rights and how they are distributed

21 of the 24 land owners indicated that they have access to the water points on their land, however all land owners take their animals to the water points on the conservancies. Majority of the land owners use these water points for livestock and very few us for both livestock and home (domestic) purpose. All land owners or pastoralist have access, use and acquisition rights to water. However, the access is also subject to the terms of the lease agreements and the type of water point.

Table 14: *Barriers to water access*

<b>Answers</b>	<b>No. of Responses</b>
Long Distance	13
Fences	3
None	3
Trespassing	2
Dry Season	2
Low water proportion	1

Majority of the responds see the long distance as serious impediment to their access to water, whereas fences and trespassing indicate the surface rights of other private land owners impeding access other reasons is few during the dry season and few of them don't have any of such impediments to access water. However it is good to note that the low water proportion is the water point built by the community as such even with the rules they are constantly faced with shortage of water.

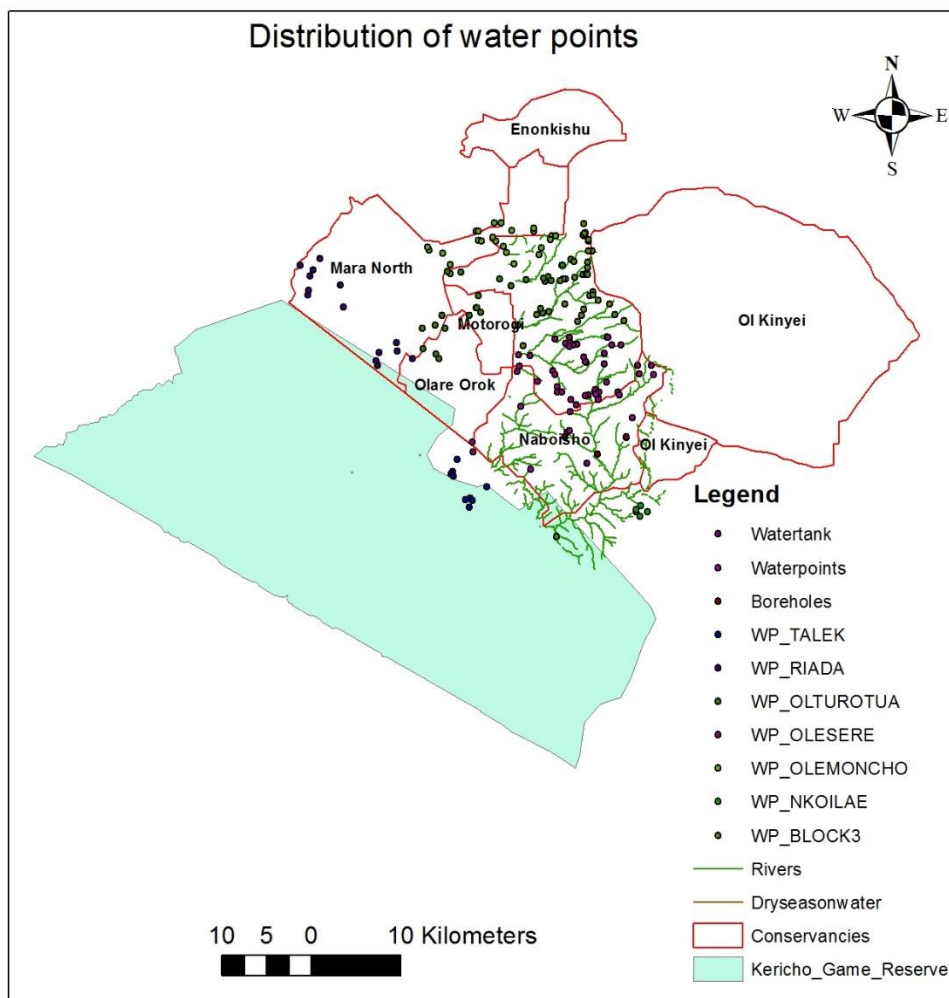


Figure 12: The distribution and location of water points

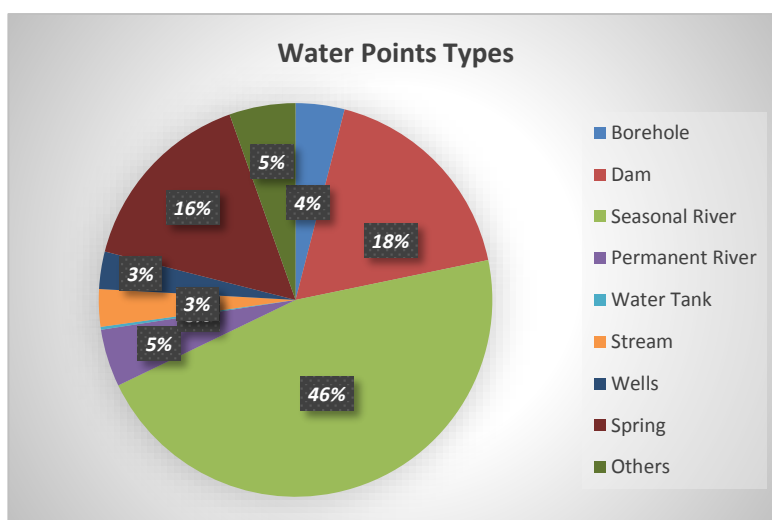


Figure 13: Percentage distribution of Water Points in three of the conservancies

In figure 13, the highest source of water is Seasonal River (46%), followed by dam (18%) and then spring (16%) the rest of the water sources are 5% and below. We can clearly see the gap of available water. Even the highest source is season which means that most part of the year (dry season) it is



not available. Thus indicating scarcity. Yet, even those that may be available are privately owned or by group ranches (See table 16) and now the rights are subject to the lease agreements.

This distribution, classification and demand (table 15) of water points indicate serious competition and conflicts over scarce water resources. To help mitigate this situation of water scarcity and conflicts a community-based organization is recognized by law. The Water Resources Users Association (WRUA) is an association of water users, riparian land owners, or other stakeholders for the purposes of cooperatively sharing, managing and conserving a common water resource. This association has brought a new variable in the governance of water resource with respect to community participation and access.

#### 4.3.3. Ownership and governance of the water points

Table 15: *Ownership of Water points*

Group Ranch	9
Natural River	8
Self	4
Conservancy	1
Natural River & Self Borchole	1
Local Community	1

Table 15 shows that 9 of the water points were originally built by the group ranches, whereas 8 of the land owners relied on Natural River, and few built their personal water points. However, those built by the group ranches are now within the conservancies and subject to the lease agreements leaving only the natural rivers as the most significant water source or point relied on by pastoralists and or land owners. Note here that these natural rivers are mostly seasonal. Most importantly, this is an indication that change in tenure from private ownership to leasehold has imparted the level of access to water points because these water points within the conservancies and only be accessed at the time of grazing which has to be agreed on by the conservancy managers and land owners committee.

Table 16: *Demand/use for water*

Main use of water	Demand
Livestock	19
Livestock/Home(domestic)	3
Livestock, Agriculture/irrigation, Home(domestic)	1
Home	1

Half of the land owners interviewed indicated that they have rules governing the water points they access whereas the other half said there are no specific rules. About the rules governing access or right to water seems unclear to the land owners. This is typically because they are used to the traditional or customary rules governing water access. The formation of WRUAs to assist them in understanding these rules and to create the awareness in the community.

#### 4.3.4. Laws that secure rights to use and access to these water points

Water is mentioned in the Constitution 18 times and in various forms. In defining the physical territorial of Kenya as in the territorial waters, as an economic and social right, as a description and definition of land,

Since water is clearly considered as a public land in the constitution we may conclude that those rights pertaining to public lands are subscribed hereto. So much so, the National Land Commission/Cabinet Secretary is responsible for water affairs

The Water act of 2002 mentions land 155 times considering that the new Water bill of 2012 has not yet been pass but should replace the Water Act 2002.

Part II Section 3 of the Water act clearly states that water resource is vested in the State and subjected to any rights of user granted under the Act.

The rights to and accessibility to these water sources and or points are not clear for several reasons

- The rapid growth in urbanization, industrial production, tourism and recreation services, agricultural and livestock production among other demand for development of water availability and water service provision are not on the same pace(National Water Policy Kenya, 2012).
- The intricate relationship between Land and water resources that are almost inseparable but treated separately by various institutions managing the two sectors;

Table 17: *Bundles of Water rights as relates to the tenure created by lease arrangement*

	Government		WRUAs		Land Owner		Conservancy/ Lessee		Authorized User/Member		Authorized Entrant/Non-member		Human Rights HR	Allocation Rights AR	Full Rights	Partial Rights	Catchment/Community Participation	
	HR	AR	HR	AR	HR	AR	HR	AR	HR	AR	HR	AR						
Access	Full	Full	Full	Full	Partial	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
Withdrawal	Full	Partial	Full	Full	Partial	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
Management	Full	Full	Full	Full	Partial	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
Exclusion	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
Alienation	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full

Table 17 is an assessment of the bundles of water rights as it relates to the tenure created by the land owners and lessee (conservancies). This assessment takes into account the analysis of the various legal instruments, interviews with landowners, Mangers for the conservancies, chairmen of Water Resources Users Associations (WRUA), and experts’ consultations with the officials of the Water Resource Management Authority. A right may be full or partial each type of right depending on the legal description and triangulated by the interviews and consultations.

The government full water rights is enshrine in the Constitution Article 5, as territory of the state, Article 62 (g) and (i)and Article 260 defined as public land (rivers, lakes and other water bodies) body of water on or under the surface (surface and groundwater). Also see fourth schedule section 22, of the constitution, Distribution of Functions between National and County Governments. The rules for water access vary according as with respect to land type, wetland, arid or riparian, and the rules does not imply tenure type rather management control on the land use for water resource quality as set forth in section 116. (1), of the water resources management rules.

Article 43(1), of the constitution provides for the Economic and Social rights of water to every person, thereby granting access, however 43(1), (d) to clean and safe in *adequate quantities*. Adequate quantities is highlighted here as we will further discuss in Chapter 5.

Article 56(e), specifies Minorities and marginalized groups to have reasonable access to water. Non-members can be considered as minorities since they are less than the land owners. And may be marginalized as they may be without land and other residents within the community.

However the partial rights to these water bodies for Landowners, tenants and other users is seen in Article 62(4), the disposal or use of public land (if we consider water as public land). But this is subject to Act of Parliament specifying the nature and terms of the disposal or use. This is where the water Act comes in.

The Water Act, 2002 spells out the ownership and control of water and the management of water resources given the establishment of the Water Resources Management Authority. Part II, Section, states that water is vested in the state and it is subject to any rights of user granted by or under the Act, this brings us to a conditional right (partial) to Access, Withdraw, and Manage by other stakeholders. This is also an indication that the government has the right to exclude or alienate. As such the function of the Water Resources Management Authority is to implement this Act.

Though Water is vested in the state, however to ensure an efficient and sustainable water use for good governance other stake holders are participating in the decision making process. The Water Resources Users association is that body recognized in the Water Act 2002 represent community-based organizations that come together around specified water resources for cooperative management and conflict resolution (sections 1.2 & 1.3, Appendix G). By extension the WRUAs have full rights of access, management (section 1.3, Appendix G) and exclusion (section 1.8 and 1.9 (a) & (b), Appendix G).

The landowner(s) also transfer rights of water points to lessee but in consultation with the landowners committee (section 3.30, Appendix D), thereby giving full access and management rights to lessee and partial access, withdrawal and management rights to land owners, and members.

\* However the right to exclusion is extinguished during the time of crisis, landowners, members and non-members of the conservancies have access to water infrastructures, boreholes, dams etc and that is implemented and managed at that time by the WRUAs.

The findings in 4.3.1, 4.3.2, 4.3.3 and 4.3.4 indicates that access to or the rights to water is influenced or significantly impacted by the ownership and governance, availability, demand and other technological barriers of abstraction of water points and sources. This creates the bundles of water rights and serves as a basis for assessment of these rights for individual actors (table 17). As such I would identify two modes of access as Rights Based (human rights) and Allocative Rights (abstraction rights).

#### **4.4. Overlay of data collected for sub-objective 1 and 2, description of the interaction between water rights and accessibility as the result of the tenure arrangements created by land owners and conservancies.**

Access to water can be viewed from two different approaches:

1. Human Rights

- Looking at the analysis of the relationship between water resources and conflict, environment, gender or livelihoods.
- The identification of threats to individual water rights  
To safe and clean drinking water (availability, reachability, and

affordability).

2. Allocation Rights (abstraction rights)
  - Abstraction, water use, efficiency and compliance with permits
  - To sustainability environmental conservation ecological integrity (Right to Manage after acquisition of water infrastructure, bore hole, dam, shallow well.

**4.4.1. The kind of land and water RRRs posed by the arrangements created by land owners and conservancies(investors) to water rights and accessibility by pastoralists and other land users**

Land and water resources are inextricably linked though often they are treated separately, often by different agencies and professionals. At the same time they are usually governed by different policies, rights and institutions. This separate treatment of the two almost inseparable resources accentuated by the different governing policies, rights and institutions makes it difficult to combine the kind RRRs as they may overlap in some class but be far apart in other instances.

Table 18: *Matrix of RRRs of land and water and water Access*

	Government		WRUAs		Land Owner		Conservancy/Lessee		Authorized User/Member		Authorized Entrant/Non-member		Human Rights
	LR	WR	LR	WR	LR	WR	LR	WR	LR	WR	LR	WR	HR
			HR	AR			HR	AR			HR	AR	
Access													
Withdrawal													
Management													
Exclusion								*					
Allienation													

Allocation Rights **AR**

Land Rights **LR**

Water Rights **WR**

Full Rights

Partial Rights

Catchment/Community Participation

Table 18 is the integration of tables 10 and 17 and carries along with it all those Articles, Sections of legal instruments as previously indicated. However, Access to the land and water points for grazing and watering livestock are regulated by the agreements made between the land owners and the conservancies and are limited to specified time periods, adherence to grazing plans, section 4.1.10 see Appendix D (unfortunately I could not lay hands on the Code of conduct or “Rules and Regulations”, but this is also highlighted during the interview). From all indications rights and water accessibility (Allocation Rights to water) is partial (limited) given the change in land tenure, demand, technological barriers, distance and land privatization in and around the conservancies.

The matrix in table 18 shows the graphical relation between RRRs and freedom to water accessibility. Notably, is the yellow square which shows the better or more secure land rights also leads to stronger or better freedom to water accessibility.

## 5. DISCUSSION OF RESULTS

### 5.1. Introduction

This chapter explains and interprets findings or results from the analysis of data contained in chapter four and challenges. These findings are validated by other literature in the form of journals, books, web links and laws. . This external validity may or may not in all cases agree with the findings, however it is intended to give insights or discuss the outcomes and what can be learned from the findings with that of previous studies.

### 5.2. Main Tenure types in study area

Although it is commonly know that these tenure types exist, Section 4.2.1 of the previous chapter clearly concludes that there are three (3) main tenure types in the study area. They include Public land as in the National Reserve, Private lands and Leaseholds. Accordingly, the National Reserve is that land which has been set aside by the Government for the preservation and conservation of wildlife and biodiversity, whereas private lands are those lands outside the National Reserve that were subdivided into separate plots. However, most of these private land owners especially those within the proximity of the National Reserve leased (leased hold) their plots to tourist institutions to form conservancies. These three Land tenure types are defined accordingly by the Constitution 2010 and based on how there access are granted, to rights to use, control and transfer. Once individuals hold a given title and their rights registered under the land registration Act it is relatively easy to define the property rights

Subdivision of customary or pastoral lands for tenure security or adjudication thereby having to register titles of ownership ceased to be subject to customary law. Kenya implemented with great vigour the land adjudication programme particularly in the areas of settled agriculture, and extended it to pastoral lands of the Maasai(Coldham, 1979). In simple terms the rules that define how property rights to land are to be allocated within a given society determines who can use what resources for how long, and under what conditions(Palmer. D, et al, 2009)

#### 5.2.1. Private property

As stated in the constitution Chapter two The national values and principles of governance in Chapter two Article binds all State organs, State officers, public officers and all persons whenever any of them—The national values and principles of governance include; good governance, integrity, transparency and accountability(Kenya, 2010). One of the most significant Articles and sections in the Constitution that defines and protects Private Property and Leasehold is Article 62 (d) & (e). The constitution rises exceptions to that which is not public while defining Public land as land which has no individual or community ownership being established or in respect of which no heir can be identified by any legal process.

Rights and fundamental freedoms 35.1.b speaks of the access to information by citizens held by another person and required for the exercise or protection of any right or fundamental freedom(Kenya, 2010). These pose serious treats to the conservancies and there is a governance gap given these tenants of governance, transparency, accountability and access to information. Access to information should not only be related to information sought for or requested by, but even more relevant if it is provided without conditionality.

An important consequence of land adjudication is that it has replaced the uncertainties of customary or group ranches by secured titles and safe conveyancing as stated by Simone Coldham in his book Land-Tenure Reform in Kenya: The Limits of Law.

### 5.2.2. Land tenure changes influence on Land Uses

The two major land uses in the study are conservation and pastoralism, all 24 land owners responded to the question of land use to conservation but also graze within the conservancies temporarily, or graze outside in the National park (public land), buy land outside, rent/lease other plots, family members or age mates plots. However, as the result of the changes in tenure types has significantly influenced the change in land use. More of the Maasai land now is used as conservancies or wildlife conservation and pastoralism becoming secondary.

Other economic activities of landowners are getting employed by some of the conservancies as rangers, waiters or tour guides, followed by cattle rearing and business, however when asked concerning the grazing activity they all graze somewhere outside the conservancy or within during the low tourist season, indicating that though they may be engaged in other economic activity they all have cattle and are predominantly pastoralist by tradition.

This is true in that savannahs of East Africa where land privatization and sedentarization have altered pastoral land-use patterns and fragmentation of arid and semi-arid rangelands (Worden, J. 2007). Using land for conservation and tourism comes at a cost to pastoralist communities. These communities pay a heavy price for the privatization of land and establishment of conservancies for wildlife and the creation of National reserves which can turn pastoralists into trespassers (Behnke, R. 2011). Thereby, water rights must take account of land use and land ownership as they are often closely linked (Hall, P. et al. 2003), sometimes formally through riparian rights.

### 5.2.3. The legal protection of these tenure types and land uses

The private lands that have now been leased have basically influenced the traditional land use of pastoralism of the Maasai to tourism and conservation. Highlighted in the Lease Agreements of the Land Owners and Conservancies (investors) are Sections 3, 4, and 5 called “The tenant’s Covenants”, “The Tenant’s Additional Rights” and “Landowner’s Covenants”, significantly these would have only been seen in an agreement as implied (*quiet enjoyment by the landlord to the tenant*) or to the Lease Agreement but in the case of these agreement the covenants expressly form part of the Agreement itself.

Leasehold covenants, is a promise from one party to the other for the other person’s benefit. The first criteria is that there is a lease in place. These covenants are set forth so as to avoid the issue of allowing only for a condition alone there by further protecting the tenant because in the case of a condition alone, where is a bridged the landlord will have a right to terminate the lease. So in effect the landlord will not automatically have the right to terminate the lease where there is a covenant. This is the understanding of why the covenant is clear in the lease agreement, to ensure the legal protection of the leasehold.

However in sub-Saharan Africa, land tenure changes has significant influence on land use. Kenya’s south which is largely semi-arid has undergone extensive changes in land tenure and use thus altering land use practices and the exploitation of the area’s limited natural resources (T. George, 2014). Maasai, especially those of Talek just within the proximity of the National reserve are traditionally semi-nomadic; they shift their herds and form temporary livestock enclosures during times of drought and also maintain semi-permanent home bases (Butt, B. et al, 2009),

### 5.2.4. Bundles of rights as the result of the tenure arrangement created

The discussion of the bundles of rights as the result of the tenure arrangement created by the land owners and the lessees (conservancies) is important in that it is the first step in understanding the significance of an integrated assessment of the bundles of rights for the both resources. This is also the basis of why there is a need for coordination and communication between both sectorial

institutions. Having devolved most of their rights to the lessees in the form of conservancies the introduction of flexibilities had to be introduced in order to maintain some of the customary practices or traditional rights of land owners (Maasais). They include the social relationships of access and withdrawals for the purpose of grazing, watering livestock and salt licking for livestock. Thereby maintaining the pastoralist livelihood of the landowners.

Flexibilities are introduced for access to the conservancies by the managers and landowners where there is a land management plan, in consultation with the landowner committee (section 5.1.21 of the lease agreement/landowners covenant) which allows for land owners to have withdrawal rights and partial access and but exclusive management rights to tenant. Livestock management, non-livestock withdrawal and management concepts.

Private ownership and leaseholds rights denies overlapping interests and rights by the creation of more exclusive ownership concepts to water and pastures resources(Lengoiboni, 2011; Meinzen-dick & Nkonya, 2007; Mwangi, 2005). The rights of pastoralists or their passage which were common grazing land now blocked by fences often leads to conflict and required negotiation of access rights(Toulmin, 2009). However, access to resources such as water within the government lands is somewhat flexible(Lengoiboni, M. 2011). These form the basis of flexibilities or renegotiation of rights with conservancies and other land owners outside the conservancy arrangement.

### **5.3. Water rights of and Accessibility by Conservancies and Pastoralists for livestock**

Rights and access to water are being impede but several factors to include availability, considering Kenya being categorized as a water scarce country, private ownership and leases created by land owners and lessee (conservancies) and the distance required to reach water for livestock. Although there are flexibilities by the arrangements of the land owners and conservancies' access to these water points and sources can only take place during grazing periods agreed by both the land owners and conservancies and priorities are given to tourism. However, when they do not access sources on the conservancies these land owners or pastoralists have to go to other water points or sources outside the conservancies and the distance, availability or fences serve as barriers to water rights and accessibility. Fences constructed by private land owners are a simple method or technology of access control both because it physically keeps some people away from a resource and symbolizes or communicates intent to restrict access. This is an evidence of control and power that exist when tenure rights are secured.

This argument is also confirmed in that migrating pastoralists follow their same migrating routes to and from dry season grazing areas, and that these routes are standard and followed each year, they may change depending on the intensity of the dry season or even drought(Lengoiboni, 2011). However, I would add also that the building of fences and trespassing the effects of private land ownership also change the regular migrating routes. Access if we have to follow the definition of Ribot and Peluso is more akin to “a bundle of powers” then to property's notion of a “bundle of rights”(Ribot, J and Peluso, N. 2003).

#### **5.3.1. Availability of Water on Land impacts on water rights and accessibility**

We argue that availability of water a factor for rights to and accessibility. Figure 13 Indicates that 46% of water point type is seasonal rivers, whereas dams, boreholes and wells which were initially constructed by group ranches and land owners now fall under the control and management of the conservancies thereby making the availability of water a challenge for pastoralists and landowners especially during the dry season. As the results of this most of the landowners and pastoralists have to travel long distances to water their livestock within the National Reserve. Water points within the

conservancies can only be accessed during the grazing period set by the Land owners grazing committee in consultation with the conservancies' managements. However, these access are somewhat flexible especially to traditional salt lakes and water points at least once a month. As an official of the Water Resource Management Authority puts it, *“They handle it the way the situation comes”* referencing the issues of water access between conservancies and landowners.

The rights to water entitles everyone to sufficient, safe reliable and affordable water(Council, 2003). The General comment 15 of UN committee on Economic, Social & Cultural Rights requires the availability of water for personal and domestic use in or near the homes, workplace or educational institutions of all.

One of the biggest challenges that the conservancies face is ensuring that there is enough clean water for the community, the wildlife, the livestock, and visitors. Most of the conservancies' management are currently conducting hydrology survey with the support of investors to determine water availability and accessibility, <http://maasaimaraconservancies.co.ke/>.

### **5.3.2. Ownership and Governance impact on water accessibility**

Changes in the ownership and governance have significant impact on the already scarcely available water points. As majority of the constructed water points by group ranches are under the management of conservancies and their mode of access are restricted accordingly by sections 3.29 and 3.30 tenants covenant and further strengthen in section 4 of the Tenant's additional Right in the lease agreement (see appendix D). These two sections of the lease agreement explicitly turns over the rights of access, control and management of these water points to the conservancies as in the first, while the second gives the conservancies rights to exclude others including landowners.

Most importantly water in general is owned by the State and governed, controlled and managed by the government. In the journals of Progress in Development Studies 7, 4 (2007), Franks and Cleaver indicated access as the most basic domain in outcomes of the system of water governance. It is weather land owners are close to a piped system (if available and or can afford it) or whether they are close to a river and can access supplies directly or alternatively the time and effort in collecting supplies. It becomes notable how these impact on water accessibility(Franks & Cleaver, 2007).

The State (government) holds water rights in trust for its citizens this dates back to Roman times. The justification of this control by state over water rights is justified based on the strategic importance of the resource, scale systems required to manage it that leads to natural monopolies, and positive and negative externalities for its use(H. Binswanger-mkhize, et al, 2012). Under modern water legislation, concessions are given for the withdrawal of specific amounts of water from a specific water resource, and there may be allocations for environmental uses. Water rights and land rights are thereby separated.

### **5.3.3. Bundles of water rights as it relates to the tenure arrangement created**

The manner in which rights are defined depicts whether people are included or excluded in the control of a vital resource for their lives. Thus, equity relates to how resources are distributed and can be defined in terms of equality of access, with specific reference to meeting basic needs, or in terms of distribution of rights in proportion to the investments that people make or the combination thereof(Meinzen-dick & Nkonya, 2007). The water resources management rules of 2006 establishes the water rights and accessibility for all forms of water extraction with the exception of that which is set forth by the constitution with respect to all having right to safe and clean water.



#### **5.4. The Interactions between water rights and accessibility given the leaseholds between landowners and conservancies**

Unlike land rights, water rights has several other variables that determines access, withdraw, management, exclusion and alienation. These are they range for its fluidity, environmental implication, type of land (riparian land). Rights to water are closely coupled to land rights and the change in tenure affects water rights and accessibility. However, water rights are more dynamic, flexible and most instances subject to negotiations and re negotiations the other natural resources. And this is why there are flexibilities for access to water and salt lakes that may not be written in the lease agreements but response to the need as it arise coating the water official at WRMA.

Section 11 of the water resources management rules may grant authority to enter upon land belonging to other person(s) survey, or investigative purpose of water resource management or development.

Land rights are also linked to other access and resource rights, including water, pasture and to timber and non-timber forest resources(Palmer, D. et al 2009). This is because water rights are embedded in social, political and economic relationships and changes in these relationships affect water rights relationships(Meinzen-Dick & Pradhan, 2002)

##### **5.4.1. What do other studies say about land & water rights interactions**

We argue from the conceptual framework figure 3, that land tenure influences on land use and land use implies water use thereby requires water rights and accessibility. Draw from this argument other studies have argued also that land and water resources are significantly linked. Land use decisions should take into account where the necessary water will come from, and at what cost (economic, environmental, and social). Thus land use planning is mindful of water supply constraints, and prioritizes development that is most consistent with maintain water quality and ensuring sustainable supplies(To, 2011).

Water rights, like rights to most natural resources in general are imbedded in social, political and economic relationships and often closely tied to other rights. This is because water rights are dynamic, flexible and subject to frequent negotiations. For example, rights to water are often closely tied to land rights and rights to pasture may be knotted to membership of a pastoral community. As such changes in these relationships and rights affect property rights to natural resources(Meinzen-Dick & Pradhan, 2002).

## 6. CONCLUSION AND RECOMMENDATIONS

### 6.1. Introduction

Land Tenure and land use change along with water rights and accessibility creates a complex issue of how to align these inseparable resources within a framework of an integrated assessment of RRRs. This chapter provides a reflection of each research questions and key findings of the research. The question that this research attempted to address is how can we describe the interactions between the tenure types based on the legal framework on one hand to that of water use and water accessibility on the other hand? The main objective developed was to define the interactions between the current land tenure arrangements and water accessibility in the Maasai Mara Ecosystem. Qualitative and descriptive research methods were used to address the three (3) specific objectives in the study. This section summarizes the results of each sub-objective. Finally, the limitations of this study are highlighted and recommendations for further researches given.

### 6.2. Specific objective 1: Identifies the various tenure types and mode of protection within the legal framework

The land tenure types are defined by the legal framework of the country. The legal framework consist of the constitution, Acts, statutes and policies which recognize and protect the various tenure types and uses of land. The results show that the three (2) main tenure types in the study area are Public land and Private lands. However, under private there is mainly leaseholds which is created by the agreements between private land owners and conservancies. In fact Public land can be of two classes to include land resource and water resources. Water is considered public land as ascribed in the Constitution and the Water Act of 2002. Water is owned by the state, governed, controlled and managed by the government.

Initially there were group ranches in the study area and they had a collective ownership of land. Grazing of livestock would be done within the ranch. As the result of the sub-division and subsequent lease agreements between land owners and conservancies there is now a change from just grazing to the major land use such as conservation and tourism with rotational and seasonal grazing now secondary.

This thesis specifically focused on the Lease Agreement which is the eventual tenure arrangement created by the land owners and conservancies. Key to these lease agreements is the inclusion of covenants. The coding of this agreement brought me to the conclusion that there are rights, restrictions and responsibilities, of both parties (land owners and conservancies), giving certain conditions to the land owners in terms of the limits to these rights as some are joint. This led me to the outcome of table 10 that there are full rights and partial rights depending on the established rules set out in the Lease agreement.

Without the covenants, there would have been the traditionally implied rights of “quiet enjoyment by the tenant from the landlord” instead these covenants explicitly define other rights and prevents the implied right to terminate by landlords as long as the covenant between the two parties is valid.

### **6.3. Specific objective 2: Identifies the water rights of and accessibility by conservancies and Pastoralists for livestock purposes**

This specific objective addresses the existing water rights of and accessibility for livestock purposes. Water Points in these arid and semi-arid land conservancies are mostly seasonal rivers, with few public bore holes personal or private boreholes. Of the 423 water sources and points vector data collected by the conservancies' managers which I was able to collect, there are 195 Seasonal rivers, 75 dams and 66 springs. Seasonal rivers consist of 46% of the total water sources or points. This is an indication of the arid nature of the land thereby hampering water rights and accessibility. This means that water is basically available during the raining season. The private ownership of land is another factor of insecure water rights in that landowners who have the means to build dams, springs or boreholes on their land exclusively owned these water points and may only permit others access or withdrawer rights should they agree on the terms offered by other pastoralists or cattle owners. Even though access to private land and private water points are with the sole preview of the owner it is flexible and most instances subject to negotiations and re negotiations. This result shows how land tenure affects water rights and accessibility.

The governance of water points within the conservancies are managed and controlled by the managers of the conservancies and follow grazing plan set up by the land owners association. Originally most of these water sources and points were owned, managed and controlled by the group ranches. This also shows how access to water is linked and or influenced by land use and tenure. Such influence is key in that landowners who were originally part of these group ranches cannot access these water points as with in the previous governance framework of the formal rather are restricted by the management of the conservancies.

The covenants are also explicate again about the management and control of all water points within the conservancies and access to these water points has to be within the framework of the land owners grazing plan and approved by the management of the conservancies.

The basis of water rights and accessibility is a fundamental legal phenomenon. The constitution defines it as a political, economic and social right which is vested in the state governed and controlled by the government. It is for this purpose that this study focuses on the Allocative rights of water and not the Human rights of water. As water accessibility for livestock purposes is not for domestic or personal use and the Water act clearly states that water resources is vested in the State subjected to any rights (allocative) of user granted under this Act.

### **6.4. Specific objective 3: Describes the interactions between water accessibility and the tenure arrangements created by land owners and conservancies**

The bundles of water and land rights as it relates to the tenure type created by the lease agreement between land owners and conservancies could have only been identified by the development of an integrated assessment method. Bundles of rights with respect to private ownership by individuals has a positive impact on water rights and accessibility. However, once this private tenure has been turned over to another i.e. in the case of the conservancies, rights to and accessibility to water is

minimum. But there are clauses within the covenants between land owners and conservancies that allows for partial access. Indicating that there is better rights and water accessibility for conservancies as compared to other actors. Covenants may provide partial rights of success to the conservancies in times of need this is because water rights are more dynamic, flexible and most instances subject to negotiations. These flexibilities are re- negotiated as seen fit by the parties. As one official of the Water Resource Management Authority (WRMA), puts it ***“They handle it the way the situation comes”***. The right to exclusion is also extinguished during time of crisis and all will have equal access to the water infrastructures, boreholes, dams etc. and that period the management of these water points are implemented by the Water Resources Uses Associations (WRUAs). Access for water is not permitted for non-members of the conservancies.

## **6.5. Recommendations**

This research is not interested in the Human rights aspects of water rights or accessibility, neither is it interested in the fact or perception of land owners and conservancies on the issue of access to water. Rather, it describes the legal interactions of Land Tenure and water rights of and accessibility. However, given the links between Land Tenure change and its impact on water rights and accessibility I realized that even with the legal entities people look as water as a vital resource and negotiate these rights continuously. Therefore, I would like to make the following recommendations:

- Easements on water rights and accessibilities should be documented and recorded with the land registry;
- Clearances should also be obtained from the land registry and attached to water abstraction permits for land that are not owned by the party seeking permission to abstract water;
- Ground water or other water naturally available on private land should be documented and recorded in the land registry also;
- Both professionals and officials of the two resources (Land and Water) should coordinate and participate when policies being made;
- There should be information sharing and updates between the Land Registry and the Water Resources Management Authority.

Finally, there is a need to further research this topic to include the full membership lists of all land owners (respondents) and conduct the test of this integrated method.

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# APPENDICES

## Apendix A

1. What is the area of Land did you get after subdivision of the group ranch.....in Acres.
2. What is the main use of your land currently?

Conservancy	
Settlement	
Rearing Animals	
Farming	
Others Specify	

3. What is your main economic activity?

Rearing animals	
Farming	
Business/shop keeping	
Employed	
Others Specify	

4. What are you **NOT** allowed to do with your land once you lease it to the conservancy?

Graze animals	
Sell	
Charge	
Settle	
Others please Specify	

5. When are you **NOT** allowed grazing your animals in the conservancy?

Dry season	
Wet season	
High tourism season	
Low Tourism season	
Others Specify	

6. Where do you take your animals when you are **NOT** allowed to graze in the conservancy?

Relatives	
Buy/pasture leasing	
Communal lands	
Friends/Age Mates	
Park	
Others please Specify	



7. What difficulties do you face when taking your animals to the place specified above?

Fences	
Trespass	
Others please Specify	

8. How do you deal with these difficulties? .....

.....

9 Have your animals ever been held up by the conservancy rangers? Yes  No

**Water Rights**

10. Do you have access to water in your land? Yes  No

11. What is your main source of water?

Water Pan	
Dam	
Piped Water	
Public Borehole	
River	
Own borehole	
Others ...Please specify	

12. What do you use the water mainly for? (Proportions)

Drinking/home uses	
Agriculture/irrigation	
Livestock	
Others specify	

13. Who built the source of water that you use?

Government	
Group Ranch	
Local Community	
Owner	
Conservancy	
Others ...Please specify	

14. What difficulties do you come across when getting to the water source/point?

Fences	
Trespass	
Long Distance	
Others specify	

15 Are there any rules as regards access to water at the named source Yes  No

Appendix B

Land Tenure & Use

1. What is the nature of restrictions that are imposed on lands contributed by members?

2. When are the restrictions implemented in what season?

3. Are the contracts or agreements registered or recorded by another institution?

Yes  No

4. Where or which institutions(s) are the contracts or agreements registered or recorded.

Kenya Wildlife Services

Land Registry

Court

Other (specify) \_\_\_\_\_

5. How are the conservancies boundaries defined?

6. Is there any spatial information of your conservancy available? Y  N

7. What type of spatial information is available?

Maps

Coordinates

Other (specify) \_\_\_\_\_

8. Are land owners and members of the conservation permitted to use the conservancy outside of purpose for other activities

9. What other activities do land owners and members of the conservancy permitted to carry out?

Grazing

Farming

other (specify) \_\_\_\_\_

10. Are there others around or outside the conservancy that make use of it?

Yes  No

11. Is there any agreement for this use? Yes  No

12. What other activities do these other occupants around and outside the conservancy use it for?

Passage

Pastoralists

Grazing

Farming

Water

Other(specify) \_\_\_\_\_

### **Water Accessibility**

1. Are there water source(s) available on the conservancy? Yes  No

2. What Kind of water sources are available?

River

Stream

Creek

Borehole

Other (Specify) \_\_\_\_\_

3. Are there water points available on the conservancy? Yes  No

4. Why are there no water points available?(If yes skip question 4)

Too far from water source

Expensive to acquire

5. How many water points are available?  (If No go to question end)

6. What kind of water points are available on the conservancy?

Bore hole

Shallow water holes

Water pipelines

Other (Specify) \_\_\_\_\_

7. Who owns the water points(s)?

Conservancy

Water Board

Private institution   
(Name)\_\_\_\_\_

Other(Specify)\_\_\_\_\_

8. Estimate how much it cost to acquire each of the water points?

9. What are these water points used for?

Livestock

Wildlife

Used by others without legal agreement

Used by others with legal agreement

Other(specify)\_\_\_\_\_

10. Are others around and outside the membership of the Conservancy permitted to use these water points?  No

11. Is there any legal arrangement for the use of such water points? Yes  No

## Appendix C

### Basic Information

Name of Water Resource Use Association

(WRUA): \_\_\_\_\_

\_\_\_\_\_

Name of Respondent:

\_\_\_\_\_

Position of

Respondent: \_\_\_\_\_

Date of Interview:

\_\_\_\_\_

#### **A. Water Point Characteristics**

1. Status of water point:  
newly constructed or installed  
Rehabilitated  
non-rehabilitated  
Conserved
2. Year of Installations/construction/rehabilitation
3. Registration status: Legal            illegal
4. Frequency of use:
  
5. Abstraction Type:  
Weir  
Pump  
Canal  
traditional
6. Current operational status:  
fully operational  
Partially-functional  
Non-operational'  
dried up

#### **B. Location of Water point and Access**

7. Are there coordinates available for these water points?
8. Location of water point: \_\_\_\_\_
9. Condition of the area:  
arid

semiarid  
medium potential  
high potential

10. Land use where located:

Conservancy

farming(agriculture)

Grazing

Human settlement\_\_\_\_\_

11. Does the location of water point influence public access to water? Y

N

If YES, Explain\_\_\_\_\_

### **C. Ownership & Access**

12. Ownership of water point:

Group

Private

Institution (provide name)

13. If owned by group, how many members:

14. Are non-member allowed to get water? Y

N

### **D. Management, Roles**

Who manages the water point?

Management status:

Good

Fair

Average

Poor\_\_\_\_\_

## Appendix D

REPUBLIC OF KENYA

THE REGISTERED LAND ACT  
(Cap. 300)

LEASE

TITLE NUMBER: CIS MARA/KOYIAKI-DAGURUGURUETV

THIS LEASE is made on 20 between:

1) (i. D. Number ) of

P. O. Box (the "Landowner") which expression shall where the context so admit include the Landowner's personal representatives and permitted assigns); and Mara North Holdings Limited, Number # , a private company with limited liability, incorporated in the Republic of Kenya and of 1<sup>st</sup> Floor Lengai House, Wilson Airport, c/o Cheli and Peacock Offices, P.O. Box 30550-00100, Nairobi, Kenya, (the "Tenant") which expression shall where the context so admits include its successors and assigns).

### WHEREAS:

- A. The Landowner is the registered proprietor of all that parcel of land situated in Narok South District in the Republic of Kenya containing by measurement approximately hectares and registered at the Narok District Lands Registry as Title Number CIS MARA/KOYIAKI-DAGURUGURUETV (the "Premises").
- B. The Tenant is a private not for profit company one or more of whose present or future shareholders represent the owners of one or more of the camps and lodges located within the "Mara North Conservancy", (defined herein below), and who share the values and beliefs set out in Recital C below. The Landowner and other Landowners (defined herein below) recognize the value of their land to wildlife conservation within the Mara North Conservancy and are interested in conserving their individual parcels of land for purposes of wildlife conservation and ecotourism.
- C. Land and wildlife conservation within the Mara North Conservancy, including the Premises, will contribute to the continued survival of important wildlife in the Mara Ecosystem. In addition, it is acknowledged that the continued existence of ecotourism will contribute greatly to poverty reduction, economic development and the overall public benefit by ensuring that wildlife endure for the benefit of the Landowners' future generations and the people of Kenya as a whole;
- D. The Landowner has agreed to lease the Premises to the Tenant for purposes of wildlife conservation and ecotourism subject to the terms and conditions in this Lease.





- 1.1.13. "Lodge/Camp Land" means any portion of the land forming the Conservancy that has already been leased (or over which rights of possession have been granted) to various camp and lodge owners whose facilities are situated in the Conservancy area and which has for purposes of identification only, been set out and briefly described in Schedule II attached hereto and incorporated herein;
- 1.1.14. "Premises" shall have the meaning ascribed thereto in Recital A.
- 1.1.15. "Rent" shall have the meaning ascribed thereto in clause 6;
- 1.1.16. "Tenant" means the incorporated entity that is the signatory to this Lease and includes all the present and future members and shareholders of such corporate entity who may also be present or future owners of any of the camps and lodges situated in the Conservancy who are identified and listed on Schedule II attached hereto and incorporated herein, which list may from time to time be amended, all of whom shall have and enjoy collectively all of the rights granted to the Tenant under this Lease;
- 1.1.17. "Term" means the term of fifteen (15) years (i.e. one hundred eighty months) duration calculated from the Inception Date.
- 1.1.18. "Tourist Related Development(s)" means the construction, development management and/or operation of any tourist accommodation facility, whether for private or public use, to include without limitation a house, villa, hotel, tented camp, lodge, fly camp or other form of accommodation together with the development of infrastructure for the provision of related tourism activities such as horse riding, guided walks, game viewing either in vehicles or on foot, bike riding or any other activity that the Tenant may deem appropriate.
- 1.2. Any reference to a statutory provision shall be deemed to include a reference to any statutory modification or re-enactment of it;
- 1.3. The clause headings do not form part of this Lease and shall not be taken into account in its construction or interpretation;
- 1.4. Words importing one gender include all other genders; words importing the singular include the plural and vice versa.
- 1.5. Reference in this Lease to any clause, sub-clause, schedule, or paragraph without further designation shall be construed as references to the clause, sub-clause, schedule, or paragraph of this Lease so numbered.

## 2. GRANT OF LEASE

The Landowner HEREBY LEASES to the Tenant and the Tenant hereby accepts this Lease of ALL THOSE Premises, together with the rights specified herein, TO HOLD unto the Tenant subject to and including all rights, easements, privileges, restrictions, covenants and stipulations of whatever nature affecting the Premises for the Term at the Rent subject to the agreements and other matters contained in the Lease, to the entries in the register relating to the Lease and to such of the overriding interests (if any) set out in section 30 of the Registered Land Act as may for the time being subsist and affect the Premises.

## 3. THE TENANT'S COVENANTS

The Tenant hereby covenants with the Landowner as follows:-

- 3.1. To use the Premises for purposes of Environmental Management and undertake Tourist Related Development on the Premises in accordance with the Environmental Management Plan;
- 3.2. To pay the Rent on the due dates and in the manner specified in clause 6 (*Rent*) subject however to the provisions of clause 7 (*Enforcement*);
- 3.3. To use the Premises solely for the purposes identified in clause 3.1 above and in accordance with, the best comparable management practices established for comparable lands anywhere in Kenya and where no comparable management practices exist, to the highest standards practicable.
- 3.4. To promote and ensure the conservation and sustainable use of biological diversity within the Premises having regard to:
  - 3.4.8. The encouragement and appropriate use, appreciation and enjoyment of the Conservancy;
  - 3.4.9. The interests of the Landowners in the Conservancy;
  - 3.4.10. The preservation of the Conservancy's natural condition;
  - 3.4.11. The protection, conservation and management of the wildlife and natural habitat within the Conservancy.
- 3.5. To protect and maintain the natural land and water systems of the Premises and the Conservancy and in this regard the Tenant may rehabilitate eroded and disturbed areas therein.
- 3.6. To ensure that during the Term the Premises (and the Conservancy at large) shall be retained predominantly in its natural and scenic condition, to protect the native plants and animals, and to prevent any use of the Premises or the Conservancy that will significantly impair or interfere with the conservation values of this Lease,

subject however to the Tenant's right to undertake Tourist Related Development in accordance with sub-clause 3.1 above and such other rights as may be granted to the Tenant herein.

- 3.7. To consider the re-introduction of flora and fauna species that were in the Premises/Conservancy and/or the surrounding area in recent past. Such species may include, but are not limited to wild dog, roan antelope and the black rhino;
- 3.8. To develop and maintain, in consultation with the Landowner's Committee, an appropriate environmental management plan (the "Environmental Management Plan") for the Conservancy outlining how different parts of the Conservancy (including the Premises) shall be managed and demonstrate how Environmental Management and Tourist Related Development will be balanced;
- 3.9. To manage the Premises in line with the Environmental Management Plan clearly outlining activities and developments that are appropriate for the Premises and different parts of the Conservancy;
- 3.10. To evaluate and audit all activities that may have an environmental impact on the Premises (and the Conservancy) and without prejudice to the generality of the above, such activities include, but are not limited to, Tourist Related Developments (either existing or new ones), walking tracks, roads, car parks, realignment of existing roads or access tracks and so on.
- 3.11. To consider making, in consultation with the Landowners' Committee, improvements on the roads within the Premises (if any) and the Conservancy for the purpose of protecting the environment without necessarily making access easier.
- 3.12. To take all practicable steps to ensure that all persons who are lawfully on the Premises (and the Conservancy) shall use the natural resources within the Premises or Conservancy in an ecologically sustainable manner and in accordance with the Environmental Management Plan.
- 3.13. To conserve the natural abundance and distribution of wild animals in the Premises (and the Conservancy).
- 3.14. To encourage appropriate commercial ecotourism activities of high standard while taking into account the views of the Landowner and the Landowners Committee and protecting the natural habitat of the Premises and the Conservancy at large.
- 3.15. Not to carry on or suffer to be carried on in or upon the Premises or any part thereof any dangerous, noxious or offensive trade or business whatsoever.
- 3.16. Not to convey or cause to be in the Premises any weapon, ammunition, explosive, trap or poison unless required for internal security, for the security of tourists on

game viewing activities, conservation or wildlife management purposes and then only in accordance with the relative Kenyan laws.

- 3.17. Not to damage, remove or attempt to remove any object of geological, prehistoric, archaeological, historic, or other interest within the Premises.
- 3.18. Not to permit any other person:
  - 3.18.8. without lawful excuse to be in possession of any animal trophy within the Premises or any animal trophy taken from the Premises except for those trophies that already exist at the Premises prior to the commencement of this Lease.
  - 3.18.9. to deliberately disturb or stampede any animal in the Premises.
  - 3.18.10 to use a dog on the Premises for any purpose other than provision of security or as a pet.
- 3.19. Not to discharge or dispose on the Premises or any part thereof any form of litter, hazardous, toxic or radioactive substance, chemical, oil or mixture containing oil contrary the provisions of this Lease or any law in force in Kenya.
- 3.20. To take all practical steps to ensure the emission of minimum light, noise and vibration pollution in the environment within the Premises and the Conservancy at large.
- 3.21. To keep any part of the Premises that is not built upon in good condition free of any waste, rubbish or refuse or any unwanted road;
- 3.22. To take all reasonable precautions against animal and plant diseases on the Premises and in the event of any such disease occurring to report the same forthwith in writing to the proper authority;
- 3.23. Not, save as may be necessary for Environmental Management, to do or permit or suffer to be done anything in or upon the Premises or the Conservancy or any part thereof which may be a nuisance to the Landowner, tenants or occupiers of any adjoining or neighbouring premises;
- 3.24. To ensure that the carrying out of any construction within the Conservancy shall be in accordance with the designs and specifications which must meet the highest standards of environmental protection and eco-tourism;
- 3.25. To comply with and observe all laws, statutes, rules, regulations, or by-laws enacted by the Municipal or Local Authority relating to the use of the Premises;
- 3.26. To install at its own expense all such Fixtures, fittings and furnishings as may be necessary to enable the Tenant to use and occupy the Premises (and the Conservancy) for the purposes of this Lease, all such works to be executed in a

good and workmanlike manner with good, quality materials, the Tenant being entitled to remove all such fixtures and fittings and furnishings installed at the Conservancy at the expiry or sooner determination of this Lease PROVIDED THAT the Tenant may at its own option (without being obliged to do so) be responsible for maintaining any Fixtures and structures existing prior to the commencement of this Lease;

- 3.27. To ensure that any subleases, licences or easements issued by it pursuant to the provisions of this Lease are consistent with the orderly development of the Conservancy and that the activities to be carried on by such tenants or licensees are of a high standard and consistent with the Environmental Management Plan and the conservancy values of the Conservancy.
- 3.28. To obtain, renew and maintain in full force and effect such covenants, licences, permits and authorisations whatsoever, and comply in all respects with such written law, as would entitle the Tenant to remain in occupation of the Premises for the sole purpose for which it is leased.
- 3.29. To take all reasonable steps to prevent the poaching of animals, wood cutting, and ring barking upon the Premises including any theft and damage to woodlands and bush.
- 3.30. To consider providing and maintaining, in consultation with the Landowners Committee, adequate improvements upon the Premises (and the Conservancy at large) including, without limitation, roads, boreholes, water holes, information services, protection of the Conservancy, introduction of endangered and other species of flora and fauna, fences and adequate security, that are necessary to attract wildlife as the Tenant may from time to time determine.
- 3.31. To preserve the environment in the Premises (and the Conservancy large) and to comply with and manage the Premises/Conservancy in accordance with the provisions of the Environmental Management & Coordination Act, 1999 and the Wildlife (Conservation and Management) Act (Cap 376 of the laws of Kenya) and the rules and regulations published there under and any other relevant legislation to the extent that such legislation affects the use of the Premises.
- 3.32. To take all necessary steps to limit: *Restrictions*
  - 3.32.8. The creation, as the Tenant may from time to time determine, of new and unnecessary footpaths or roads over the Premises and/or Conservancy except as are essential for the better management and enjoyment of the Premises and/or Conservancy for the purpose set out in sub-clause 3.1.
  - 3.32.9. Any trespass on the Premises and/or the Conservancy and to take such action as the Tenant may determine from time to time in the event of such trespass.

3.32.10 Any encroachment on the Premises and/or the Conservancy or the acquisition of any new right of passage, drainage or other easement over, upon or under the Premises and/or Conservancy.

#### 4. THE TENANT'S ADDITIONAL RIGHTS

4.1. The Tenant, and all persons expressly or by implication authorised by it, shall have the following additional rights in relation to the Premises (and the Conservancy):

4.1.5. To sublease, on such terms and conditions and to such person or persons as the Tenant may determine, in consultation and agreement with the Landowner and the Landowners Committee, the Premises, or a portion of it, for purposes of allowing a person as the Tenant may deem fit or appropriate to undertake a Tourist Related Development and the Landowner hereby covenants and agrees to assist and facilitate any such sublease by providing whatever consent or approval may be required of the Landowner for the Tenant to effectuate any such sublease;

4.1.9. To assign, on such terms and conditions and to such person or persons or entity of whatever nature or form as the Tenant may determine, in consultation and agreement with the Landowner and the Landowners Committee, any rights and obligations under this Lease or the Lease in its entirety, as it may deem fit and appropriate, and the Landowner hereby covenants and agrees to assist and facilitate any such assignment by providing whatever consent or approval may be required of the Landowner to effectuate any such assignment without receiving any additional compensation for such consent or approval;

4.1.10. To develop, promulgate and enforce, in consultation with the Landowner's Committee, such rules and regulations and/or a code of conduct (the "Rules and Regulations") regarding the use of the Conservancy (including the Premises), as the Tenant shall deem necessary in order to achieve the conservation purposes of this Lease. Such Rules and Regulations shall govern all persons being or entering the Conservancy including the Landowner, his family, guests and invitees.

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has → ?

4.1.11. To develop and enforce such agreements as may be entered into from time to time as between the members or shareholders of the Tenant who are the owners of one or more of the camps or lodges situated in the Conservancy who are identified and listed on Schedule II attached hereto and incorporated herein, which agreements shall govern all persons and companies or entities and all camps and lodges or tourism facilities operating in, being in or entering into the Conservancy.

- 4.1.12. To prevent any activity on or use of the Premises and/or the Conservancy that is inconsistent with this Lease and the purposes set out in sub-clause 3.1 and to require the restoration of such areas or features of the Premises that may be damaged by any inconsistent activity or use;
- 4.1.13. To market the Premises and/or the Conservancy as a wildlife conservancy and preferred tourist destination;
- 4.1.14. To raise any form of income or fees which, without limitation, may include a conservation fee, traversing fee, game walk fee, game drive fee, balloon flight fee, or any other fee or income of whatever nature, for the Tenant's absolute, exclusive, sole and unilateral account, from all guests, clients, invitees or licensees that may enter the Premises and/or the Conservancy. In this regard the Landowner and other Landowners will not be entitled to any portion or percentage of any such income or fees, it being agreed and understood that except for the payment of Rent as provided in this Lease to the Landowner, all other income or fees that may accrue from the Premises are the absolute, exclusive and sole entitlement of the Tenant. The Landowner hereby further covenants and agrees to assist and facilitate the collection of any such income or fees on the account of the Tenant by providing whatever consent, assistance or approval as may be required of the Landowner, including the Landowner's presence in any administrative or legal proceeding, to effectuate the proper collection of any such absolute and exclusive income or fees of the Tenant, without receiving any additional compensation for such consent, assistance or approval;
- 4.1.17. To tear down and demolish any Fixtures on the Premises that are existing prior to January 1, 2009 for purposes of facilitating Environmental Management. In this regard, the Tenant will provide transportation at the Tenant's expense for the transport of such Fixtures but the Tenant will not be required to compensate the Landowner for any damage occasioned to the Landowner as a result of such tearing down or demolition. If the Landowner is unwilling to have any such Fixtures taken down and demolished then in that event the Tenant may terminate the Lease at the Tenant's option or alternatively may opt in its discretion to pay a reduced Rent amount as set forth in clause 6 herein below.
- 4.1.8 To construct ranger outposts, gated entrances to the Premises and/or the Conservancy, and any other improvements as the Tenant deems necessary, without providing additional compensation to the Landowner;
- 4.1.9 To construct or procure the construction, maintenance, operation of an airstrip on the Premises and/or Conservancy to support its Environmental Management operations. In that event the Tenant will negotiate and

10 Reason from note -

provide additional compensation or change in Rent to the Landowner of such Premises as may be agreed at that time. In this regard, the Tenant may also, at its option, consider the upgrade or re-construction of any past airstrips on the Conservancy that are not currently in use and in such cases shall also negotiate and provide additional compensation or change in Rent to the Landowner of any such past airstrip as may be agreed at that time. Further, in this regard, the Landowner hereby covenants and agrees that the Landowner will not be entitled to any portion or percentage of any income or fees that may arise from the operation of any such airstrip and the Landowner hereby further covenants and agrees to assist and facilitate any such construction, maintenance and operation of such airstrip by providing whatever consent or approval may be required of the Landowner to effectuate any such construction, maintenance or operation without receiving any additional compensation for such consent or approval;

- 4.2.0 To erect, at its sole cost and expense, such signs as it may deem necessary for purposes of demarcating the outer boundary of the Conservancy, it being understood that the Landowner of any such Premises on which such a sign is located shall not receive any additional compensation for such sign erection;
- 4.2.1 To pass and re-pass to and from the Premises and/or Conservancy with or without vehicles at all times and for all purposes connected with the use of the Premises and/or Conservancy over and along all roads and foot paths on the Premises and/or the Conservancy;
- 4.2.2 To draw water from any existing borehole, stream, spring or ground fountain and to install such water outlets wherever necessary at the Tenant's expense without the Landowner receiving any additional compensation for such water supply drawn by the Tenant.

#### 5. LANDOWNER'S COVENANTS

- 5.1. The Landowner hereby covenants with the Tenant as follows:-
  - 5.1.8. To permit the Tenant and the Tenant's assigns and successors, peaceably and quietly, to hold and enjoy the Premises, without any interruption or disturbance from, or by, the Landowner or any person claiming, under or in trust for, the Landowner;
  - 5.1.9. To obtain all consents (including the relevant approval or consent of the Municipal or County Council and/or the local Land Control Board) and any other approval required by law in order to give legal effect and validity to this Lesse;



*Restrictions*

5.1.10. To pay and discharge the existing and future taxes, assessments, charges and outgoings whatsoever imposed or charged upon the Premises (the "Outgoings") PROVIDED THAT in the event that such Outgoings shall be due and unpaid for a period or more than three (3) months from the 1st of January in every year, the Tenant shall have the right (but not an obligation) to pay and fully settle such Outgoings and deduct such payment from the Rent.

5.1.11. To ensure that any transfer of the Premises or any part thereof, subject to this Lease and further that such transfer contains a covenant that the new owner of the Premises or any part thereof will be bound by the covenants, terms, conditions, rights and restrictions detailed in this Lease;

5.1.12. To immediately vacate the Premises or any other land of the Conservancy occupied by the Landowner and remove all settlements temporary or otherwise, Bomas and Homesteads on the Premises or any other land of the Conservancy; in the event that the Landowner does not so vacate at any time any such settlement, Boma or Homestead that is situated on the Premises or any other land of the Conservancy the Tenant shall have the absolute right and power in the Tenant's absolute discretion to (a) Terminate this Lease by giving notice to the Landowner, in which case the Tenant shall no longer be obligated to pay any Rent pursuant to this Lease to the Landowner effectively from the date of such notice, or (b) to pay the reduced Rent set forth in clause 6 herein below.

*Restrictions*

5.1.13. Not to graze or allow the grazing of any Livestock on the Premises or any other land of the Conservancy except in accordance with the Livestock Management Plan of the Tenant which the Tenant may announce from time to time after consultation with the Landowners' Committee.

5.1.14. Not to allow other herders who are not Landowners of the Conservancy to traverse the Premises or the Conservancy or to water their cattle or livestock on the Premises or the Conservancy without the express written consent of the Tenant after consultation with the Landowners' Committee.

*Restrictions*

5.1.15. Not to allow third parties to create or obtain any rights of access over the Premises or the other lands of the Conservancy;

*Restrictions*

5.1.16. Not to construct any Bomas and Homesteads or expand any existing Bomas and Homesteads in the Conservancy or on the Premises;

*Restrictions*

5.1.17. Not to cut any trees (for firewood or otherwise) on the Premises or in the Conservancy or allow the Premises or Conservancy lands to be used for burning of charcoal, ring barking, collection of firewood, or any other

purpose which in the absolute opinion of the Tenant, is against the conservation purposes of this Lease;

- 5.1.18. Not to, or purport to, create any rights whatsoever in relation to the Premises or the Conservancy that would in any way offend the rights and benefits accruing to the Tenant from this Lease and the Leases of the other Landowners;
- 5.1.19. Not to allow any other tour operators or third party to enter or use any part of the Premises or the Conservancy or put up or erect or construct any structure within the Premises or the Conservancy whether for game viewing, overnight camping or for any other purpose without the written consent of the Tenant;
- 5.1.20. Not to enter into any other lease agreement with any person or company without the consent of the Tenant for the establishment or operation of any permanent tourist or safari camp, lodge, self help bands or any other temporary tourist facilities on the Premises or in the Conservancy and the Landlord shall not grant any rights in the Premises or any portion thereof or in the Conservancy to any other person for similar or other purposes during the continuance of the Lease;
- 5.1.21. To afford the Tenant the right to exclusive management of the Premises and the Conservancy in consultation with the Landowners Committee with the Tenant having the right to appoint a manager of the Premises and the Conservancy;
- 5.1.22. To make or join with the Tenant in the making of any objection or representation against any third party claiming any rights whatsoever on the Premises, as the Tenant shall deem expedient;
- 5.1.23. To give full particulars to the Tenant of any notice direction order or proposal for the Premises made given or issued to the Landowner by any local or public authorities within seven (7) days of receipt and if so required by the Tenant to produce it to the Tenant and without delay to take all necessary steps to comply with the notice direction or order and at the request of the Tenant but at the cost of the Landowner to make or join with the Tenant in making such objection or representation against or in respect of any notice direction order or proposal as the Tenant shall deem expedient;
- 5.1.24. To ensure that all times during the Term, there shall be a fully functional and representative Landowner's Committee established in accordance with clause 8 below;

to  
Right  
exclude

BY WITNESS this Lease has been duly executed the day and year first hereinabove written.

SIGNED by the said Landowner

ID \_\_\_\_\_

In the Presence of

Mr. \_\_\_\_\_

ID \_\_\_\_\_

In the Presence of

Mr. \_\_\_\_\_

ID \_\_\_\_\_

**CERTIFICATE**

I HEREBY CERTIFY that \_\_\_\_\_ the Landowner  
expressed before me and being known to me, acknowledged the above signature / marks to be  
such person's and that such person freely, voluntarily executed this instrument and understood  
its contents after the contents and provisions of this Lease had been read and interpreted and  
explained to such person in Kiswahili and that the Landlord has been adequately advised  
and has had the opportunity to seek independent advice on the provisions and terms of the  
Lease.

Signed \_\_\_\_\_

Coated with the common seal of MTELA

NORTH HOLDINGS LTD )

In the presence of

Director )

Director )

SEVENTH SCHEDULE

(Rules 118,120,123)

PROTECTION AND CONSERVATION OF RIPARIAN AND CATCHMENT AREAS

1) Activities proscribed on riparian land are:

- (a) Tillage or cultivation;
- (b) Clearing of indigenous trees or vegetation;
- (c) Building of permanent structures;
- (d) Disposal of any form of waste within the riparian land;
- (e) Excavation of soil or development of quarries;
- (f) Planting of exotic species that may have adverse effect to the water resource
- (g) or any other activity that in the opinion of the Authority and other relevant stakeholders may degrade the water resource;

2) The criteria for requiring a soil and water conservation plan are:

- (a) Existing condition of the riparian area and the risk of river bank erosion, sources of direct runoff into the water course and sediment sources within the riparian and catchment areas;
- (b) Slope of the land;
- (c) Land use and land management practices and the risk of soil erosion and destruction from excessive direct runoff;
- (d) Presence or otherwise of soil and water conservation structures;
- (e) Potential water resource pollution arising from the land use;
- (f) Any other criteria that the Authority considers to be significant;

3) The criteria for identifying a protected area or groundwater conservation area are:

- (a) Catchment characteristics;
- (b) The vulnerability of the water resource;
- (c) The water resource quality objectives and the current status of the water resource;
- (d) The class of the water resource;
- (e) Water demands, present and projected, on the water resources;
- (f) Land uses and their potential impact on the water resources;
- (g) Any other criterion that the Authority considers relevant;

4) Contents of management rules or plans related to a protected area or groundwater conservation area may include:

- (a) Procedures to be applied for the management of the Protected Area or Groundwater Conservation Area;
- (b) Prohibited activities;
- (c) Any measures required to be undertaken for water resource conservation and protection;
- (d) The timeframe for implementation of required measures;
- (e) Any other conditions that the Authority may consider relevant;

Appendix F

The Chief Executive Officer,  
Water Resources Management Authority,  
P.O. Box 45250 – 00100  
NAIROBI



Form: WRMA 017  
Catchment: \_\_\_\_\_  
WRMA ID: \_\_\_\_\_  
File: \_\_\_\_\_

**Water Resources Management Authority**

*(To be submitted in triplicate)*

*(Rule 11)*

**APPLICATION FOR AUTHORITY TO ENTER INTO AND UPON LANDS OF OTHER  
LANDHOLDERS FOR THE PURPOSE OF INVESTIGATION AND SURVEYING IN CONNECTION  
WITH A PROPOSED APPLICATION FOR A PERMIT OR EASEMENT**

PARTICULARS OF APPLICANT		DETAILS	
1. Full name of applicant(s) (In Block Letters)			
2. PIN Number (where available)			
<b>Physical Address where water is to be used</b>		<b>Contact Address</b>	
3. L/R Number(s)		4. Box Number	
5. Village(s)/Ward(s)		6. Town	
7. Sub-location(s)		8. Post Code	
9. Location(s)		10. Telephone Contact (Landline)	
11. Division(s)		12. Telephone Contact (Mobile)	
13. District(s)		14. Email Contact	

**DETAILS FOR WHICH ENTRY IS REQUIRED**

15. Name of Body of Water or Aquifer where water is to be diverted, abstracted or stored	16.
17. State as specifically as you can the proposed purposes for which you wish to use the water	
18. Give a general description of the proposed project referring where necessary to the Cadastral map which you are required to submit herewith:	
19. State the time in months which you estimate it will take to make the necessary survey and investigations	
20. State when you propose to start the above investigation (give date)	

The Chief Executive Officer,  
Water Resources Management Authority,  
P.O. Box 45250 – 00100  
NAIROBI



**Form: WRMA 017**  
Catchment: \_\_\_\_\_  
WRMA ID: \_\_\_\_\_  
File: \_\_\_\_\_

**PERSONS LIKELY TO BE AFFECTED**

(Attach extra sheet if required)

Description of land (Give L R (No.))	Name of Owner	Postal address and Tel of the owner or of his duly authorized agent
1.		
2.		
3.		
4.		
5.		
6.		
7.		

**APPLICATION FEE**

Application Fee (KES)	
Receipt Number	

**SIGNATURE**

Signature of Applicant or duly Authorised Agent	
Date of Signature	

ATTACHEMENTS	Attached (Yes/No)	Comments/Remarks
Copy of Identification Documents		
Copy of Land Documents (Land Registrar)		
Relevant Maps		
Copy of Receipt for Payment		