AN ASSESSMENT ON THE EFFECTS OF ENVIRONMENTAL CONSERVATION POLICIES IN COLONIAL AND POST COLONIAL TANZANIA, 1922- 2000

THE CASE OF MOROGORO AND SHINYANGA REGIONS

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A THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (HISTORY) OF THE OPEN UNIVERSITY OF TANZANIA

2014

CERTIFICATION

The undersigned certify that has read and hereby recommend for acceptance by The Open University of Tanzania a thesis entitled: ***An Assessment on the effects of Environmental Conservation Policies in Colonial and Post Colonial Tanzania, 1922- 2000. The Case of Morogoro and Shinyanga Regions*** in fulfillment of the requirements for the degree of Doctor of Philosophy (History) of The Open University of Tanzania**.**

……

Prof. Joseph. F. Mbwiliza

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Date: ----------

DECLARATION

I**, Mikidadi Hamisi Alawi,** do hereby declare that this thesis is my own original work and that it has never been presented and will not be presented to any other University for a similar or any other degree award.

Signature …….

Date ……

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May God grant them a long and bright life, Amen!

DEDICATION

This thesis is lovingly dedicated to my parents, Hamisi Alawi and Zuria Ayubu, for their love, endless support and encouragement, my lovely wife Khadija Ramadhani Lissu and my lovely children Khairat and Ayubu who have been great sources of motivation and inspiration. This work is also dedicated to my beloved brother and sister.

ABSTRACT

This thesis examines the effects of environmental conservation policies in colonial and post colonial Tanzania from 1922 to 2000 in Morogoro and Shinyanga regions. Little is known and has been written about environmental conservation policies in different historical epochs. The stated objectives have been accomplished by analyzing the following themes: firstly the pre-colonial environmental conservation in Morogoro and Shinyanga regions; secondly, the strengths and weaknesses of environmental conservation policies among the Luguru and Sukuma of Tanzania during the colonial period; thirdly, the impact of environmental conservation policies on cultural aspect on both regions and lastly, the post-colonial environmental conservation policies.The thesis has mainly centred on environmental conservation strategies and practices. Economic and political changes have been broadly treated as complex processes of transformation and adjustment of environmental conservation strategies and policies. To explain this transformation, the Political Ecology, Ecological Revolution, and Historical Ecology theories have been used. The thesis used qualitative method. Data analysis was guided by the stated research questions. Each question was expanded to form a major chapter. The researcher presented the findings by using primary and secondary information. It was concluded in the thesis that the European capital penetration alone did not automatically simplify the imposition of colonial environmental conservation policies there were other internal factors that acted upon. It is recommended that there is a need to review and research the narratives and organizational models for promoting more significant local involvement in environmental management.

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LIST OF ABBREVIATIONS AND ACRONYMS

AWF	African Wildlife Foundation
CBC	Community Based conservation
CMEAMF	Conservation and Management of the Eastern Arc Mountain Forests
DANIDA	Danish International Development Agency
DC	District Council.
DRDP	District Rural Development Programme
ECF	East Coast Fever
FFCO	Flora and Fauna Conservation Ordinance
GATC	German Agency for Technical Cooperation
GSG	Green Shinyanga Group
HASHI	Hifadhi Ardhi Shinyanga
ICRAF	International Centre for Research in Agro Forestry
IMF	International Monetary Fund
IUCN	International Union for the Conservation of Nature
MOECO	Environmental Conservation Organisation
NAFRAC	Natural Forestry and Restoration Agriculture Centre
NGOs	Non Governmental Organizations
Pas	Protected Areas
PM	Pest Management
PRA	Participatory Rural Appraisal
RIDP	Regional Integrated Development Programme
SDPM	IFAD -The Small Holders Development Project Marginal Areas

SDS	Sukuma Land Development Scheme
SFC	Sukuma Federation Council
SHISCAP	Shinyanga Soil Conservation and Afforestation Programme
SMF	Shinyanga Mazingira Fund
TAA	Tanganyika African Association
TANAPA	Tanzania National Parks
TANU	Tanganyika African National Union
TECG	Tanzania Environmental Conservation Group
UK	United Kingdom
ULUS	Uluguru Land Usage Scheme
UN	United Nations
UNDP	United Nations Development Programme
VEC	Village Environmental Committee
WB	World Bank
WCA	Wildlife Conservation Act
WCA	Wildlife Conservation in Africa
WMAs	Wildlife Management Areas
WTO	World Trade Organization
WVI	World Vision International
WWF	World Wildlife Fund
WWFCN	World Wide Fund for Conservation of Nature

CHAPTER ONE

1.0 INTRODUCTION AND THE BACKGROUND TO THE PROBLEM

1.1 Introduction

After the end of the First World War, in 1919, the League of Nations granted Britain a mandate to govern the former German East Africa - which acquired a new name, Tanganyika. British policy from the 1920s onwards was to encourage indigenous African administration along traditional lines, through local councils and courts. A legislative council was also established in Dar es Salaam, but African members were not elected to this until after World War II. By then local political development was an obligation under the terms of United Nations trusteeship, in which Britain placed Tanganyika in 1947 (Tim Rambert, 2013).

During the 1950s a likely future leader of Tanganyika emerged in the person of Julius Nyerere. He immediately found a political party, the Tanganyika African National Union (TANU) (evolving it from an earlier and defunct Tanganyika African Association-TAA). From the start its members featured prominently in elections to the legislative assembly. When independence followed, in 1961, Nyerere became the new nation's Prime Minister (Ibid). In 1962 Tanganyika adopted a republican constitution and Nyerere is elected president. In 1964 Nyerere reaches an agreement with Abeid Karume, president of the offshore island of Zanzibar which has been so closely linked in its history to the mainland territory of Tanganyika. The two presidents signed an act of union, bringing their nations together as the United Republic of Tanzania. Nyerere became president of the new state, with Karume as his vice-president (Kimambo, I.N 1996).

It is from the above articulated leadership (power) transition, this thesis analyses environmental conservation policies in colonial and post colonial Tanzania from 1922 to 2000 in Morogoro and Shinyanga regions. The thesis has mainly centred on environmental conservation strategies and practices before, during and after colonial domination. Economic and political changes have been broadly treated as complex processes of transformation and adjustment of environmental conservation strategies and policies.

1.2 Background to the Problem

The experience of environmental conservation is not a new phenomenon. It has been asserted that the partitioning of Africa during the Berlin Conference of 1885 legalized the colonial control of African natural resources. This saw the 'nationalization' and transfer of land and other natural resources from the communities which owned them to the colonial state which was entrusted with new power to control them (http//www.tanzaniagateway.org./doc). This disrupted the way local communities lived and related to their natural resources.

Prior to colonialism, traditional environmental use was in harmony with nature because societies had developed their customs and regulations which ensured sustainable use of natural resources. Pre colonial communities, have also observed that the process of ecological transformation of natural forms was a major element in the religious systems of any society with a subsistence economy (Matowanyinika, 1991). A great deal has been written about the notion of 'sacredness', and the role that sacredness plays in conservation. Sacred groves are seen as representing

important pre-colonial forest conservation; sacred pools are related to wetlands conservation, and so on. While there can be no doubt that religion was certainly deployed to conserve critical resources, particularly in times of crisis, it appears that sacred places represented much more broader religious goals and functions than conservation. Sacred places represent different scales of conservation, from the individual hunters shrine, for instance, to large sacred territories managed by several religious and political authorities.

For example, the most widespread ecological shrines in Central Africa were village shrines, presumably because it was at the village level that ecological pressure was most keenly felt. (Matowanyika op. cit). According to Matowanyika, in a subsistence economy, the landscape is never completely setled by people and those which remain have never been subjected to man's ecological transformations or which, once used, have been abandoned again. These places are of great significance: they tend to represent hidden forces on which man draws for his survival. 'Wild' places play a prominent part in the religions of peoples engaged in a subsistence economy. Wild places become important foci of religious places if they are somehow prominent in the landscape. "Hills, pools, imposing trees, caves, streams, falls and rapids become associated with invisible entities, and thus become objects of veneration (Ibid)."

Thus, the most comprehensive studies of pre-colonial conservation practices as they existed during the colonial era in central and southern Africa have occurred in the context of studies of religion. This is not surprising, since conservation would not have existed as a separate discipline per se, but as part of general social organization.

As Schoffeleers states, the prevalent idiom used by central African societies for the articulation and application of their earth philosophies is religion(Schofelleers 1979:2). Schofelleers further notes that territorial cults are distinct from other religious organizations in society in terms of their high degree of institutionalization, their reflection of the power and primacy of political organizations over kin groups, and historical continuity. Given that population densities were generally low compared to resources, and also that resource exploitation was designed to fulfil immediate consumption needs and only limited exchange values, natural resources were not commoditized in the pre-colonial era. Consequently, early conservation ideals were developed to deal with crisis situations arising out of natural disasters, rather than from the extractive activities of humans. Thus most regulation of resource use revolved around the implications of particular forms of resource extraction for droughts, floods and pestilence. Schoffeleers notes that cults function to regulate the production and distribution of food, the protection of natural resources, and the control of human migratory movements (Schofelleers op. Cit). Ecological functions are distributed through a number of these religious institutions, including lineage cults concerned inter alia with land and livestock issues, professional cults of hunters, fishermen and others, and territorial cults which were profoundly ecological in function.

"Territorial cults function in respect of the well being of the community, its fields, livestock, fishing, hunting and general economic interests."(Ibid) They achieve these objectives through ritual as well as issuing and enforcing directives. Territorial cults function to control the use of fire, agricultural production methods and practices for

example opposition to the introduction of certain crops in the colonial era; fishing and grazing. Cults also played an important role in determining settlement patterns, population movements and the acceptance or non-acceptance of immigrants.

In South Africa, the pre-colonial state also took steps to regulate resource use by outsiders (Schofelleers op. Cit). King Shaka set up a royal hunting reserve in the present day Hluhluwe Game reserve. This reserve was designated for the ruling political and military class. Some African rulers set up rudimentary management systems to restrict early European hunters and save wild animals from extinction (MacKenzie, 1988:21). For example, Mzilikazi introduced a permit system for all European hunters who entered his kingdom. Under this system, gifts and other presents were given to the king in return for permission to hunt in his territory. The king also levied a percentage of the spoils of the hunt as payment for the permission (Masona, 1987). Mzilikazi also set up a game reserve in Matabeleland known as *Maduguza*, west and north west of his capital, Bulawayo, where no one was allowed to kill wild animal except with the king's permission (Masona, op cit). Thus, perceptions of resource degradation were not limited to the colonizing whites, the indigenous people were also aware of the problem and devised appropriate responses.

As these processes [of wildlife destruction by European hunter-gatherers] accelerated in the nineteenth century, it was not just the Africans who found it increasingly difficult to gain access to the faunal resource but also the European hunters themselves. By this time whites had become acutely aware of the decline of

big game stocks. Two species, the blaaubok and the quagga, had become extinct while others no longer survived in vast tracts of Southern Africa where formerly they had been abundant (MacKenzie, op cit).

It is significant to note that pre-colonial conservation was based as it were on the unity of humanity and nature, and devised strategies for conserving nature while at the same time guaranteeing access to it. In Tanzania, the Iraqw people of Northern Tanzania had good traditional knowledge of using the landscape and resources in their totality (Lawi, 1999: 297-298). They divided their landscape into several different usage zones. This division shows among other things, the Iraqw's knowledge of various soil types and their characteristics as well as effects of topography on different land options (Lawi, 2000:159-161).

Another indigeneous method, involved improved crop production, livestock management and construction of permanent homes by using materials from the forest. Apart from the above articulated knowledge, of conserving the environment, the Iraqw people considered dark forests and streams as the principle abodes of the earth-based spirit called *Neetlaang'w* (Lawi, op cit). The common belief was that an accumulation of events considered to be ritually polluting to the land could bring disaster like miscarriages that would eventually result in the migration of the *Neetlaang'w* attached to a particular important forest in the areas concerned. This could lead to the drying up of water resources in the forest, and consequently, to the total disappearance of the forests *(Ibid).* Therefore, the Iraqw people knew how to

conserve their environment before colonial domination. They also understood the impact of environmental destruction.

Similarly, the Pare community of northern Tanzania had their own ways of conserving their environment before the coming of colonialists. Forests were mainly used as training centres of their gods and worship areas (Kisaki, 1999:38). These centres were highly preserved. Creeping vegetation around the forest were not allowed and grasses around these areas were not cut for livestock or house thatching (Kisaki op cit). No one was allowed to cut down trees in the forest or even to collect a tree which had fallen down by itself. They believed that failure to observe those regulations would invite disaster and cause misfortunes to anybody who neglected them.

The Pare community who also vigorously maintained their environment, they used *'mpungi'* (shrine) as places where every clan offered sacrifices to the ancestors (Kisaki, 1999 op cit). The '*Mpungi,'* were responsible for either thanks giving or request for eradicating calamities in the clan. This activity was done in the dense forest where the forest used as *'Mpungi'* was highly respected. For example, women were not allowed to cut grasses or collect firewood from the forest and animals which were in these sacred areas were not allowed to be killed *(Ibid).* Therefore, the *'mpungi'* were important in keeping the environment sustainable in bringing rain and medicine.

The Lawyers' Environmental Action Team, observed that there were societies in pre colonial Tanzania with taboos and traditions which contained hidden features that ensured a close relationship between humankind and wildlife. There were establshed mechanisms to punish those who violated the revered rules (The Lawyers' Envoronmental Action Team, 1994).

Apart from religious outlook on environmental conservation in pre colonial Africa, different experiences had been used in Tanzania whereby shifting cultivation was practiced in the woodland and moist savanna areas, but due to the sparse population the effect on the vegetation was probably slight. In the miombo woodland, the occurrence of tsetse flies prevented large-scale habitation, and hunting and honey-collection were the main forms of utilization (Lungred, 1982:46).

In the drier areas, however, the influence of pastoralists on the vegetation, through grazing and the systematic use of fire was certainly much more profound. There are strong indications that mountain forest areas were cleared for cultivation during early dry periods, and then kept open by fires and grazing (Kisaki, 1999, op cit). Also the mountain forests were often used as temporary refuge during times of war and it is unlikely that there were permanent settlements within mountain forests until much later. Large-scale movements of population up the mountain slopes first occurred during the eighteenth century, primarily as a result of the invasion and occupation of the plains by the cattle raising Masai. This forced the agriculturalist communities to settle in the mountains where they could better defend themselves. They cleared the forest on the lower slopes and, depending on skill and land potential, different forms

of permanent and semi-permanent agriculture developed. Some of these mountain communities developed into powerful and well-organized societies during the eighteenth and nineteenth centuries, e.g. the Chaggas of Kilimanjaro and the Sambaa of Usambaras (Lungred, 1982 op cit).

Therefore, this experience shows that pre-colonial societies maintained specific strategies that helped them to utilize their environment and conserved it. As colonialism progressed, territorial cults came under various challenges, like being undermined which eventually led to their breakdown. These challenges included: Land expropriation and wage labour which drastically changed the structure of social organization; Christianity, which questioned the religious bases of the cults; The colonial administration itself; the rationalist interpretations of ecology in the form of land conservation and animal husbandry; The bureaucratization of the chieftainship which weakened political support for the cults. As a consequence of these pressures, by the 1920s, the territorial cults had greatly diminished in importance (Lungred, 1982 op cit).

Despite the traditional environmental knowledge and practices articulated above, they came to be regarded as harmful to the environment. Colonialists assumed that African environmental conservation experience was wrong, and may be to justify their views and interests; they assumed that the natural environment in Africa was more vulnerable than it superficially seemed to be.

Thus, colonialists thought that the African environment needed active care and protection from human encroachment (Lawi, 1992 op cit). Colonial government undermined the role of local people and their knowledge in managing their environment. The conception was grounded on the fact that local people misused the environmental resources like forest, land and wildlife. Generally, Africans were seen as unstable in using their environmental resources (Lawi, 1992 op cit). It was from this colonial conception of environmental conservation that the logic of conservation as well as sectoral policies was derived *(Ibid).*

The colonial environmental conservation policies in Tanganyika had different aims and purposes. In his analysis Kjekshus pointed out that the establishment of wildlife reserves for example, had the purposes of creating hunting lodges (Kjekshus, 1971:74-78). Thus, animals were preserved for commercial purpose and immediate subsistence consumption (Kjekshus, 1971 op, cit). Business persons and tourists could access animals easily in ecologically designated places such as game reserves and National Parks (Ibid). With regard to forest resources, Yusufu Lawi also had the same view with Kjekshus, (1971) and Koponen, (1992) when he states that forest reserves were established to enable trees to grow for commercial production and was to protect natural forest from natives' encroachment (Lawi Op. cit).

Similarly the creation of National Parks and Games resources was guided by the same consideration. In this anaylsis Kjekshus has argued that the creation of game reserves and National Parks in Tanganyika intended to serve two purposes: one was that the pre-existing man-wildlife interaction was considered one of the causes of

diseases like sleeping sickness that was caused by tsetse flies, hence the establishment of game reserves aimed at restricting man wild-life interaction (Kjekshus, 1971 op, cit). The second was derived from the assumption that some African communities like the Masai had cattle theft behaviour which caused some problems to their neighbours (Ibid). In this sense, reserves were created not only to create hunting lodges and to prevent disease but to prevent cattle theft (Ibid). The assumption of the colonial administrators was that the Masai would fear crossing the reserved and restricted areas in their attempts to move with their spoils. Masai cattle theft is a traditional tendency. Therefore, the policies limited them to practice that behaviour. However, behind apparently good intentions was the logic of colonial exploitation through alienation of man from nature.

Similarly, colonial conservation policies aimed at creating places which could act as laboratories for undertaking ecological experiments for animals and plant species(Kjekshus, 1971 op, cit). It is upon this purpose that, the interests of researchers conflicted with those of managers and conservationists (www.clark.edu *Layer Environmental Team* retrieved August, 2006). While, the former pressurized for the establishment of reserved areas so as to have undisturbed natural laboratories in which they could conduct research, the latter wanted to manipulate nature for sustainable use and yet, the conservationists were about getting areas that could provide an admired aesthetic appeal of natural phenomena *(Ibid).*

Parallel to this argument, some animal species like tiger, rhinos, and elephants were becoming extinct in Tanzania's environment due to over-intensive hunting and for

the case of forest and soil; there was a threat of undergoing desertification due to over forest exploitation and poor methods of controlling soil erosion *(Ibid).*

The first task for the new British administration was therefore to reclaim the old mountain forest reserves. In the 1920s and 1930s reservation was also made for large tracts of miombo woodland to secure the supply of the valuable *Pterocarpu.s angolensis* (Lundgren, 1982 op.cit). At the end of the British time the areas under forest reserves were practically the same as today. The total area of reserves is 130,000 km^2, of which only 9,300 km^2 are high forests and the bulk of the remainder is miombo woodland. The major forestry development during the British time was the systematic introduction and trial of exotic trees suited for plantation production of timber, firewood, and later pulpwood *(Ibid).*

Thus, whereas wildlife conservation policies aimed at preventing extinction of some wild species, forest and soil conservation policies aimed at controlling the existing state of land degradation (Lundgren, 1982 op.cit). From the afore mentioned purposes one is tempted to concur with Koponen's view that colonial conservation policies in Tanganyika were basically introduced to serve the interest of whites and in most cases to justify colonial view and altitude towards the management of environmental resources (Koponen,1992:528). This was because the colonial administrators did not introduce the notion of conservation and sustainable use of natural resource to Africa; on the contrary Africans knew how to conserve their environment before the coming of the Europeans. Without that knowledge, Europeans could not find the environment which, they claimed, needed care and protection.

The colonial administrators were convinced that they had mastered nature to a vastly greater degree than the natives had and that they possessed the means to tackle the problems, which the indigenous people had failed to solve. In this sense, the contribution of Africans to environmental degradation was emphasized while that of Europeans was down played *(Ibid).*

During the 1920s and 1930s the British colonial state was preoccupied with formulation and implementation of environmental conservation policies (Koponen, 1992 op. cit p). This period has been termed as "conservation era" because greater attention was paid on soil erosion and deforestation. This was a colonial response to the prevailing economic downturn that set in towards the end of the 1920s within the colony. Therefore, serious conservation campaigns were done. In actual fact the campaigns had economic implication on economic recovery of the western European countries and their colonies. Conservationists concurred with the agricultural policy in particular with the "grow more crops campaign (Manson, 1996:200)."

British colonial officials had begun to see soil erosion as a great threat to agricultural production (Madox, 1996). They responded by introducing soil conservation policies in areas such as Ulugulu-Morogoro district, Mlalo-Lushoto, Kondoa-Irangi and in Sukumaland. The policies focused on wildlife preservation, forest and soil resources conservation *(Ibid).* For example, in Morogoro, the Local Authority of 1921 declared that, those forests of Ndiman, Makanga, Lusegwa and Vidavu should be protected. This measure was instituted to restrict the activities of the natives like agriculture, cutting of building poles that were being done in the above mentioned forests. These

activities were seen by the colonial authority as predisposing factors for the environmental destructions through deforestation and soil erosion (TNA, retrieved 2011 File No.74B, and Vol-1 Forest Morogoro). Another observation asserted that, the existing legal framework that governed land matters was guided by the Land Ordinance of 1923 *(Ibid)*.

Within this legislation, all land was supposed to be public and the commissioner was granted power to make land grants and leases if he deemed it to be for the benefit of the public/national interests. There were two sets of law relating to land tenure namely: (a) Statutory law, which governed lands that were granted by the government (such as the land held by private companies, state farms, large and medium scale farmers). These rights are also known as 'granted rights of occupancy'; (b) Customary law, which governs all untitled land under small holder production (Chachage, 1998:253-263) . This categorization of land occupancy was selective and ignored the common people (natives) in controlling the land. It therefore, undermined the role of customary rights in occupying the land.

The 1928 amended Land Ordinance seemed to back away from exclusive state control in its classification of indigenous land rights. This law was shortly amended as it was deemed ineffective in defending colonialists' interest on utilization and exploitation of African resources. It stated that where a native lawfully used or occupied land in accordance with native law and customs, he could not be removed by the government against his will, unless the land was alienated to a third party. In addition to the above explanation, the ordinance restricted and controlled bush fires.

This system of bush fires was used as a shifting cultivation strategy. The natives were advised to adopt terrace or *tuta* system that could prevent soil erosion (Manson, 1996 op cit)

In the year 1929, the Game Preservation Ordinance of 1929 was enacted. The ordnance stated that the activities in the gazetted game reserves should be seriously controlled; which implied that all activities in the game reserves were restricted. But the Europeans could be allowed with special permission and on payment of prescribed fees (TNA, retrieved 2011, No. 15).

Licensing procedures were revised in the 1932 amended legislation. It empowered the governor to promulgate regulations to regulate activities within Gazzeted Game resources. Although these regulations on the surface appeared to be non-discriminatory in practice they operated against the interests of local communities in adjacent villages *(Ibid).* The residents' full and minor licenses were issued to be in force for one year, including the date of issue. These regulations aimed at selecting and reducing the number of the natives who were involved in the game hunting activities. Furthermore, the regulations required payment of licence fees. Although the fees were not prohibitively high, few natives could be reconciled to purchasing licences for what appeared to be an encroachment and restrictive access to resource they had considered to be communaly owned. More restrictive measures continued to be taken throughout the 1930s.

The conservation for protection of the Flora and Fauna of Africa propagated in London in 1933 mandated that colonial administrations should move towards the establishment of the national parks where wildlife would be protected. Traditional hunting was still allowed in game reserves and wildlife use rights of hunters – gatherer tribes such as the Hadzabe and Ndorobo were specifically preserved. Government's view, placing wildlife use restrictions on these people could have exterminated the group and that was contrary to the provision of the trusteeship. It is important to emphasize that under the 1940 ordinance, the law gave the Governor the power to define customary land rights in national parks based on the public interest (TNA, 2011 op cit). In 1959, the Serengeti National Park was reorganized in an arrangement that resulted in re-location of resident Masai pastoralists from the park. A new National Park Ordinance passed that all living in the Serengeti and any future national parks, were to be evicted in these areas and establishing an important legacy as the colonial era moved towards its close (Neuman, 1998:85)

Following the above explained conservation policies, the Africans responded negatively. They therefore, resisted against colonial environmental conservation policies. These resistances were pronounced in different parts of the colony. For example in Morogoro, the Luguru protested against soil conservation measures introduced in 1950s (Maak, 1996:152-153). In the 1955, the Luguru resistance erupted into violence when they demonstrated openly shouting, "We don't want terraces" (Maak, 1996 op cit). The Luguru riot represents the cry of people who were struggling to deal with colonial environmental conservation policies, which they felt were based on erroneous assumptions about their land ownership patterns and labour

practices. The Luguru protested that soil conservation methods (terraces) increased hard work, but did not bring increased rewards *(Ibid).*

Therefore, based on colonial environmental conservation policies discussed above, the policies were a result of external influences and they contributed to the misunderstandings first, between the indigenous people and colonial officials and second, between different sections of African communities themselves. State antagonism occurred, whereby some communities were favored by the policies than the others. Most of the societies, which depended on hunting for their subsistence, were allowed to access the wilds in reserved areas but only for food purposes. While this happened to those societies, some societies were restricted until they acquired official hunting license (Neuman, 1998). On the other hand, Kjekshus (1971) comments that exemption from the licensing rules was granted to the so-called hunting tribes: the Wabahi, Watindiga, and Wandorobo who were allowed to hunt common animals for food (Kjekshus, 1971:78-79).

At independence, the government adopted the colonial environmental conservation policies. Tanzania, like other wildlife-rich territories of east and southern Africa, followed the colonial frame work that had also inherited the colonial environmental conservation policies (Fred, 2007: 232-261). Western conservationists anticipating disaster for the country's wildlife under African rule developed strategies in the changed political environment of the post-colonial era. Firstly, they mobilized foreign resources to support wildlife conservation in Africa (WCA). This effort was led by a suite of relatively new organizations such as the International Union for the

Conservation of Nature (IUCN), the World Wildlife Fund (WWF) and the African Wildlife Foundation (AWF) (Fred, 2007 op cit). These provided approximately 90 percent of conservation funding provided by foreign donors in Tanzania. This influenced policy initiative with regard to conservation of wildlife and forest resources (Ibid).

The second strategy for promoting conservation in post-independence Tanzania also revolved around financial considerations, but in a different way. Not only could western organizations and governments provide funding for conservation, but also through increased tourist inflows and financial inflow from commercialized game hunting. This wildlife-based tourism industry seemed to provide valuable foreign exchange to the young nation *(Ibid).* While emphasizing the variance in conservation perspectives between himself and Europeans, President Nyerere also seemed to accept this argument on behalf of wildlife:

> I personally am not very interested in animals. I do not want to spend my holidays watching crocodiles. Nevertheless, I am entirely in favor of their survival. I believe that after diamonds and sisal, wild animals will provide Tanganyika with its greatest source of income. Thousands of Americans and Europeans have the strange urge to see these animals (Fred, 2007 op cit).

Thus, in the first decade after independence, wildlife conservation policies in Tanzania changed little from the colonial period. European laws restricting local use of wildlife and traditional hunting practices remained in place. Tarangire National

Park, for example, was created out of Tarangire Game Reserve in 1970, which removed it from use for dry season grazing by local pastoralists. As a consequence protected Game Controlled Areas were up-graded to more exclusive Game Reserves and National Parks.

It is evident that, a post-colonial wildlife policy was a reflection of the wildlife registration passed earlier on, during the colonial era. For example, the Wildlife Conservation Act of 1974(WCA) repealed the Flora and Fauna Conservation Ordinance of 1951(FCO) but inherited much of the provisions of the old legislation. There is a little difference between WAC and FCO; WCA totally defended the interest of the colonial hegemony and very little paramount was given to the indigenous Africans.

The WCA, which remains in force as the main wildlife legislation in the country today, continued and intensified the colonial practices of restricting local wildlife use and consolidating state authority. The WCA did not seek to reinstate the rights to traditional use of wildlife or enable local management and access to the resources. It provides no explicit exceptions for hunter-gatherer tribes to continue using wildlife as were made in the British wildlife laws. The WCA does provide the Director of Wildlife with discretionary authority to allocate hunting rights or licenses to an ‘Authorised Association', which can include a local village, but this provision has rarely been used to allow rural communities access to wildlife in un protected areas (Hurst, 2003:1). Residency restrictions in game controlled areas continued to be used

and against local communities, organized since the 1970s as legally constituted villages with corporate powers *(Ibid).*

The WCA and the centralized wildlife management policies demonstrated the general characteristics of the postcolonial Tanzania state. It therefore, continued to consolidate the colonial practices of restricting the use of wildlife. The benefit of land and forest was seen at state level not at individual level. This stimulated conflict between the farmers, hunters, pastoralists and the government.

Forests and woodlands of mainland Tanzania have been important to the country's history. While historical data on forest cover are notoriously unreliable, periodic estimates have put forest cover at anywhere from 34 to 48% of mainland Tanzania's land area in the post-colonial period. This forested land, approximately 90% or 32,299 hectares is *miombo* woodland. The remaining portion consists of coastal and delta mangroves and the closed forests of the highlands in Arusha region, the Eastern Arc Mountain chain and the Southern Plateau. Of this forested land, approximately 37% or 12,517 hectares is classed as forest reserve, controlled and managed by the state (Ibid). Landscape, state forest reserves at independence were spaces associated with exclusion and state control. While newly trained Tanzanian foresters do not necessarily view forest reserves in this way, they are however, concerned these efforts towards Tanzania's economic development.

Local resistance to the loss of access rights to land resources has motivated new efforts by international conservation NGOs to redistribute tourism benefits and

promote social welfare in communities adjoining protected areas. Continued pressure from "below" will necessitate further attention to questions of land rights and justice. Increasingly in contemporary cases, local groups, often through the formation of indigenous NGOs, are demanding autonomous control of land and resources, which they view as customary property rights that have been usurped by the state. In this context, it is often sociopolitical claims, not land pressure per se, which motivate encroachments' into protected areas. Local demands can be politically radical and most international conservation NGOs and state authorities are reluctant to go so far as to grant sole control of forests and wildlife habitat to villages or other local political entities. Local participation and local benefit sharing, however, are not the same as local power to control use and access. Yet, in the end, this is what many communities seek *(Ibid).*

So far, pastoralists are the main social group organizing to redress the perceived injustices of wildlife conservation in Tanzania. Other affected groups, such as peasant farmers on adjacent protected areas, have not yet organized around similar issues. The potential exists, however, for a much more widespread and comprehensive political struggle over land and resource rights in protected areas, such as developed as part of the nationalist movement in the colonial period. Provided with new democratic openings, pastoralists are moving away from 'everyday form of resistance' and protest toward more organized and formalized forms of political action. It is difficult to predict what new structures and policies for wildlife conservation will emerge because of their activism. Land rights activists have, however, made it clear that wildlife conservation issues cannot be addressed

without considering broader struggles for human rights and social justice (Neuman, 1998 op cit).

The coming of many Non Governmental Organizations (NGOs) encouraged local resistance due to the loss of access rights to land and forest resources. These NGOs, tried to settle the situation by suggesting to redistributing tourism by promoting social welfare programmes in the communities surrounding the protected areas. This brought a new paradigm whereby the communities demanded an autonomous control of land and forest resources, which they believe to date to be their own on the basis of customary property rights. Although the post colonial state continued to put on a mantle of a peoples' state and in this regard, the legitimate custodian of the land, the people regarded the intervention as an unwelcome intrusion. Therefore both the state and NGOs are making emphasis on community based management of natural resources. This is implemented through participatory approach. But in reality, the sense of ownership is very idealistic. What the government has been doing, is to decentralize the protection of natural resources to the natives. The sense of devolution on the ownership and utilization of resources seem not to exist at all. This therefore, has instantaneously precipitated to the natives' dishonesty to their leaders and full unacceptance of the introduced environmental conservation projects. Based on the said argument, Mbwiliza had this to the subject: Increasingly local groups, often operating through NGOs, demand autonomous control of forests and wildlife resources, seen as no customary property rights which have been usurped by the state. Thus the struggle over property rights has now become transformed into a socio-political struggle. Forms of defiance like "poaching" and "encroachment" into

protected areas may undercurrents of a wider socio- political protest movement. However, rather than prepare for armed confrontation which the state will nevertheless win at a great price, careful and long term planning can avoid this eventuality.

Instead of granting outright ownership and control of forests and wildlife, the stake holders can push ahead more expeditiously with enhanced local participation with tangible regular benefits sharing with local communities. This could be implemented though a generalized creation of wildlife management areas for wildlife and similar framework for forestry management both farming and integrated programme of environmental conservation with clearly defined objectives of poverty reduction (Mbwiliza, 2012: 70-76).

Following the above argument, Mbwiliza (2012) has shown how the communites demand the full authority to manage their natuaral resources. He goes further by showing us that communities are involved in conserving the environment, but there are uneven and unfair distribution and utilization of their natural resources. Thus, reduces the sense of devotion to the communities and create the conflict between communities and the state.

In summary, we have noted a general trend that runs through the period of study is the struggle for ecological control between state and society. This study therefore, focuses on the period from 1922 to 2000. It was during this period that many environmental conservation policies were introduced in Tanganyika by British

colonial government. After independence, Tanzania witnessed an increased foreign financial influence and consolidation of political power in the one party political led system. The years between 1990s and 2000, Tanzania witnessed donor agencies and international environmental conservation organizations that influenced development of the environmental reform that has historical legacy. It was during this time too when the government started to decentralize the management of natural resources to natives.

1.3 Statement of the Problem

Studies like *Custodian of the Land* by J. Giblin et al (1996), *Ecological Control and Economic Development in East Africa*, by Helge Kjekshus (1971), *Highland Sanctuary: Environmental History in Tanzania*, *Usambara Mountains*, by C. Comnte et al (2003) writes on environmental issues, but very few of them involve a historical perspective. Very little is known and has been written about pre-colonial conservation practices in the region. The general belief is that low population densities, unsophisticated agricultural and hunting practices, and immobile populations meant that ecological conservation tended to be built into the routine economic, social and religious activities of the era. Consequently, pre-colonial societies did not need to develop sophisticated conservation mechanisms. The reality tends to be very different. Existing evidence suggests that settlements typically were consolidated with very high population densities. Agricultural and other resource extraction activities were very sophisticated and adapted to the requirements of specifics resources and ecosystems over time, while the societies themselves developed sometimes very sophisticated mechanisms to regulate resource use

(Fortmann, 1992). However, much evidence of pre-colonial conservation practice has been obliterated by colonial conservation practices *(Ibid).*

In addition, many scholars do not show clearly how colonial conservation policies were adopted by postcolonial Tanzania. Moreover, very few of them have explored colonialists' perceptions on how Africans (Tanzanians) conserved their environment. However, the literature does not show the weakness within the local social formations. European capital penetration alone did not automatically simplify the imposition of colonial environmental conservation policies. Other agencies including internal local structures of the social formation had reciprocal action in shaping conservation policies. For example, the inability of local ruling classes, to control and manage environmental resources, paved the way for the emergence of conservation architecture which operated in favour of colonial interests. Like the chiefs of the colonial era, presided over superstructure that stood on borrowed strength in that it was foreign donor funded both in terms of resources and expertise. It was these weaknesses in the economic base, which influenced the imposition of colonial environmental conservation policies. Moreover, the impact of environmental conservation policies on cultural aspect is not fully addressed in other studies. Finally most of these studies do not analyze critically the participatory approach on the management of natural resources by the natives. They partially examine the sense of ownership on environmental conservation that lacks a full authority to the natives. Therefore, this study has directly concerned with bridging this historical gap in knowledge. Guided by this view, this study has attempted to analyze colonial and postcolonial environmental conservation policies from the Tanzanian perspective.

1.4 Objective of the Study

1.4.1 General Objective

The main objective of this study is to evaluate the impact of environmental conservation policies in colonial and postcolonial Tanzania and to identify as well as interpret various responses of different communities to these policies.

1.4.2 Specific Objectives

(i) To provide an overview of conservation strategies and practices in pre colonial communities and traditional conservation education.

(ii) To analyze the strengths and weaknesses of colonial environmental conservation policies on the Tanzanian (Tanganyikan) on socio-economic sectors.

(iii) To investigate the impact of colonial environmental conservation policies on cultural practices and African response.

(iv) To assess how postcolonial Tanzania adopted the logic of colonial environmental conservation policies and their impact on environment and communities.

1.5 Research Questions

(i) What were local the conservation strategies and practices in pre colonial communities and traditional education?

(ii) What were the strengths and weaknesses of colonial and postcolonial Tanzania (Tanganyika) environmental conservation policies on socio-economic sectors?

(iii) What was the impact of colonial environmental conservation policies on local cultural practices?

(iv) Why did the postcolonial Tanzanian government adopt the logic of colonial environmental conservation policies and their impact on environment?

1.6 Significance of the Study

This study will help historians to reinterrogate the environmental history of Tanzania. Moreover, it will help the governmental and educational institutions, as well as students, to use information from this study for their further studies and research. It will also show and suggest a new direction on how information from interviews is carefully and critically collected, and analyzed and interpreted. In this regard, the study suggests that Africans are not homogenous and therefore, there is a necessity to accommodate the plurality of African environmental views. Lastly, the study will be useful to scholars, environmentalists, policy makers, activists and foreign agencies involved in environmental issues by providing more meaningful community involvement in environmetal conservation and managements. This will be through using recommendations suggested in this presnt study and all research gaps exposed by this study.

1.7 Thesis Architecture

This thesis is divided into eight chapters. Chapter one shade lights on general information of the study. Chapter two explains Theoretical Framework and Literature

review Chapter three discusses Research Methodology, Chapter four analyses the pre- colonial environmental conservation in Morogoro and Shinyanga regions. The chapter is divided into three sections namely; the environment and people among the Luguru and Sukuma, pre-colonial environmental conservation strategies and practices. It is asserted in the chapter that pre- colonial environmental conservation practices involved human and nature interaction.

Chapter five discusses the strengths and weaknesses of environmental conservation policies among the Luguru and Sukuma of Tanzania during the colonial period. The chapter asserts that colonial environmental conservation policies ignored indigenous traditional conservation knowledge and practices. The British environmental conservation policies which existed from 1920s to 1959, created dichotomy between human and nature relationship and instead focused essentially on wildlife, soil and forest conservations and managements.

Chapter Six scrutinizes the impact of environmental conservation policies on cultural aspect on both regions. It gives an insight on how the policies affected the Luguru and Sukuma culture on the aspect of farming and hunting practices as well as their taboos and customs on utilization of various environmental resources.

Chapter seven discusses the post-colonial environmental conservation policies. The chapter gives an explanation on the impact of villagization policy on environment. In this chapter the tension between state and local communities over the management of natural resources are dismissed. Policy shifts are discernible as both the state and

Non Governmental Organization (NGOs) make emphasis on community based management of natural resources. This is implemented though participatory approach.

Chapter Eight concludes by giving a summary of what has been discussed in the previous chapters and highlight main issues which still need further investigation. In a nut shell the chapter shows that European capital penetration alone did not automatically simplify the imposition of colonial environmental conservation policies. Other agencies including internal local structures were mutually inclusive in shaping colonial environmental conservation policies.

CHAPTER TWO

2.0THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1Theoretical Framework

This study borrows from three theoretical models namely Political Ecology, Ecological Revolution, and Historical Ecology.

2.1.1 Historical Ecology Theory

Historical Ecology is an approach that focuses on man-nature relationship overtime in specific environmental setting. It involves studying and understanding this relationship (environment and people) in both time and spaces in order to gain a full image of all of its accumulated effects. Through interaction, humans manipulate the environment and facilitate its transformation (Balee, 1998:13-29). It therefore, examines the dimension of local agency and initiative. According to Eriksen who is one of the proponents of this approach, it concentrates on material development, changes in production systems, and interaction, as well as conflict between man and his natural environment. A growing number of historians like Strom and Permer oriented themselves along this innovative approach to form the beginning of the ecological paradigm (Cronon, 1982:75-97).

An important aspect of historical ecology is that human culture and environment are in a dialogue. They influence and respond to one another in continuous cycle. This is different from saying that throughout time, as the environment has changed, the human species has adapted to these changes. Instead, humans have brought their cultures to new lands, impacted these landscapes, and then made the necessary

changes to adjust their culture or life style to the now altered landscapes. In fact, as the first postulate holds, it is very difficult to find a landscape everywhere on the planet that has not somehow changed as a result of humans (Cronon, 1982:75-97). These alternations can be referred to as human mediated disturbances. As the second and the third postulate, hold, it is important that we do not over generalize human and society *(Ibid).* Humans impact nearly every environment but this can create an increase in biodiversity of certain landscapes at a certain time.

William Beinart and Joann Mc Gregor concur with the above assertion by giving reflective examples. They stated that in part this reflects an urgent need to revisit over the historical transformation of Africa Landscapes in the light of mounting economic, political and moral arguments. A new paradigm has been developed recently which profoundly questions judgments made about environmental degradation. It suggests that much environmental damage has been caused by colonial intervention, but that even when under considerable stress; African rural societies have managed their interaction with nature constructively and often beneficially. In this context, both sympathetic social scientists and local African leaders have called upon history in a different way. They emphasize the salience and validity of local knowledge and indigenous peoples' rights over their resources. Some claim continuous tradition of living close to the land and, to a degree, in harmony with nature (Beinart, 2003:1).

Historical Ecology supposes that environment and its history should be a sub-set of a much broader ecological history, which reconstructs human interaction with the

physical environment *(Ibid).* Analysis of environmental change in historical perspective will pay attention to the outcome of past decision as well as giving and indicating of what the future might bring.

In this case, Historical Ecological theory was somehow useful in tracing long-term dynamics of natural forces and human actions. It also, partially explains the history of ideas, perceptions of what aspects African cultures, colonial and independent governments have been considered as obstacles to sustainable environmental conservation. The main weakness of Historical Ecological theory is that it makes more emphasis on internal forces while the external forces are given little paramount.

2.1.2 Ecological Revolution Theory

Carolyn Merchant initiated the Ecological Revolution Theory (Merchant, 1989:2-3). Merchant defines Ecological Revolution as the major transformation in human relations with nonhuman nature. It arises from changes, tension, and contradictions that develop between its modes of production and reproduction. These dynamics in turn support the acceptance of new forms of consciousness, ideas, images and world view (Merchant, 1989 op cit).

Merchant pointed out two types of ecological revolutions: colonial and capitalist, Ecological Revolutions through out the study of New England. Yet, the implications extend far beyond the confines of New England. Merchant used New England as case study because New England is a mirror of the world. Changes in its ecology and society over its first 250 years were rapid revolutionary. It is only through a historical

approach that the magnitude and implications of such changes for the human future be fully appreciated (Merchant, 1989 op cit).

Merchant adds that, the Europeans settled in temperate countries throughout the world, where colonial ecological revolution took place. Today capitalist ecological revolutions are occurring in many developing countries in a tenth of New England's transformation time. In the epilogue, it is suggested that human being are now entering a third type of revolution – a global ecological revolution- that encompasses the entire earth *(Ibid).*

A capitalist ecological revolution, in New England took place roughly started in 19776 (War of Independence) to 1860. It was initiated by internal tension within New England by a dynamic market economy. Local factories imported natural resources and exported finished products. Air pollutions, water pollution, and resources depletions were created as externalities outside profit. Merchant has this to say:

> The first colonial ecological revolution occurred during the seventeeth century and externally generated. It resulted in the collapse of indigenous Indian ecologies and the incorporation of a European ecological complex of animals, plants, pathogens and people. The colonial revolution extracted native species from their ecological context and shipped them overseas as commodities. It was legitimated by a set of symbols that placed cultural European human above wild nature, other animals and beast like savage (Merchant, 1989 op cit).

The capitalist revolution demanded an economy of increased human labor, land management, and a legitimating mechanistic science. Each of these "ecological revolution" altered the local ecology, human society, and human consciousness. New materials structures and plows, fences clocks and chemicals were imposed on nature.

The course of the colonial and capitalist ecological revolutions in New England may be understood through an explanation of each society's ecology, production reproduction and form of consciousness; the process by which they broke down; and an analysis of the new relations between the emergent colonial or capitalist society and nonhuman nature.

Therefore, Merchant used the following concepts for this approach to environmental history which are production, reproduction and consciousness, the relation among animals, plants, minerals, and climatic forces constitute the ecological core of particular habitat at particular historical time. Through production, (or the extraction, processing and exchange for subsistence or profit), human actions have their most direct and immediate impact on nonhuman nature *(Ibid).*

Human reproduction, both biological and social, is one step removed from immediate impact on nature. The effects of the biological reproduction on human beings are mediated through a particular form of production (hunting-gathering, subsistence agriculture, industrial capitalism and so on). Population does not press on the land and its resources directly, but on the mode of production. Two steps removed from immediate impact on the habitat are the modes through which a society knows and

explains the natural world- science, religion, and myths. Ideas must be translated into social and economic actions in order to affect nonhuman world *(Ibid).*

Because of the differences in immediacy of impact of production, reproduction and consciousness on nonhuman nature, a structured multi-leveled conceptual frame work provides the basis for understanding of stability as well as evolutionary change and transformation. Although changes may occur at any level, ecological revolutions are characterized by major changes at all three levels. They are initiated by widening tension between the requirements of ecology and production in a given habitat and between production and reproduction (Merchant, 1989 op cit).

Similarly, Michele Wagner has a closely related view, when he argued that knowledge is a very important component that people use to define and interact with their environment. This knowledge has a direct bearing on their techniques for managing, changing and adapting to the environment (Wagner, 1996:175). Wagner (1996) analyses ecological tendency in the Buha cultural region of western Tanzania. He examines the relationship to its changing historical context. Wagner shows how culture played its role in shaping ecological development among the Buha communities. Wagner differs from Merchant as he insisted cultural motive, trough community spirits to be the leading factor in shaping ecological changes among the Buha communities. While Merchant sees cultural aspect as one of the components in ecological transformation, she makes more emphasis on external forces which emanated fom either capitalism or colonialism.

Following Ecological Revolution model, this study has examined how tension between the environment, production and consciousness give rise to revolutionary change in humans' relations with non-humans. Although Merchant's ecological model requires modifications to be useful in Tanzanian context, it can be used to explain the impact of colonial capitalism and the imposition of colonial rule on communities in the area covered by this study. For example, regarding agency, this theory identifies no indigenous forces in the process of change. On the other hand there is an evidence of local initiatives as African responded to the changes passed by colonialism. Another shortcoming arises from the definition of "colonial" which in Merchant's thought appears similar to demographic replacement. This is evident on her focus of temperature zones, the discussion of reproductive collapse (as opposed to colonial endangerment and adjustment), substitution of one consciousness for another and the narratives shift to colonial farmers after the completion of colonial ecological revolution (Jacobs, 2003:33)." Tanzanian societies, especially in Morogoro and Shinyanga did not give way to Europeans as those in New England rather they had to adapt and sometimes proceeded with their old system amidst colonial revolutions.

However, the fact remains that African experienced colonialism, and that its environmental effects require critical investigation. Thus, this study considers several processes such as the impact of colonial administration, transformation from subsistence production to commodity production.

2.1.3 Political Ecology Theory

The term Political Ecology was coined by anthropologist Eric Wolf. He discusses how local rules of ownership and inheritance "mediate between the pressure emanating from the large society and the exigencies of the local ecosystem (Wolf, 1972:201-205)." Wolf defines political ecology as the study of the relationship between political, economic and social factors with environmental issues and changes *(Ibid).*

Political Ecology explores how the interplay between political, economic and social aspects which affect the environment. Its concepts help to understand the role played by states and transnational corporations in altering the human-ecological balance under capitalism (Charney, 1994:1). It is claimed that the mankind-nature relationship in terms of 'scientific' articulations of environmental degradation, underplay the social and political dimension of environmental changes *(Ibid).*

This approach will help to understand how power relations determine the patterns of environment use in the study areas: Morogoro and Shinyanga. Different policies and actions by colonial and postcolonial Tanzania will be studied through political ecology.

This study has mainly used the Political Ecology approach because it clearly examines the relationship between environmental conservation policies and property rights in management of natural resources. This involves local communities from colonial to post colonial era on how they conserved their environment, how

colonialism brought new environmental conservation policies as well as the adoption of these policies during the postcolonial period.

As it has been posited historically, political ecology has focused on phenomena affecting the developing world, since the researchers have sought primarily to understand the political dynamics surrounding materials and struggles over the environment in the third World (Charney, 1994 op cit). It is also examines the nature and causes of the environmental changes at different scales of analysis, to address the importance of meanings assigned to ecological system, and the effect of human-environmental interaction on natural resources (Leon, 2002:1).

Political Ecology has potential to find answers that have practical implications for resources management. It therefore, shows the relationship between the land user and manager and the land itself and then goes on to find relevant links at local regional and international levels. Moreover, it shows how people with different technologies, economic and policy incentives use resources and perceive ecological system as well as their different impact on natural environment.

2.1.4 Interrelations and Relevance of the Theories

Using Ecological Revolution Theory, the findings in Objective One (Pre colonial environmental conservation strategies and practices) has demonstrated the transformation in human relations with non human relation. It was from Ecological Revolution Theory, this study has shown the transformation in human relation and non human relations. For example, traditional environmental use was in harmony

with nature because societies had developed their customs and regulations which ensured sustainable use of natural resources. Pre colonial communities, have also observed that the process of ecological transformation of natural forms was a major element in the religious systems of any society with a subsistence economy.

Ecological Revolution Theory was also used to explain the impact of colonial capitalism and the imposition of colonial rule on the Luguru and Sukuma communities. Through Ecological revolution theory, the findings in the Second Objective (Strengths and weaknesses of colonial the environmental conservation policies) of the study, have shown that colonial domination in Morogoro and Shinyanga was pre occupied with the formulation of the environmental conservations policies based on soil, forest and wildlife. It was through the application of Ecological Revolution Theory, the study has shown how the colonial policies destroyed the existed human relations with non human relations by ignoring indigenous tradition conservation knowledge and practices.

By means of Historical Ecology Theory, the findings in the third objective has reflected the theory conception when it demonstrates the history of ideas, perceptions of what aspects of African cultures, and how the colonial governments have been considered as obstacles.

It is from this theoretical approach of which the study in the third objective (the impact of the colonial environmental conservation policies on culture) where the impact of colonial environmental conservation policies on cultural aspect of the

Luguru and Sukuma are discussed. It was through this theory of which the perception and ideas on Africa tradition farming, hunting and live stocking have been analyzed and how these activities related to environmental conservation.

This theory has relevance in objective Four, as it gives practical implications on resource management. It also shows the relationship between the land user and manager as well as land itself and then goes on to find links at different levels. It was from this approach (Political Ecology Theory), when the findings of the study show the management of resources during post colonial period. The findings also have shown the involvement of NGOs and communities in environmental conservation. The findings go on by addressing how the managers and land user are in conflict on land resources and the responses of the policies used by the manager/ government.

2.1. 5 Literature Review

2.1.6Pre-colonial Conservation Practices

Matowanyika argues, certain important elements of pre-colonial ethnography and environmental management survived into the colonial period because of their continued relevance to the environmental management practices of the colonised peoples (Matowanyika,1991op cit). Historians, sociologists, anthropologists and other tudents of non industrial societies have emphasized the close relationship between social organization and the environment (Ibid). They have also observed that the process of ecological transformation of nature forms as major element in the religious systems of any society with a subsistence economy(Matowanyika,1991op cit). A great deal has been written about the notion of 'sacredness', and the role that

sacredness plays in conservation. For example, sacred groves are seen as representing important pre-colonial forest conservation; and sacred pools are related to wetlands conservation, and so on. While there can be no doubt that religion was certainly deployed to conserve critical resources, particularly in times of crisis, it appears that sacred places represented much more broader religious goals and functions than conservation. Sacred places represent different scales of conservation, from the individual hunters shrine, for instance, to large sacred territories managed by several religious and political authorities. Similarly, in Usambara Tanzania, several animal species were protected through restriction and prohibition from using them. These include *Redunca sp* (Nkulungu) and *Tragelaphus scriptus* (Pongo). It was believed that eating meat from these animals could result into getting skin disease. This helped in protecting these wild animals. Various sacred trees including *ficus sp* (Mvumo), *Sterculia appendiculata* (Mgude) and Diospryos mespilformis (Mkulwe) were protected for various used like medicines, rituals and places where people meet (Kweka, 2004:20). Any one cutting sacred tree was fined a male sheep or white black kock, which was slaughtered to pacify the angered spirits *(Ibid).* Also trees on top of mountains and in water sources were not cut in the belief that they bring rainfall and conserve water. This generally shows that pre colonial societies had their policies that governed them in conserving their environment. The most widespread ecological shrines in central Africa were village shrines, presumably because it is at the village level that ecological pressure was most keenly felt (Kweka, 2004 op cit).

According to Matowanyika(1991), there were some landscapes that were never interacted with human activities. This made very litle human ecological transformations. These places are of great significance: they tend to represent hidden forces on which man draws for his survival on the other hand, protected man's culture.

'Wild' places play a prominent part in the religions of peoples engaged in a subsistence economy *(Ibid)."* Wild places become important foci of religious places if they are somehow prominent in the landscape. "Hills, pools, imposing trees, caves, streams, falls and rapids become associated with invisible entities, and thus become objects of veneration*(Ibid)."*

Perhaps the most comprehensive studies of pre-colonial conservation practices as they existed during the colonial era in central and southern Africa have occurred in the context of studies of religion. As Schoffeleers states, the prevalent idiom used by central African societies for the articulation and application of their earth philosophies is religion (Schoffeleers, 1979:2)." Schofelleers further notes that territorial cults are distinct from other religious organizations in society in terms of their high degree of institutionalization, their reflection of the power and primacy of political organizations over kin groups, and historical continuity.

Ecological functions are distributed through a number of these religious institutions, including lineage cults concerned *inter alia* with land and livestock issues, professional cults of hunters, fishermen and others, and territorial cults which are

profoundly ecological in function. "Territorial cults function in respect of the well being of the community, its fields, livestock, fishing, hunting and general economic interests(Schoffeleers, 1979 (Schoffeleers, 1979 op cit)." They achieve these objectives through ritual as well as issuing and enforcing directives. Territorial cults functions to control the use of fire (Malawi); agricultural production methods and practices e.g. cult leadership of opposition to the introduction of certain crops in the colonial era; fishing and grazing. Cults also played an important role in determining settlement patterns, population movements and the acceptance or non-acceptance of immigrants. Schoffeleers notes that the Mbona cult of Malawi's reaction to perennial flooding of the marshlands of the lower Shire Valley in the late 1930s was to exert pressure on the population to emigrate to relieve pressure on the land Lawyers' (Environmental Team, 2006 op.cit). Different observation is provided by the Lawyers' Environmental Action Team, that most of society members were predominantly hunters during the pre colonial era in they Tanzania maintained cultures, traditions and taboos that contained hidden features which to some extent ensured a close relationship between humankind and wildlife. There were established mechanisms to punish those who violated the revered rules *(Ibid).*

As colonialism progressed, territorial cults came under various challenges, which eventually led to their break down. These challenges included: land expropriation and wage labour, which drastically changed the structure of social organization; Christianity, which questioned the religious bases the cults; The colonial administration itself; the r- ationalist interpretations of ecology in the form of land conservation and animal husbandry; The bureaucratization of the chieftainship

which weakened political support for the cults. As a consequence of these pressures, by the 1950s, the territorial cults had greatly diminished in importance (Matowanyika,1991 op cit). The role of indigenous technical knowledge systems in pre-colonial conservation has also been considerably studied *(Ibid).* Local communities developed intimate knowledge of their ecosystems and used this knowledge to tailor systems of sustainable resource use and management that were appropriate to these systems(Matowanyika,1991 op cit). Local resource users developed intimate knowledge of the ecological status of the resources, rates of reproduction, rates of sustainable off-take, as well as forms of sustainable off-take. Numerous examples can be adduced from local myths and religions to demonstrate the ways in which indigenous knowledge was deployed and reinforced in religion to regulate resource use *(Ibid).*

Thus traditional healers developed regulations around the harvesting of medicinal plants, some of which are still in force to this day, hunters, fishers and pastoralists all developed highly complex resource use regulatory systems based on the productive and reproductive capacities of the resources in question. However, pre-colonial conservation practices were not only regulated in the religious realm with reference to local use (Adams, 2003:33).

Colonial conservation was based on a myth of nature which emerged from the scientific processes of exploration, mapping, documentation, classification and analysis. Nature came to be defined as the absence of human impact, especially

European human impact. Nature thus came to define regions that were not dominated by Europeans (Adams, 2003 op cit).

2.1.7 Colonial Conservation Policies: From Game and Forest to Environmental Conservation

Colonial conservation policies aimed at creating places, which could act as laboratories for undertaking ecological experiments for animals and plant species (Environmental Team, 2006 op.cit). It is upon this purpose that, the interests of researchers conflicted with those of managers and conservationists (Ibid). While, the former pressurized for the establishment of reserved areas so as to have undisturbed natural laboratories in which they could conduct research, the latter wanted to manipulate nature for sustainable use and yet, the conservationists were about getting areas that could provide an admired aesthetic appeal of natural phenomena (Ibid).

Parallel to this argument, some species were becoming extinct in Tanzania's environment due to over-intensive hunting and for the case of forest and soil; there was a threat of undergoing desertification due to over forest exploitation and poor methods of controlling soil erosion (Ibid). Forestry activities were resumed again in the early 1920s after a complete standstill during the war, when a considerable encroachment took place into the reserve by people trying to escape enlistment into the German colonial army. The first task for the new British administration was therefore to reclaim the old muntane forest reserves. In the 1920s and 1930s reservation was also made for large tracts of miombo woodland to secure the supply of the valuable *Pterocarpu.s angolensi* (Lungred, 1982 op cit). At the end of the

British time the areas under forest reserves were practically the same as today. The total area of reserves is 130,000 $km^{2,}$ of which only 9300 km^2 are high forests and the bulk of the remainder is miombo woodland. The major forestry development during the British time was the systematic introduction and trial of exotic trees suited for plantation production of timber, firewood, and later pulpwood. Large-scale planting started in the early 1950s, mainly in highland forest reserves. The major species were pines, cypresses and eucalyptus. This plantation activity has continued and accelerated after the country became independent in 1961 *(Ibid).*

In this case, wildlife policies aimed at preventing extinction of some wild species while forest and soil conservation policies aimed at controlling the existing state of land degradation (Lungred, 1982 op cit). From the afore mentioned purposes one is attempted to concur with Koponen's view that colonial conservation policies in Tanganyika were basically introduced to serve the interest of whites and in most cases to justify colonial view and atitude towards the management of environmental resources (Koponen,1992 op cit). This was because the colonial administrators did not introduce the notion of conservation and suitable use of natural resource to Africa; on the contrary Africans knew how to conserve their environment before the coming of the Europeans. Without that knowledge, Europeans could not find the environment, which they claimed that it needed care and protection *(Ibid).*

The colonial administrators were convinced that they had mastered nature to a vastly greater degree than the local communites had and that they possessed the means to tackle the problems, which the indigenous people had failed to solve. In this sense,

the contribution of Africans to environmental degradation was emphasized while that of Europeans was down played (Koponen, 1992 op cit).

It is possible to conclude from this discussion that colonial environmental conservation policies, were a result of European external influences and they contributed to the misunderstandings firstly, between the indigenous people and colonial officials and secondly, between different sections of African communities themselves. State antagonism occurred, whereby some communities were favoured by the policies than the others. Most of the societies, which depended on hunting for their subsistence, were allowed to access the wilds in reserved areas but only for food purposes. While this happened to those societies, some societies were restricted until they acquired an official hunting license (Neumann, 1998 op cit). On the other hand, Kjekshus comments that exemption from the licensing rules was granted to the so-called hunting tribes: the Wabahi, Watindiga, and Wandorobo who were allowed to hunt common animals for food (Kjekshus, 1971 op.cit).

Different observation was noted in Shinyanga when the colonial state understood the problem of environment in the region. The main problem was closely related to the number of livestock, particularly cattle. The major solution suggested was destocking. Along side destocking, there were other solutions such as new methods of land use involving tie ridges and contour farming (Gg'wanza, 1993:60). Between 1920s and 1950s, destocking was intensively enforced by the colonial government. The overstocking policy has been advanced as a development programme consisting

of packages which included land usage, population density, stock movement and sale or removal of stocks from overcrowded areas.

In 1947, the Wasukuma Land Development Scheme covered an area of 9,000 square miles. The aim was to intensify cultivation especially cotton and controlling grazing as well as to protect land resources (Gg'wanza, 1993 op cit). The policy on livestock was implemented through imposition of a compulsory of take (destocking) quota to be done either by selling that excess number of cattle or moving them to newly opened areas. Many peasants had negative attitude toward the whole exercise. As a reaction, many pastoral peasants preferred moving in new areas to settling or slaughter their cattle. Many people moved to Geita and Kwimba during the time of implementing the scheme *(Ibid).*

With the eruption of the Second World War, the destocking campaign gained new momentum. This was because there was more need for beef supply to the British troops fighting the war. For example the district of Maswa and Kwimba together were required to supply 60,000 to 70,000 heads of castle (Gg'wanza, 1993 op cit). The pastoral peasants resisted the campaign because they did not know the intention for destocking.

2.1.8 Conservation as Alienation

The colonial environmental conservation policies had a number of impacts. In the first place, they rejected local people's view and experience concerning their understanding and knowledge of managing the environmental resources.

Accompanying the European rejection of African environmental experience, Africans lost their rich agricultural land or tribal land and their limited access to the environmental resources being preserved (Kjekshus, 1971op.cit). The proclamation of Serengeti and Ngorongoro as National Parks led to loss of grazing land among the pastoralists and loss of agricultural land to the peasants (Neumann, 1998, op cit). The Nou-forest reserve limited the Iraqw people to access the forested landscape for both their economic and cultural activities (Lawi, 1992:98). Africans were alienated from their land to give room for the establishment of game reserves and forest reserves. Their traditional use of the environmental resources was forbidden and those were allowed were to carry use permits (Environmental Team, 2006 op.cit).

The Maasai for example, were forcefully removed from traditional grazing areas, in an effort to pacify the Maasai and to clear preferred land for European settlers *(Ibid).* British alienation of the Maasai from their lands was based on a colonial ideology that dehumanized the pastoralists as "backward and barbaric (Environmental Team, 2006 op.cit). The Europeans disregarded the sustainability of indigenous knowledge based of land-use strategies in favour of an emerging model of colonial development through the notion of eco-tourist activities in the region. This was based on conservation strategies on a notion of "man against nature," and failed to apply to the Tanzanian context of natural world that had been managed by pastoralists to this recent period (Ibid).

Similarly, hunters were affected by the policies. For example, Koponen (1992) argues that in colonial legislation, access to game was progressively denied to local

Africans and turned into an imperial perquisite (Koponen, 1992 op cit). The first step taken towards game preservation was to regulate hunting by means of ordinances and licenses (Ibid). As these were largely at discretion of the governors and could be involved and revoked at will, personal differences in their attitude left clear imprint on the actions of colonial state (Koponen, 1992 op cit). Koponen goes further when he points out those sporting hunters were charged 20 rupees, and professional hunters 500 rupees, ordinary Africans had to pay more than that to go for hunting *(Ibid).*

The prohibitation of hunting with nets as a traditional popular method hindered economic and nutritional benefits to many African people (Koponen, 1992 op cit). Later on a colonial official called Rechenberg abandoned the prohibitation of the net hunting and reduced the minimum hunting licenses charge to three rupees Neumann (1998) points out that the struggle by Africans for right to hunt wildlife were perhaps the most visible and symbolically important in this contested area (Neumann, 1998 op cit).

Not only hunting was affected by the policies, but also cultivation (agriculture), especially shifting cultivation became less accessible as land was privatized. It is also said that land was subdivided according to ownership and agricultural pressure exerted on small and smaller plots of land proved to be extremely degrading for the soil and impoverish for the Tanzanian people and East Africa at large (Koponen, 1992 op cit). On the other hand, Saibul comments that the minority group of cultivators proceeded to capitalized on two opportunities, which presented themselves in their predicament *(Ibid).* They realized that there is a potential conflict

between wild animals and domestic stocks. In addition, Maack (1996) puts that some administrators found fault with Arusha and Meru agricultural practices. Their practices of intensive permanent cultivation, intercropping of cash crops and cultivation of steep hillsides were all blamed for poor yield. Moreover, the agricultural department initiated a minor conservation campaign in 1948, but the effort soon collapsed as Meru and Arusha refused to cooperate with the administration (Maack, 1996 op cit).

The focus here is on how the policies brought the contradictions between different economic sectors that people dealt with and that depended on the environment. Moreover, wild animals affected those people who lived near the game reserve and national parks. For example, in Ngarambe village, Kilwa District in Lindi region, elephants are inside the settlement, and they affect crops grown. Near Lindi airstrip lions killed 23 people in five months in 2000. In Bonye-Dutumi, Crocodiles killed 11 people, and in the last two years it has been estimated that wild animals kill at least 200 people on average per year in Tanzania (Bulduis, 2001:29)

Different observation shows that the creation of national parks in Tanzania brought sustainable impact to the natives. This even involved the misunderstandings between administrators and other colonial officials (Bulduis, 2001 op cit). The idea of creating national parks, however, was opposed by administrators in Tanganyika, who felt that the strategy was infringing on natives' rights and thus was posing a risk to the political stability of the colony. A. E. Kitching, a District Officer and later Provincial

Commissioner, was one of the most outspoken personalities on this issue (Kideghesho, 2010: 228-248). He criticized Hingston's recommendation by arguing:

> Hingston's recommendation (of creating national parks)…pays no regard to native interests. They involve the alienation in perpetuity of thousands of square miles of the land of the Territory…to create the finest Nature Park in the Empire. The recommendations appear to me to be so wrong in principle as to make any detailed examination unnecessary *(Ibid).*

Despite strong opposition from the colonies, Hingston's(This was colonial official) recommendation was reinforced by the 1933 London Convention on Flora and Fauna of Africa. The convention required all signatories (including Tanganyika) to investigate the possibility of creating a system of national parks. Powerful individuals in London consistently overstated the problem of what they termed "destructive behaviour of Africans to wildlife" as a way of pressing the colonial government to act (Kideghesho, 2010 op.cit). In 1940 the first Game Ordinance that gave the governor a mandate to declare any area a national park was enacted. Consequenly, Serengeti was upgraded from a game reserve to a national park in that year. However, it remained a "park on paper' (i.e., without effective enforcement of the laws and regulations governing the national parks) for almost a decade, a delay which can be attributed to World War II (1939 – 1945) *(Ibid).*

The gazettement of the Serengeti as a national park precipitated conflicts and opposition from the local communities as they depended on the area for agriculture, hunting and settlement. This was a consequence of conservationists'

placing more value on wild animals than on human beings. For example, one of the former park managers of Serengeti stated blatantly: “The interests of fauna and flora must come first, those of man and belongings being of secondary importance”. In the eastern part of Serengeti, the Maasai resisted the proposed park boundaries through violence and sabotage/vandalism. They speared the rhinos, set fires with malicious intent, and terrorized civil servants. The Ikoma hunters in western Serengeti contravened the colonial conservation laws which barred them from hunting, while swearing to use poisoned arrows against any wildlife ranger who would interfere with their hunting activities (Kideghesho, 2010 op.cit). The late 1950s the idea of excising Ngorongoro from Serengeti National Park, proposed as a measure to accommodate the interests of the Maasai pastoralists, made Professor Bernhard Grzimek one of the most prominent conservationists who laid the groundwork for modern nature conservation work in Serengeti. Grzimek, the former president of the Frankfurt Zoological Society for over 40 years, was invited by the Board of Trustees of Tanganyika National Parks to carry out an aerial count of the plain animals in the Serengeti and plot their main migration routes. Findings of this work were considered essential in advising the government on the proposed park boundaries following the hot debate over the idea of excising the park. Raymond Bonner, an author of the book *At the Hand of Man*, describes Grzimek as a man who “has done more than anyone else to dramatize the plight of African wildlife *(Ibid).”*

In 1959, Grzimek and his son co-authored a book, *Serengeti Shall Not Die*, in which the importance of wildlife preservation in Serengeti was underscored (Kideghesho, 2010 op.cit). The book stressed conservation of the Serengeti and its wildlife at all

costs – even if that would compromise the interests of local people. The title of the book is the clarion call to keep the Serengeti pristine against human-induced threats. Almost five decades have elapsed since the book was authored. However, given the growing management challenges and threats facing the Serengeti, the relevancy of this title has increased. The main challenges/threats facing the Serengeti include poaching of wildlife, habitat destruction, human-wildlife conflicts, population growth, and poverty, challenge the validity of the ambition that "Serengeti shall not die"*(Ibid)*

2.1.9 Post Colonial Environnemental Conservation Policies : From Patronage to Partnership

The perpetuation of colonial wildlife policies was also reflected in wildlife legislation passed in the post-independence era. The Wildlife Conservation Act of 1974 (WCA) repealed the Fauna Conservation Ordinance of 1951, but was by no means a departure from the colonial wildlife management framework (Kideghesho, 2010 op.cit). The WCA, which remains in force as the main wilidlife legislation in the country today continued internsified the colonial practices of restricting local wildlife use and consolidating state authority. The WCA did no seek to reinstate traditional use rights to wildlife unable to local management and access to the resources. It provides no rexplicit exceptions to to hunter-gatherer communities to continue using wildlife as were made in the Wildlife Law during the British government (Fred, 2007:32).

In the years after independence, the capacity of Tanzania's wildlife management authorities to police rural resource users deteriorated, despite the infusion of financial support from western conservation organizations. Factors contributing to this reduced government capacity included the retirement of senior staff and poor recruitment policies.

By the end of 1970s the country's economic condition was rapidly worsening as a result of both its socialist policies and outside shocks, especially the 1978-79 war with Uganda (Ibid). Within this context, funds for wildlife management grew scarcer still. The commercial poaching of elephants and rhinos, coupled with widespread hunting of other game species for meat in rural areas, served to reduce the country's wildlife populations. By 1980, black rhinos had disappeared from large parts of the country, including many areas where they had formerly been abundant Elephant populations also crashed due to poaching in the 1970s and 1980s, declining from an estimated 370,000 in 1970 to only 55,000 in 1990 (Fred,2007 op cit).

This is clear evidence that Tanzania’s anti-poaching regulations had proven difficult to enforce and were ineffective in arresting the decline of many large mammal species. In savannah ecosystems, wildlife generally uses areas much larger than those 'protected' within the boundaries of parks and reserves. In Tarangire National Park, for example, wildlife moves out of the park in the rainy season to calving and grazing areas on adjacent communal and private rangelands. At least half of the total range of elephants in Tanzania occurs in unprotected areas, with elephants often moving back and forth across park boundaries through numerous migration corridors (Buldus, 2001 op cit).

The inadequacy of Protected Areas (PAs) combined with the difficulty in enforcing legal prohibitions on rural wildlife uses played an important part in triggering new ideas in Tanzania about ways to work with communities surrounding PAs in order to devise more sustainable and practicable conservation policies *(Ibid).* This movement towards community-based conservation was informed by similar experiences and experiments occurring elsewhere in Sub-Saharan Africa. The new conservation paradigm emphasized the role of local rights and market incentives in sustainable conservation (Fred, 2007 op cit). As a result, by the late 1980s, several avenues for pursuing new community-based management initiatives in Tanzania were under development. Firstly, a number of pilot projects were initiated by the Wildlife Division and Tanzania National Parks (TANAPA), often supported by foreign donors and conservation NGOs. In these pilots projects emphasis was played down. Secondly, a process began to formally define Tanzania's policy for wildlife management in a way that would address existing challenges, and which could then be used to guide reform of the country's wildlife laws as necessary. This process was also funded principally by donor agencies and western conservation NGOs, and aimed at facilitating strategic planning for wildlife management in Tanzania, and to establish an agenda for the requisite legal and policy reforms *(Ibid).*

The resultant policy review process called for significant reforms to the wildlife management framework that had operated in Tanzania since the colonial era, with the focus being on new approaches on community lands outside of parks and reserves. The conclusions of a Ministerial task force made up of a combination of Tanzanian wildlife officials and expatriate technical advisors was that,

> The present state ownership of all wildlife breaks down incentives for proper custodianship by rural communities for the wildlife among which they live'. The task force further concluded: 'It is essential to the future of wildlife conservation in Tanzania that local communities who live among the wildlife should derive direct benefit from it, otherwise all future conservation efforts will be condemned to failure.

At a national workshop held in 1994, the Director of Wildlife, M.A. Ndolanga, endorsed these findings with the following statement:

Ownership of wildlife is another major issue that must change to encourage community-based conservation. At present the state owns all wildlife, and villagers in community-based conservation project areas are issued with a quota by the Department to give them the opportunity to hunt legally. Although this is a considerable step forward, the villagers do not own the wildlife and until they do, they will not feel responsible for it (Fred, 2007 op cit).

The involvement of local communities in managing wildlife and direct benefit, sharing of revenues from tourist hunting enterprises was central to this reform agenda. The Ministry and its donor supporters were of the view that commercial hunting at this time had the greatest economic potential for generating benefits from wildlife in rural areas where tourism infrastructure was poorly developed. An official policy and management plan for tourist hunting called for efforts 'to widen opportunities for rural people to participate in the tourist hunting industry and to

ensure a more equitable distribution of revenue' *(Ibid).* By the time this policy development concluded, the mechanisms for developing community wildlife management had been identified and described in considerable detail. The villagers would be able to decide how they wanted to utilize that wildlife through activities such as tourist hunting, wildlife viewing, game cropping or wild meat harvesting, subject to some degree of oversight or quota designation from the Ministry. Legislation providing for the creation of Wildlife Management Areas (WMAs) had been drafted by the end of 1994 (Fred, 2007 op cit).

In 1998, the Wildlife Policy of Tanzania was released following approval by cabinet and parliament, and based on the task force's principles and recommendations. The policy promoted local participation in wildlife management and the promotion of community-based conservation through the establishment of Wildlife Management Areas (WMAs). The policy notes that wildlife conservation has historically failed to 'compete adequately with other forms of land use, especially to the rural communities' and that this was a result of the 'inadequate wildlife use rights' held by local landholders. Although the state will retain ownership of wildlife, the policy calls for the government to develop 'an enabling legal, regulatory, institutional environment for rural communities and private sector to participate in wildlife conservation.' In its clearest statement of devolutionary intent, the policy declares, 'It is the aim of this policy to allow rural communities and private land holders to manage wildlife on their land for their own benefit.' WMAs are detailed as the means to accomplish this by allowing rural communities to designate areas where they will be 'managing and benefiting from wildlife on their own lands'(Fred, 2007 op cit).

These wildlife sector reforms were part of a much broader set of economic and political reforms occurring in Tanzania during the 1990s, all of which aimed to liberalize the economy *(Ibid).* Local government reforms called for decentralisation of service provision from central Ministries to the district level, in order to bring services closer to the rural citizens. Forestry policy had been overhauled in a similar manner to promote local ownership of forests and community management. The debate moved to a higher level during the late 1990s to include issues of ownership of natural resources. It was as result of policy shifts emanating from such debates that a presidential commission was appointed in 1995. The commission chair by professor Shivji, a University of Dar es Salaam, Law professor recommended new land legislation which repealed the 1923 Land Ordinance, in 1999. These land tenure reforms sought to provide a framework for promoting private investment and ownership of land, as well as to secure community rights amidst substantial pressure to do so following the widespread land tenure insecurity of the previous two decades (Fred, 2007 op cit). The new legislation retained formal ownership of land in the hands of the state but strengthened the legal status of customary land rights and established a more accountable governance framework for village councils to manage lands on behalf of village communities *(Ibid).*

2.1.10 Forest and Land

What remains to be explored in the post colonial era are the interrelationship between competing land use discourses and those components of the Tanzanian state and its supporters involved in translating those discourses into management regimes (Hurst,2003 op.cit)

Forests and woodlands of mainland Tanzania have been important to the country's history. While historical data on forest cover are notoriously unreliable, periodic estimates have put forest cover at anywhere from 34 to 48% of mainland Tanzania's land area in the post-colonial period. This forested land, approximately 90% or 32,299 hectares is *miombo* woodland. The remaining portion consists of coastal and delta mangroves and the closed forests of the highlands in Arusha region, the Eastern Arc Mountain chain and the Southern Plateau. Of this forested land, approximately 37% or 12,517 hectares is classed as forest reserve, controlled and managed by the state (Hurst, 2003 op.cit).

At independence, the state forest reserves and those who controlled them faced challenges as they attempted to justify traditional forest management in terms of congruent with post-colonial Tanzania development discourses *(Ibid).* As features of the socio-environmental landscape, state forest reserves at independence were spaces associated with exclusion and state control. While newly trained Tanzanian foresters do not necessarily view forest reserves in this way, they are however, concerned these efforts towards Tanzania's economic development. The Forest Division attempts to support the establishment of a forest industry. It was predicated on the opinion that forestry was in a position to contribute a significant amount to state revenue through export, in addition to meeting the growing domestic timber needs of the country. Following independence, the Forest Division pushed strongly for the expansion of the country's saw milling capacity, made efforts to improve timber export quality controls and planned for the development of a pulp mill that would meet the pulp and paper needs of all of East Africa.

Despite these efforts to situate forests at the heart of the economic engine that would power post-colonial development, forested areas did not figure prominently in the recasting of the social-environmental landscape in Tanzania in the early years of independence. The Forest Division and its personnel were gradually marginalized within the wider Tanzanian development project. Their proposed contributions to the post-colonial development agenda fared poorly in the political process of determining priorities for state attention and investment.

A historical-geographic approach, suggests several reasons for how and why this marginalization took place. Firstly, the discourses and practices of forestry as a sector were out of tune with those of other socio-environmental sectors on the development agenda such as agriculture. Spatial and temporal incongruities existed between the social spaces produced by personnel and the social spaces envisioned by the leaders of political liberation project. Secondly, traditional forest management techniques were poorly adapted to changes in the conditions of resource extraction, as an eagerness to develop an intensification of economic planning processes. Thirdly, the identity and positionality of foresters, as well as the nature of their spatial biases, meant they were poorly observed (*Ibid)*

Efforts to conserve certain threatened species or habitats have in too many cases been implemented at the expense of local peoples throughout the world. Although modern conservation thinking has been shifting away from its original anti-people bias, it has yet to redress many of its past abuses and to accept that people are part of the environment (Neuman, 1998 op cit). Thus, the historical processes of colonialism

and postcolonial nation building consciously shaped the basic relationship between peasant farmers and pastoralists and the conservation agencies. From the perspective of pastoralists numerous injustices had been carried out by the state in the name of wildlife conservation. The fact that pastoralists' voices speaking out against conservation as usual are now heard loudly at international conferences and workshops is itself a remarkable historical shift in Tanzania's conservation politics. Rural activists have incorporated the potent rhetoric of sustainable development and human rights into their struggle, an action that heralds a new assertiveness (Neuman, 1998 op cit).

Local resistance to the loss of access rights to land resources has motivated new efforts by international conservation NGOs to redistribute tourism benefits and promote social welfare in communities adjoining protected areas. Continued pressure from "below" will necessitate further attention to questions of land rights and justice. Increasingly in contemporary cases, local groups, often through the formation of local NGOs, are demanding autonomous control of land and resources, which they view as customary property rights that have been usurped by the state. In this context, it is often sociopolitical claims, not land pressure per se, which motivate encroachments' into protected areas. Local demands can be politically radical and most international conservation NGOs and state authorities are reluctant to go so far as to grant sole control of forests and wildlife habitat to villages or other local political entities. Local participation and local benefit sharing, however, are not the same as local power to control use and access. Yet, in the end, this is what many communities seek (Hurst, 2007 op cit).

So far, pastoralists are the main social group organizing to redress the perceived injustices of wildlife conservation in Tanzania. Other affected groups, such as peasant farmers on other park boundaries, have not yet organized around similar issues. The potential exists, however, for a much more widespread and comprehensive political struggle over land and resource rights in protected areas, such as developed as part of the nationalist movement in the colonial period. Provided with new democratic openings, pastoralists are moving away from 'everyday form of resistance' and protest toward more organized and formalized forms of political action. It is difficult to predict what new structures and policies for wildlife conservation will emerge because of their activism. Land rights activists have, however, made it clear that wildlife conservation issues cannot be addressed without considering broader struggles for human rights and social justice (Numann, 1998 op cit).

In Africa, however, the element of central government control prevailed until fairly recently. This is understandable, because under colonial rule a strong central administration had been established in order to have power over and bring under central control the tribes and communities, which were seen as a source of trouble. Uprisings against the colonial powers continued until independence, re-enforcing the centralistic of colonial governments *(Ibid).*

The weaknesses and inefficiencies of many African states have meant that numerous protected areas have existed in name only, but support from international organization has strengthened conservation capabilities on the ground. Conservation

receives continual and valuable support from a number of NGOs which lobby and raise money for conservation causes. They provide valuable funds to Africa governments without the means to endorse ambitious conservation schemes (Brockinton, 2006:10).

After independence, the new administrations feared the centrifugal powers of tribalism and in the case of Tanzania, discouraged the traditional local structures. The traditional chiefs were done away with and local governments dissolved. Central government representatives were put into villages and services such as schooling, medical care and agricultural extension, but also protection of crops from wild animals were affirmed to be tasks of the government. The central government promised to take care of these aspects of village life and in fact managed to deliver, until in the seventies the economic performance began to slip and finances ran shot(Baldius, 2001 op cit). This was also the case where natural resource and wildlife management were concerned. Wildlife has traditionally been perceived as threat to crops and life as well as a source of meat and income through trade in wildlife products, mainly ivory *(Ibid).*

At the same time, new protected areas were created at an accelerating rate and managed under what is now called the "fences and fines" approach. Communities were barred from entering and disturbing these areas, with a few exceptions such as the case of the Ugalla Game Reserve, where a special arrangement was introduced for fishermen and honey producers. For instance, up to the early seventies between

2,000 and 4,000 elephants were shot by government scouts every year as part of crop protection in Southern Tanzania alone (Baldius, 2001 op cit).

The prevailing attitude by both conservationists and game wardens has remained that every local villager as a potential poacher. Police action, rifles and handcuffs were regarded by the authorities as the instruments to settle this conflict. This approach was based on the illusion that governments everywhere on the continent were in control of the natural resources and were able to protect them countrywide. In reality African administrations and economies started to under perform soon after independence. Very often government officials colluded with would be poachers or even were in the forefront of poaching. While the protection of wildlife inside the parks and reserves could to a certain extent be maintained by the "fences and fines" approach, at least in Southern and Eastern Africa, very little effective law enforcement took place outside these protected areas. As a result, wildlife resources outside parks and reserves were being "mined" at levels that could not be sustained *(Ibid).*

Arising from the literature reviewed above, some important things have been noted. Firstly, the literature exposes some shortcomings and benefits of colonial environmental conservation policies. Secondly, these policies made Tanzanians to resist against their imposition giving rise to paradigm shift from colonial patronage to the partnership. Having one the first round in that struggle for restoration of their land rights. Wildlife management continued to be dominated by increasing state control and regulation in a colonial mindset inherited from colonial rule. During the

colonial era, this was a component of European expropriation of the African resources to serve foreign conservation interests. After the independence foreign financial influence, national economic concerns, and a governance system of single party socialism continued to be unable until challenges from below move the discourse to a new level of struggle of the ownership over natural resources (Ibid).

By the 1990s, because of an array of external influences and internal pressures, a reform agenda emerged that called for the transfer of authority for environmental management to the local level. However, these reforms have encountered considerable obstacles from entrenched institutional interests in environmental resources on the part of state agents. Reform is largely restricted to the expression of policy statements designed to attract donor support and pacify local concerns. Donor agencies and international conservation organizations have been the main influences behind the development of the reform agenda, but have their own institutional limitations and disincentives to developing adaptive and potentially more effective strategies for promoting institutional change (Baldius, 2001 op cit).

The fundamental barriers to environment management reform in Tanzania thus lie in the historical legacy of centralization, the resultant institutional incentives within the bureaucracy for maintaining control over a valuable resource, and the relative lack of influence of other actors on policy processes in Tanzania's current political environment. These factors not only explain the divergence between policy and practice in Tanzania, but also reflect fundamental institutional challenges facing environmental conservation efforts.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Study Area

The study was conducted in Morogoro and Shinyanga regions. The above-mentioned regions have experienced environmental conservation policies and are home to national parks and game reserves. Morogoro Region lies between latitude 5^{o} 58" and 10^{o} 0"to the South of the Equator and longitude 35^{o} 25" and 35^{o} 30"to the East. It is bordered by seven regions (Regional Commissioner's Office Morogoro, 1997). Arusha and Tanga regions to the North, the Coast Region to the East, Dodoma and Iringa to the West, and Ruvuma and Lindi to the South. Morogoro Region occupies a total land of 72,939 square kilometres which form approximately 8.2% of the total area of Tanzania mainland.

The main ethnic groups in Morogoro region are the Waluguru dominating in Morogoro Rural and Mvomero districts, Wasagara and Wakaguru in Kilosa, Wandamba and Wapogoro in Kilombero and Ulanga districts respectively *(Ibid).* In this region, the study was conducted in the following divisions: Mikumi-Doma, Mgeta, Mkuyuni Kiloka, and Matombo in Mvomero and Morogoro Districts respectively. The above mentioned locations experienced environmental problems based on soil and forest before and after colonialism.

The annual rainfall ranges from 600mm in low lands to 1200mm in the highland plateau. However, there are areas which experience exceptional droughts (with less than 600mm of rainfall and these areas are in Gairo and Mamboya divisions in the

North of Kilosa District and Ngerengere Division in the East of Morogoro Rural District). The mean annual temperatures varywith altitude from the valley bottom to the mountain top. The average annual temperature varies between 18 C on the mountains to 30C in river valleys. In most parts of the region, the average temperatures are almost uniform at 250C. In general the hot season runs from July to September (*Ibid).*

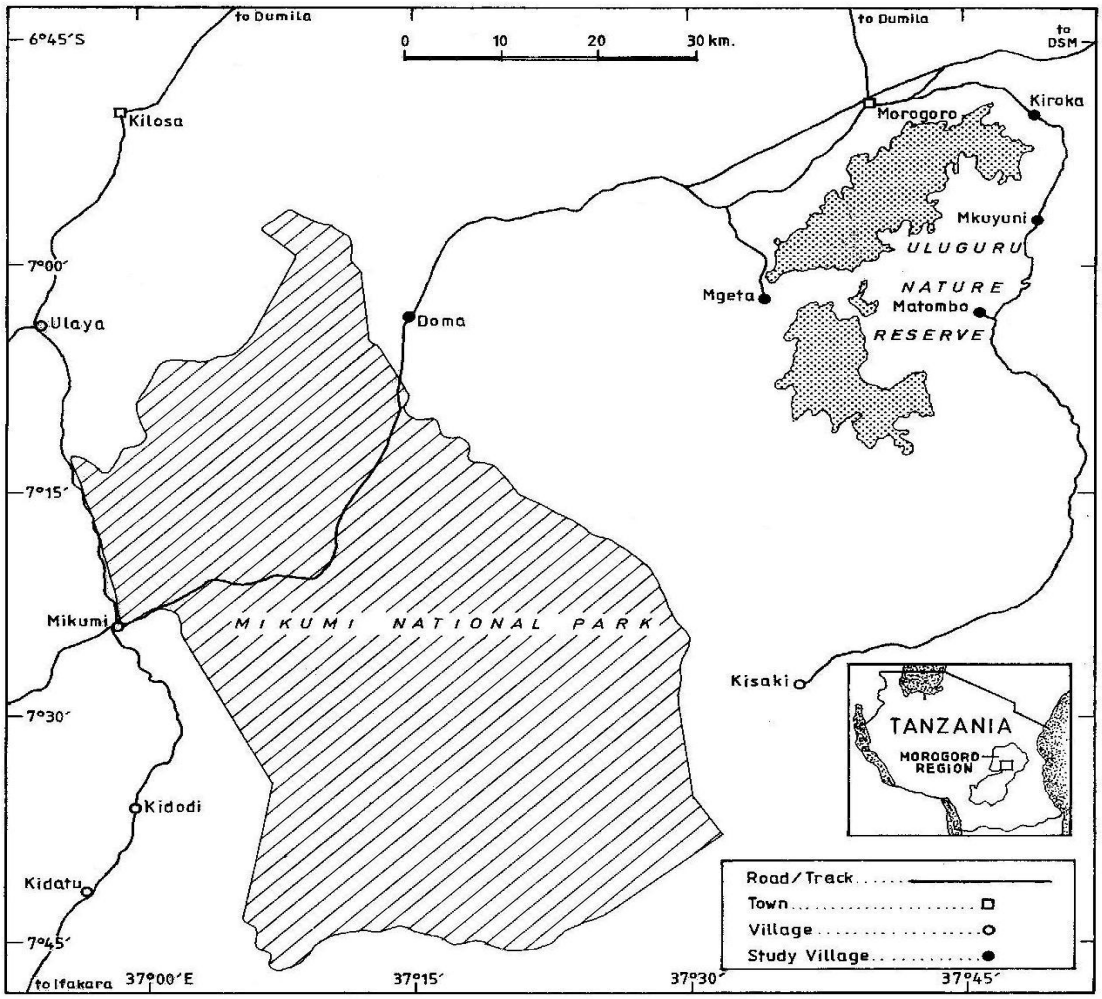
Shinyanga region is found in the north-western part of Tanzania, South of Lake Victoria. It lies between latitude 2^o - and 5^o South of the equator and longitude 31^o - and 35^o East of Greenwich. It borders Mwanza, Kagera and Mara regions to the North; Arusha Region to the East; Singida and Tabora regions to the South and Kigoma Region to the West (Monela, 2005). The Region has eight administrative districts namely; Shinyanga Rural, Shinyanga Urban, Maswa, Meatu, Kahama, Bukombe, Bariadi and Kishapu (Based on fieldwork, 2011).

Shinyanga Region covers an area of 50,764 km^2 of which 31,140 km^2 is arable land, 12,079 km^2 pasture land and the remaining 7,544 km^2 is under forest reserves *(Ibid).* Altitude varies between 1,000 m in the southeast to 1,500 m in the north-east above sea level (a.s.l). The region is characterized by small hills, separated by savannah (*mbuga*) plains with gentle slopes. Ecologically the region falls under the unimodal plateau. Mean annual rainfall is about 700 mm and it ranges from 600 mm in the east to 1200 mm in the west. Rains begin in November and end in April/May. Rainfall is poorly distributed with high variability within and between seasons of the year. Monthly temperatures vary between 27.6^oC to 30.2^oC maximum and 15^oC and

18.3^{o}C minimum. It has been described that the soils of Shinyanga region, on hilltops, are moderately well drained, grayish brown and sandy. On the low-lying bottom lands are the poorly drained black clays (cambisols and vertisols). Vertic soils are very extensive covering 47% of all soil types in the region. Natural vegetation was originally woodland and bush land with species such as *Acacia, Brachystegia, Albizia, Commiphora* and *Dalbergia* being dominant (Ibid).

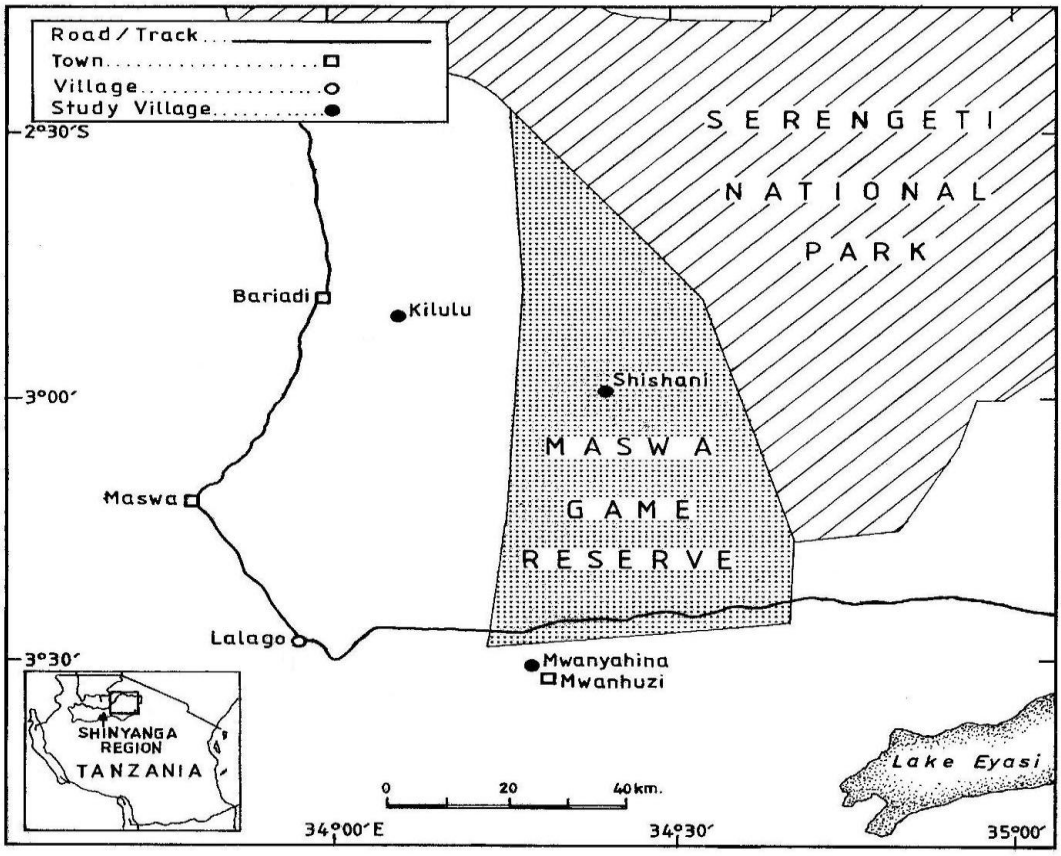
However, during the 1920s and 1930s, large areas of land in Shinyanga and Maswa were cleared of bush and trees as part of a tsetse fly and quelea quelea bird eradication programme. Since then, deforestation and bush clearing have continued, a situation which has made many places to have low vegetation cover. Therefore, in Shinyanga, the study was concentrated on the following villages Miti Mirefu, Masengwa, Ibinzamata, Kilulu, Mwanyahinya and Shishani- Longalombogo based on Shinyanga, Meatu and Bariadi districts. These areas experienced environmental degradation and the use of traditional knowledge to conserve their environment as well as environmental conservation policies.

Figure 1: Map of Morogoro showing the villages which are adjacent to the Mikumi National Park and Uluguru Mountains



Source: Dar es Saam University, Geography Department, map Laboratory unit

Figure 2: Map of Shinyanga showing the villages which are adjacent to the Serengeti National Park and Maswa Game Reserve



Source: Dar es Saam University, Geography Department, map Laboratory unit

3.2 Methods

This study has mainly used qualitative technique. Qualitative technique is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials - case study, personal experience, introspective, life

story, interview, observational, historical, interactional, and visual texts that describe routine and problematic moments and meanings in individuals' lives. Accordingly, qualitative researchers deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand (Danzin, 1994:2).

The method is very useful in providing rich descriptions of complex phenomena. According to the nature of this study, qualitative technique has investigated things in their natural settings and attempting to make sense or interpret phenomenon in terms of meanings that people bring to them. Some of the objectives of this study deal with perceptions that are better captured through the use of qualitative model. The model helped to understand peoples' perception.

Archival materials have been used in this thesis. These are information objects that serve as evidence of past events. They record information about past activities and act as memory aids that allow its users to recall and relive them or to re-communicate information about those events at some point in the future (Archival Materials: A Practical Definition, 200 In this thesis a combination of written archival documents, and oral recollections forms the evidentiary basis for the researcher's effort to understand the effects of colonial environmental conservation policies. Although different social actors produced these evidentiary materials, the reseacher read them as complementary because none of them can stand alone. Since all of this evidence reflects the subjectivities or perspectives of people who authored and produced them, interpreting them as complementary evidence allows the possibility to read and evaluate them against each other. Reading them as complementary evidence is also a

way of acknowledging that the social actors who produced them, such as government officials who wrote archival documents or peasants whose reminiscences, the reseacher has uncovered through their descendants, did not live in isolated worlds. Rather, they influenced, engaged, and shaped each other within the limits that colonialism imposed. These social engagements allow us to glean the negotiations and relationships between the different actors who produced these materials.

A variety of written documents has offered an important evidentiary basis for this thesis, including archival records written by colonial government officials. The reseacher accessed these documents at the Tanzania National Archives in Dar es Salaam, the largest depository of historical documents in Tanzania. Oral recollections constitute an important evidentiary basis for this thesis in which biographical and unstructured interviews were used. The biographical interview is the collection and analysis of an intensive account of a whole life or portion of a life, usually by an in-depth, unstructured interview. The account may be reinforced by semi-structured interviewing or personal documents. Rather than concentrating upon a ‘snapshot’ of an individual's present situation, the biographical approach emphasises the placement of the individual within a nexus of social connections, historical events and life experiences (the life history) (Danzin, 1994,op cit).

In this thesis biographical and unstructured interviews were used because of their advantages over questionnaires and document reviews as they provide flexibility to both the researcher and respondents. Furthermore, these two types of interviews enabled the researcher to control the research process by adjusting questions

whenever necessary as well as by creating new questions in response to informants' answers. In this an open-ended question is designed to encourage a full, meaningful answer using the subject's own knowledge and/or feelings. It is the opposite of a *closed-ended question*, which encourages a short or single-word answer. Open-ended questions also tend to be more objective and less leading than closed-ended questions *(Ibid).* Based on this study, open-ended questions were mostly used in oral interviews in order to accord a wide chance of giving more information about the study theme. Officials in national parks and Agricultural Departments deemed to have relevant information were interviewed, including interviewees who belong to chief family and other different social groups.

The researcher conducted interviews with men and women (between 60 and 70 years) who were conversant with environmental conservation policies especially those living around game reserved areas, and national parks because they were the people most affected by the colonial environmental conservation policies. Most of them (interviewees) had witnessed the colonial environmental consevation policies as young boys, girls, or youths; or they had heard about the environmental conservation from their parents and grandparents. The researcher conducted the interviews in Morogoro and Shinyanga- Tanzania (See first paragraphs of this chapter), but Shinyanga now is called Simiyu is a ne region that incoporates Bariadi and Meatu Districts in which the researcher conducted the interviews before being the new region by then was Shinyanga.

Local languages like Luguru and Sukuma, of which the researcher does not know how to speak them but he understood by the assistance from assistant researchers who were familiar with these languages. The researcher received cooperation from his interviewees partly because of his assistants in the region. Their recollections generated important material on how their parents and grandparents had understood and dealt with threats to environmental consrvation policies, their perception of the inroduced policies, and their response on the government measures on environmental conservation. The researcher interpreted the oral recollections as cumulative knowledge that his interviewees learned from their parents and grandparents and which they recreated in their contemporary world to make sense of the past. Core ideas of how earlier generations dealt with the challenges of environmental conservation from one generation to another, and each subsequent generation infuses these ideas with contextual meanings to make them relevant in their time. Thus, oral recollections contain traces of the past, the contemporary experiences, and the dialectical interplay between them. Through the oral recollections the study gave prominence to understanding the views and arguments of people in these environmental conservation areas and who have preserved their local knowledge and experience of their environment. This cumulative dimension has enabled the researcher to interrogate contemporary oral recollections as a window into the world in which the environments were conserved and developed in the past. It has also offered discussions into social formations, peasants, local chiefs, and government officials during the implementation of the colonial environmental conservation policies.

As a cumulative form of knowledge that defines individuals and social communities, each generation passes this knowledge to the next one. The process of passing memories from one generation to the next involves change and continuity in the nature and character of these memories. This change and continuity, Jan Shetler has noted, results from the fact that new generations tend to redefine and contextualize these memories in their own times, social contexts, and historical experiences. As they redefine them, they no longer reinforce the received facts that no longer have relevance in the new contexts and such facts may disappear in the contemporary recollections of the past (Shetler,1980:1-12). Thus, new generations construct the memories of the past in ways that reflect the changing social and historical contexts of their time. In this way, oral interviewees are not passive recipients of the versions of the memories they learned from their predecessors. By redefining them, and making them relevant to their own times, they become actors who produce recollections that reflect continuity with the past and which they use innovatively when they adapt them to new circumstances *(Ibid).*

The researcher also look at oral recollections as mediated oral texts that demand careful reading and critical analysis. The interview he had with Said Maroda (Shinyanga Urban) illustrates this point. As the researcher reflected in one of his recollections: *What do you understand by destocking policies during the British colonial government and after the independence:* [During the British colonial rule destocking was intensively operated and it affected the livestock keepers's economy. Even after independence Nyerere promised to eliminate the policy. Unexpectedly the policy came again] (Mzee Maroda, 2011). Although Maroda witnessed colonial

destocking policy as a boy, almost sixty years separated the policies that the colonial government implemented and the time the researcher conducted interviews with him in 2011. The intervening developments such as the socialist politics of the 1960s and the 1970s and the liberalization drive associated with the implementation of Structural Adjustment Programs in the mid 1980s formed part of Maroda's recollections of earlier periods. Consequently, Maroda infused stories of his parents during the British colonial period with those of Nyerere's socialist ideals as well as the cost-sharing schemes that came with the Structural Adjustment Programs. In so doing, his recollections reveal the ways in which the contemporary postcolonial developments that shaped his life left traces in the memories of what he witnessed as a boy in the 1930s and 1940s (Shetler, 1980 op cit).

Finally, oral recollections embody the self-interests and personal agendas of the interviewees. Through recalling the past, narrating about it, and systematizing the role that their parents accomplished in reshaping the environmental conservation, oral interviewees assumed the role of repositories of the memory of the social processes that have shaped the development of their communities from the past to the present. For instance, elders narrated the stories about hunting practice in the past with confidence and their local authority in preserving the environment, and, they sometimes presented these stories as objective reality or truth. However, the researcher interpreted their oral recollections as subjective and interpretive constructions that they used to make sense of environmental conservation of the past. These recollections are as subjective as any other form of evidence that historians (both Africanists and non-Africanists) utilize to produce historical knowledge.

To deal with the challenge of subjectivities, the researcher conducted interviews with several men and women in order to corroborate their recollections. Despite the potential limitations of oral recollections, they embody the perspectives of the descendants of the rural communities who encountered the colonial environmental conservation policies, programs and socially engaged with the government officials and local chiefs to shape their dynamics. First, the recollections constitute the interior view of the communities who witnessed the environmental conservation meaures or those who heard about them from their elders. They shed light into the cosmological understanding of the threats to the existed human –nature relation that the researcher examined in Chapter Four, and he shows how the pre colonial communities conserved their environment. Finally, these recollections have made our understanding of the threats to conservation policies more complex than could be deciphered from colonial archival documents alone. Reading the visions of local communities and government officials expands our understanding of the complexity of the threats to environmental conservation that ranged from per -colonial to post colonial. The researcher has interpreted the colonial officials documents, ethnographic writings, of the cumulative oral recollections as dialogical and complementary texts that different actors produced as they dynamically engaged with each other during the implementation of the colonial conservation policies. The researcher has taken all the evidence seriously, without privileging any of it, because each set of evidence represents the perspectives and actions of the social actors who produced them and who "were bound by their mutual engagement" with each other during the implementation of the consrevation policies.

The advantage of taking seriously different types of evidence without privileging any sub-set is that it allows the researcher to corroborate them and to study negotiations between social actors. As Giles-Vernick (2002) has pointed out, interpreting documentary and oral evidence without privileging either of them, allows the materials to "flesh out" and "contextualize" each other (Giles-Vernick, 2002: 12-41). This interpretive strategy becomes a window not only into how government officials and rural communities understood and dealt with threats to environmental conservation, but also into how they entered into social engagements and relation to the environment and its utization. In this way, we get a fuller picture of the environmental-history focusing on conservation approches.

3.2.1 Data Analysis and Presentation

Data analysis has started by organizing the data obtained from documents, files, field notes and other visual data. Taped interviews were transcribed. Exploring the qualitative data is next and involved making notes about early observations as well as developing codes. Codes are words, phrases or even sentences that are assigned to chunk of qualitative data that allow the research to categorize the data into themes. Data analysis then involved the researcher coding the data by reading the raw data (field notes, interview, transcripts etc) and assigning codes to small portions of the text (http.www.makertresearchworld.net/indexphp.com14/08/2010). Codes were then grouped together to form themes

Data analysis was guided by the stated research questions. Each question was expanded to form a major chapter. The researcher established an analytical

framework for each question in the presentation of findings by using primary and secondary information. This was followed by a synthesis of the information which in the end helped to arrive at an accurate argument. Qualitative analysis involved the research to pattern the similarities and differences among concepts; properties; mechanism within the evidence; and general meanings amidst the mass of data gathered.

CHAPTER FOUR

4.0 ENVIRONMENTAL CONSERVATION STRATEGIES AND PRACTICES IN PRE COLONIAL COMMUNITIES OF TANZANIA.

4.1 Introduction

This Chapter shades some lights on pre- colonial environmental conservation practices in Morogoro and Shinyanga regions. The chapter is divided into three sections: the environment and people among the Luguru and Sukuma and pre colonial environmental conservation strategies and practices basing on traditional institutions as well as social and taboos. In this context institutions can be defined as codes of conduct that define practices, assign roles and guide interactions, and the set of rules actually used. They are made up of formal constraints (roles, laws, and constitutions), informal constraints (norms, behaviour, convention and self imposed codes of conduct). Examples of formal constraints are social and taboos, setting out closed areas, rituals and other repetitive culture practices. Finally the conclusion will be made.

4.2 Environment among the Luguru and Sukuma of Morogoro and Shinyanga regions

4.2.1 Morogoro

In giving an overview of the Uluguru Mountains in this section, it can be stated that these mountain ranges are historically covered by forests and woodland (Young et al, 1960:27) It is along the same view that the land of Uluguru places special relevance in understanding the Luguru society. The land is rough and hilly, with steep slopes (Young et al, 1960 op cit). The land is poor, marginalized by overpopulation and

overuse while the implements used in agriculture are relatively simple. Therefore, the social structure developed primarily around the control of the land and allocation of its use to the members of the Luguru Lineage *(Ibid).* This was not evident in Shinyanga region. For example, probably due to the expansiveness of the land and absence of mountains. E.W Bovile was quoted as saying on Uluguru Mountains:

> These highlands are of extraordinary beauty, and have been compared to those of Kashmir, through lacking the flora luxuriance of the east Great Rocks crop out on the floors of the valleys as well as on the hill-side; but nowhere does this ruggedness meet the eyes, for the whole landscape is clothed in dense tropical vegetation, though which only occasional gaunt peak rises above the general conformation of the hills. The rising sun turns the brilliant green of the virgin forest to a wonder medley of soft shades of pink and mauve and violet; but during the heart of the day the heights are enveloped in a veil of the softest blue. To the south, where the greatest elevation is reached, the mountains rise to the 7,000 feet contour over a considerable area *(Ibid).*

Plate 1: Some parts of the Luguru Mountains

The above picture shows some parts of the Luguru Mountains. The picture was taken during the fieldwork at Kiroka in Morogoro, 16/06/11

Bovile has tried to demonstrate the real physical features of the Uluguru Mountains. His explanation shows that the area is mountainous in nature whereby most of its places are covered by green grasses and trees.

On the Uluguru hills again, particularly on the eastside which its roads, winds initially through the more populated areas, then on to the remoter region of the Kutu people until at last it dwindles away in the vastness of the National Park. On the west side, the road shortly leaves the plains and makes a short, tortuous climb into the mountains, continuing for a few miles beyond Mgeta where it stops abruptly with a vast and largely uninhabited region lying before it to the South (*Ibid).*

4.2.2 Shinyanga

In Shinyanga, as it was noted earlier its landscape is mostly flat with a vast horizon interrupted by isolated low stone hill and giant old baobab trees (Mlenge, 2004:5). This is very different from Morogoro landscape as we have seen before specifically in Uluguru areas. Elsewhere in Shinyanga, one sees a contrasting scene of acacia or miombo woodlands with green pastures underneath *(Ibid).* Generally, the Eastern portion of Shinyanga, is mostly open country with many baobab trees and a few bushes, and is densely populated (TNA, Shinyanga District Book, retrieved 2011). To a large extent Shinyanga region is predominantly semiarid, with an average precipitation of 600-800 millimeters. Its rainfall is erratic and poorly distributed with high variability among seasons. Its low hills and plains are characterized by long dry summers, and natural vegetation has historically consisted of extensive *miombo* and acacia woodlands (Winrock International November, 2006). In Shinyanga the land rises invariably from 1,000 to 1,300 metres above sea level (Ndege,1995: 15). The landscape is characterized by broad or narrow valleys interrupted by rocky hills. These hills consist mainly of granitic, sometimes gneissic rocks. There are also some huge plains which developed on old alluviual soils derived from granitic rocks *(Ibid).*

To be more specific, Shinyanga region falls under the unimodal rainfall plateau. In this agro-ecological zone, a system of agro-pastoralism called ngitili is practiced *(Ibid).* Ngitili, which means leaving an area closed to allow grass regeneration for later use during the dry season, is an indigenous knowledge used to alleviate dry season fodder supply shortages, to conserve and protect soils and to reclaim degraded land (Winrock, 2006 op cit.) Maize is the main food crop, followed by sorghum and

rice, and cotton is the main cash crop. Livestock is an important component in the system; production is generally extensive, based on traditional communal grazing. Natural vegetation was originally woodland and bush land. However, due to severe deforestation, many areas turned treeless except for a few acacia and baobab trees. The vegetation has gradually reverted to an open bush savanna. In the past, the Shinyanga region was extensively forested with woodland and bush land species such as Acacia, Brachystegia, Albizia, Commiphora and Dalbergia species *(Ibid).* Shinyanga as it was noted before most parts are flat areas and covered by numerous trees and tall grasses.

In view of the above foregone evidence, this section therefore, has demonstrated the variation of Tanzania environment. This variation gives the difference in conducting economic activities and their related social political organizations. This environmental difference influenced the strategies and practices in conserving their environment as it will be articulated in the coming section.

4.3 Pre colonial Environmental Conservation Strategies and Practices

Pre- colonial conservation strategies and practices have tended to be romanticized by most contemporary scholars. Available evidence does indicate that the pre-colonial societies became the first, to access and use the natural resources. This therefore, reflected the effort that balanced the relationship between their environment and activities. Murombedz pointed out that very little is known and has been written about pre-colonial environmental conservation practices in Africa (Murombedzi, 2003:6). The general belief is that low population densities, unsophisticated

agricultural and hunting practices and immobile populations meant that ecological conservation tended to be built into routine economic, social and religious activities of the era (Murombedzi, 2003 op cit). This would seem to suggest that colonial authorities did not have to convert exotic conservation measures but rather to build on the existing indigeneous knowledge base. The reality tends to be very different, existing evidence suggests that settlements were consolidated with very high population densities. Agriculture and other resource extraction activities were very sophisticated and adapted to the requirements of specific resources and ecosystems over time, which the societies themselves developed sometimes very, sophisticated mechanism to regulate resource use *(Ibid).*

The pre-colonial period was also characterized by forest management through traditional institutions, low populations and minimal forest resources exploitation. People lacked technological capacity and markets to overexploit natural resources and thus their impact on the environment in general was low. The main anthropogenic impact of forest formations during pre-colonial times was probably modification of large savanna areas by fire. Due to low population the impact of shifting cultivation and grazing on the environment was quite limited (Bassert,1993). In Tanzania, like in other African countries, uncultivated land was owned communally before colonialism and people used forests extensively for their livelihoods. The forests were the sources of food, medicines, clothes, water and place for spiritual activities. Hunting was a fundamental activity for many cultures as it contributed significantly to the community's food supply (Eliakimu, 2009:8)

4.3.1 Morogoro

In Morogoro among the Luguru it was asserted that leaders were highly respected and were responsible in governing natural resources. These leaders provided some instructions to the society on how to conserve the forests especially restricted forests. According to these leaders, it was claimed that the spirits restricted people from destroying the forest (Kisegeyu, 2011). Management and use of forest resources was controlled through customary institutions including beliefs, taboos and customs. Small scale commercial exploitation of forests and woodlands for timber in Tanzania started early in the 18th century when the Arabs came to Tanzania and specific tree species were selectively felled *(Ibid).* In many ways people lived in a subsistence economy and these claims are still valid today. Similarly, Chenje argues that in the pre colonial period, traditional leaders had authority over land and other natural resources in systems that were based on clan or tribal groupings *(Ibid).* Forest resources, were governed by local customs that limited access to some areas such as sacred grooves, and grave yards and controlled tree cutting though a series of taboos. With these restrictions, access to land use of restricted forests and land was strictly controlled. This therefore, provided a sustainable existence of their environment.

Pre-colonial Tanzanian communities in the Luguruland practiced hunting activities. This was due to the prevailing social economic conditions and relations of production being at a rather embryonic state. The "hunting industry" in pre-colonial era could be located remotely within the frame work of a communal based activity. The activity was founded on traditional rituals, rules and norms and was structured in a way that ensured a tranquil co-existence between wild animals and the community

members (Mrisho, 2011 Fildwork). The pre colonial format of state and law of most communities that practiced hunting was structured in a way that gave enormous powers to the enforcement machinery of the chief and local clan leaders. The industry was regulated by prescribed hunting norms that sought to control by prescribed hunting norms provided for both community needs as well as known fair, properly enforced and relatively effective in the prevention of over exploitation of wild animals during the pre colonial era (Mrisho, 2011 op cit) .

In some of the communities, it was only chiefs and heads of clans who were allowed to hunt or authorize hunting. These authorities were required to abide to certain rituals and procedures pertaining to hunting. In some cases, they had to perform traditional pre-hunting sacrifices and rituals to seek the blessing of the ancestor spirits before embarking on hunts *(Ibid).*

Hunting seasons were common in societies during the pre-colonial era. Some species of animals, usually considered sacred or totemic were not to be hunted. The same assertion was also revealed from an interview that was held at Doma village in Morogoro region, when the interviewee claims that hunting practice was controlled by local leaders using taboos whereby only specific types of animals were allowed to be hunted (Hassan, 2011, Fieldwork).

However, much evidence of pre-colonial environmental conservation practices has been obliterated by colonial conservation practices. A significant number of contemporary protected areas in Tanzania were protected under pre-colonial regime.

For example, areas that were conserved during the colonial era include Mikumi National park, Serengeti national Park and Selous Game Reserves. The imposition of colonial conservation regimes on these landscapes gave rise to conscious efforts to obliterate these pre- existing land uses and their long term impacts. The mentioned areas were conserved by pre colonial communities before the protection of colonial control. For example villagers at Doma in Morogoro had their local knowledge of conserving their environment. They maintained a proper balance between reaping the harvests of nature to meet their daily needs and the necessity of conserving the environment. Taboos regarded for example, the conservation hardwoods *mkangazi* and *mninga* and animals species. This was done since some tree species were responsible in bringing rain. Some animals were used to detect good harvest and drought season which alerted the communities to preserve their already harvested crops (Kilasa, 2011). The communities also reserved some areas to be used during the dry season. Thus, in this way, the Doma community at Doma village balanced their environmental use.

Apart from the above said articulation it has been shown from our field data that the Luguru communities largely use their traditional institutions in conserving their environment *(Ibid).* Traditional institutions are basic in nearly all African societies. They are often categorized into an age based hierarchy, traditional leaders, traditional healers and members of society who have excelled in indigeneous knowledge. They oversee and enforce tribal rules and regulations or taboos. In enforcement, they act as a supreme court with the final say in all tribal matters. Their conservation role is still evident in some areas although marginalization by colonial and post-colonial

management systems and cultural dilution caused by immigration, formal education and adoption of modern religions considerably reduced it.

The above fact can be evidenced by an interview with Kibwana Mbega (a formerson of chief) at Mkuyuni in Morogoro, who was quoted as saying that "there were traditional tribal rules to conserve the forest (Mbega,2011).'' He further says that the "enforcement was upon the clan elders with supreme power over the possession of the land and forest of the related clan *(Ibid)."* Kideghesho agreed with the above interviewee by revealing that, a study in Serengeti indicated a willingness among communities to collaborate with state agencies, through their traditional institutions to overcome illegal hunting. Other respondents commented that "there were strategies in conserving forests and land fertility during pre- colonial period among the Luguru;" for instance bush firing was prohibited in Nyandira village. Similarly, Hamisi Ahmadi Matanzi agrees with Kideghesho by commenting that there were strategies in conserving forests in pre- colonial era. For example, bush burning was not allowed in Uluguru Mountains, the traditional institution commanded high loyalty among communities due to strongly held beliefs that a failure to observe taboos or rule governing them could cause hazardous misfortunes to the respective communities.

In the related line of argument; Bogasi (2011) has commented that "natives had their own strategies of conserving environment, some forests were preserved. Forests were protected through taboos, for instance, people were not allowed to cut trees around *Mlima Ng'alo*" (Bogasi, 2011). The same claim was made through an interview with

Shomari Omari Mkunde in Kiloka who was quoted as saying "forest like Dinyango, Bondwa and Kisamuili were protected and it was taboo to cut trees, failure to observe this could cause problems to the whole society (Mkude, 2011)." Kideghesho concurs with Shomari Mkunde when he mentioned that traditional institutions regulated behaviors through an oath called *kihore*. It is believed that *kihore* can subject a wrong doer to undesirable consequences such as death, extreme poverty and incurable diseases while the society may experience several droughts, pests' outbreak, and loss of livestock and consequently hunger *(Ibid).* Similar institutions and authorities exist among other communities of Tanzania, although they are not necessarily as robust as they used to be in the past. Examples includes, *Abhachama / Abhazama (for Issenye / Ikizu tribes), Abhaloking (Natla), Abhagamunyavi (Sizako), Wafumwa (Pare), Vanjuma (Gweno) and Laigwanan* (Masai) (Kideghesho, 2010 op.cit).

Abdalah Mdung'ile commented that there were traditional environmental conservation practices of conserving tree species among Luguru local communities. This was under the clan elders, in which wet land areas and trees such as Mvule (*Mililia excelsia*), Mkangazi (*Khaya Nyasica*), and Mninga (*Pterocarpus angiogenesis*) were highly conserved and the taboos restricted to cut them (Mdung'ile, 2011). Correspondingly, Folke and Coldin advocated that taboos and regulations demonstrated their potential in protection and survival of the endemic threatened and keystone species and their habitats. The populations of these species are relatively high in localities where they are considered to be sacred or totemic *(Ibid).* Killing, destroying or consuming totemic species may lead to punishment by

clan or tribal elders, Abdallah commented. However, often the performance of well–defined traditional rituals is mandatory in order to pacify angered spirits (Ibid). Among the Ikoma, killing a totemic species leads to a household of a clan to which such a person belongs to pay a fine exceeding the daily household's budget, slaughter a domestic species and supply the local brew (Kobwe, 2011). In the same line of idea, Kweka advocates that in Usambara, cutting a sacred tree is compensated by slaughtering a male sheep or white / black cock. The above assertion is evidenced through an interview which was done with Charles Kobwe at Mgeta who adds that cutting a sacred tree is compensated by slaughtering a male goat (Kweka, 2004 op cit).

Among the Luguru, local practices as well as social and taboos played a great role in conserving their environment during the pre-colonial period. Taboos against specific actions and behaviour were common in virtually all human cultures. They are moral or cautionary restrictions placed on certain customs by authority of people (e.g. Kings, priests' elders). They derive mainly from religious and long-established traditional beliefs and social customs, and some have developed as a response to environmental problems and logic derived from indigenous knowledge (Mbogo, 2011). The same view was revealed by (Martin,2011) when he commented that through such taboos the Luguru of Mgeta were able to conserve forest through taboos and regulations imposed by traditional leaders. In the same line of argument, Munamato Chemhuru and Dennis Masaka commented on among the Shona people of Zimbabwe, that environmental taboos had a vital moral role towards the ontological wellbeing of both the individual person and the environment at large.

Prohibitions and restrictions through taboos on unsustainable use of certain plant species, forests, mountains, rivers, pools and nonhuman animals, among other ecological species in the ecosystem, were not a new epistemology among the Shona people (Munamato, 2010:7). Although the Shona people have felt the impact of the full weight of the domineering influence of colonization and globalization, they have continued to cling on to some of their cherished values, including taboos *(Ibid).*

Therefore, traditional institutions are unambiguously accepted by society members, who believe that such institutions posses divine or religious power. This reality can serve as an entry point for conservationists in efforts to revive and promote the conservation role of these institutions. The Luguru communities had a close relationship with their environment specifically in agricultural practices. For example some areas were reserved as fallows for more than ten years. This provided a chance to the vegetation cover to recover. It also provided soil with its original fertility for agriculture development and grasses for livestock. This therefore, enhanced the ecological balance of the area (Kabbi, 2012). The Luguru of Morogoro had been experienced conservation strategies on soil erosion.

In the same way, at Mgeta in Nyandira area, certain trees called "*minganunga*" were planted along the hills to protect soil erosion. The Nyandira area had minimal soil erosion rate since the local communities used the *minganunga*" trees (Nyendiva, 2011). In the same village, it was added that soil erosion was also protected through planting trees known as *"midugutu."* It was restricted to cut such trees in the *mizungu mwembe* forest. This therefore, made the soil in the forest to remain intact in

its purity (Dimoso, 2011). Mwaura (2008) in this view, asserted that in farming technologies, the Matengo people, believed to have lived in the steep slopes of Matengo highlands since the Iron Age. They had developed a sophisticated system that enabled them to grow crops on hillsides while at the same time controlling soil erosion of their farms called "*ngoro."* This farming system improved soil moisture retention and fertility (Mwaura, 2008:7). This experience was also practiced by many African societies for example; many of the indigenous knowledge approaches to environmental conservation included technologies and practices as shifting cultivation, mixed cropping or intercropping, minimum tillage and agro-forestry, as well as transhumance (Mwaura, 2008 op cit). These technologies and practices were common place and were used with various other methods of land use and management to promote higher yields while at the same time conserving the environment (Mwaura, 2008 op cit). A deeper insight with the similar observation as noted above was given by Kjekshus (1971) when he adds that in the pre colonial era, agriculture production was based on tradition technology with shifting cultivation or fallow system as the means to maintain labour productivity and generate soil fertility. Low population density permitted long period of fallow, which contributed not only to soil fertility regeneration, but also allowed rapid forest recovery (Kjekshus, 1971 op cit). Kjekshus went on by pointing out that some areas were reserved for other functions such as water catchment protection, livestock grazing areas as well as religious rituals *(Ibid).*

4.3.2 Shinyanga Region

In Shinyanga, there was a mutual relationship between man, livestock and land use as it has been articulated in the previous section. These have played a very important role in maintaining the balance in the environment (Kamata, 1993:76). People used to reserve areas for pastures during the dry season. This practice continued up to the time when villages were introduced in Shinyanga. This shows that indigenous people had sufficient knowledge of the environment and had developed efficient means of managing it. Similarly, the Sukuma people practiced transhumance known as *Lugundiga (*a system of preserving a piece of land for dry season grazing). All these tried to ensure that there existed a certain balance in the environment. This articulation is clearly summarized in the following observation:

> In maintaining a certain environmental balance the particular herding and grazing practice of the Sukuma herdsmen have been of great importance. By realizing grazing pressure exposed soil at seasonally critical points and by resolving to long distance movements and, in the last resort, migration when no other solutions are at hand, a certain balance has been maintained (Gg'wanza, 1993 op cit).

The traditional management of the environment practiced by the Sukuma in Shinyanga was not only considered inevitable but also indispensable in maintaining an ecological balance in the absence of intensive investment which would avail piped water and irrigation or stored fodder. This explanation is concurred with one of the interviewees who put this to the subject:

> To avoid destruction of water sources, elders dug the dams that were used by their livestock. Some areas were reserved for pasture to be used during the dry season. Generally their number was very small they knew how to balance their environment (Limbu, 2011).

Watson has the same ideas when he argues that traditional ecological knowledge serves an important function in the long-term relationships between indigenous people and vast ecosystems in the place and can contribute to understanding the effects of management decisions and human-use impacts on long-term ecological composition, structure, and function (http://www.ecologyandsociety/ 19/01/2012).

According to Watson (2011) it means that it is the people who know their environment and how to interact with it. The decision of using the environment belongs to them (Watson, 2011). In the same line of argument, one of the interviewees asserts that there was a practice of burning the grasses so that it can provide new pastures. This was technically done without destroying the environment. It was mentioned that the new grasses after burning were of great importance for cattle feeding for reproduction and their health (Ipolu, 2011).

Homewood (1991) gives a deeper insight when he described the pastoralists' environmental strategy among the Maasai that they have many ways of managing resources at their own areas. Pasturelands can be managed through burning without destroying or reducing its intrinsic value. Though practices for managing those rangeland resources by use of fire may be common amongst many pastoralists, the

following case from Maasailand can be considered. The Maasai for example use fire to control rangeland resources in the following manner (Homewood, 1991). A specific area of pastureland which has not been burnt after the last year's rainfall and hence having oldest grass (*erashe*), is earmarked and fire is set on it. The earmarked part of the pasture is burnt in the evening when the day heat is over and winds are gentle to avoid any possibility of uncontrollable fires from escaping to other areas. For them, morning is also not suitable for pasture burning because grasses are wet following the chill nights of the semi-arid and hence grass may not catch fires (Homewood, 1991 op cit). The Maasai have specific times of the year suitable for this activity. The pastures are not set on fire just immediately after the rain season (between September and October when the first rains of subsequent next rain-season is expected to fall). This is because the Masai do not only burn the grass to get rid of the old ones, but do so, to stimulate new grass growth for the flocks of small ruminants and herds of cattle to access it. When the pastureland has been set on fire and new grasses have started to sprout following rains, a traditional succession of livestock feeding is followed to allow a more efficient and effective use of pasturelands. In this regard, goats and sheep become the first to tour the newly shooting grasses of the pasturelands-because it is believed that the newly stemming grass, and which is very close to the ground can only be easily reached by small ruminants and wild ungulates and feed on it (Homewood, 1991 0p cit). However, as grass grows tall enough for other animals to feed on, calves follow up the succession and lastly mature cattle are allowed to visit the pasture lands. During the period when the succession by small ruminant is taking place, mature cattle have to feed on un-burnt part of the pastureland to allow the land to recover itself with minimal usage by

goats and sheep. The management system goes on repeatedly, with alternate burning of one part of the pastureland and resting of another part *(Ibid).*

In Shinyanga among the Sukuma, people used their customary institution called "dagashida." This was a powerful traditional regulatory mechanism which involved an assembly that formulated customary laws and punished those who broke it (Mlenge, 2004:30). This law gives great transparency in decision making. The law therefore, was mainly used to conserve the environment. It punished those people who destroyed the environment *(Ibid).* Hunting and grazing as well as cutting trees in reserved areas were seriously prohibited. This is supported by evidence obtained from an interview with a forest researcher, Mwakisu (2011) in Shinyanga who was quoted as saying "basically '*dagashid*a' institution governed resource use. It was mainly implemented by the local soldiers called *'sungusungu*." He went further by pointing out that this practice was of great importance in environmental conservation during the pre-colonial period (Ibid). Different observation was given by Iddi Maroda, who is one of the oldest elders among the Sukuma living in Shinyanga town. Mzee Maroda stated that there were chiefs who were responsible in conserving the environment. For example, the "*Kizumbi*" forest was seriously restricted; people were not allowed to cut trees in this forest (Maroda, 2011 op cit). Another interviewee added that elders insisted to build the dams that were to be used for cattle instead of using water sources (Gimba, 2011). He added that even the area where the Kilulu mission was built was mainly reserved by the natives through a tradition system called "*ngitili,"* the area was governed by the local leaders called

"*wanangwa."* When the Europeans came the area was taken and the mission was built in the area *(Ibid)."*

In the same line of argument, Kweka (1993) puts that there must be a regulation of using and applying the indigenous knowledge and natural resources management system that provide effective strategies for conservation of biological diversity and sustainable use of natural resources. As we have seen among the Sukuma, their local institutions were responsible in conserving the environment (Kweka, 1993:2). Kweka (1993) went further by putting that various ecosystems and species associated with local commons are often managed by way of local level institutions that regulate access and use rights to resources in time and space (Kweka, 1993, op cit). In t his way, local institutions facilitated capacity building and participatory decision making and sustainable approaches to pre-colonial environmental conservation (Ibid).

Conservation related taboos may be categorized as specific species taboos and habitat taboos. The specific species taboos protected flora and fauna in space and time; they regulated and prohibited harvesting, detrimental use and consumption (Kweka, 1993 op cit). Kideghesho (2004) agrees with Kweka (1993) when he generalized that traditional African cultural practices are generally built into ways of conserving and protecting natural resources against over exploitation through the use of taboos and totemic affiliation with localities and wild flora and fauna species. The practices also involve devising institutions that can oversee and regulate resource use on a sustainable basis *(Ibid).* Kweka (1993) again went on to assert that habitat

taboos control access and use of resources in a particular area, for instance, in sacred habitats, thus checking anthropogenic interference detrimental to flora, fauna and their habitats *(Ibid).* Among Ikoma and Nata tribes of western Serengeti, Tanzania taboos and regulations ensured rational use of resources (Kweka, 1993 op cit).

In Shinyanga among the Sukuma, a sacred tree called *blighia unijugata* or *ntamanwa,* was believed that it emits electric shocks that can kill simply by touching it or even removing branch or a bark. People in the village are even afraid of talking about it (Ibid). Although the tree had medicinal value for treating cancer and tumors, only authorized people could obtain it after a special ritual. It protects a water source vital to over 1500 people in the Runzewe ward (Ibid).

Although they lack formal legal backing, taboos and regulations are very effective in regulating human behaviour and forcing compliance to societal values and therefore enhancing conservation (Mbogo, 2011 0p cit). Temu *et al* (1999) pointed out that at Msasa village in Shinyanga region damaging *Blighia unijugata* a sacred tree, is atoned by slaughtering a sheep known in Sukuma as *nholo ja kifuho* and preparing a local brew ntulile *and kangara* (Temu, 1999). This collective responsibility has forced people to care for sacred species. It was also regarded as local environmental conservation policies that guided people to conserve their environment. The same experience was witnessed in Shinyanga among the Sukuma again, when it was asserted that the Sukuma taboos did not allow people to cut trees. This therefore reserved water sources and natural wells. For example, there were two wells in *habia* area now located in Bariadi district, the wells are said to have never dried up even in

times of prolonged drought. Furthermore, there was special education that was provided basing on taboos. This was mainly initiated by special people using the plants called *isule*; this was used to carry some of medicine and protecting land from being affected by insects and floods (Ntimba, 2011). This was done by very special people and it was said that those farms which did not use *isule* were affected by drought and insects *(Ibid).*

Another observation claimed that the population of pre-colonial community was very low and the land satisfied their needs. Each clan protected its area called *mpagaa* these were conserved areas and were kept until the next rain season. These areas were of great importance in providing pastures for their livestock (Kisusi, 2011). Similarly, Mwandu (2011) added that pre-colonial communities in Shinyanga conserved their environment through individual ownership of small areas called *ngitiri* these were community based forests. The main supervision to these forests was mainly done by chiefs and sub chiefs. It was forbidden to cut tress or conducting any economic activities in those forests. The main belief was that taboos through ancestral spirits did not allow such activities to be conducted in the forests (Mwandu, 2011). This therefore, made the ordinary people to fear and automatically their environment was conserved. The same claim was given by Maganga (2011) who claimed that there were dangerous forests which were guided by ancestral spirits. Therefore, nobody was allowed to use such forests. It was believed that the forests were used to sacrifice people who committed mistakes in the village. These forests are called *nngalu* and negezi.

The same experience has been observed in the Eastern Usambara, when Kweka (1993) puts that local forest reserves had the status of "God" to these villages surrounding the forests. For example, *muinga* which is called the name of *linmga* stands for God's mountain with sub peak called *ukindo* (Kweka, 1993 op cit). These places were normally used for rituals/worshiping activities to thank the ancestors for all good things that have been occurring to the society or to ask discontinuation of any existing disasters such as prolonged droughts or certain disease outbreaks *(Ibid).* Different observation was given by Maganga Samson in Shinyanga, that pre colonial population was very low, therefore there was enough land. The level of destroying environment was very minimal. Local leaders knew how to allocate the land for sustainable use (Maganga, 2011). In the same line of argument, Bassett(1993), asserts that during the pre-colonial era, the resources were plentiful due to low population pressure. Therefore, despite the practice of shifting cultivation, the system was deemed sustainable (Basset, 1993 op cit). Local institutions were in a place and had strong allocation powers which may also have contributed to what appeared to be sustainable resources system (*Ibid).*

Using taboos as preventers for environmental destruction was again witnessed in Shinyanga. This was when the elders used their ancestral spirits called *ibimbe* and *yenge.* These spirits were used to call wild animals and identify the kind of animals found in the particular forest. Using these spirits, hunters were not frequently allowed to enter the forests before consulting the ancestors. This therefore, preserved the lives and sustainable existence of wild animals (Tungu, 2011). This is supported by Kideghesho (2006) when he states that the pre-colonial traditional societies in

Western Serengeti were physically and spiritually connected to animal species and plants in their surrounding environments *(Ibid).*

This link contributed to sustainable use and harmonious coexistence. The religious affiliation and local management structures sanctioned some destructive behaviour and designated some species and habitats as sacred (Kidegesho, 2006). The same observation was detailed by the Lawyer Environment Team when they illustrated that animals which were to be hunted, very strict procedures, rules and rituals were to be adhered to. Most community members maintained hunting practices and rules that ensured their continued existence with wild animals. The rules were aimed at regulating and governing social behaviour in hunting and were enforced by recognized traditional institutional structures (Lawyer Environment Team, 2006).

These structures formed the foundation upon which the hunting industry is based. Kideghesho (2006) went further by mentioning taboos and regulations that ensured rational use of resources among the Ikoma and Nata tribes of Western Serengeti, Tanzania: killing an animal before finishing, accumulation or storage of game meat for the future, hunting or touching animal sacred to a particular clan (oghusengera), killing an animal found giving birth, killing rare species such as pangolin (*Manis temminckii*) killing friendly non-edible wild animal killing young, pregnant or lactating animal, killing an animal that has sought refuge in a homestead, Use of wild meat in wedding, rituals and by mothering women (Kidegesho,2006: 89), Killing or hunting an animal found in a water catchment area, killing wild animals indiscriminately (those going against this will remain poor and never own livestock)

Other-conservation-related regulations sharing of wild meat among members of the community (okomussa; to keep the number of hunters in society at lowlevels), When found fighting, only one animal allowed to be killed, hunting mostly targeted the adult and male animals, setting free wild animals found trapped, Restrict hunting of some species unless special permit is obtained from tribal chief, Restrict hunting of certainspecies to specific seasons to allow breeding following a shot animal until it is found, Different clans had different preferences for bushmeat e.g.abarumarancha and abasaye (eland), abakigwe (zebra) and abangirate (fish). Probably done to reduce competition and ensure sustainability of the resource, heavy fines on anyone found setting fires on protected forests (Kidegesho, 2006 op cit).

The above mentioned taboos by Kideghesho (2006) show that pre colonial communities of Western Tanzania through their local leaders, had managed to conserve the wild animals. It shows that the hunting industry among Ikoma and Nata communities possessed certain skills and regulations that ensured a sustainable existence of the wild animals in the area. The same taboos have been shared among the Sukuma in Shinyanga and Mwanza. For example an interview held in Shinyanga revealed that there were several taboos that governed hunting practice. It was not allowed to hunt an infant animal, it was also not allowed to hunt animals by using any kind of poisons, and all hunters were to be identified in the society as this enabled the leaders to isolate whoever violates the said regulations (Maganga, 2011 0p cit).

The same experience was revealed in Shinyanga at Kilulu village when an interview discovered that hunting was regarded as an official profession. To be a hunter one

must possess the knowledge and skills as well as exposure to taboos and regulations pertaining hunting practices. Basing on taboos and regulations, hunters were not allowed to hunt an animal that is not used for food purpose. It was not allowed also to hunt animals found drinking water (Limbu, 2011).

To conclude therefore, it is significant that pre-colonial environmental conservation based on forest wildlife and soil was on the unity of humanity and nature, did not create separate categories for conservation, but rather devised strategies for conserving nature while at the same time guaranteeing access to it. Although this access and use may have been mitigated by policy, religion custom and practice to reflect existing stratification and other imbalances in pre- colonial society, the motivation for environmental conservation was to guarantee human access to nature.

This was different from the colonial model of environmental conservation in which areas for human influences and settlement were highly restricted access to resources. Colonial conservation was based on a myth of nature which emerged from the scientific processes of exploration, mapping, documentation, classification and analysis. Nature came to be defined as the absence of human impact, especially European human impact. Nature thus came to define regions that were not dominated by Europeans. Although colonialists ignored pre-colonial communities' knowledge of conserving the environment, the post independence approach of community based environmental management which is used, has been rooted from the pre colonial communities' practices on environmental conservation.

This is evidenced when one puts that community based natural resources management is not a new phenomenon. Local groups of people have managed the land on which they live and the natural resources with which they are surrounded for millennia. Indigenous African communities often developed elaborate resource management systems, as other local communities throughout the world have done. Historically, pre colonial societies in Tanzania and intermingled freely with wildlife, and conserved their nature according to their culture (Mkumbukwa, 2008:589-600).

In recent days, local groups of pastoralists, farmers, and hunter-gatherers throughout Africa maintain many traditional systems of collective natural resource management which help to sustain the livelihoods and cultures of millions of people. In the last few decades, there has been a growing awareness of the importance of collective natural resource management practices and institutions, and recognition of the ways that historic forces have disrupted local people's ability to manage the lands and resources they depend upon. A wide range of policy makers and development and conservation practitioners have supported efforts to revive or bolster local natural resource management institutions in response to various economic, social, environmental and political pressures. Increasingly, debates over local communities' ability to manage their lands and natural resources are a part and parcel of broader struggles over political and economic power and authority in African countries that had historical experiences rooted from pre-colonial environmental conservation practices.

This conclusion therefore, saves as a starting point for Chapter Five which discusses the colonial environmental conservation policies among the Luguru and Sukuma specifically from 1920's to 1959.

CHAPTER FIVE

5.0 COLONIAL ENVIRONMENTAL CONSERVATION POLICIES

5.1 Introduction

In the previous chapter, it was shown how pre – colonial communities preserved their environment. By using Morogoro and Shinyanga local communities, as examples we were able to show how these communities managed to respond to changes of environmental conservation by adopting different land practices and strategies. These practices and strategies were mainly governed by the local institutions as well as their related taboos that restricted people from destroying the environment. When the Europeans came to Africa during the colonial period, not knowing the underlying logic behind the adopted strategies and practices, assumed that African environment needed active care and protection through colonial registration and they therefore, imposed on their exotic conservation policies. It has been found that during the colonial period the policies engaged by the colonialists excluded the indigenous people in their implementation programmes. They in addition, completely ignored the traditional conservation knowledge of the indigenous people in study areas. In view of the above articulation, the colonialists introduced the top –bottom approach to environmental conservation policies and plans particularly from the 1920s to 1959. These policies essentially based on wildlife conservation, soil and forest management in Shinyanga and Morgoro.

5.2.1 The General Discuss of Colonial Environmental Conservation Policies in Shinyanga Region

Implementing these policies, in Shinyanga among the Wasukuma, it was noted that with respect to the exact time when the environmental problem started in Shinyanga, the period between 1920s and 1930s could be taken for convenience as the benchmark for tracing origin of the problem. This is because, during this period, an intensive tsetse-fly and quelea quelea eradicating campaign was launched (Kamata, 1993: 58). The outcome of this programme to the environment was deforestation and soil degradation which on the whole characterized the onset of the semi – arid conditions in the region. In the same line of argument one of the interviewees had this to say: "although the colonialists advocated deforestation to control tsetse fly infestation, at the back of their minds they had the intention to introduce cotton production in Shinyanga (Sabuni, 2011).

Similarly, Kamata asserted that during the 1920s cotton growing was introduced in Shinyanga, and he further stated that the coincidence between cotton growing and the onset of the environmental problem suggested a link between the two. This evidence asserts that the problem of environment became more critical with the increase in the number of cotton producers. For instance, between 1927 and 1930, cotton production increased seven folds from 567 tones in 1927 to 4,365 tons in 1930 (Kamata, 1993:59). This production, affected the expansion of the ngitili that existed before. A similar view was given by the Deputy Provincial Commissioner in Sukuma land when asserted that whenever good land was recovered after clearing to eradicate tsetse-fly, it should be made available for settlement coupled with the construction of

tank dams in the Mbugas for domestic water supplies (TNA, Block 15, retrieved 2011). In Shinyanga, Madulu states that during the British rule (1919-1961), an ambitious tsetse fly eradication campaign was implemented between 1923 and 1929 by clearing away their bush land natural habitat. This campaign opened up more land for agriculture and created new tsetse-free outlets (Madulu, 1998:2).

A unique experience was shown in Southern Rhodesia when they the colonial authority shot game in the name of tsetse control as the herds of buffalo and antelope recovered from devastation of rinder pest they were subjected to repeated government calls. When famine struct Southern Rhodesia in 1922, game meat was no longer available as a hedge against starvation. In this and all Sub-Sahan sequent period failed rains, Africans had neither the opportunity nor the means to turn to protein bounty bestowed upon their forefathers. One rare African source, the history of manyika written by an employer of Methodist of Episcopal Mission Press in Unitali (Mtare), Tason Matawanyika, lamented the removal of meat from the African diet; European took all guns from Africans and refused to let them shoot games. But Europeans shot games while Africans had to eat relish only with vegetables. If an Africa shoots an animal with a gun, the Africa is arrested and the gun is confiscated (Grove et al, 1999:57). This experience went beyond tsetse fly control it affected even African died from wild game which have been disappeared due to the implimentaion of tsetse Act in the region.

From the foregone discussion, it can be seen that Kamata viewed the conservation policy to have been directly linked with cotton production for export. Evidence from

the present study adds that the colonialist conservation policy in Shinyanga had an intricate aim of controlling tsetse-fly hence freeing the indigenous people from being infected with the killer tsetse-fly spread sleeping sickness. Furthermore, the recovered good land would then be released for settlement of the people (TNA op. cit). Mlenge in line with the views of Kamata narrated that bush clearing was aimed to eliminate the killer trypanosomiasis disease for cattle and sleeping sickness in humans (Mlenge, 2004:6). Besides Mlenge concurred with Kamata in that, clearing of bush and forests was due to sustain increased agricultural activities which in turn were the main cause of deforestation in Shinyanga (Mlenge, 2004 op cit). But Mlenge observed that cotton farming was heavily popularized in Shinyanga as an alternative economic activity to livestock farming and as a way of generating income *(Ibid).*

In the same line of argument, an interviewee named Idd Maroda commented that during the colonial period, it was seriously insisted that bushes and thickets must be cut to expel tsetse-flies so that cattle could not be affected and the cleared land was simultaneously used for agriculture and settlement.

He further stressed that in some villages, this policy was intensively implemented to an extent that one village had to be named "Masengwa" implying "cutting Maroda, 2011 op cit)." Similarly, the related articulation stated tha a tsetse survey has been carried out to observe the present fly population with special attention which was paid to the Brachystegia covered areas within forest reserves (TNA, 2011 Block file No 95:1).

It was also added that the area concerned is uninhabited and consist of approximately 90 square miles or 57,600 acres. These figures apply on to the area shown on Harrison's map dated 1939 which clearly shows the general outline of the main block of tsetse infested bush together with its vegetation make up.

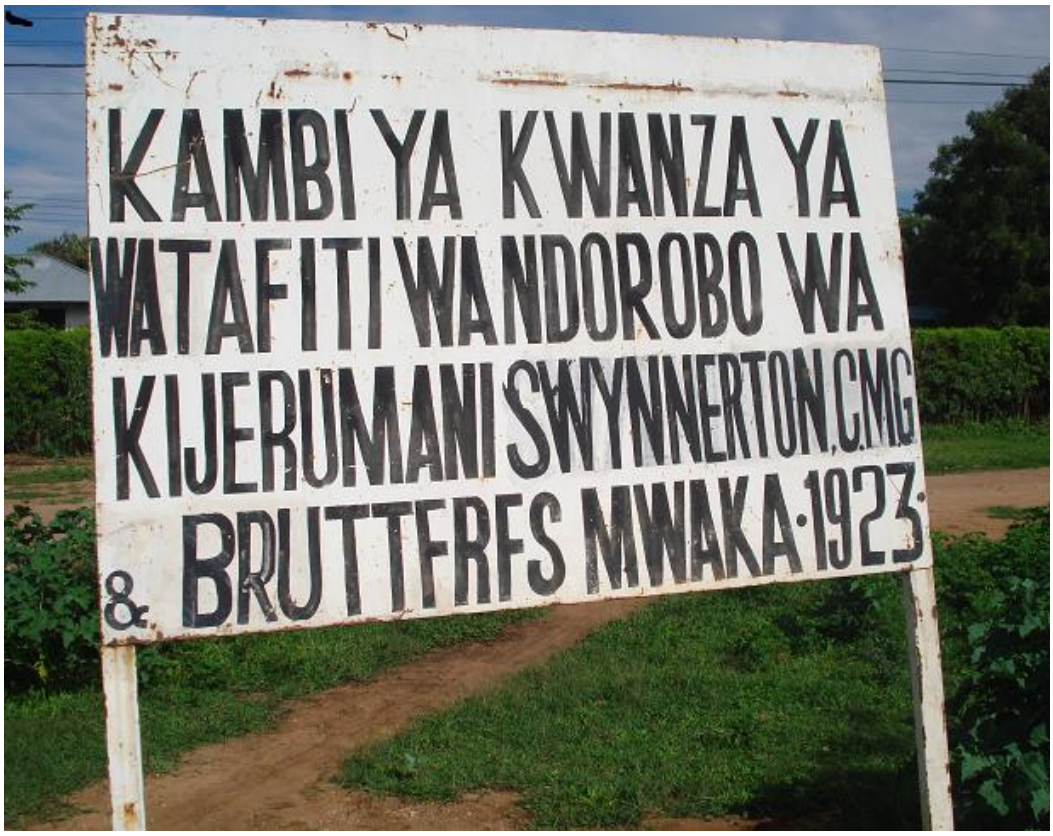
Within this area the density varies from Apparent Density (A.D) 50 to 145: the later figure represents a concentration area in a large woodland region comprised almost entirely of *Coniphora compestris* and situated to the south east of A.D. (TNA, retrtieved 2011:67, Uduha). There were two other bush areas, one to the North East *somagedi*: clearing which is apparently fly free and others are being to the South and South West of Kitalala village *(ibid).*

A deeper observation asserted that as far as tsetse-fly eradication was concerned, bush was firstly experimented during the 1925; ring backing and burning was the main feature of this work. The value of agriculture in relation to tsetse control was very apparent. This meant, tsetse fly control work can be briefly described as: - free movements of population and encouragement of improved agriculture development in bush areas *(Ibid).*

Based on this idea, Kamata relates tsetse fly eradication with cotton production expansion and livestock keeping (Kamata, 1993 op cit). During the 1925 some more 250 additional new settlements had been expanded in twelve months and it increased 3,0000- 4,0000 heads of cattle from the grazing benefits from the clearing made (TNA, retrieved 2011:2 Tsetse Control, Shinyanga District book).

Mlenge relates this idea when he puts that tsetse-fly eradication between 1925 and 1940s opened the way for a rapid increase in livestock population (Melenge, 2004 op. cit). This increased a new dynamic inland use and pressure on pasturelands.

Plate 2: The First Tsetse- Fly Camp in Shinyanga during the Colonial Period



The above picture was taken in Shinyanga around the Lubada areas. This picture marks the building site where the first Tsetse-fly Research Camp was built. The camp was firstly initiated by the German researchers (Sywnnerton, CMG and Bruttfres) in 1923. This camp aimed at doing several studies on tsetse-fly infection and suggesting eradication measures against tsetse-fly encroachment (Field work in Shinyanga, 19/12/2011).

It was asserted that in Shinyanga, administrative agriculture, veterinary and medical services were all essential components of tsetse-fly control work. Therefore, in each and every work undertaken the question of agriculture and grazing had been carefully considered and whenever possible the tsetse work was undertaken to obtain the utmost value as far as agriculture and grazing are concerned (TNA,2011 op cit).

The 1926 Shinyanga Annual Report showed that 86 square miles of land had actually been cleared. In addition, some 200 square miles of country had been cleared for grazing as the result of anti tsetse campaign. Many volunteers worked harder than the previous years. One of the interviewees in Shinyanga asserted that all people involved in forest clearing were given special food for the work. Some times some cattle were slaughtered to be consumed by workers. The work of cleaning the forest was largely organized by local leaders or sub–chiefs called *banangwa.* For example Chief Makwaiya of Shinyanga organized labourers who were used in forest clearing at mangwa village. In Masenga village, chief Kapela of Shinyanga district organized forest cutting especially at Samuye area (Kisusi, 2011).

This is supported by Schuknecht who adds that forest clearing was performed by Sukuma labourers, often in their thousands who had been called out by chiefs. The only payment was beer and meat which were provided by major stock owners or out of natives' treasury fund (Schuknecht, 2008:63).

It is clearly noted that tsetse fly eradication campaign increased the number of cattle. For example, cattle increased from 1,300 heads in 1929 to 2000 heads (TNA 2011 op. cit). This also increased the expansion of agriculture production (Mlenge, 2004:7). The expansion of agriculture especially cotton and the increase of cattle had resulted into soil degradation in Shinyanga. It was soil degradation that alerted the colonial government to introduce the destocking policy that aimed at preventing soil erosion through a forced request advanced to the farmers by colonialists, to reduce the numbers of their cattle which were rapidly increasing in Shinyanga.

Cattle destocking was vigororously enforced from 1920s to 1950s by the colonial government. The policy was advanced as a development programme consisting of packages which included land usage, planning human settlements, stock movement and sale or removal of stocks from overcrowded areas (Kamata, 1993:60). The Sukuma Land Development scheme was lauched in 1947. The scheme occupied an area of 9,000 square miles consisting of the districts of Mwanza, Geita, Maswa and Shinyanga. (TNA, retrieved 2011,No. 85 file 95)

The main aim of the scheme was to control grazing and settlement expansion and intensifying cotton production. The scheme also aimed at educating the people on new methods of land use and draw of excess population and stocks into prepared expansion areas (Kweka, 1993 op cit). Kweka (1993) goes further by arguing that the central aim of the scheme was to balance between the number of stocks and the capacity of the grazing land *(Ibid).*

Further clarification on destocking policy, the commissioner in Shinyanga district wrote that stock reduction was to be carried out based on the stock reduction rules which during the time they had not been approved by the colonial government. (TNA retrieved 2011 Stock Reduction, No. 46. File No. 95). These rules described even the stock reduction procedures whereby cattle owners were required to reduce their animals on the basis of the following schedule, cattle owner of 0 – 10 heads had to reduce none, owner with 11 – 20 heads had to reduce one head. This process was put in by the following rules: the Sukuma Land Livestock Restriction Rules of 1950, the Sukuma Land Federation Land Rules and the Destocking Rules of 1952 which were approved for implementation *(Ibid).*

These new rules amended the above stated destocking schedule and the new process demanded cattle owners to destock as shown in Table 1. In previous schedule which was based on the stock reduction Rules before approval cattle owners owning cattle between 0- 10 could not destock, livestock keepers in the same bracket were compelled to destock one animal after approval of the Sukuma land Livestock Restriction Rules, 1950; the Sukuma land Federation Land Settlement Rules, 1950 and the Destocking Sukuma land Federation Rules, 1952. However, this type of destocking was not expected to have serious effect on the Wasukuma herdmen. However, to the contrary, it increased serious resentment because of the owner in which the regulations were enforced. (TNA, 2011 0p cit). Although cattle destocking was introduced as a measure to reduce the pressure on the grazing land and as a measure to avoid soil erosion on the semi-arid Sukumaland, it was also linked to colonial interest in promoting cotton production.

The expansion of cotton production between the two World Wars had given rise to serious soil degradation. Cattle destocking was therefore, intended to complement other measures which were taken to arrest the situation. But the demand for meat to feed British soldiers during the Second World War, forced colonial officials in Sukumaland to intensify enfocement of destocking beyond set limits (TNA, 2011 Shinyanga, See also Kamata, 1993 op. cit.).

Table 1: Schedule of Destocking Cattle among Natives in Shinyanga 1952

Number of stock in Units	Number of stock units to be destocked
0 – 10	1
11 – 20	2
21 – 30	3
31 – 40	4
41 – 50	5
51 – 60	6

Source: Tanzania National Archives, Dar es Salaam Acc. No 46 File No 95

Evidence indicates that the destocking that had started during the Second World War did not stop even when the war ended in 1945. It continued because it was one of the determinant factors to ensure the success of the campaign for increased cotton production. The regulations remained in force after the Second World War. The reasons for introducing compulsory destocking were obviously to remove competition between livestock and cotton on labour and land, to make the livestock industry in Usukuma to positively contribute to the British policy of saving the Dollar (Mbonya, 1987:164).

The British colonialists saw this idea to be quite viable and lucrative. But the inherent anticipated benefits were short lived because in the years immediately after the war the number of cattle sales at the stock markets started to decline as shown in Table 2 *(Ibid).* This decline in the sales of cattle had the following implications. Firstly it worried the British colonial government of Tanganyika. Secondly, it defeated the realization of the set aims that were stated as:

(i) Prevention of overstocking and soil erosion;

(ii) To meet the increasing internal and external demands for meat.

Table 2: Declining Cattle Sales after World War II in Tanganyika up to 1951

Period	Cattle sold	Price Tshs/100/=
Pre war	80,000	4/=
During the war	300,000	10/=
Post war : 1949	210,000	18/=
1950	210,000	25/=
1951	196,412	123/=

Source: Mbonya (1987) Op. cit.P.164

(iii) To ensure that the livestock industry was providing the territory with a reasonable economic return.

(iv) Ensuring that the canning factory of Tanganyika Packers which was in part owned by the government, obtained sufficient cattle supplies to allow for economic operation (Mbonya, 1987 op cit).

In Shinyanga it was observed that the policy initially was not seriously implemented until after the Second World War in 1945. It was after the war when the compulsory in Usukuma was introduced and it lasted up to 1955 *(Ibid).* It was during this period

that the British colonial government introduced the so called limited destocking in Usukuma, the aim was to feed the war – stricken British soldiers and civilians in Europe (TNA, 2011op cit).

Kamata has the same view with that of Mbonya when he argues that with the eruption of the Second World War, the destocking campaign gained new impetus. This is because there was a need for more beef supply to the British troops fighting the war (Kamata, 1993:62). For example, the district of Maswa, and Shinyanga together were required to supply 60,000 to 70,000 heads of cattle *(Ibid).* It was asserted that 15,976 had been slaughtered and 13,926 from 1932 and 1953. And destocking rates in the districts were as follows: Geita 5.5 percent, Mwanza 9.96 percent, Shinyanga 5.5 percent, Kwimba, 4.0 percent (TNA, 1953, 215/2307/A/IV – Report by DPC and TNA, 1952, 215/230/A/IV). It was also stated that the redistribution of population of the resettlement of people and stock from congested area would not relieve the basic problems of overpopulation and overstocking if land use could not be changed. Defaulters of the destocking rules would be punished by fine of 500 shs or imprisoned (TNA, 1951 215/367 Notes of meeting, Maswa and Kwimba).

It was obvious that Sukuma stock owners used every means at their disposal to reduce the number of animals they would have to destock, or evaded destocking altogether. There were several ways of doing this. Owners could lie about the number of animals they possessed by distributing animals temporarily to people without stock. For example, a Sukuma owning 36 head of cattle could divide his

herd into four parts and distribute three of them to other people, sometimes against a small charge. Upon visiting households to count the stock and determine the number of animals which had to be destocked, the Native Authority clerks would find four herds of nine instead of one herd of 36 animals, which meant that destocking rule did not apply (TNA, 1952 a note on Destocking). Redistribution of stock to friends or relatives was a common strategy of Sukuma stock owners to reduce losses in times of drought or disease and it was therefore, not difficult to adapt it as a way of minimizing losses through official policies. Sometimes animals would be 'sold' and brought back after the destocking lists had been compiled. To limit 'fake' sales of animals to people with no or only few animals, the administration ruled that stock could only be sold to licensed butchers or traders at the official markets *(Ibid).* However, many butchers cooperated with stock owners by 'buying' animals and subsequently returning them against a small 'service charge'. These 'services charges' were between five cents and one shilling per head in Shinyanga and up to 1.50 shilling in Mwanza (TNA, 1952 Destocking op. cit)

Another observation stated that soil erosion in Shinyanga was controlled under colonial rural development policy. The origin of colonial rural development policy in Sukuma after the war can be traced to the interwar period when colonial administrators and scientists became concerned about the potentially destructive effects of African population growth, soil erosion and allegedly wasteful and inefficient practices of African land resource use (TNAM,1953:15-16 Kwimba, and TNA, 1953, – PCLP, Shinyanga)

During the 1930s colonial officials increasingly regarded Sukuma as a region in environmental and agricultural decline and advised a development scheme to halt this process *(Ibid)*. The post war period witnessed the implementation of the Sukuma Land Development Scheme (SDS) the most ambitious and expensive rural development project in Tanganyika's post war development plan and other colonial initiatives for agricultural, administrative and economic reform which affected the lives of the region's inhabitants to an unprecedented extent (Butter, 1997). Moreover, the Sukuma-land Development Scheme (SDS) which was in operation during the 1947-1956 periods was instrumental in population resettlement (Madulu, 1998:2). By 1952, over 30,000 people had moved to Geita District and many agro-pastoral families moved to Bariadi, Maswa and Meatu Districts *(Ibid).*

In the second colonial occupation in the agricultural sphere, two major priorities of colonial Development Policy in Sukuma land can be identified. The first was the conservation of natural resources and the ecological stabilization of Sukuma agriculture the second was economic development i.e increased production of Sukumaland's major agricultural crops particularly cotton, and increased cattle sales at official markets (*Ibid*).

Both objectives resulted in a number of different policies which included the resettlement of Sukuma farmers and their livestock from 'overcrowded' areas, the establishment and maintenance of 'optimum densities' of human and livestock populations to prevent soil erosion, the adoption of farming practices that were

supposed to conserve the soil and increase productivity, and the reduction of livestock numbers.

Far more effective in balancing the impact of the wars and depression, it was to improve the marketing system by puting more emphasis on the production of the main export crops. A major plan for more crops' campaign was started in the 1930s at the initiative of the new Director of Agriculture, Ernest Harrison, who claimed that increased production should be regarded as a priority of administrative policy, and he demanded a more general recognition of the fact that a native district is in the nature of an estate requiring management and development (Wakefield, 1931 TNA). Harrison and other architects of the campaign stressed that the level of production could be easily raised by exerting more pressure on the native cultivator whom they regarded as notoriously lazy and under employed

The first essential is a change in the native's frame of mind; he has been mostly a gentleman at leisure without the means or desire to meet the obligation of the most lowly citizen. Harrison himself endorsed this view in the same year in commenting on the reluctance of African cultivators to grow more cotton: "Half of the native's objections to cotton are excuses for laziness (*Ibid).*

The plant – more – crops campaigns involved an increase in the number of agricultural extension staff who could advice, supervise and face cultivators to grow more cash crops. More pressure was also exerted through the Native Authorities and by judicious propaganda' and 'education' efforts of Agricultural officers *(Ibid).* It is

difficult to determine in detail to what extent the plant-more-crops-policy was based on compulsion, but the reminiscences of High Senior, Assistant District Officer in Maswa from 1936 to 1939, suggested that it played a major role (Harrison, 1931 TNA). However, it is important to stress that the plant-more-crops campaigns involved no measures for comprehensive agricultural change on development. Neither major technical innovation nor modifications of the existing models of land tenure and occupation were proposed *(Ibid).*

Forcing Africans to grow more crops was first and foremost a matter of financial necessity. The architects of the campaign were also not too concerned about the possible social or environmental consequences of their policy. However, as knowledge about African agricultural environments slowly increased in the 1930s, colonial scientists argued for a more comprehensive approach to the development of African agriculture in order o balance the potentially destructive effects of the changes introduced during the colonial period (Harrison, 1934, TNA).

Another environmental conservation approach on soil erosion was used in Shinyanga under the Sukuma Development Scheme, where it was advised that tie- ridging should be done and that all crops must be tie ridged. This practice of making tie-ridges was vigorously implemented throughout the district by the existing orders made under Section 8 of the Native Authority Ordinance (Government Notice No. 175 of 1937). This was evidenced when one of the interviewees asserted that tie-ridges were made around the farm to protect soil erosion while in the middle ridges part were not made. It was insisted to do that and agricultural officer visited the

farms to ensure the construction of tie – ridges (Ntemi, 2011). Similarly, minutes of a meeting held at Bubinza , Mwamashele Special Area on 23rd October 1948 in Shinyanga, emphasized that grass strips should be used. It was a decided that five yard grass strips should be established on the contour in the Buduhe section, this season, similar to those laid down in the Mwamashale section last year. These were to be at 30 yard intervals down slope (TNA, 1954, Shinyanga).

The colonial conservation forest policies were seriously implemented during the colonial period. The legal framework for administering the forests was established by the 1921 Forest Ordinance which incorporated all the previously designated German Forest Reserves (TNA, 1921 Forest Ruling). The policy initiated a series of prohibition for Forest Reserve or forest produce, firing, cutting or removing trees for cultivating or squatting. In Shinyanga district written orders by the chief were issued aimed at regulating forest reserves, protecting trees and cattle movement. It was prohibited to enter the forest reserve and conduct any human activities *(Ibid).* This order was also reinforced by the orders issued by the Native Authorities of the Shinyanga District under Section 9 Native Authority Ordinance. The Ordinance had the purpose of preventing the occurrence of fires in forests. It was ordered that any native, who becomes aware of a forest fire, shall report it at once to his headman *(Ibid).* It was also noted that every male native shall, when so ordered by a headman or chief have to assist in the extinguishing of any forest fire that may have broken out (Ibid). It was also noted that all forest reserves are carrying a good supplementary demarcation of each mounds which the natives are conversant with *(Ibid).* It was ordered that the reserves are to be under constant *askari* patrol to prevent

unauthorized entry *(Ibid).* This is also supported by one of the interviewees when he said that it was restricted to cut trees especially in the forest reserves (Masunga, 2011). Another interviewee asserted that forest conservation was done in the conserved areas (Derera, 2011). Correspondingly, orders issued by the Native Authorities of the Shinyanga District under section 9 Native Authority Ordinance, stated that it was restricted to cut a damage trees around the hills. The ordinance goes further by identifying certain kinds of trees like *ilula*, *Igwata* and *Ihusi* that were allowed to be cut without the permission of the Native Authority *(Ibid).* It was an offence to cut or damaged other trees which are not mentioned by the ordinance (Ibid). It was also forbidden to cultivate or to graze stock within an area declared and demarcated by the Native Authority as a hill –top woodland reserve, or to cut firewood, poles or thatching grass in such areas without a permit in writing from the Native Authority (TNA, op. cit). The Ordinance insisted that any native occupying land which borders upon any area declared to be a hill– top, woodland or plantation reserve shall erect beacons to demarcate the boundary between the declared area and the land he occupies *(Ibid).*

It was also noted that, owing to the ending of the rains, the heat of the sun, and the winds, caused extreme dryness on the bush soil, further work on replanting sisal on the demarcated boundaries of the reserves was done. It was further added that all forest reserves were carrying out a good supplementary demarcation of earth mounds which the natives were conversant with. This exercise to be implemented, the reserves were always under constant *askari* patrol to prevent unauthorized entry *(Ibid).*

Land in Shinyanga, under the Native Authority about 150 square miles of Miombo wood had been reserved as a result of the rough demarcation of hills tops (Taganyika, Annual Report, 1943). People had no access to use the land for both economic and social activities. Similarly, the Annual Report of the Forest Department of 1954 asserted that in Shinyanga, the forest rules of the Sukuma Land Federal Council were agreed upon and awaited publication at the end of the year (Taganyika Annual report 1943 op. cit.). The report went on by giving out a set of rules in the control and management of Native Authority forest reserves in the areas. These rules were mainly based on protecting the tree *(Ibid).*

The Game Policy during the colonial period was not serious in the whole part of Shinyanga. Villages like Longalombogo, in Bariadi Shinyanga and Mwajidalala (London) village in Mwanyahina ward – Meatu, had their natives affected by the colonial prohibitive hunting policies. In an interview at Masunga Masai asserted that it was seriously prohibited to enter Maswa Game Reserve and Serengeti National Park which closely bordered the mentioned village (Masunga, 2011). In this Jonathan Adams and Thomas Mc Shane expressed that the Western people dominated conservation through National Parks, anti poaching and the like can be relooked for a new generation (Adams, 1996:253).

Plate 3:Forest Close to Maswa Game Reserve

The above picture was taken in Meatu –Shinyanga at Mwajidalala (London) village. This Village is closely bordered by the Maswa Game Reserve. This area is highly restricted for anybody to enter. It is situated a few meters from the village.

5.2.2 General Discussion of Colonial Environmental Conservation Morogoro Region

Unlike in Shinyanga, the same policy on tsetse-fly eradication was advocated in Morogoro district but it was only to remove trees and bushes on selective basis. We noted further that the campaign in Morogoro was slightly mild compared with that in

Shinyanga region. It has been noted that Morogoro was surrounded by tsetse-fly especially in the township. It was therefore, ordered by the colonial government that all thickets and young trees that were springing up should be removed while the more valuable trees like *Ocotea sambarensis* and fine species left standing (TNA,2011: 73 Tsetse-fly Elimination)

In 1945 a new approach to the problems of the mountain catchments degradation was initiated with the introduction of the Uluguru Land Usage Scheme. This initiative emphasized terracing, enforcement of regulations against bush burning in the hills and stressed the planting of trees outside the forest limits for the provision of fuel wood and poles for construction purposes (Duff, 1961:1/8). Despite these efforts, evidence shows that the objectives of the scheme were never realized and the scheme was abandoned in 1951 because of the negative response from the Local communities *(Ibid).*

In Morogoro, the Director of Agriculture insisted that soil erosion at Mgeta where the local communities have been introduced to contour ridges. It was insisted that the Luguru communities should their fields involve contour in strip cultivation for example, Nguru Mountains in the forest reserve on the Uluguru Mountains had to use terracing gardens *(Ibid).* The director added that the natives appear to have done nothing to combat sheet erosion on the fields which they used to cultivate *(Ibid).*

Apart from the above approach the Forest Department proposed to remove barren land from cultivation and plant it with trees, with the upper areas of the highlands

demarcated as a special reserve for protecting the headwaters of the streams (Young, 1960:144-145). In implementing soil conservation policy in Morogoro, it was noted that there was a misunderstanding between the experts and colonial officials on soil conservation through terracing *(Ibid).* For example, an agriculture officer proposed that major emphasis be placed on sensitization on the improvement of terracing and how this was to be done. Terracing demonstration plots would first be built and the Luguru would have a full year in which to decide whether they would accept this plan *(Ibid).*

Objection was made that the delay would prevent the scheme being completed within the ten–year period. Finally it was agreed to spend the bulk of the money on personal emoluments for staff and concentrate on the development of bench – terraces as the most affective way of preventing soil erosion (Young, 1960 op cit). It should be noted that there was no final agreement among the experts on the utility of bench terraces and that from time to time during the life of the scheme the policy was criticized. Despite this of consensus on the merits and methods to be used, the policy of bench–terracing was adopted, to the exclusion of other methods *(Ibid).* This had a great contribution to the failure of the scheme. For example, interviewees supported in this view that terracing construction was a new approach to them. There was no prior education campagns to sensitise the people on the importance of the terracing (Kisegeyu, 2011 op. cit). He added that there were no any construction demonstration areas of the terraces, and where there were any, they were not fully developed to be shown as models for making terraces in the hill lands *(Ibid).*

Some parts of Morogoro had different observations on the terracing policy. For example, in the Mgeta area terracing had been carried on for many years. In 1920s local and legal pressure allowed the operation of conservation measures in the Mgeta area. This consisted of planting trees in small areas so as to prevent soil erosion and to allow fuel wood harvesting. During this time too, a system of reducing sheet wash erosion by laying down grass and weeds in ridges contour, called 'Mgeta system' was used. In 1929, regulations were laid down by the British colonial government to stop the burning of grasses or bushes on land without permission (Temple, 2003:110-123).

During the 1930s there were worries on the availability of land, it was recommended that more permanent crops should be used such as coffee so as to reduce sheet wash, and there were also recommendations to encourage the use of local trash contour ridges. This practice (contour ridges) was new to other parts of the Urugulu like Matombo where people resisted. It showed that the approach used in Mgeta from 1920s on soil conservation practices were less harsh than in Matombo from 1950s. Therefore, people of Matombo responded negatively to the Uluguru Land Usage Scheme and they also viewed the scheme as a new phenomenon (Interviews, 2011 Matombo and Mgeta).

There were also efforts to reforest and improve protection of residual forest areas, in Mgeta where 100 hectares of clan forest reserve was set aside. Trial plots and experimental ladder or step terraces for vegetables and potato growing in the Mgeta area were established in 1936 –1937, these are different from bench terraces and may

have evolved naturally a lot earlier, they were thought to be successful (Lyamuya,1994) . Live grass barriers were also tested, regulation was put in place to stop indiscriminate burning by having a meter wide fire break around all *shambas*

Major conservation work was put in place during 1937 to 1943 with the aim to educate and demonstrate instead of undertaking schemes to prevent soil erosion (Lyamuya, 1994 op cit). In 1943, after an influential report, a new territorial regulation was put in place to stop large scale burning. In 1944 large scale reforestation and compulsory expulsion were infoced *(Ibid).* Instead demonstrations showing the benefits of storm draining, terracing and tie ridging were set up, in three areas of Mgeta, Kienzema and Kibuku, this seemed to have worked with farmers adopting these techniques, but today few of the farmers carry on these techniques *(Ibid).*

The land in this area is especially steep, and terraces were only a single row wide little wider than the width of the hoe. However the Mgeta people approved the results of their terraces and in general were sympathetic with the broader Uluguru Land Usage Scheme (Young, 1960 op cit). This made Mgeta people still using terraces up to date *(Ibid).* The approach succeeded because it built on the past experience of local communities of using terraces.

Plate 4: Farms with terraces at Mgeta village in Morogoro

Plate 5: Farm with terraces at Mgeta village in Morogoro

The above pictures show one of the farms with terraces at Mgeta village in Morogoro, (Field work 19/08/2011)

In game policies the British colonial government established a Game Department and other supporting institutions that were charged with controlling and regulating the hunting of wild animals' species. This was seriously implemented by the formulation of a number of legislations by the British Colonial government. In this view, it was pointed out by Helge Kjeshus that the legislation was completed through British Legislation Proclamation of Game Preservation Proclamation of 1920 which denied a game licenses to any African hunter, and made hunting a matter of very special permission by the government (Kjekshus, 1971op. cit). The colonial government in Tanganyika enacted the Game Preservation Ordinance in 1921 (Lawyer Environmental Team, 2006 op. cit). It was followed by the Game Ordinance of 1940 (Ibid). These legislations were of vital importance in preserving wild animals. The Game Ordinance was later replaced by the Fauna Conservation Ordinance of 1951(*Ibid*). The above legislations generalize the game conservation policies used in Tanganyika during the British control. Colonial authorities were selective in the application of these general policies. In Morogoro for example, leopards and lions were selected for protection for various reasons (TNA, retrieved, 2006 Game Reservation Ordinance). Later protection was extended to include other types of wild such as elephants, buffalos and giraffes. It was seriously restricted to hunt those kinds of animals (Albina, 2006).

The Annual Reports of the Game Department of 1931 – 1952, on the issue of hunting give a deeper insight on the impact of application of these ordinances their confusion which arose from their interpretations (Annual Report of the Game

Department in Tanganyika Territory, 1957:6) The table below shows summary of licences issued 1st January 1951-31st December 1951*(Ibid).*

Table 3: Summary of licences issued 1st January 1951-31st December 1951
(Fauna Conservation Ordinance 1951 No. of 1951)

Month	Trophy Dealer	Professional hunter		Bird	General		Supplementary	Total Value	
		Resident	Visitor		Resident	Visitor			
January	4	2	2	212	73	14	22	2290	6
February	2	1		158	36	7	13	805	9
March	1		2	165	60	1	13	836	3
April	1			596	55	1	13	1336	10
May	1	1		403	57		11	903	14
June	5	6	1	265	60	17	32	2152	17
July	8		2	297	97	12	34	2229	1
August	4	1	1	274	106	19	62	3138	
September	3	1	3	247	97	18	88	3365	7
October		1	2	234	107	7	54	2185	16
November	6			194	53	2	32	1362	19
December	3		3	134	64	7	50	1621	10
Total No	38	13	16	3.179	865	105	424		
Total Value	380	130	1150	3179	4326	3150	14	22227	14

Source: The Annual Reports of the Game Department of 1931 – 1952,

The local licenses were to contain 15 heads of the common animals; although the species tended to differ according to the district; and the fee to the license was to be in the between of Shillings 15 to Shillings 90 (Annual Report 1957 op cit). The general public learned that a new license would be effected from 1st October 1957, in

which the number of animals on the schedule would be reduced and the overall cost would be increased, there was a rush to take out major and minor licenses under the old ordinances before 1st October, because these licenses would be valid for the next 12 months *(Ibid).* The report implied that the game population was preserved by reducing the number of heads and species of games to be hunted with the new ordinance. For instance, the new general licenses permitted the killing of 59 head games, of twenty seven different species whereas under the previous old ordinance, 232 head of games of 38 different species could be hunted in a major licences and 110 head of 24 different species on a minor license *(Ibid).* Supplement licenses were only issued for rare species such as elephants and rhinos.

This explains the view which stated the reason for the African hunters to rush to purchase hunting permits based on old ordinance before was changed to a new one on 1st October, 1957 (Annual Report, 1957 op cit). In order to check the effectiveness of the ordinances all reserves and controlled areas were visited regularly and where possible extensively toured on foot by the game wardens *(Ibid).* The same assertion was observed in Morogoro, when Omari S. Mfunga added that at Mkata and Maharaka villages – hunting activity was highly restricted. He goes further by saying that many game wardens were assigned to protect the animals. Only hunters with licenses were allowed (Mfunga, 2011). However in Morogoro restrictions were imposed on natives not to cut trees and hunting wild animals in the reserved forests of Mfumbwe, Mami and Kisego at Mkuyuni (Ramadhani, 2011). In another interview in the same ward, Abdu Athumani Ramadhani, puts that there were reserved forests namely Kinole, Kungwe and Kugowe which were highly restricted

to hunt or cutting trees. He added that people/hunters were allowed to hunt with special permission and certified licenses from the District Authority *(Ibid).*

A similar account on Doma village in Morogoro shows that the villagers were restricted to hunt or even to enter the Mikumi National Park that boarders their village (Malipula, 2011). Additional consensus reads that the early colonial wildlife policies were designed not merely to conserve the wildlife from over hunting, but also to control the animals in terms of numbers, variety and location. During the British colonial control, the game policies attempted to balance between the conserved wildlife and crop production, always with an eye towards increasing peasant farm surpluses; for instance, in 1920s the British Preservation Department Scouts, killed about 800 elephants per annum in Tanganyika in an effort to limit crop predation (Neumann,1998).

It was also noted that in Morogoro forest reserves covered 830 sq miles. Most of these forest reserves cover the Uluguru Mountains (TNA, retrieved 2011 Morogoro District Book). It was also prescribed by the Native Authority Ordinance under section 8 (f) of 1930 that each chief must identify areas in which bushes and trees were to be seriously protected. It was insisted that no native is allowed to cut down or burn the following trees that are growing on the public lands: Mvule, Mkangazi or Mninga (Ibid). In the same way, one of the interviewees asserted that some of the forests were highly protected/reserved. He mentioned some of the forests which were highly restricted like Mfumbwa, Mami, Kisego and Changa (Chawila, 2011).

Plate 6: Mfumbwa Forest Reserve at Mkuyuni Village

Plate 7:Mfumbwa Forest Reserve at Mkuyuni Village

Plate 8:Mfumbwa Forest Reserve at Mkuyuni Village

The pictures above show one of the forest reserves that is highly protected (Mfumbwa Forest). This restriction was done even during the colonial period. Currently no one is allowed to enter into this forest. (Field work conducted between Mkuyuni and Matombo villages in Morogoro, 20/08/2011)

The Annual Report of the Forest Department of 1928 stated that in the Lugome forest reserve, and its tree species were allowed to be used through licenses (Athumani, 2011). Kassim Shomari and others added that at Mfumbwe forest and at Kiroka in Morogoro, no any activity was allowed in the forest (Shomari, 2011). Monson shades the lights on the forest policy by asserting that the Forest Department was needed to implement strict regulation of Africans access to forest resources. Monson went on by saying that fines and royalties as well as demarcation of forest reserves well all used to restrict tree cutting by local people (Manson, 1996:200). The same observation is supported by the Annual Report of the Forestry Department of 1923 that the Kimomba forest reserve in Morogoro was restricted. Protective measures taken have been in form of forest guards, patrol to prevent the cutting and burning of fire lines and special fire patrols in the dry season (Annual report, 1923, Forest). Similarly the Annual Report of the Department of forestry of 1928 in its Forest Rules revoked the regulations that governed the management of public land and forest and substituted more practical and reasonable restrictions. It was added in the Report that certain trees were scheduled as unconditionally protected (Annual report, 1928, Forest). All unscheduled trees on public – lands were allowed to be cut without charges. The rules also gave permission for unscheduled trees to be cut and

removed for purpose of not influencing the natives to reach the scheduled trees in the forest *(Ibid).*

It was noted that in Morogoro among the Luguru, the year 1944, was of the worst fire season on record that caused shortage of rain. This followed serious fire measures on the forests. The natives believed with superstitions that fire protection measures were responsible for a plague of rats which had damaged their crops in many places (Annual report, 1953, Forest).

The similar observation was noted from the Annual Report of the Forest Department of 1955 on proclamation of certain Native Authority Forest Reserves in the Eastern Provinces (Morogoro). This province and others had waited the publication of proper rules to take care of the reserves. It was seriously considered that protection by orders under the native Authority Ordinance would suffice until the revised main ordinance allowed the formulations of proper Native authority (Annual report, 1955:3-4, Forest). The document from Tanzania National Archives reveal that the chief had issued some of the rules under section 8 (f) of the native Authority Ordinance that no native was to cut timber or firewood in any clan forest without the written permission of the headman of the clan (TNA, retrieve 2011 No. Vol. I, Forests – Morogoro). This assertion is clearly supported by the one of interviewees who puts that chiefs used their power and that of colonial government to restrict people/natives from cutting the trees. He further goes on by pointing some of the reserved forest like “Uturu” end Nemela along the hills which were highly restricted for human activities (Nassoro, 2011). Correspondingly, the Forest Department

Report of 1956 asserts that areas were selected as native authority reserves in the Uluguru and Nguru Mountain areas of Morogoro District and un gazetted plantations and areas protected by local rules were reached throughout the year (Annual Report, 1956 Forest).

Generally, the Forest Department Report of 1957 gives the main features of the Forest Ordinance that are procedures for investigation rights, provision for allowing rights in forest reserves, legislation concerning dedication of private forest and greater powers to local authorities to manage their own forest reserves under the advice of the chiefs conservator (Ibid).

5.2.3 Comperative Analysis: Morogoro and Shinyanga

Starting with overstocking and terracing in Shinyanga and Morogoro respectively had the same aim of combating soil erosion. Their implementation differed significantly in principle and their differences were in terms of environment, communities and historical experiences. For example, overstocking policy in Shinyanga lasted during the period from 1920s to 1950s (Kweta, 1993 op cit). While in Morogoro terracing policy under the Uluguru Land usage scheme lasted from 1952 to 1955 peter, (1998:29).

It can be noted that the policy in Morogoro existed for very few years. This was mainly attributed to the negative response among the Luguru that resulted into many riots against terraces (Young, 1960 op cit). The whole campaign was refused by the use of force as the Luguru at Matombo and Mkuyuni in Morogoro to construct

terraces (Ibid). Although in Shinyanga force was at the centre of ensuring that destocking policy was implemented, the pastoral peasants resisted it. Kweka argues that the pastoral peasants did not clearly know the intention for destocking; this to him is considered to be the reason for the Sukuma to resist it (Kweka, 1993:63). It is likely the same among the Luguru, it seemed the British colonial government did not provide prior–education on the importance of making terracing as a way of combating soil erosion. The above assertion by Ntimba reveals a passive resistance over destocking whereas the same negative attitude was observed in Morogoro when an interviewee revealed that the Luguru were against the policy as it had no rewards to them (Kisegeyu,2011 op cit).

All in all it can be commented that, although the tsetse fly control and destocking policies in Shinyanga and terracing policy in Morogoro had extreme benefits to the agricultural developments in the two regions, the negative attitude demonstrated by their respective natives implied the failure of the British colonialists to educate them so that they could be involved in the policy implementation without any infringements.

The Sukuma destocking experience contrasts sharply with what happened in Morogoro. The Luguru who had migrated from the Ubena plains of Iringa with their cattle, their pastoral system was subsequently decimated by the effects of the tick borne East Coast Fever (ECF) disease which culminated into extensive killing of the animals. Furthermore the livestock could not flourish due to the insufficient pastures found in the mountains. After cattle failure, the Luguru adopted agriculture as their

main activity and practised shifting cultivation, dominated by annual crops such as maize and pigeon peas. Unfortunately, this initial phase of exploiting the virgin Luguru land was not accompanied by any soil conservation measures. Hence land was cleared and cultivated repeatedly until it became impoverished and later abandoned in search of a new and better area (Rutatora, 1996:117-128).

In view of the above effects, the British colonial government introduced soil conservation measures which included village campaigns, demonstration of storm draining, terracing and tie ridging.

At this level of discussion, three major policies had been used in both Shinyanga and Morogoro. Starting with the Tsetse Fly Act of that aimed at cleaning the forests in Shinyanga especially in the 1920s, so that tsetse flies could not be accommodated; the policy had direct impact on forests. At the same time the policy influenced cash crops expansion and cattle keeping. This consequently, brought soil degradation in Shinyanga. It was this problem that necessitated destocking policy that intended to combat soil erosion. On the other hand tsetse fly menace was very minimal in Morogoro. In Morogoro among the Luguru, Terracing Policy was seriously applied, although it lasted for a very short period of time. The Policy also aimed at combating soil erosion so that it can restore soil fertility.

5.3 Strengths of the Colonial Environmental Conservation Policies

When one makes an assessment on the colonial environmental conservation policies he/she may find many shortcomings than advantages, this does not mean that the

policies had no benefits to the Africans (Tanganyikans). One of the benefits from the colonial environmental conservation policies was afforestation and the creation of forest reserves. Through this practice, the British colonial government managed to fulfill its measures that aimed at restoring the environment in its purity. Generally, the colonialist targeted to control land and ensure environmental continuity and its long – term use.

5.3.1 Morogoro

One of the interviewees in Morogoro added that since the forest were highly protected by the colonial policies; people had no access to cut the trees or even to clear the land for agriculture. This had an advantage in preserving the environment in its future use (Interviews, 2011 Shinyanga and Morogoro). Similarly another interviewee in Morogoro asserted that forest conservation was highly insisted around the mountain area. This helped to prevent the source of rivers as it is known that many streams, and springs originate from the mountains that are covered by the forest. Therefore, this made the area to receive rainfalls throughout the year (Kisuyu, 2011).

Another benefit from the colonial environmental conservation policies had to do with games. The Governor made the game regulations that allowed and regulated games for the purposes of food supply in time of famine or by natives who habitually depended for their subsistence on flesh or wild animals (Koponen, 1992 op ci). In this Kjekshus comments that exemption from the licensing rules was granted to the so called hunting tribes: the Wabahi, Watindiga and Wandorobo who were allowed

to hunt common animals for food (Kjekshus, 1971 op.cit). Chitipu (2011) has different observation when he puts that the technical proposal over the colonial environmental policies to some extent were a solution for land and water conservation (Chitipu, 2011:36). This argument was supported by an interview made with Mkude (2011) when commented that colonial environmental conservation policies helped to conserve land and water. He went further by saying that the policies enabled to conserve source of water and land fertility (Mkude, 2011).

Correspondingly, Young puts that agriculture and forest officers had been aware for some years before the scheme was adopted that the Uluguru Mountains were carrying a heavier population than the soil could sustain. The land was eroding and as the Luguru extended their holdings in the hills key destroyed the forest. The colonial policy under the scheme had positive aim at restoring the Uluguru land from being eroded (Young, 1960). Abdallah Makawanja has the same view with Jackson and Young when commented that one of the significant role of the colonial environmental conservation policies was to conserve land and water resources (Makanja, 2011). It was also noted that the colonial environmental conservation policies helped to conserve the Luguru Mountain. It should be noted that the Luguru growing population in most cases destroyed the natural environment. However, the introduction of colonial environmental conservation policies helped to conserve the Uluguru environment (Chitipu, 2011 op cit). This was particularly implemented by the terracing policy under the Uluguru Usage Scheme that aimed at improving the land in the Uluguru Mountains (Young, 1960 op cit). In the same way Hamisi (2011) puts that the colonial environmental conservation policies helped in conserving the

Uluguru land. People of Matombo and Mkuyuni had no education /knowledge on the impact of using modern methods in agriculture that could speed down soil erosion (Hamisi, 2011).

In the same line of idea, Savile who was chief proponent of conservation measures in Uluguru, advocated that the importance of colonial environmental conservation policies was to maintain the natural set up of the mountains (Young, 1960 op cit). The conservation of the Uluguru Mountain helped to regulate the supply of water in the valleys in as much as the headwaters of several of the major rivers of Tanganyika which are allocated in the Uluguru Mountains *(Ibid).* Young (1960) adds that the colonial environmental conservation policies under the Uluguru land Usage Scheme helped in transmitting conservation knowledge across the natives and provide with them an employment *(Ibid).* The official work was primarily educational and supervisory explanations were made and necessary steps were suggested for reclaiming land *(Ibid).* Terracing helped the natives not to burn the trash and weeds on their land hence maintained the natural set up of the environment *(Ibid).* The above assertion can be evidenced by an interview made with Martin Mloka who pointed out that terracing policy went together with the provision of education to the natives (Mloka, 2011). It was also pointed out that terracing policy helped in conserving land from soil erosion for examples, those terraces which had been carried on in Mgeta areas prevented soil, erosion (Young, 1960 op cit). Cosmas Albert has the same view with Young and Fosbroke when he puts that in Mgeta the terraces helped much in conserving land from soil erosion. The Mgeta people

approved the results of terracing and their favorable attitude towards terracing limited to the extent of dissatisfaction which arose later (Ibid).

5.3.2 Shinyanga

In Shinyanga, the same policy on environmental conservation, had advantage to the area. This was seriously implemented by over stocking policy that aimed at preventing soils erosion. The over stocking policy had been advanced as development programme consisting of package which included land usage, population density, stocks from overcrowded (Kamata,1993 op cit). To implement this programme, in 1947 the Sukuma land Development Scheme started (TNA, retrieved 2011, Land usage in Usukumaland). This programme had an advantage to natives as when Kweka puts that the main aim of the scheme was to control grazing and soil erosion as well as settlements expansion and intensifying cotton production. This noted that the scheme managed to balance between the number of stocks and the capacity of grazing.

Another observation by the documents from Tanzania National Achieves state that the Native Authorities of the Shinyanga district under section of Native Authority Ordinance had the positive purpose of making the existence of the forest by preventing the occurrence of fires in the forests *(Ibid).*

Generally these two policies: over stocking and terracing policies had the same advantages and the purpose of combating soil erosion both in Shinyanga and Morogoro.

In actual fact, colonial environmental conservations policies had fewer advantages than disadvantages, the policies brought very slight importance to the natives. As it has been discussed in Chapter Four that pre – colonial societies had their knowledge of conserving the environment. In the same efforts of conserving the environment, in Shinyanga another controversial aspect of the Sukuma Development Scheme was Forestry.

Two approaches are described: afforestation that planting new trees on open lands or reafforestation bringing back forest cover by allowing natural vegetation grow on protected areas (TNA op cit). Both ideas were alien to the Sukuma who maintained that there was no need to plant or protect trees as long as their demands for fuel and building materials could be met by excursions into unhabited areas or by the burning cattle dung *(Ibid).*

On the other hand, afforestation efforts introduced dozens of exotic species notably teak in the low lands and varity of other species elsewhere, but much of these activities were largely experimental than economical (Maack, 1996 op cit). However, the efforts of colonial forestly officers were only militated by the reluctance of Sukuma farmers to accept the necessity of afforestation measures, but also by the fact that it was not known which tree would be economical and suitable to the natural conditions of the Sukumaland (TNA, op cit). Forest experts conducted trials with various species on the experimental farm and nursery and laid down large plantation of *cassia* and other trees in several parts of Sukumaland *(Ibid).*

5.4 Weakness of Colonial Environmental Conservation Policies

During the colonial period the scientific environmental–conservation got in Tanzania with the name of protected areas and community conservation. These types of conservation borrow a lot from mythical Europeans beliefs in pristine environments, and human being as having over all things in the universe (Musyoka,2007:175).

In evaluating colonial environmental conservation policies, it is helpful to understand the legacy of early scientific ideas and conservation "ideologies" through the colonial era. These ideas concentrated on two phases. The first phase spanned the period from 1890s to 1945 what could be called *pioneering protection* a time in which and adventures, explorers and Missionaries arrived in Tanzania and killed a lot of the "big" game species (Musyoka, 2007 op cit). The other period lasted from 1945 to 1960. This period was dominated by "preservation through parks" game reserves and forest reserves *(Ibid).*

This period (1945-1960) witnessed exploitation of Tanzania natural resources and elimination of the natives from their environment. It was during this period that we can experienced and poachers' action against substance hunters and declaration of big chunks of communal land as out of bound for communities thus permanently disrupting their livelihood and initiating a vicious ciycles of poverty creation amongst people who essentially depended on natural resources for sustainable livelihoods (Mohamedi,2011).

Another damage that was done during the era as far as environmental conservation policy is concerned was ignoring the traditional methods of environmental conservation. Harry Wells claims that colonial environmental conservation policies ignored the potential role of traditional practice in conserving rule of traditional practice in conserving their environment.

In a similar view David Anderson and Richard Grove pointed out that prior to the late nineteenth century Africans communities were able to sustain viable ecological control systems with a considerable degree of success. The dual impact of expanding capitalism and colonialism administration resulted in a major ecological catastrophe. They finally balanced the relationship between man and his environment that had existed in the area prior to the mid nineteenth centuary was undermined and involving it in a process of underdevelopment still unrevised today. Colonial induced disease, colonial warfare, labour recruitment and colonial policies of control combined to bring down a breakdown of the man-controlled ecological systems *(Ibid).*

5.4.1 Morogoro

The interviewees in Morogoro put that colonial environmental method of conserving the environment ignored the traditional method of conserving the environment. She further says that there was no involvement of local people in the whole process on environmental conservation during the colonial era (Mohamedi, 2011 op cit). Another interviewee went deeper by putting that colonial environmental conservation policies alienated African from their land and gave chance for the establishment of

wildlife conservation areas. He further said that colonial government was more concerned with benefit derived from hunting rather than the well being of local people (Longnuis 2011).

In a different observation it was witnessed in Morogoro at Matombo village where people were forced to construct terraces. This policy was compulsory. The response from the people towards this policy was very negative in some cases native laws and customs were violated. This reaction spread even at Mkuyuni (Young, 1960:156-157). The policy emphasized terracing reinforcement of regulations against burning of grasses and bush in the hill areas and stressed the planting of trees outside the forest limits for the provision of fuel wood and poles for construction purpose. Notwithstanding, evidence revealed that the objectives of the scheme were never realized and the scheme became abandoned in 1957 *(Ibid).* The policy therefore, arose contradiction and finally the riot between the government and natives. The main weakness of the scheme was that natives were not involved in the Act implementation and its importance *(Ibid).* The Luguru were forced to construct terraces so that they can combat soil erosion. Soil conservation policy was seen by both the Luguru and Sukuma as an increased work with little reward.

5.4.2 Shinyanga

In Shinyanga it was restricted at Mwantini area to hunt any kind of animals before permission from the game warden (Rashidi, 2011). In the same view, Kjekshus (1971) commented that the issue of permits to Africa hunters had really alienated

natives from benefiting from their nature. This made hunting as a matter of special permission by the Governor *(Ibid).*

Another impact is witnessed when the natives lost their agricultural land or tribal land and limited access to the environmental resources being preserved (Kjekshus,1971 op. cit). The proclamation of Serengeti and Ngorongoro as National Parks led to loss of grazing land among the pastoralists and agricultural land to the peasants. The interviews conducted in Shinyanga at Longalombogo village whereby the villagers boundering to Serengeti National Parks, claim to be affected by the reserve that they have no access to hunt, graze and even to cultivate as they did before (Ntobo,2011). Africans were alienated from the land to give room for establishment of games and forest reserves. Their traditional use of the environmental resources was forbidden and those who were allowed had to carry hunting permits (Alawi, 2011:125). The Maasai for example were forcefully removed from traditional grazing areas in an effort to clear preferred land for European settlers. British alienation of the Maasai from their lands was based on a colonial ideology that labled the pastoralists as 'backward and barbaric'(Alawi,2011 op.cit). Therefore, the Europeans disregarded the sustainability of indigenous knowledge based on land–use strategies in favor of an emerging model of colonial development through the notion of eco–tourist activities in the region *(Ibid).* This conservation strategies was based on a notion of "man against nature" and it failed to apply to the Tanzania context of natural world that had been managed by pastoralists for decades *(Ibid).* The same assertion was given by Guha, Ramachandra when he puts that wherever national wildlife parks have been

established in Africa, the indigenous peoples who formerly hunted, gathered, cultivated, and pastured their livestock there have been evicted from the land, on the premise that their presence constitutes a threat to area wildlife.

Since it is wealthy tourists from the industrialized countries, not Africans, who enjoy expensive vacations in wildlife parks. Therefore, establishment of a national park in the name of conservation and biodiversity represents, in fact, a massive transfer of resources from the poor to the rich (Mamachandra, 1989:71-83).

The similar environmental conservation policy was introduced in Shinyanga aimed at combating soil erosion. It was implemented under the Sukuma Development Scheme. It was advised that tie–ridging should be constructed so that they can combat soil erosion. This was implemented by, the existing orders under Section 8 of Native Authority Ordinance, of 1937. The main weakness of this policy was that it did not involve the natives on making the policy and even by giving them education and addressing the importance of the policy (TNA, op cit).

In different observation, it was discovered that environmental conservation policy had seriously contributed in destroying the environment. In the connection to the said argument, one of the interviewees had this to the subject: Although the colonial government engineered deforestation to control tsetse fly infestation, at the back of their minds they had the intention to introduce cotton production in Shinyanga (Sabuni, 2011 op cit). Correspondingly, Kamata (1993) stated that during the 1920s cotton growing was introduced in Shinyanga and he went further by stating that the

coincidence between cotton growing and the onset of the environmental problem suggests a link between two. This assertion confirms the problem of environmental because more conflicts with the increase in the number of cotton procedures. For example, between 1927 – and 1939 cotton production increased seven folds this therefore affected the Sukuma tradition agriculture. Similary, Mlenga (2004) relates with Kamata (1993) when he puts that clearing of bushes and forests was done to sustain increased agricultural activities which in turn were the main cause of deforestation in Shinyanga (Kamata, 1993: 59 op cit and Mlenge, 2004 op cit).

Apart from Tsetse fly Act in Shinyanga, over stocking act was also damaged the economy of the Sukuma. This policy initially aimed at combating soil erosion. The present study has discovered that the policy had economic implication to the European economy. In this Kamata asserts that with the eruption of the Second World War, the destocking campaign gained new impetus. This is because there was more need for beef supply to the British troops fighting the war (Kamata, 1993 op. cit).

It was confirmed also that the overstocking policy weaked the traditional commercial grazing it provided no incentive for an individual pastoral peasant to destock. The policy perceived that the tradition land use methods could not sustain the environment. Mbonya goes further by assessing the over stoking policy when he commented that destocking during the Second World War aimed at feeding the British soldiers and civilians. It has further been stated that destocking during the war would have been stopped at the end of the war. However, after the war destocking

continued because it was one factor that determined success of cotton production (Mbonya, 1987:63 op cit). It changed its states from limited to compulsory destocking. The reasons for introducing this compulsory destocking were; to remove the competition between livestock and cotton on labour and land, and secondly, to make the livestock industry of Usukuma to participate and contribute positively to the British policy of saving the dollar *(Ibid).*

Similarly, Schuknecht adds that stock owners saw that the policy had disadvantages to them as they maintained that cattle were best and safest form of wealth, providing security for lean times and that livestock was essential to the social structure of the "tribe" it was used for "customary payments" like dowries (Schknecht, 2008:162 op cit).

The Sukuma did not recognize and accept the scheme, they rejected the notion that land was severely eroded and in need of rehabilitation as the colonial administration claimed. They rejected the official interpretation of the administration roles as a selfless guardian of the natural resource of the vegetation *(Ibid).* In the same line of argument one of the interviewees in Shinyanga commented that cattle existed even before the coming of the Europeans. There was no serious soil erosion in the region. The interviewee went further by saying that the campaign by British on soil erosion took place between 1920s and 1950s. This period reflected the interwar period that showed the high meat demand from soldiers. Therefore, destocking policy in Shinyanga had economic and political implications (Kinge, 2011).

Basing on the above assertion the documents from Tanzania National Archieves stated that the reasons for introducing the compulsory destocking were obviously to remove competition between livestock and cotton on labour and land; and to make livestock keeping contributing to the British policy improving the economy (TNA, op cit).

It is clearly known that the bush clearing and cotton production expansion were the major factors that degraded the soil in Shinyanga. Livestock production/keeping in Shinyanga existed before cotton production. In this, Kamata commented that throughout the period when people kept cattle without undertaking cotton production, livestock never considered a problem to the environment. The introduction of cotton growing and the pressure it was exerting to land formed the basis on which livestock and their owners became a problem (Kamata, 1993:54-60 op cit). Kamata shows that the weakness of the policy was that it did not consider the natives and it lacked natives' participation on the policy formulation and implementation *(Ibid).* Anderson David and Richard Grove have the view that the spread of the tsetse fly, rinderpest, smallpox and other diseases were the main force for the introduction of some acts that demanded the clear down of the forests. This disruptive measure had an impact on the environment.

In East Africa, the commercialization of the livestock economy and the consequent widespread increase in stocking densities brought about widespread land degradation. Social inequalities and changing patterns of authority under colonialism led to the breakdown of regular rotation cycles and erosion of common-property

systems, which in turn led to "breakdown of the plant cover, the extension into humid regions of plant associations natural to the sub-humid land, and massive water and wind erosion over wide areas (Grove,1987 op cit). Similarly, Watson was quoted as saying:

> All agriculture involves destruction and it stands to reason than no permanent agriculture is possible where the soil is progressively degrading. The real cause of soil erosion the practice of an agriculture which does not take full account of the natural remitations of the environment and cause of soil exhaustion, which is inevitable precursor of soil erosion, even when stipped of vegetation, and the only care for the soil erosion is to utilize the land in a manner which maintains and preferably increases its fertility (Watson, 1936:305)

For this reason, therefore, Watson blamed the present system of trade which demands more food stuffs and raw materials as the major cause threatening destruction to much Africa's arable land by erosion. Basing on the same assertion, Watson added this to the subject:

> The bulk of this trade fodder is not required primarily for food and clothing, nor the amenities about life, but for trade. If there is a surplus of these things beyond what can be traded for profit (not beyond what can be used for the people who used them this surplus is burned, buried, allowed to rot or otherwise disposed of). The soil of Africa is thus being exploited for the benefit of the few and with no through out for that of the inhabitants and commercial

> hierarchy holds the reins. The average trader may not see how he can possibly be connected with soil erosion, but nevertheless he is *(Ibid).*

In this idea, Africans were encouraged to grow more commercial crops not for their own advantages; but for the overseas market. This was reflected during the colonial period in Shinyanga when the colonial administration, substitute livestock keeping to cotton production by labeling livestock keeping as destroyer of soil fertility. For Watson natives with increasing number of cattle were the greatest cause to Africa's soil erosion. The explanation lies in the endeavour to commercialize agriculture (Watson, 1936:305).

Magwala Mwenda, puts the lights on this argument by narrating that overstocking policy end its general implementation, eroded the wealth of the Sukuma. For the Wasukuma cattle is a symbol of wealth, therefore, the more the number of cattle person owns the weathier he was considered be. This increased both his social and economic status (Mwenda, 2011). Basing on this fact, the Sukuma found that the policy limited their economic prosperity. G'wanza in his assertion on destocking went further by showing the depopulation problem that has been emanated from compulsory destocking. Many peasants reacted by moving in new areas to save the cattle from being reduced. The large number of peasants moves to Geita and Kwimba during the time of scheme implementation. This therefore, led depopulation in the area (G'wanza, 1993 op cit.)

In another observation, it was noted that measures for soil conservation and agricultural betterment came out after the approval of the rules and orders by the Nature Authorities. Native Authority orders which made manuring and tie-riding

compulsory were introduced in the Sukuma Districts 1946 (Rounce, 1949: 104-105). From 1948 on, natural resource legislation for the whole region was adopted by the Sukuma Federation Council, (SFC) starting with the Sukuma plough rules which were intended to regulate the numbers and use of ploughs in Sukuma to prevent soil erosion. In 1949 the various soil conservation orders of the different chiefdoms were coordinated and reissued as the Sukumaland composite soil conservation orders (TNA, retrieved 2011 Sukumaland Federal Council) In the same year Forestry Orders, cassava planting Orders, manure and straw Orders and cotton planting Orders were adopted in Sukuma.

By 1950s the agricultural economy of the Sukumaland was closely regulated at least on paper. There were detailed instructions on how many acres per homestead had to be manured and tie ridged or planted with cassava and cotton, in which way cattle and other stock had to be herded, watered and moved, at what time and in which way certain crops should be sown, weeded or their residues in to restore the fertility of the soil *(Ibid).* Breaching of the rules and orders could be punished with fines or imprisonment (TNA, retrieved 2011 List of Rules and Orders). Many Sukuma did not possess cattle or other stock and in some areas there were not even enough animals to provide sufficient amount of manure. Cattle duug was widely used as fuel due to the lack of firewood, and smoky manure fires were after maintained at stockyards to keep away flies and ticks which could transmit fatal disease to livestock.

Many Sukuma perceived that manuring encouraged weeds and therefore, increased labour. However, the main problem was to get manure into the fields. The majority

of Sukuma farmers cultivated various fields sometimes at a considerable distance from each other in order to make use of all available soil types. Most fields could only be accessed by foot, and head transport of manure was time-consuming and extremely laborious *(Ibid).* Therefore, manure proved to be labor and capital intensive at the same time. Not only the transport but also the production and preparation of sufficient amount of manure were often impractical for Sukuma cultivators. This therefore, contributed to the failure of colonial attempts to integrate manuring into Sukuma cultivators during the 1950s despite considerable pressure from Native Authorities, technical and administrative officers and African Agricultural Instructors *(Ibid).*

The results of colonial attempts to induce or compel Sukuma cultivators to tie-ridge fields were also not too encouraging. As early as 1946 legislation which required the compulsory tied ridging of at least half an acre of land per homestead was introduced in Sukuma. However most Sukuma cultivators refused to tie-ridge their fields (TNA, op cit). At the end of the year the District Commissioner of Maswa reported a massive increase in cultivators for violation of natural resource orders since the introduction of compulsory tie-ridges and noted: 'Tie-ridging .....encounters the strongest opposition and great objection to the extra amount of labour involved on a given of land' (TNA, 1946: 7 Maswa District Report). Tie-ridging was not only labour intensive but many Sukuma cultivators doubted that it would prevent soil erosion, maintain soil fertility and increase yields as colonial scientists claimed. Their suspicious to a large extent was based on bad experiences with colonial soil conservation policies in the past *(Ibid).* Before and after the war colonial experts had

attempted to persuade and compel Sukuma cultivators to construct ridges along the contour in order to prevent soil erosion. However, in many areas construction of ridges had been enforced even on soil types that were not suited for it *(Ibid).* As a result necessary drainage of the lower and heavier soils was prevented and crops were damaged due to water-logging. Moreover, in many cases the experts' layout for the construction of the ridges and drainage channels failed and the neighboring fields were damaged severely by water runoff from ridged fields.

Exceedingly heavy rains in many parts of Sukuma caused water-logging in the tie-ridged and roots of many crops started to rot. The failure wear down the prestige of colonial experts further and many cultivators and chiefs became even more opposed to tie-ridging than before (TNA 1946, op cit).

5.4.3 Comperative Analysis

Based on the impact of environmental conservation policies in Morogoro and Shinyanga regions, it was found that Shinyanga region was seriously affected by the policies than Morogoro region. For example in Shinyanga every environmental conservation policy by the colonialists, in first place was aiming to conserve the Sukuma environment. For instance, tsetse fly Act intended to protect both the Sukuma health and their herds. Consequently, the policy affected the Sukuma's economy and their social status for several decades. It was from the failure of this policy when the colonial government used over stocking policy in the Sukuma land which also affected both the Sukuma's economy and their culture.

The said effects were very minimal in Morogoro. It was found in this study that the Luguru were seriously affected by terraces policy in some few villages like Matombo, Kiroka and Mkuyuni. However, the policy took very short period of time. It should be noted out that the colonial environmental conservation policies in Shinyanga brought a sustainable environmental destruction in the region. This is currently responded by the mushrooms of the NGOs.

In case of the soil, it was recognized that the natives were divorced from the land after being instructed by the policies. However, the policies provided new modern instructions on agricultural sector. These instructions differed from their indigenous experiences on farming practices. It was also observed that the policies which were directed in agriculture were not positively welcomed by the natives in Morogoro and Shinyanga. Initially the policies aimed at combating soil erosion. But in some occasions, it was clearly observed that the policies aimed at expanding cash crop production. This was seriously observed in Shinyanga between 1920s and 1940s. Thus, it has been said of colonial exploitation that it was rapacious 'rather than reproductive, bent on quick returns rather than long-term exchange. It was destructive to the soil and resources, yet failing to provide for alternative forms of livelihood'. Colonial relations were, therefore, not just exploitative but super exploitative. Such dichotomy has also been termed parasitism or plunder. The quest for a cheap source of raw materials supplied the justification for the continued maintenance of formal consumption of labour under capital in colonial social formations. Such efforts were shown by the policy of the colonial state to exhort peasants to produce more for not only the export market, but also their reproduction

and reconstitution. This phenomenon was made possible by the sustenance of pre-capitalist social relations of production within which the reproduction and reconstitution of peasant labour was supposed to take place.

In wildlife, the chapter has tried to show the impact of the policies on wildlife. It has deeply exposed the selectiveness of the policies. This was mainly implemented by licenses in which few Africans had little access to while the majority had nothing on hunting sector. The chapter has shown that hunting was made to be an activity of special permission. It was also discovered that hunting activity was monopolized by white hunters who had an access to hunt even in the game reserves. An African who was caught hunting in the game reserves was regarded to be a bandit a poucher. But the reality shows that the natives lived with these animals for many years. It can be observed that large amount of games were reduced during the colonial period unlike during the pre colonial Tanzania. It was noted that capitalism had acted upon wildlife resources where it used an exploitative tool with the name of 'conservation policy' that aimed at stopping the natives from using their games. Instead, the policies helped colonialists to harvest wild animals and increased the profit and the capital at large. The policies on wildlife had very little advantages to the natives. Some of the natives were favoured to hunt while others were restricted. Those who depended on eating meet as their main food were favoured by the policies. It is known that the favoured tribes had many uses of wild animals apart from food.

In forest, the chapter discussed on forest reserves. It has shown some of the advantages whereby some new tree species were introduced. The policies aimed at

making the sustainable existence of the forests. It was clearly discovered that the policies affected the natives as large parts of the land were made to be forest reserves. The natives lost their former forests where they benefited from the forest products.

The colonial forest policy internally aimed at making investments and markets which were highly needed and new had to be found. Tanganyika was now supposed by the colonial office to become the main supplier for Imperial timber. Therefore, the government doubled the expenditure on the Forest Department and accelerated the reservation of forests in1949. However, a new Forest Policy was adopted in 1953, recognizing the fact that most timber came from outside the Forest Reserves, and emphasizing the role of protection rather than production. The protection of watershed areas and other forested areas in order to prevent soil erosion and land degradation was a major objective of the new Forest Policy, and caused the coming gazettement of large areas of forest reserves, including the new practice of reserving vast woodlands. As the problematic economy of Britain allowed relatively little investment in economically inferior colonies like Tanganyika, increased attention was now given to activities that would promote self reliance whilst generating revenue. Numerous initiatives were taken by colonial administrators to increase cash crop production, develop infrastructure, improve agricultural practices and prevent environmental damage to the detriment of sustained productivity. This period has been termed a “second colonial occupation”, since the measures mentioned above led to a growing interference of administrators into the lives and Africans. It also implied the action of capitalism on African resources.

CHAPTER SIX

6.0 THE IMPACT OF COLONIAL ENVIRONMENTAL CONSERVATION POLICIES ON CULTURE

This chapter examines the impact of environmental conservation policies on culture. It mainly gives an insight on how the policies affected the Luguru and Sukuma culture. The aspect of culture among the Luguru and Sukuma covers many practices which included traditional farming practice, traditional hunting and gathering, as well as s taboos. All these aspects are directly associated with their environment. Based on the said practices, the chapter shades light on the Luguru and Sukuma culture in relation to its environment.

6.1 Morogoro Region

There are similar perspectives among the scholars and informants on the impact of colonial environmental conservation policies on cultural practices. Informants emphasized that the new techniques of colonial environmental conservation policies ignored the traditional methods of conserving the environment. For example, an interview conducted with Kaloli Andrea at Doma- Morogoro, revealed that colonial environmental policies ignored the traditional strategies of conserving the environment. He further says that an introduction of colonial environmental conservation policies went together with alienation of traditional forest from traditional possession into colonial state owned (Kaloli, 2011). The process hindered the practice of traditional rituals like initiation ceremony and traditional sacrifice as people failed to interact with natural environment *(Ibid).*

Another observation was stated by the Morogoro district book from the Tanzania National Archives, that in 1956 the total alienated areas were 2070 sq. miles, in which freehold lands covered approximately 60sq. miles, lease hold 151 sq miles, and Game reserves 1000 sq miles (TNA, op cit). Therefore, the natives were limited the access to their environment where they could practice their traditions. In the same line of idea, F. Ngerengere puts that under British rule, 3.5 million acres were alienated from native lands towards settler interests and ownership. Customary tenure, upheld through tribal traditions, assured that economic interests of each member of the clan were preserved. It must be recalled here, that colonial interventions declared all land as "not owned" left many natives labeled as trespassers on their ancestral lands. This colonial policy resulted in many lands to be poorly managed (deforested, eroded, and derelict) and refuelled migrations both voluntary and forced (Ngerengere, 2008:5).

One of the interviewees in Morogoro puts that the benefactors of the policy can point to land developments in the interest of "the economy" as an advantage worthy. But it is development at the cost of many native peoples in turn being displaced from their ancestral originally settled lands to start a new life and abandoned their culture (Kioga, 2011).

An interview in Morogoro which was conducted with Kioga (2011) who had this to speak on the subject 'introduction of colonial environmental conservation policies evacuated natives from their natural forest and land to pave the way for wild life

conservation' (Kioga,2011 op cit). Zamponi 2011) in this view has commented that indigenous people have been subjected to 'the colonization' of their land and culture. Hamza Kisegeyu at Kiroka Morogoro goes further by narrating that natives' environmental conservation practices were seen by the colonialists as of little value (Zamponi, 2011). Whatever was done in conserving the environment and traditional agriculture procedures were regarded to be environmental destruction (Kisegeyu, 2011 op cit). However, natives were denied to practice their wild animal related rituals and traditional agricultural practices. In the same view, Ntimba (2011) from Shinyanga and Kinoga (2011) of Morogoro in their interviews draw an explanatory picture on colonial exploitation of natural resources by asserting that natural resource management policies in the colonial era were a central component of the project of extending European political control into natural African landscapes. Colonization by European powers in the 18th and 19th centuries, and the accompanying spread of conservation practice did not bring with it respect for traditional rights in to the natural resources and their related culture (Ntimba,2011 op cit and Kinoga,2011).

The model for nature conservation that was globally imposed by European nations was based on the American approach of pristine. It was asserted that wild area set aside for human enjoyment and fulfillment was encouraged by concerns about the depletion of wildlife, timber, and other valuable resources. Ownership of land was gradually transferred from traditional local authority to the state domain in order to enable colonial authorities to exploit African lands, labour, and resources. Resources such as wildlife were progressively placed under central regulatory authority, with the rights of local people to utilize resources alienated over time Ntimba and Kinoga,

2011 op cit). It was from these transformations, which affected the African culture related to the environment.

McCann agrees with the above assertion by revealing that preservation of wild as game was directly and repeatedly challenged by men living and finding their living in their own place, their own country but now by the arbitrariness of laws, made over into criminals into rogues and into marginal men (Brown et al,1992:4). In the same line of an argument, one of the respondents in Morogoro added that colonial environmental conservation policies were associated with the process of evacuating people from their land. Similarly, Mfunga (2011) in Morogoro reported that introduction of colonial environmental conservation policies evacuated natives from the land whereby local people were denied to access forest resources (Mfunga, 2011).

The Annual Report of the Forest Department of 1956 advocates that colonial environmental conservation policies created system of west reserves and established prohibitions against their use. Colonial motivation for establishing reserves were in making the territory profitable and did seek to develop timber production for both domestic and external markets (Annual Report,1955 op cit). Similar view was revealed by an interview made with Kilasa (2011) in Morogoro who commented that forest reserves during the colonial regime were restricted over the exploitation of the forest (Kilasa,2011). Colonial environmental conservation policies restricted the exploitation of forest resources. She further goes on by pointing that forest such

as Kinole and mountains like Kungwe and Kugome were highly protected by colonialists (Kilasa, 2011 op cit). The extraction of forest resources were prohibited as no any African was allowed to consume forest resources from them. Hence natives in Kinole village lacked access to use forest as training center for youth as a means of equipping new generation with traditional values and customs *(Ibid).* In same village (Doma), it was asserted the Mikumi National Park; (By then *shamba la bibi)* people were restricted to enter the park. Culturally people were affected since they had no access to meet their social and taboos (TNA, retrieved 2011 Game Ordinances). One of the interviewees in Morogoro added that when the Mikumi area was proclaimed to be the National Park; the culture was affected since the natives had no access to enter into the park. Some animals which were used by traditional healer like *"Nyumbu"* became unavailable. Most of these animals were obtained from the park (Malipula, 2011). In this, Mkunza (2011) at Matombo in Morogoro puts that the policies affected culture of the Luguru. Some animals were not allowed to be hunted like an elephant, buffalo, lion and the Zebra. Culturally the elephant stools are used to cure children and lion oil are used for several treatments its skin was used by the kings to demonstrate obedience and authority (Mkunza,2011).

Plate 9:*The pictures showing elephants and a lion in Mikumi National park*

The pictures above show the elephants and a lion. These pictures were taken during the field work that was conducted at the Mikumi National Park in Morogoro Region. (Fieldwork 08/06/2011) Culturally the natives have no access to get body-parts of these animals for ritual activities

Correspondingly, Mgunge agrees with Neuman by commenting that colonial environmental conservation policies affected the traditional social set up (Mgunge, 2011). It should be noted that people around game reserved areas were denied to access wild animals products such as skin, nail, and tail which were used in traditional dances and rituals.

He further says that the demarcation of forest reserves and prohibition of cultivation and grazing within the boundaries was probably the colonial measures to secure control over access to forest resources. And in turn evicted natives from access to forest resources where they could even practiced their culture. The process affected traditional ways of life. There were shortage of cultivating land and grazing land which are some of the important traditional economic activities. It was also asserted that during the pre-colonial period, indigenous people had unlimited access to the natural resources. Their traditional practices and culture-based respect for nature led to the continued conservation of wildlife species. During the colonial period, the management shifted to the top-down approach, which witnessed many of the local people being alienated from their ancestral lands where all cultural practices were carried out (Tanzania Wildlife, 2006).

This change of heart was mainly due to colonialists creating more land for conservation and thus forced the natives to be evacuated and cut their only link with

natural resources. This approach came with several consequences such as hostility, which grew between the natives and the protected areas managers (Annual Report, 1952 0p cit). The natives thus started engaging in illegal activities that led to most of the natural resources becoming extinct and some wildlife populations disappeared which were of vital importance on culture practices *(Ibid).* Kinoga (2011) adds that colonial environmental conservation policies were not clear on African rights. In essence, the law placed all regulatory control in the hands of traditi onal elders and African customary hunting and use of practices were defined as crimes (Kinoga, 2011 0p cit). A similar view was revealed by an interview made with Hassan Kiwambo in Morogoro when he commented that colonial environmental conservation policies limited the practice of traditional hunting among the natives Kiwambo, 2011).

The above historical fact is supported by an interview which was done with John Mdumbwa who was quoted as saying "hunting by Africans involved cultural values and practices that offended the sensibilities of European who held fast their own values and myths concerning wild life" (Mdumbwa,2011). The same was revealed by an interview made with (Mwingo 2011) when he pointed out that colonial government authorities were more concerned with the benefit derived from hunting by whites rather than the well being of the local community members (*Ibid).* Adam Saidi lamented that natives could no longer practices their traditional related rituals and rites because of the restrictions placed in areas reserved for hunting (Saidi, 2011)

Correspondingly, Worster states that African rights to hunt wildlife were perhaps the most visible impact of colonial environmental conservation policies (Worster, 1993:20-27). The culture of hunting was discouraged in most part of Africa. Despite the fact that hunting wild animals in Africa was an important cultural practice which colonialists totally destroyed. For instance, in African context, success in hunting was translated to be tantamount to success in military campaign at both the individual and group at large (Worster, 1993:20 Op cit).

Supporting Worster's argument, Edward Steinhart added that hunting raised crucial cultural questions of gender and values, and basic ideas about nature and religion conservation as well as interaction politics. One of distinctive signs of this new imperial cultural complex was particular role that hunting played in representing and dramatizing class relations. The pioneer hunters and settler hunters did their best to maintain the purely and aristocratic lineage of the hunting "tradition" they carried with them. However class relations and then cultural manifestations cannot be as easily transplanted in a new environment context (Steinhart, 2006:209).

The enforcement of these values and myths was integral for the legitimating of colonial rule and to reaffirming the superiority of the British culture and society. To allow African hunting and forest use to continue would mean placing African culture and resource management practices on equal footing with those of Europeans (Worster, 1993:20 Op cit).

An interview made with Hamza Kisegeyu of Morogoro who commented that colonial environmental conservation policies restricted native's right of access to and utilization of wild animals for food and taboos as well as poles for building (Kisegeyu, 2011). Another respondent Mrisho (2011) had the same view with Hamza Kisegeyu when she commented that natives were not allowed to hunt in Banzayege forests, once a person was caught in the area was fined or jailed (Mrisho, 2011). This therefore, affected cultural aspect as people used trees for medicine and wild animals for their taboos.

This was supported by Neuman when he advocates that colonial environmental conservation policies restricted African rights of access to and utilization of forest and forest products. The Game ordinance of 1940 was enacted partly because of this northern pressure aimed at establishing national parks as a legal entity for the first time in Tanganyika. The 1940 ordinance gave the governor powers to define customary land rights in national parks based on public interest (Neumann, 1992).

In a different way, Young and Fosbrooke advocate that the colonial environmental conservation policies developed in Luguru areas such as agricultural techniques dictated local farming system (Young, 1960 op cit). The new techniques were a challenge to the traditional methods of farming; where the hoe and the machete were the major popular pieces of agricultural equipment *(Ibid).* They were also challenged by the general social structure.

The subsequent Luguru riots over environmental conservation practices in Luguru may be considered to be a form of resistance not only to the new farming techniques but also to the imposed rule which was introduced to them and was seen as the destroyer of their traditional agriculture.

Ramadhan Dilunga has different observation when describing that "there were resistance over the compulsory terracing in Matombo (Dilunga,2011). The process involved hard working "for terracing many hours of back-breaking labour which bring poor yield". Most of the local people interviewed at Matombo had often repeated complaints about the colonial implementation of forced terracing. It was laborious, it brought hunger by destroying the soil and lowering yields, it forced men and women to labour together and it caused their native authority to betray them.

All of the above noted colonial environmental conservation measures were against traditional cultural practices hence natives went into riots (Ibid). Similary, Maack (1996) states that colonial environmental conservation policies resulted into resistance "in Uluguru Waluguru resisted effort to combat soil erosion because they derived few benefit from their lab our (Maack,1996 op cit). Their complaints against the scheme echoed their wider struggle against the growing impoverishment and domination of their society and united them in a common purpose. In 1955 Waluguru resistance erupted into violence. However, the time spent in resistance and violence could be used in implementing traditional practices hence led to the destruction of indigenous cultural practices. Tausi Abdallah Kihali of Morogoro differently commented that cultural practices were disturbed by colonial environmental

conservation policies (Kihali, 2011). A detailed explanation was given by Ferdinand Sigara who had the same view with Toppone and Tausi who commented that "colonial environmental conservation policies distorted African religion (*Ibid).* He further goes on by saying that Africans were denied access to forest to give sacrifice and traditional rituals *(Ibid).*

Similar view was revealed by an interview made with Laurent Costa at Matombo, in Morogoro when he commented that colonial environmental conservation policies resulted into cultural destruction (Coster, 2011). He further argued that there were restrictions over exploitation of forest for traditional medicine as well as wild animal skin and tails for traditional rituals and dances *(Ibid).*

In the same way an interview conducted in Morogoro at Doma, revealed that there was restriction to hunt into forest reserve area called *Shamba la bibi* before being renamed the Mikumi National park. This restriction therefore had affected the villages like Mkata and Maharaka. It was precisely said that many soldiers were put around the forest so that they can protect the forest from the natives to hunt and cut trees. It was from that restriction, people lost an opportunity to worship and hunt wild animal for ritual purposes in the forest reserve (Mikumi National Park) (Chamanda, 2011).

Kopponen (1992) had the same view when he commented that in colonial legislation access to game was progressively denied to local African (Koponen op cit). Kopponen goes further by pointing out the prohibition of hunting with nets as a

traditional popular method hindered economic and nutritional benefit to many Africans *(Ibid).* Similarly, Neumann points out that the struggle by Africans for rights to hunt wildlife were perhaps the visible and symbolically important to this contested area (Neumann, 1992:13 op cit).

Comprehensive information was given by Eliminata (2011) at Matombo when she commented that culture was affected by the colonial environmental conservation policies. She goes further by narrating that the policies restricted the natives from using some of their natural resources. For example, at Matombo in Morogoro around Gombe area, there was a forest owned by Lubingo clan. This forest was largely used for social rituals. When colonialists came the forest was conserved and put under the state control. Therefore, all ritual activities were stopped. Apart from forest restriction, traditional land use was abandoned. It was said that before the colonial domination, the watonga clan under the leadership of Nyengombili, used to provide some of the land to the clan member for cultivation and grave yards or cemetery uses (Eliminata, 2011). The remaining land was rented to other clan who paid rent in kinds. When the colonial control started in the area, some of the policies were introduced to restrict people from using the land for the above mentioned reasons. Instead, the land usage was instructed by the colonial authority. The colonial state initially used the Native Authority Laws to restrict the natives from using the land. Therefore, the traditional land usage was seen to be destroyer of the land *(Ibid).* In the same way, the policy at Matombo in Morogoro restricted some of the forest areas like Utunu. In this forest area, people used animals for ritual issues. Some of the tree

species were used for medicine. The colonial policies restricted people from using these resources for their taboos (Mohamed, 2011).

The related idea was revealed among the Luguru, that colonial environmental conservation policies affected the culture of the Luguru. Before the policies, people used the forest to get medicine from herbal tress. It was said that trees like *mkefa* and *mdaha* were used for medicines. Most of the forests that were reserved contained these trees (Dimosco, 2011). Therefore the natives were affected by the policies since they never had any more access to enter in the forests.

6.2 Shinyanga

In Shinyanga among the Sukuma the policies indirectly affected their culture when over stocking policy was implemented. Interviews conducted in Shinyanga, state that the overstocking policy damaged the traditional commercial grazing as it provided no incentive for an individual pastoral peasant to destock. This means that the reduction of numbers of cattle did not have direct returns to the pastoral peasant in terms of land for grazing (Ntimba, 2011 op cit). Similarly, Schuknecht adds that stock owners saw that the policy had disadvantages to them as they maintained that cattle were best and safest form of wealth, providing security for lean times and that livestock was essential to the social structure of the "tribe" it was used for "customary payments" like dowries (Schknecht,2008 op, cit p). Another interviewee in Shinyanga has the same view when he gives a deeper insight that environmental conservation policies during the colonial period affected many pastoralists. For them cattle is of the vital importance. The policy of overstocking

affected many pastoralists as it involved the reduction of the herds. It is noted that cattle and Sukuma culture cannot be separated. Cattle cover all the Sukuma's life style. Some of the Sukuma did use cattle's skin to cover dead body during the funeral. For the Sukuma, it was perceived that the reduction heads of cattle had direct impact on their culture (Naungula, 2011).

Another observation, advocates that colonial environmental conservation policies displaced Africans to pave the way for wild life management and conservation projects and the government initiative to isolate pockets of Island and reserving them (TNA, op cit). In the same way of idea, interviews in Shinyanga revealed that the policies affected Sukuma culture, in that when the colonial masters came in Shinyanga they introduced Tsetse fly Act. The act aimed at eradicating tsetse flies. Therefore, it was implemented through clearing of the forests so that tsetse flies could not be accommodated in the forests. This act had direct impact on the Sukuma culture. For example among the Sukuma there was a forest that was used to pray with their ancestral' spirits called *"Ibimbe"* through the *"Yenge"* customs. It was said that using these ancestors the Sukuma could call the elephants and other animals and speak with them to predict the rainy and amount of harvests. When colonialists introduced the tsetse fly act, many forests were cleared. This therefore led to the disappearance of the customs and tradition said above. It was added that the policies caused the disappearance of the animals which were found around the homestead of the Sukuma (Ntimba, 2011 op cit). These animals like "*Mbushi"* and leopard were used in ritual activities. Some of these animals are found in the Serengeti National

Part where the Sukuma have no access at all. It is said that the leopard's skin was highly demanded by traditional healers for ritual matters (Maganga, 2011).

Based on the discussed interviews F. Nelson and Sandbrook have directly revealed out the indigenous cultural aspects practiced before the colonial environmental conservation policies in the region by pointing out that there were taboos and restrictions on gathering of plants, which limited to some degree the harvesting of plant resources. Some taboos prevented women and young people from cutting down certain trees. Menstruating women, for example, were prohibited from collecting medicinal plants; it was believed that if they did so the healing power of the plants would be reduced (Fred et al, op cit). These taboos ensured the conservation of many species. In many communities, big trees were not cut for domestic purposes; but only small shrubs, reeds, and grass, which regenerate quickly. These were collected for such purposes of building houses, kraals for animals' night keeping etc. Among the communities in the Lake Victoria basin aquatic plants -such as papyrus reeds and water reeds commonly used in making basketry, sleeping mats, fish cages and for thatching roofs were harvested sustainably (Ibid). These practices were abandoned when the colonial environmental conservation policies were introduced in the region. Some of the policies instructed the natives to clear the forests on the assumption to eliminate the tsetse flies and put free the region from tsetse borne diseases that made all taboos invalid Perter, (2011).

It was also revealed by the interviews that before the colonial domination in Shinyanga, there was a forest area called *maswale in* Bariadi. This forest contained

medicine trees and fruits like *mkuyu* and *mkwaju.* Traditionally people were healed through these trees (Budoya, 2011, Ntimba, 2011 and Joseph, 2011). The colonial environmental conservation policies affected this relation. Cutting of trees, affected the *maswale* forest area were the traditional medicines were found before (Ibid).

Correspondingly, one of the interviewees in Shinyanga, commented that before colonial policies on the environment, there were special grasses found in the forests that were used to make small baskets in Sukuma language were called "*itangwa/jidabuka"* these baskets were used for collecting grains from the farms by the Sukuma and Sumbwa communities. When the colonial environmental conservation policies were introduced a especially tsetse fly act, that forced people to clear the forests and bushes, the said grasses totally perished *(Ibid).*

Plate 10: Small Baskets Called "Itangwa/Jidabuka

The above picture shows one of the small baskets called "itangwa/jidabuka"which are made up of grasses and ropes. Culturally these baskets were used for collecting grains from the farms by the Sukuma and Sumbwa communities. These grasses are not available now. The picture was taken from Shinyanga at Environmental Museum (Maarifa Centre) during the fieldwork, 19/012/2011.

Plate 11: Leopard Skin

The above picture shows Leopard's skin that was used as a carpet by the tradition healers when make incantation to the ancestors spirits. This picture was taken from Shinyanga at Environmental Museum (Maarifa Centre) during the fieldwork, 19/012/2011.

Detailed information was given out from an interview held in Shinyanga that colonial environmental conservation policies affected the culture of the Sukuma communities. Before the coming of the colonial control in Shinyanga there were

some areas called *"yabujije"* It was believed that these areas (forests) bring rainfall and the areas were used for worshiping the ancestors' spirits. When the colonialists introduced environmental conservation policies, people were forced to cut trees so that tsetse flies could not be accommodated. It was from this an exercise, where the culture of the Sukuma was affected (Ntemi, 2011).

In another view, an interview made in Shinyanga revealed that the impact of environmental conservation on cultural practices had affected many things. Some of the animals which were used in ritual activities were not accessible as many forests were conserved and those which were not were highly affected by the tsetse fly act that demanding the clearing of the forests as the way to remove tsetse flies. Animals which were not seen were like lion, leopard and *mbushi* and some other body parts of animals like horns were highly needed for healing processes. These animals were used by traditional healers.

Based on the above interviews, Koponen in his analysis advocates that colonial environmental conservation policies resulted into an untenable situation in African rights seemed to be simultaneously eliminated and protected (Koponen, 1994 op cit). Apart from animals some tree species were not available because of the above mentioned reasons. Some of these tree species were used for medicine. One of the examples of these trees is the small roots of *Acacia tortilis* which are burned and the smoke inhaled to clear colds and coughing. The fresh pods are boiled in water, and used as a general preventive medicine; and its shade from the tree is very important

for people, and for lactating livestock to produce enough milk for people and young calves (Menge, 2003:11).

Another view in Shinyanga revealed that impact of environmental conservation policies was seen in land use whereby the land used to grow indigenous crops like millets and soghum was used instead to grow exotic plants and other cash crops like cotton. Cultivation of millet and sorghum represented an African traditional crops and agriculture (Ntindigwe,2011).

In a different observation it was said that there was an animal called *"Negele"* (honey heater). The skin of this animal is used for the Sukuma divine. Therefore, the policies reduced and restricted the Sukuma from getting such animals and trees for medicine (*Ibid).* The same idea was given by one of the interviewees in Shinyanga who was quoted as saying "the colonial policies restricted people from getting trees for medicine and some animals for rituals. "Iam one of the traditional healers who have been affected by these practices" (Kobela, 2011).

Plate 12: Skin of an Animal Called *Negele(Honey eater)*

The above picture was taken from Shinyanga Environmental Mesium (Maarifa Centre) during the fieldwork conducted on 19/12/2011. This is a skin of an animal called Negele (Honey eater) used for divine activities for the Sukuma, Sumbwa and Nyamwezi.

Plate 13: A Traditional Doctor at Mwanyahinya Village, Meatu District-Shinyanga

The picture was taken in Meatu-Shinyanga at Mwanyahinya Village. This is one of the traditional healer in the village. He introduced himself as Gayunzulu Kobela. (Fieldwork conducted in Shinyanga 06/04/11)

Plate 14:Cultural Instruments

The above picture shows some of the cultural instruments used by witchdoctors that related to the environment. Some of these instruments are the horns used for healing process. This picture was taken from Shinyanga at Environmental Museum (Maarifa Centre) during the fieldwork, 19/012/2011.

In another observation by the Annual Game Department Report, it was said that by 1950's the tension between wildlife and people were growing. For instance Game Ordinance of 1951 revealed that in 1959 the Serengeti national park was recognized in an arrangement that resulted in re-location of resident Maasai pastoralists from the park. A new national park ordinance passed that all living in the Serengeti and any future national parks areas were to be evicted in these areas and establishing an important precedent as the colonial era moved towards its close (Annual Report, 1956:6) It was also said in Shinyanga that the environmental conservation policies

led to the disappearance of the traditional crops and animals which were used in ritual practices. This impact was highly contributed by deforestation done by the colonial policy of tsetse fly control from 1920s. The policy involved clearing of the forest so that tsetse flies were to be eliminated (Gimba, 2011).

In this view, L. Lendgren contributing by giving the types of exotic trees that was introduced by the colonial government in the forest policy. Lundgren puts that reservation was also made for large tracts of miombo woodland to secure the supply of the valuable *pterocarpus angoensis (*Lundgren, op ci). The major forestry development during the British time was the systematic introduction and trial of exotic trees suited for plantation production. The main species were *pines, cypresses* and *eucalyptus (Ibid).*

Based on the above articulation, the same experience was witnessed in Shinyanga that before the colonial domination in Shinyanga, there was a certain well around the forest in Bariadi called "*habia"* it is said that water never dried because the taboos restricted people from cutting trees around the well. This well was largely used as a worship place where people prayed to their ancestors' spirits. When colonialists came in Shinyanga introduced many environmental conservation policies (Ntimba, 2011 op. cit). One of the policies introduced was tsetse fly policy that directed people to clear the forests so that tsetse flies could not be accommodated. Implementing this policy, many forests were cleared. Therefore, the "*habia"* well dried and people could not use the area for rituals and worship again (Ntimba, 2011 op cit). In the same line of argument, it was said that clearing of the forests that was

insisted by the tsetse fly policy made disappearance of animals like elephants. An elephant stool was used for curing children's disease among the Sukuma (*Ibid).*

Plate 15:Elephant Bones

These are some of an elephant's bones that remained after its death. This was caused by clearing of the forests in Shinyanga as it had been instructed by the tsetse fly Act from 1920s. Many elephants died because of the absence of food from the cleared forests. This picture was taken during the field work that was conducted in shinyanga, 19/12/2011

Another observation was witnessed in Shinyanga that the environmental conservation policies affected the culture of the Sukuma. One of the policies that affected the Sukuma's culture was overstocking policy. It was through overstocking policies where the cattle were reduced claiming that were the source of soil erosion

and soil infertility. This programme reduced large number of cattle. It is well known that cattle have many uses in terms of cultural aspect. Cattle's hides were used to make drums that are used during the ceremonies. Its tail is used by the traditional healers and dancers. And all bride prices were paid in terms of cattle. Therefore, destocking affected the number of cattle and their related cultural practices (Koyo, 2011). Saba Naungula in Shinyanga has provided a deeper insight when he commented that environmental conservation policies on overstocking during the colonial period affected many pastoralists. For them cattle is their pride. It is noted that cattle and sukuma culture are not separable (Nungula, 2011). Cattle cover all the Sukuma's life style. Some of the Sukuma do use cattle's hides to cover dead body during the funeral. For the Sukuma, it was perceived that the reduction of the cattle had direct impact on their culture (Ibid). It was added that medicinal herbs from the forest were not well obtained. Food habit changed from traditional crops to the newly introduced varieties. The policies also disturbed the grazing pasture areas where cattle were to be grazed. As it is well known that for the sukuma cattle is of vital importance as it covers all his aspects of culture like bride price, shelter (skins), farming system through using manure. All these were limited by over stocking policies (Mwabuma, 2011).

In another observation the interviewees in Shinyanga commented that one of the colonial environmental conservation policies that affected the Sukuma was proclamation of the Serengeti National Parks and later on Maswa Game reserve. These reserves restricted people from using wild animals and plants where they could get traditional medicine and some animals for ritual purpose. To enter in the

reserve it required a person to have a special permision. Whoever found in the reserve without the knowledge of the colonial authority was to be purnished by fines or jail. Therefore, the policies kept away the natives from their environment where their cultural practices were done (Kisusi,2011)

The interviewees in Shinyanga commented that the colonialists did not accept the way people conserved the environment. They saw that the natives as environmental destroyer. It was from that perception, colonialists introduced environmental conservation policies. Another impact on the Sukuma culture was witnessed after the proclamation of Serengeti National Park. This had many effects to the Sukuma's culture, since it restricted the Sukuma from getting animals for the rituals and tree species for medicine (Masanja, 2011).

The same observation was commented by the Annual Report of the Game Department in Tanganyika Territory shows that the conservationist's concern was about excessive destruction of wildlife species in the East Africa protectorate. This led the colonial government to promulgate conservation policies to protect unique wildlife attractions and species. African modes of natural resource use were perceived to be unprogressive or barbaric and hence to be eliminated local people were prohibited from entering the park and utilizing the existing park resources including pasture wildlife, water fuel wood upon which indigenous African communities depended on for subsistence and African traditional hunting was banned. African culture had no any chance to be practiced (Annual Report, 1952 op cit). Based on the above assertion, Adams (2003) puts that declaration of the

national parks in Rhodesia in 1926, did not recognize the traditional hunters and gatherers. It was said that Rhodesian shrine and sacred existed where the park had been created in which the natives were not accessible to use them. This shows how the policies affected the natives' culture (Adams, 2003 op cit).

A similar view by H.I Majamba stated that the advent of colonialism on the African continent had a profound impact on, among other things, killing of traditional hunting rituals of pre colonial societies in the region. Majamba convincingly, argues that the colonial wildlife policy aimed at benefiting the whites and disvalued Africans ownership of the natural resources (Majamba, 2003:648). He adds that in Tanzania for example, the policy did not take into account the fact that some community members had to hunt specific animal species to fulfill cultural and traditional rituals *(Ibid).*

Based on Majamba's assertion, one of the interviewees in Shinyanga gives a deeper insight by articulating that the traditional Sukuma cultural practices were generally built into ways of conserving and protecting natural resources against over exploitation through the use of taboos and totemic affiliation with localities and wild flora and fauna species. The practice also involved devising institutions that can oversee and regulate resource use on a sustainable basis (Kisenge,2011). When colonialists came these practices had been affected by the new modern policies that were directed to conserve the environment. These new polices, saw that the Sukuma did not know how to protect and care the environment. Therefore, these policies

disturbed the way Sukuma conserved the environment in relation to their culture (Ibid).

6.3 Comperative Analysis

The colonial environmental conservation policies had affected culture of both the Luguru and the Sukuma of Morogoro and Shinyanga respectively. It should be noted that the more colonial environmental conservation policies, the more impact on cultural aspect. This was evident in Shinyanga region when the Sukuma had seriously been affected by the colonial environmental conservation policies. It was from the same policies that affected the Sukuma culture. All environmental conservation policies in Shinyanga played a role in destroying the Sukuma culture but overstocking policy seemed to be the worst policy tha affected the Sukuma culture. In Morogoro the Luguru were lagely affected by forest conservation policy as they engaged in hunting activities.

Based on the discussion of this chapter, it can be concluded that capitalism in its development, aimed at consolidating the system by exploiting the resources of Africa. To make these resources, existing in a sustainable use, colonialists imposed various policies that moderated the use of resources (forest, soil and games). It was the implementation of these environmental conservation policies that fundamentally affected cultural practices among the Luguru and Sukuma.

The chapter has seriously shown how the pre colonial social formation used their culture in conserving the environment. When the colonialists came they ignored

these experiences and introduced their policies that divorced the natives from their nature. This practice continued until the country got independence as will be discussed in the next chapter on environmental conservation policies in post colonial Tanzania.

CHAPTER SEVEN

7.0 ENVIRONMENTAL CONSERVATION POLICIES IN POST COLONIAL TANZANIA

7.1 Introduction

In the previous chapters we have seen various colonial environmental conservation policies. These policies spanned the period from 1920s to 1959. It has been shown that the policies focused on wildlife, soil and forest conservation. This chapter discusses environmental conservation policies in post colonial Tanzania focusing on Morogoro and Shinyanga regions from 1960 – 2000. In the first place the chapter explains the adoption of the colonial environmental conservation policies by the post-colonial government (Tanzania).

Secondly, this chapter shows the impact of villagisation policy and related policies on environment thirdly, the chapter discusses the role of Non-Governmental Organization (NGOs) on environmental conservation and lastly its conclusion.

7.2 The Adoption of Colonial Environmental Conservation Policies by the Post Colonial Tanzanian Government

7.2.1 Wildlife Policies

This section attempts to examine some of the colonial environmental conservation policies that were adopted by the post colonial Tanzanian government. The policies adopted were specifically focused on wildlife and forest. Therefore, in regard to this section, the discussion starts with wildlife.

It was found that wildlife policies had been adopted when the country got her independence in 1961. In the same year the government of Tanzania had only three game reserves and nine forest reserves. It was claimed that after the independence the policy of the government was to develop and expand the forest reserves and the national parks by using the same colonial policy framework (Tanzania, 1998:3 Sera za Wanyama pori). Tanganyika had incomplete policy on wildlife therefore; the directive and advices of protecting the games reflected the colonial policy *(Ibid).* It was found that the wildlife conservation Act of 1974 reflected the colonial conservation ordinance of 1951. The latter used much of the provision of the former legislation. In this adoption, very little difference has been noted from the former legislation. The WCA, which remains in force as the main wildlife legislation in the country today, sustained and intensified the colonial practices of restricting local wildlife use and consolidating state authority. The WCA did not seek to reinstate the rights to traditional use of wildlife or enable local management and access to the resources. It provides no clear exceptions for hunter-gatherer tribes to continue using wildlife as were made in the British wildlife laws. The WCA does give the Director of Wildlife with discretionary authority to allocate hunting rights or licenses to an 'Authorised Association', which can include a local village, but this provision has rarely been used to allow rural communities access to wildlife in un protected areas (Hurst, op cit).

7.2.1 Morogoro

Interviews conducted in Morogoro show that after independence the wildlife policy has not changed since the restriction on wild animals was still in force. They added

that the policy still ignored local communitys' rights on accessing wild animals (Musa, 2011). Correspondingly an interview held at Doma in Morogoro, goes further by revealing that local communities have been closer to these reserves even before the policies were anacted during and after colonial domination. The policies therefore, separate people or natives from their nature. It was expected that independence would bring out these differences, worse still the same practiced were inherited (Maliuza, 2011). The Annual Report of the Game Department, in this view, posited that post-colonial policy on wildlife in Tanzania alienated local people from wildlife (Tanganyika Annua Report, 1962). The policy view people as a threat to wildlife. It was also found that local communities see wildlife as a threat to their crops, livestock and their lives. Based on this argument, an interview conducted in Morogoro revealed that wildlife policy is a threat to the peasants and human lives. It was said that elephants killed some people and destroyed crops. For example, Mzee Charles Kabuma and Shabani Kigwata were injured by an elephant from the Mikumi National Park. It was also added that Mr. Abdallah Rajabu Massenda was killed by the elephant (Kiasa, 2011 op cit). It was added that the same incidences mentioned above took place even before the independence. Ireneus (1998) and Hahn (2011) are not much different from Kilasa (2011) (Interviewees) when they put that Tanzania after independence had put the final adjustment to the reserve's boundaries that aimed at protecting migratory elephants. They go further by narrating that it is estimated that more than a quarter of the food crops produced near the protected areas are destroyed by ruinous animals, and an average of ten people are killed by wild animals annually. Having these calamities, the law does not provide for compensation for the damages inflicted. This led to the conflict between wildlife

authorities and the villages. This reduced the number of elephants from more than 100,000 in 1976 to below 30,000 in 1989 (Ireneus, 1998:2) .

Supporting the above articulated assertion, Kanyatta puts that even after Tanzania got her independence its leaders continued with the colonial policy of setting aside considerable portions of their territory to protected areas. In following the colonial policies, Tanzania leaders continued to alienate and marginalize rural people from the control of the natural resources in protected areas. This was implemented through eviction and legislation that prohibited traditional forms of wildlife utilization (Kanyata, 2006). Kanyatta (2006) goes further by pointing out that this act has resulted in considerable resentment by many local people about wildlife conservation *(Ibid).*

The involvement of the community and reducing the reduction of the wild animals, the Director of wildlife used the Wildlife Conservation Act of 1974 (that had colonial legacy) to accommodate changes including approving and issuing sustainable hunting quotas to the communities and protected communities from being attacked by wild animals. Another observation shows that after the Tanzania independence the government continued to implement the colonial policy through Wildlife Conservation Act of 1974. Under the previous law, the Fauna Conservation Ordinance of 1954 asserted that some communities still have the right to carry out hunting tradition methods (Siege, 2001:16). It was further found that the conservationists' games wardens' attitude, regarded every local villager as a potential poacher. Therefore, the natives were intensively restricted *(Ibid).*

Through interviews conducted in Morogoro it was revealed that there were no changes in the forest policies as soon as the country got her independence, what changed was just the names of some forests and date in their operational (Kisegeyu, 2011). This assertion is supported by the Annual Report of the Forest Division of 1961 and 1962 which showed that after the independence many forests were reserved under Local Authority Forests that were reserved occupied more than 4,424 square miles (Tanganyika Annua Report, 1961 op cit).

Another observation shows that forest policies of 1961 and 1963 had not changed from colonial forest policies. The legislations used mainly reflected the Forest Ordinance of 1957 (cap, 389) with regard to the conservation and management of forests and forest produce throughout the country. It shows that the policies on forests from 1961 to 1962 were much directed on reserving more forests than before (Tanganyika Annua Report, 1961 op cit).

It was insisted that the forestry colonial policy of 1953 and the Forest Ordinance of 1957 were adopted by the post colonial Tanzanian government in early 1970s with the objective of involving local communities in the management of natural resources. Therefore, because of s challenges that faced the country like shortage of funds and social economic changes, the said objective was not accomplished. This made the adopted policies to have very little differences from the colonial forest policies. It was asserted that in 1998 the government revised the previous policies and the national forest policy was approved *(Ibid).*

The National Forest Policy of 1998 has rested its emphasis on participatory management and decentralization. Therefore, the overall goal of the new policy was to enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations (Tanzania Nationa Foresr, 1998). The said goal has mainly intended to deviate from the colonial forest policy that was centralized by the colonial government. Since the goal was not realistic it was very difficult to be different from colonial modality.

7.2.2 Shinyanga

Interviews conducted in Shinyanga asserted that the policy that was used to proclaim the Serengeti National Park was not changed. The Park still restricts the natives to enter. One of the interviewees convincingly argued that the policy restricted even for the pastoralists to graze in the Park (Ntobo, 2011 op cit). It is evidently shown that some people used to graze their cattle during the night in the National Park escaping from game policy that restricted them from entering in the park. The Policy does not allow hunting activity in the park. Therefore, all these restrictions do not differ from those of the colonial period (Ibid).

Based on the above said assertion from the interviews, Kanyatta (2006) reveals that national parks during and after colonialism have invaded the areas for settlement, cultivation, livestock grazing and collection of fuel wood. He added that the policy in some areas brought the conflict between the government and the local communities when they decided to encroach the protected areas including national parks (Kanyata,

2006:4-5). In his assessment, Kanyatta criticized the wildlife policy of 1951 adopted by the Tanzanian government that it did not involve the local people in conserving the environment. He further showed evidence that the protected areas and laws on their own can not protect the wild animals in the long term without the involvement of their human neighbours. It is believed that local people see wildlife in different perception as opposed to that of those who live in close proximity to them *(Ibid).*

In a different way, one of the interviewees in Shinyanga region puts that Community Based Conservation gives a sense of ownership although many communities responded negatively. It is very difficult to recognize the owner of the natural resources included the wild animals (Mwakisu, 2011). He further commented that the community has no a sense of ownership on environmental conservation (Mwakisu, 2011 op cit).

Correspondingly, Marshall W. Murphree lamented on the new approach of Community Based conservation (CBC) that does not fully indicate the real owner of the natural resource. He goes further by describing the notion of CBC that is no longer a new idea. It is just the reflection of the colonial environmental conservation policy with its strategy of taking large tracks of land away from rural peoples. To Murphree this was, in effect, conservation against the people therefore, independent governments changed this approach as ‘conservation with people’ it aimed at involving the community in conserving their environment. This approach is still valid in this contemporary environmental conservation programme. This approach (Community Based Conservation) reflects a new recognition of the environmental

insights of Africa's culture (Murphree, 2001:5). This approach insists on 'community participation' based on assumption that this approach has recorded successes. But it has some shortcomings. It is very astonishing to see that the successes recorded are isolated and contingent; externally initiated and heavily subsidized by the outside world. Therefore, the approach does not identify the ownership of the natural resources *(Ibid).* It is clearly seen that the same initiators have used colonial orientation in emphasizing Community Based Conservation.

Another observation is witnessed in the wildlife policy of Tanzania that has little difference from the colonial wildlife conservation policies. Its main difference has been seen in their objective that they generally aim at protecting the environment on sustainability and socio-economic transformation. Generally the policies wanted to maintain the great biological diversity endowment, which constitutes an important economic base to the nation (Gibson 2003:17). What is seen to be a difference is that the wild life conservation policy of 1998 directly involves local communities and private sector in managing the controlled areas. While the colonial wildlife policy involved very few communities especially those who depended on games as source of food.

It has been noted that the wildlife policy of 1998 has still maintained colonial legacy. For example, the tradition rights over access and use of wildlife resources by rural Tanzania were terminated following transfer of proprietorship and use-rights of resources from the local communities to the state (Kidegesho, 2008:3 op cit). This is

an exercise that reflected the colonial wildlife policy that removed the local communities from their natural environment.

On forest and land the post colonial government of Tanzania inherited colonial environmental conservation policies as well. The first forest national policy was reviewed in Tanzania in 1963. This revision reflected the colonial forest policy of 1953. It was instructed that the forest and tree resources would be managed sustainably to meet the needs and desires of the society and the nation (National Forest, 1998 op cit).

The big change was witnessed in 1998, when the Tanzania government approved its revised forest policy. This places strong emphasis on participatory management guidelines which are incorporated in management plans. Villagers and communities are supposed to select, and set aside degraded and village forested areas to be conserved (Mlenge et at, 2003:8). In the same line of ideas, one of the interviewees in Shinyanga was quoted as saying "There is very little difference between the colonial and post colonial forest policies, the main changes in post colonial forest policies is the involvement of local communities in preserving the forests" (Kalenga, 2011).

This was also revealed by an interview conducted in Shinyanga by asserting that it is difficult to see the difference between the colonial forest policy and this of the post colonial times, the post colonial policy puts more emphasis on involving people in conserving the environment (Limbu, 2011). The main weakness comes to the local

communittys' awareness on the distribution and the ownership of forest resources and their produce. This means that even during the colonial period the local communities did not access the said rights. It is asserted that colonial policy on forest was largely vested on exotic plantations. In one of the post colonial Tanzanian government's forest policy objective, was that the exotic plantation forests will be replaced by the natural forests *(Ibid).* The said objective does not emphasize the total elimination of exotic plantation rather it directs on the reduction of them. It is clearly observed that this is not because of the poor implication. It is openly shown that very few areas in the country have managed to replace natural forests by the exotic plantation in which some trees like *vangueria infausta* were planted. For example here in Shinyanga the efforts were successful in few areas (Tungu, 2011).

Another observation shows that the post colonial Tanzania government maintained policies which were even unpopular with the people. For instance, anti-destocking campaign was used by the nationalist leaders as an emphasis point for the people to struggle against the colonial domination. But after the independence the government adopted the same policy in dealing with the environment in Shinyanga (Kamata, 1993:65 op cit).

The 1962 Tsetse Act and Range development management policy was introduced in 1964. These legislations were either directly aimed at solving one of the environmental problems or indirectly and unintendedly affected the environment in the process of its implementation. For example, the major aim of the Tsetse Act was to eradicate the flies and ensure safety for both livestock and human being from

typanosomiasis and sleeping sickness respectively. During the colonial era this involved bush and tree clearing leading to deforestation. Tsetse fly eradication has been held as one of the contributing factors to degradation of the environment in Shinyanga (Kamata, 1993 op cit). Therefore, this policy was implemented even during the period when the country got her independence.

Range Development Act drew its inspiration from ideas of people like Laisen and others such as World Bank who considered traditional land use and management as primitive and bad to the environment *(Ibid).* The broad aim of the act was stated as: providing for the conservation, development and improvement of grazing lands. This was to be achieved through different means which included control of entry into residence and settlement scheme within an area declared as a range development, control of grazing and cultivation and protection of natural resources and formation of ranching associations and ranchlands.

The ranching associations, once formed, were expected to manage and control ranchlands for the benefit of measures, and develop the natural resource management policy (Kamata, 1993:68 op cit). Below is Range Development Act 1964 on Control of grazing and cultivation and protection of natural resources as was quoted as saying:

> Commission considers it necessary or expedient so to do for the purpose of the conservation of the soil of, or the prevention of the adverse effects of soil erosion on land in,a range development area or any part there of, or otherwise for the rehabilitation, protection or improvement of the natural

resources there of, it may make special orders or, with the prior approval of the Minister, general orders— (a) prohibiting, restricting or controlling the use of and for any agricultural purpose including the keeping or grazing of stock and other domestic animals; (b) prohibiting, restricting, limiting or controlling- (i) the breaking or clearing of land for the purposes of cultivation; (ii) the firing, clearing or destruction of vegetation including Stubble; (iii) the use of agricultural implements or machinery; (URT,1964)

(iv) The use of dams, wells, boreholes, waterholes, watercourses,

Streams, rivers or lakes;

(v) The introduction or removal of flora or fauna;

(vi) The introduction, grazing, watering or movement of stock and other domestic animals;

(vii) The gathering of natural produce;

(viii) The exercise of any rights in relation to forest produce determined

Under the provisions of the Forests Ordinance; *(Ibid)*

(ix) The carrying or use of weapons, snares, traps, nets or poison;

(c) Requiring, regulating or controlling-

(i) The afforestation or re-afforestation of land;

(ii) The protection of slopes and closed areas;

(iii) The drainage of land including the construction, maintenance

or repair of artificial or natural drains, gullies, contour banks,

terraces and diversion ditches;

(iv) The uprooting or destruction of any vegetation;

(v) the removal, dipping, inoculation, injection, branding or

> marking of stock and other domestic animals and the reporting of the signs of any animal disease;
>
> (vi) The registration of brands and stock marks and the registration of ownership of stock;
>
> (d) Prescribing the method of cultivation of land;
>
> (e) Prohibiting, restricting or controlling—
>
> (i) The construction or extension of buildings or works, or restricting or controlling the sitting thereof; (ii) the construction or extension of roads or tracks, or restricting or controlling the sitting or alignment thereof: Conservation of soil and protection of natural resources (Parliament Act, 1964).

The above policy shows some of the restrictions that had an impact on the environment. It therefore ignored the indigenous conservation practices that had been used for many years. The Act reflected the colonial policy especially on the livestock keeping that restricted people to have many herds in the name of protecting soil erosion.

What was expected of the Range Management Act as it was for the Sukumaland Development Scheme have included control of diseases improvement of pastures, provision of water facilities and improvement of livestock quality and thereby raise the unit value of cattle. The result of all this would eventually fall *(Ibid).* This would have a positive effect to the environment. The ranching associations as it happened to the Sukumaland Development Scheme failed. The major reason for this was the fact

that ranches had been ill conceived. They aimed at replacing traditional pastoralism with modern livestock keeping. As the matter of fact, they did not take into consideration the nature and type of the ecosystem *(Ibid).* Another observation shows that the policy and the emphasis on cotton production during the post colonial Tanzania (which was a continuation of a similar policy during the colonial era) has also aggravated the problem. This was largely commented by one of the interviewees in Shinyanga who puts that after independence, in a bid to expand and improve cotton production, the state introduced block farms in Shinyanga region. In these farms, peasants were required to follow advice on cotton cultivation in exchange for assistance in cultivating their farms using tractors supplied by the Ministry of Agriculture (Ntimba,2011 op cit). In the same line of argument Kamata added that between 1966 – 1967 farms increased by 24.8 percent in Shinyanga district, 3.0 percent in Maswa District, and 100 percent in Kahama. The result of this had been expansion of acreage in land (Kamata, 1993:70). In relation to the interviews conducted, this had adverse effects on the environment in terms of deforestation and soil degradation. The need for more export to enhance foreign exchange earning pushes behind the whole concept of sustainable development which implies better and cautious utilization of the environment to ensure a permanent life supporting system for the present and future generation (Interviews Shinyanga, 2011).

At this juncture it seems that the government's policies directly concerned and indirectly affected the environment. On the one hand the government wanted to solve the problem but on the other hand destroyed the environment. It was observed

that the post colonial government had also focused on the number of livestock's and their relationship to the environment. This understanding is a continuation of a similar conception which pre-dominated the colonialists' attempts to solve the environmental problem in the region *(Ibid).* Based on the above assertion in the 1960s environment conservation was firmly linked to destocking as a major solution. There was resistance from pastoral peasants regarding this urge. Despite this resistance, the state was not prepared to abandon the policy and in 1975 it was talking of a 10 percent destocking to solve the problem.

7.3 The impact of Villagization Policy on Environment

As it has been discussed before that the post colonial Tanzania inherited colonial structures, policies and villagisations. Following the colonial impact, on economic and political development during the colonial regime, the Tanzania government adopted Socialism and Self Reliance. This ideology had an impact on environment through Vigillasation Policy of 1975. Although it was not deliberately intended to cause harm to the environment, its effect to it was very bad. The most affected groups were the pastoral peasants. The most notable land reform that affected traditional land use systems in rural lands has resulted from the 1970s Ujamaa Villagisation. State land was demarcated through legal or administrative procedures in force during the Villagisation programme from 1973 to 1978. Due to Villagisation, land insecurity in village lands increased because local people's control over their traditional land and natural resources was weakened. This created many unseen land disputes throughout Tanzania (Interviews in Shinyanga and Morogoro, 2011).

Most of the villages were conceived as agricultural villages. There was no concern for the livestock keeper in Shinyanga and in other places of Tanzania. As a result most of the conditions necessary for traditional rangeland management no longer existed in a village setting *(Ibid).* Similarly, Mlenge puts that the introduction of "Ujamaa" or villagisation, by the Tanzania government in 1974 as a new form of centralized authority destroyed the traditional community-level regulations that once limited the over-use of rangelands. Thus, people started to leave the region in search of better grazing land for their livestock (Mlenge, 2004:5 op cit). Consequently, it resulted to a serious environmental degradation by the early 1980s, which forced many people to leave the region in search of better pasture land for their livestock (Kisegeyu,2011 op cit).

7.3.1 Morogoro

Based on the above assertion, an interview in Morogoro revealed that villagisation affected the environment; many trees were cut to rebuild new houses. It was also said that many forests were cleared to give room for new settlement (Kamata1993:69 op cit). In the same line of idea, Kamata (1993) commented that unintended effect of villagization, to the environment relates to massive destruction of forests and other natural resources. This resulted to many people to be forced to settle into new areas which compelled them to clear bushes and trees. The cultural aspects of the people and their environment were jeopardize force was used to settle people in areas which were considered to be sacred (Kwabi, 2011). This led to indiscriminate use of resource such as trees and other species to the detriment of the environment. Therefore, this contributed to the collapse of the traditional institute of managing and

protecting the environment *(Ibid).* It was also asserted that the vilagillisation policy had affected the environment whereby the natives were required to cut the trees for new farm and settlements. Some of the local community moved from dispersed settlements to the newly established settlements. For example, the local communities moved from Mtukila, Magali and Malevu Villages to the newly established villages of Mtamba at Matombo (Silili, 2011)

In Morogoro, villagization necessitated the intensification of land use, a practice that was unfamiliar to most of the people and unstable for fragile environment. The result has been the spread of serious cases of soil erosion and rapid destruction of the natural resources *(Ibid).* Based on the above assertion, an interview conducted at Matombo, revealed that villagization policy destabilized the natives' settlement structures. This resettlement had negative impact on the environment. For example, farmers cleared new farms for cultivation and that caused soil erosion in some parts, also, trees were cut so as to build new houses. It was also asserted that some of the wild animals like lions and elephants moved away and some were killed. The interview revealed that Matamba village at Matombo was badly affected because many isolated homesteads were forced to go to Matombo to form the Ujamaa village. For example, people from Magali, Mtutula, Malevu areas/homesteads were forced to form the single village at Matamba (Dilunga, 2011).

7.3.2 Shinyanga

Interviews conducted in Shinyanga revealed that the environmental conservation policy made an emphasis on cotton production during the post colonial era (which

was a continuation of a similar policy during the colonial rule) have also precipitated the problem. This was insisting economic status. Thus by self reliance policy that the peasants must increase cash crops production so that they could uplift their, it brought serious impact on environment by aggravating deforestation and soil erosion (Maganga,2011 op cit).

Mlenge gives a deeper insight by asserting that that when Tanzania government nationalized all property including land in the mid 1970s, many traditions with various forms of authority over distribution and control of common resources were abandoned. In the years that followed in Shinyanga implementation of the Ujamaa Policy, promoted widespread confusion over how natural resources issues could be handled (Mlenge, 2004:7 op cit). Therefore, in the prevailing environment of under insecure rights to land and other natural resources, over exploitation became even more widespread. Every one cared about the immediate needs at the expense of long-term conservation of land, environment and other natural resources (Mwakisu, 2011 op cit).

Correspondingly, interview conducted asserted that Tanzania adopted the policy of villagilazation in 1967 as part of a national strategy for development *(Ibid).* It was assumed to be the best means by which the welfare and standard of living of the majority of people in rural areas could be improved since the majority of the population lived in isolated homesteads, large scale resettlement was recommended as the first step in the direction of modernization (Gimba, 2011). This policy entailed, among other things, the resettlement of all households outside areas of

dense settlements into villages. By 1975, it was estimated that over 75% of the national population was resided in such villages. Judging from the effects of the implementation of the villagization policy, it was that major environmental implications of large-scale resettlement were not fully considered before the plan came out *(Ibid).* The extent of deforestation resulting from implementing this policy during this period remains unclear *(Ibid).* Also, some farmers who would have moved new villages in the preceding period would still open new farms, probably by encroaching more forests and woodland. Consequently, the poor location of new settlements on land of inferior quality led to a sharp decline in agricultural production in the years that followed villagization

Interviews conducted revealed the same by claiming that the Villagilazation Policy had impact on environment, it made natives resettlement whereby people were forced to be grouped to the special areas that had been designed for the Ujamaa village (Zwililo, 2011). As it is known in Shinyanga that the Sukuma, before the policy, lived far apart from each other because of their cattle and agricultural activities. Therefore, during implemention of the policy, the environment was affected, specifically the forest and soil. For example, at Kilulu village around the mission areas, the environment was highly destroyed to give the chance for implementing the villagization policy (Kibyala, 2011). Mhando has the view that vilagillisation embraced the settlements of the rural population and their environment. He goes further by pointing out that it was the farmers who were directly affected. It was that impact that affected the environment as farmers struggled to get new farms through clearing the forest (Mhando, 2011). Mhando

added that through vilagillisation policy Tanzania population increased and that had an impact on natural and manmade environment.

Based on this study Mhando, gives some population figures in Morogoro and Shinyanga Regions that show population increase from years to years that brought effects on land degradation and depletion of natural resources (Mhando,2011 op cit). For example in Morogoro, in 1967 its population was 682, 700 in 1978 it had increased to 939,264 and in 1988 it was 1,212,659. In Shinyanga it was found that in 1967 its population was 899,468 while in 1978 it was 1,323,535 and in 1988 it had risen to 1,760,869 *(Ibid).*

The mentioned figures by Mhando indicate that there was high increase in population in Shinyanga than in Morogoro, this also gives an implication that there was serious environmental degradation in Shinyanga than in Morogoro caused by the dense population that emanated from villagization policy.

It was acknowledged that land degradation has been and continues to be a major problem in many areas of Tanzania. Its manifestation is evident in the form of severe soil erosion, siltation and loss of soil fertility. In Shinyanga region for example, measurement of soil erosion loss revealed an increase in the amount of soil loss per hectare from the 1960-1965 and the 1965-1980 period (Mhando, 2011:460). This problem is largely a function of various human activities including overgrazing over cultivation and deforestation (URT, 1964).

Deforestation through expansion of agricultural land and fuel wood contribute to and are the most prominent forms of human activity accounting for deforestation. An interview conducted in Shinyanga, provided a deeper explanation by narrating that changes in population size and its characteristics have an important effect on settlement and land use pattern during the villagization. High population growth triggers more resource depletion and, hence, more degradation (Gimba,2011 op cit.) The food needs of a growing population can be met either through intensification of agricultural production on the land that is already cultivated or through expansion of cultivation into new area. Both processes have ecological consequences that vary from one setting to another (Makomba,2011). Until the 1970s the major means of expanding agricultural production in Shinyanga region was the expansion of cultivation into new lands, typically after the destruction of vegetation cover *(Ibid).* As a result soil erosion reduced the amount of land available for human and livestock use to a large extent. The consequence of such reduction is concentration of human activities in a much reduced land area causing high population pressure on the land leading to high population densities (Matondo, 2011 and Pangangutwe, 2011). The interviews conducted in Morogoro region revealed the same by commenting that the formation of "Ujamaa Villages" concentrated the once scattered settlements in certain selected locations. Many environment implication of the villagization exercise were observed. On the positive side, villagization helped to remove and resettle people from severely degraded areas in the region. On the negative side, the exercise increased population pressure on land and accelerated excessive deforestation within and around the immediate surroundings of the villages (Kioga et al, 2011). Moreover, the exercise stimulated spread of land degradation processes to

the less affected areas. It was asserted that people were removed from Mayungu and Mugoda areas to form a new village at Doma in Morogoro *(Ibid).* Therefore, the concentration of people in the said village for example, caused concentration of resource extraction in specific localities in and around the village (Kioga, 2011op cit). In the same line of ideas one of the interviews in Shinyanga puts that overgrazing, excessive tree felling, farm expansion and land use conflict between the livestock keeping and crop-farming became common events in most villages in Shinyanga during the villagization. It has been observed in Shinyanga that in more densely populated parts of the land, there is less forest cover. This is due mainly to excessive deforestation and expansion of human activities into the forests to meet the increasing demands from population pressure (Kisenge, 2011 op cit). It is asserted that changes in the traditional pattern of activity have brought about environmental stress.

Another observation shows that the villagization policy was the culmination of a long process of searching for the best rural development strategy for Tanzania. During the colonial period and the early years of independence, changes in land use were initially achieved by opening up new areas but retaining traditional agricultural practices. Subsequently, improvement in the agricultural system was considered necessary in order to meet the increasing demand for food and export crops. A transformation approach was therefore proposed whereby modern inputs could be introduced through extension services. Village settlement schemes were established in chosen areas in order to relieve areas with population pressure *(Ibid).* This strategy proved to be an expensive undertaking with very limited returns. As a result, it was

abandoned after only two and a half years of ope ration. However, the idea of modernizing the entire agricultural sector was considered a necessary prerequisite for rural development. It was assumed to be the best means by which the welfare and standard of living of the majority of people in rural areas could be improved. Since the majority of the population lived in isolated homesteads, large-scale resettlement was recommended as the first step in the direction of modernization. Resettlement would also provide the basis for concentrating land and human resources, thus minimizing the cost to the Government of providing basic services *(Ibid).* At the same time, the benefits of co-operative production and use of modern methods of farming would quickly spread and transform the entire national economy.

Judging from the effects of the implementation of the villagization policy, it seems that major environmental implications of large-scale resettlements were not fully considered before the plan was carried out. It was simply assumed that what had prevented nucleated settlements before was the lack of organization and that once this was provided, the benefits of living together in village communities would be more or less automatic. According to the 1978 Population Census, the average population density for the whole country increased by 42 per cent between 1967 and 1978 of the four regions which experienced an above average density change, three - Tabora, Rukwa, and Arusha -are some of the most sparsely populated regions in the country (see Table 4). The factor which has influenced density change at the regional level is mainly natural increase rather than resettlement, which mostly involved intraregional movement of population. The impact of resettlement on the population density has been felt more at the district and subdistrict levels. Local studies have

indicated that over 75 per cent of all movements into villages involved distances of up to 10 kilometres only. This suggests that overall, even more drastic density changes have occurred at the local level over much of Tanzania, particularly in areas which were previously sparsely populated.

This concentration of population has had several important effects on land utilization. Firstly, land-use patterns have undergone considerable change. In some areas, land that was once cultivated and under permanent crops was abandoned and allowed to revert to bush when people were moved into villages. In other areas, marginal land which was previously uninhabited or only used for grazing has been closely settled and the natural vegetation has been replaced by food crops such as maize, cassava, and sorghum. See, where settlements have been established there has been a change from the traditional, extensive use of land to very intensive cultivation and livestock rearing.

The establishment of villages with a central core for dwelling units has increased distances to farms, restricted the traditional practice of shifting cultivation (since all village land is allocated for various uses), and made land a scarce commodity. The longer house-to-field distance has affected the time and energy required to reach fields, the ease of application of inputs such as manure and fertilizer, the ability to protect crops from pests, and the cost of transportation of harvests from fields to the village. Hence, in most villages only the land adjacent to the village is intensely utilized. Third, with the establishment of permanent settlements, an ongoing competition for land between sedentary agriculturalists and pastoral groups has been intensified. In this struggle there is evidence to show that land that was previously

exclusively used for grazing has increasingly been brought under permanent cultivation since villagization, thus pushing livestock keepers to even more marginal lands. The possibility of developing successful mixed farming near or within the village has been reduced at the expense of livestock being moved away from settled areas. This has created in some areas a separation between crop production and livestock development, except in areas where stall feeding is practiced.

Table 4 Regional population density change 1967-1978

Region	**Density per sq. km**		**Percantage change in density**
	1967	**1978**	
Dodoma	17.2	23.5	36.6
Arusha	7.4	11.3	52.7
Kilimanjaro	49.3	68.1	38.1
Tanga	28.9	38.9	34.6
Morogoro	9.7	13.3	37.1
Coast	13.2	15.9	20.4
Lindi	6.4	8.0	25.0
Mtwara	37.2	46.2	24.2
Ruvuma	6.2	8.9	43.5
Iringa	12.1	16.2	33.9
Mbeya	12.5	17.9	43.2
Singida	9.3	12.4	33.2
Tabora	6.6	10.7	62.1
Rukwa	4.1	6.6	60.9
Kigoma	12.8	17.5	36.7
Shinyanga	17.7	26.1	47.4
West Lake (Kagera)	23.1	35.5	53 7
Mwanza	53.6	73.3	36.8
Mara	25.0	33.2	32.8

Source: 1978 Population Census: Preliminary Report, Tanzania

Similarly, it was expressed that by the 1970s Shinyanga was under severe ecological strain, its people feeling the consequences in the form of falling incomes and lost livelihoods. Early attempts at reforestation launched by Tanzania's government, the World Bank, and other agencies largely failed to stem the loss of indigenous woodland and its impact on communities. Top-down, bureaucratic management of projects meant that villagers had little involvement or stake in the success of these efforts. During the 1970s, the socialist government of President Julius Nyerere also adopted laws that increased communal ownership of rural land and encouraged people to live in discrete villages where services could be better provided. Individual *ngitli* enclosures, which many villagers had carefully sustained for food, fodder, fuelwood, and medicines, were no longer encouraged. Indeed, many *ngitili* were destroyed during the period, as the villagization process undermined traditional institutions and practices of making *ngitili* (HASH, 1989).

Therefore, it can be summarized in this section that under villagisation policy, the initial attempts to radically change Tanzania's rural development were, to a large extent, a failure. It is apparent that the mobilization of the populace toward that end was no easy task, and failure was imminent. Debates have persisted regarding long-term effects of villagization, including optimal time use, poor agricultural practices such as over cultivation, and ecological and social effects. The foregoing discussion has demonstrated the implications that villagization had for rural development, demography, and internal migration in Tanzania. It was also noted that the increased resource exploitation had an environment impact on rural areas.

What remains evident, however, is the fact that villagization was introduced and implemented at marvelous speed and scale. Consequently, many stakeholders did not take part as willing participants. United with organizational shortcomings, these circumstances paved the way for its failure, which could not come too soon. It became evident that ill-preparation, inadequate expertise, too much bureaucracy, and inadequate leadership all predicted a doomsday setting waiting to happen. In terms of demography, these efforts at rural development actually initiated the first steps toward reverse migration into urban centers, as rural areas could no longer offer the kind of opportunities for better livelihood long sought by rural residents. In many areas, traditional farming and land tenure systems have been unable to adapt to population pressure and, therefore, have been unable to prevent degradation of the environment.

7.4 The Role Non-Governmental Organization and Community Environmental Conservation Agencies

In the previous section, it was observed that the Tanzania government from 1970s to 1980s was pre-occupied by vigillazation porocess that had affected the environment. From 1980s there was the changing of global relation that seriously emanated from the disintegration of the Soviet Union in Russia. It was during this time when the financial institutions like International Monetary Fund (IMF) World Bank (WB) and World Trade Organization (WTO) took a role of readjusting the economy of the third world countries included Tanzania. These changes signified the collapse of socialism in Tanzania.

It was from these changes, where the approaches on environmental conservation reflected the foreign model conservation approaches under NGOs and other foreign agencies. These NGOs and agencies influenced the communities on environmental conservation in the concept of community based environmental conservation. Supporting the above assertion, in 1987 the German Agency for Technical Cooperation (GATC) on behalf of the German government, rehabilited the Seluos Game Reserves. It also secured a sustainable funding for the reserve, and to significantly reduced conflicts between Selous Game Reserve and neighboring local population. The conflicts were reduced by promoting sustainable wild life utilization as a vehicle for rural development in local communities (Baldus, 2009:16).

7.4.1 Morogoro

Based on the above section, the foreign conservation strategy through NGOs did not consider interests and benefits over the protected environment of the local communities. It showed that the natives were just involved in protecting the wildlife (animals) without considering the impact of the wild animals to the natives' lives. In Morogoro at Doma Village wild animals damaged crops like maize, millet and Sorghum (Kilasa,2011 op cit). It was also noted that elephants and bush pigs are responsible in the crop damaging too. In some occasion, these animals injured people and killed them. This was enhanced by one of the interviewees at Doma who argued that elephants damaged the crops and killed people. For example, Mr. Abdallah Rajabu Masenda was killed by an elephant which came from the Mikumi National Park. He added that some of the natives by the names of Charles Kabuma and Shabani Kiswata were injured by the elephants *(Ibid).* This experience was very

minimal in Shinyanga where there were very few wild animals except in some few areas bordered by the Serengeti National Park and Maswa Game Reserve. This was commented by interviewees in Shinyanga when they put that some wild animals like bush pigs and elephants damaged the crops from the Serengeti National Park (Hamza, 2011 op cit).

The similar assertion on the impact of wildlife conservation in the name of community conservation approach states that efforts to conserve certain threatened species or habitats have in too many cases been implemented at the expense of local peoples throughout the world. Although modern conservation thinking has shifted away from its original ant-people bias, it has yet to redress many of its past abuses and to accept that people are part of the environment. It was also asserted that the establishment of virtually every national park in Tanzania required either the outright removal of rural communities or at the very least, the curtailment of access to lands and resources (Morogoro,2011 and Shinyanga, 2011 interviews). The historical processes of colonialism and post colonial national building thus shaped the basic relationship between peasant farmers and pastoralists and conservation region. From the perspective of pastoralist political activities, numerous injustices have been carried out by the state in the name of wildlife conservation (*Ibid).* Based on the above assertion it is the fact that pastoralist voices speaking out against conservation as usual are not heard at international conferences and workshops this is in itself a remarkable historical shift in Tanzania's conservation politics *(Ibid).*

This situation, the loss of access rights to land was responded by local resistance and other resources. This has motivated new efforts by international conservation NGOs to redistribute tourism benefits and promote social welfare in communities adjoining the protected areas. Increasingly in contemporary cases, local groups, after the formation of indigenous NGOs, are demanding full autonomous control of land and resource, which they view as customary property rights that have been usurped by the state (Interviews, 2011 op cit). Following the above assertion it has been viewed that community based conservation does not produce enough benefits for the communities and it is just a replacement of the government laws on environmental conservation (Siege, 2001:20 op cit). In another observation, it was observed that between 1988 and 1989 onwards the government aimed at solving the problem of poaching (Ireneus,1998 op cit). The Tanzania government was assisted by the international community in initiating programs to conserve the country's wildlife resources. Programmes of a similar nature also took place around the Serengeti National Park *(Ibid).* This programme was a joint venture, between Tanzania and the governments of Norway and United Kingdom (UK) respectively. Before the implementation of the programme, the administration of wildlife was a top-down monolithic responsibility of the wildlife division, the rural communities that co-exist with the wildlife were legally excluded from its management; although in practical terms they continued to utilize it legally *(Ibid).*

The same was noted in Morogoro when it was asserted that poaching involved a chain of people ranging from businessmen and some public law enforcement officials, with villagers playing the primary role of actual killing of the animals

(Kisegeyu, 2011 op cit). It was further added that the fate of wildlife conservation was determined by the villagers, and in order to maintain protected areas successfully the local communities must be involved in conservation activities. Although the natives were involved in conserving their environment they had no full control of the natural resources *(Ibid).*

They alternatively use the Village Environmental Committee. For example, in Morogoro at Matombo and Kiroka Villages the Village Environmental Committees are responsible in educating people on conserving the environment. It was asserted that committee members urged the communities to plant trees so that they can combat soil erosion (Nasoro, 2011). A deeper insight was given by one of the interviewees in Morogoro on the Village Environmental Committee (VEC). It was asserted that the committee was very important in educating people to protect the forest and combat soil erosion. It was also observed that the villages Environmental Committees are getting support from NGOs like World Wide Fund.

The interviewee was quoted as saying "I myself was one of the policy implementers at village Environmental Committee, those people who were caught cutting trees were to be fined for 25,000/= or to be jailed for three months (Bogasi, 2011 op cit).

Apart from Village Environment Committees in Morogoro region, the Conservation and Management of the Eastern Arc Mountain Forests (CMEAMF) project conducted its activities on environmental conservation. This project is mainly funded by World Bank. The project aimed at improving for long term sustainable

conservation of the globally important forest of the Eastern Arc (MNR, 2006). Some of the interviews in Morogoro revealed that the project promoted beekeeping and honey production. It was the conservation of the forest that developed the production of honey (Mpello, 2011). In the same way, World Wide Fund for Conservation of Nature (WWFCN) has put an effort to improve natural environment of Tanzania. It raises the awareness to individuals by documenting different information relating to bad environmental practices, for instance, they published a newsletter titled "Shipping the Gods Naked" in explaining illegal fishing and general improper use of the environment *(Ibid).* In Morogoro, they created awareness to local communities on forest issues based on advocacy and lobbying. Bogas (2011) said the NGO has achieved creation of awareness on laws, policies and principles which we have but the majority of Tanzanians are not aware of (Bogasi, 2011 op cit). It was also claimed that the NGO integrated Morogoro district authority an establishing guide centres so as to seize forest products that are acquired illegally. Correspondgnly, this was worked by Tanzania Environmental Conservation Group (TECG) that created attention to individual by raising awareness.

Another observation shows that International NGOs and donor agencies have historically been highly involved in wildlife management in Tanzania. Their role has been both direct, through manpower, technical and financial support to conservation agencies, and ideological, through training within conservation agencies in methods, ideals, and philosophies of Western nature conservation. The Wildlife Policy envisions that this role will continue in the future. Because Western donors and conservation NGOs have been the source of financial resources and suppliers of

technical equipment and personnel, the policy focuses, not unexpectedly, on international NGOs. (Lawyers' Environmental Action Team, 2011op cit) Implimenting the above assertion the Conservation and Management of the Eastern Arc Mountain Forests (CMEAMF) puts this to the subject "To develop and implement conservation strategies that ensure the sustainable conservation of the Eastern Arc mountains, both for the conservation of forests and biodiversity, but also to ensure the livelihoods of more than a million people living on the mountains and the millions more who are dependant on the water and power coming from these areas". This aim reflects the general purpose of all environmental NGOs *(Ibid).*

It is also iffirmed that many local NGOs are dependent on the same international benefactors; the government often considers them competitors and acts to marginalize their activities and contributions. Given potential contributions of local NGOs and other parts of civil society to wildlife management, this exclusion calls into question the government's commitment to better management. For the Wildlife Policy to limit efforts of local NGOs and even shut them down on the premise of providing the government with financial and technical assistance negates local NGO support to community-based conservation, benefit sharing and social equity, policy dialogue, and law enforcement. It also makes it more difficult for them to carry out their duty to protect Tanzania's resources as stated in Article 27 of the Constitution of Tanzania.

Whether the exclusion of local NGOs will endure given their growing numbers, expanding efforts and assertiveness, including advocacy and monitoring of government decisions and actions, it remains to be seen. It also depends on the power

of the Bill of Rights in the Constitution which guarantees NGOs fundamental and crucial rights, such as the freedom of association and access to information. Given constitutional provisions, it is the right and duty of Tanzanians interested in wildlife management to become more actively involved whether or not they provide financial or technical assistance to government wildlife agencies.

Another observation in Morogoro shows an effort of the emerged NGOs on environmental conservation. For example, Morogoro Environmental Conservation Organisation (MOECO) started a way back in 1992 as Uluguru Malihai Club (UMC) in Morogoro as branch of Malihai Clubs of Tanzania (MCT) based in Arusha. It was dealing with various issues of environment and sensitizing the community along Uluguru Mountains. Due to poor communication and financial constrains, then members after meeting of consensus, decided to register themselves as NGO, under the name of MOECO was fully registered in 1997 with registration certificate no. SO 8773. The main concern of MOECO is environmental protection and conservation through various activities within Morogoro region (TNA retrieved 2011, Morogor).

By implementing the national and regional guidelines on environmental matters, the NGO focused and implemented its activities which included: Assisting in establish tree nurseries as conservation method as well as income generating activities, Identified environmental problems in the region that need immediate action, Organizing seminars/workshops to exchange views on identified environmental problems, analyzing them and suggesting possible remedies, Holding public lectures, organizing film/video and theatre shows in order

to sensitize the people on the conservation of nature, Producing regular newsletters and radio/Television programmes for environmental education to the people, Establishing tree nurseries at the headquarters of the organization and at the selected villages from where the seedlings will be raised and distributed to communities adversely affected by haphazard deforestation, Networking and collaborating with other related institution, NGOs and government at region, national and international levels (TNA, op cit).

Correspondingly, the villages in Morogoro responded by formulating the Villages Environmental Committee that are responsible in providing environmental education and protecting the environment. For example when the interviews were conducted at Mkuyuni village it was asserted that each village has a village environment committee which is made up of twenty members. Each committee in its respective village is responsible to provide seminars to the villagers on environmental conservation issues. It was also revealed that the committee is responsible in identifying all people who destroy the environment and report them to the Village Executive Officers.

The committees are responsible also for urging people to plant trees (Myani et al, 2011). It was deeply stated that the idea of environmental committee came from the district, it was started in 1998. Before this village was not allowed to look after the forest. The environmental committee was set up to protect the forest, plant trees and stop illegal uses. They patrol Kimboza reserve, as well as looking after five public forests (Ndimane, Lupala, Ndime, Kisenga and Kipungole), the committee always insists to get gum boots and bicycle to be used during the patrol for at the moment it

takes them 1 hour to patrol the forest by six or four people. In total there are 20 members of the committee. When people are caught illegally cutting trees in the reserve or public land they are fined 20,000 TSH, the timber confiscated (Environmental Committee, 2011 Morogoro). Environmental committees were also set up in water catchment areas. These committees are concerned with fire and illegal timber harvesting, they report to the village leaders, but these environmental committees are not responsible for the forests on the public lands, and there is little communication between the commmunity and the forestry staff (Kibungo,2011).

7.4.2 Shinyanga

Based on the objective of the study, an interview held in Shinyanga revealed that an effective protection of the entire ecosystem was carried out by the government. Local community was also participated in conserving their environment (Ganyunzulu, 2011).

In 1986 the government of Tanzania created a new long term programme under the Ministry of Natural resources and Tourism Department of Forestry and Beekeeping called “Hifadhi Ardhi Shinyanga (HASHI). The HASHI initiative represented a new focus of encouraging Villagers to reserve the natural resources and use of their own traditional knowledge to preserve the land (ICRAF, 2011).

Based on the above assertion, in recent study it was observed that the ownership of the Ngitili (the most used technology in the lake zone that involves ensuring the forest and land for the future use) under HASHI from 1980-2001.

Table 5 Some of the villages in Shinyanga which owned *Ngitili*

DISTRICT	VILLAGE		INSTITUTIONS		HOUSEHOLD		TOTAL AREA
	No	Ha	No	Ha	No	Ha	
Bariadi	36	11,214	22	2,482	3,930	6,191	19,887
Meatu	23	4,486	19	35	4,836	9,620	14,155
Shinyanga Urban	12	1,975	-	-	126	245	2,224
Total	71	17,675	41	2,517	8,892	16,056	36,266

Source: HASHI 2001

Table 5 above shows the concentration of *Ngitili* in the two districts of Bariadi and Meatu. *Ngitili* are becoming a key component in Sukuma land use management *(Ibid).* The implementation of *Ngitili* was possible when the Government of Tanzania introduced land reclamation measures. The government of Tanzania sought to address this problem that had reached an alarming limit, it was firstly, initiated by the Regional Integrated Development Programme (RIDP) Funded by World Bank, District Rural Development Programme (DRDP) funded by the Royal Netherlands, Hifadhi Ardhi Shinyanga (HASHI) funded by the government of Tanzania and the government of Norway and Shinyanga Soil Conservation and Afforestation Programme (SHISCAP) also funded by the government of Norway (Ibid).

It should be noted that HASHI fell under the umbrella of the , Shinyanga Soil Conservation and Afforestation Programme (SHISCAP), together with Shinyanga Mazingira Fund (SMF) and International Centre for Research in Agro Forestry (ICRAF) *(Ibid).* While Shinyanga Mazingira Fund focused on the provision of funds for soils conservation, afforestation and related activities to individuals schools,

NGOs, groups, villages, parastatal organizations and government institution, ICRAF focused on the development of appropriate agro forestry technologies to conserve natural resources (Mwakisu,2011 op cit).

SHISCAP was phased out in 1993 and SMF and ICRAF operated under HASHI. In 1995 SMF was phased out to give room for establishment of regional environmental fund superseded by HASHI and ICRAF (Ibid). It was observed that HASHI staff emphasized on learning about and applying local knowledge on trees and other natural resources. They also adapted pre-existing Wasukuma institutions of *Sungusungu* and *Dagashida* and different practices such as the establishment of *Ngitili* (Mlenge, 2004:16 op cit). In the same line of argument, interviews in Shinyanga put that these approaches went against the conventional top-down scientific methods of the 1980s (Mwakisu,2011 op cit). Similarly Mlenge (2004) adds that HASHI staff, assisted by a hot consultants and researchers from various institutions, carried out many field studies aimed at learning as much as possible about villagers' perception on their environment. It was only after gaining the confidence and respect of people that HASHI staff could begin recommend changes in land-use practices (Ibid). Interviews in Shinyanga confirmed that HASHI staff had several meetings with the newly formed village Environmental committees *(Kamati ya Mazingira)* HASHI staff prepared training courses for the committee members, covering such as top soil and water conservation, how to establish and manage tree nuisances, basics of good forest management, molding of energy saving stones, beekeeping management (Mwakisu,2011 op cit)

In Shinyanga, the Village Environmental Committees were trained in facilitative monitoring of conservation activities. With this training the committees developed village environmental action plans. Participatory Rural Appraisal (PRA) techniques such as resource mapping, transect walks problems/solution ranking, were used to identify key issues facing each village where HASHI worked (Melenge,2004:17 op cit).

In the same line of idea, it was observed that in Shinyanga the Village Environmental Committees worked closely with the village government and played major roles in awareness creation, conducting demonstrations, encouraging household and protecting the reserves in the villages. As part of the environmental team Village Environmental Committees spearheaded the protection and sustainable utilization of natural resources in the villages. They also monitored the whole process of natural resources rehabilitation (Ipolu, 2011). Apart from Village Environmental Committees, there is a role of ICRAF in Shinyanga. The history of ICRAF in Shinyanga dates back to 1991, when agro forestry research and development component led by ICRAF was established at HASHI. This was aimed at helping develop and disseminate appropriate agro forestry technologies and innovations to alleviate identified land use problems and to improve livelihoods of farmers in Shinyanga (Mlenge, 2004:23 op cit). It was noted that a diagnostic and design survey that was conducted in 1988 identified the main land use constraints in the Sukuma agro-pastoral system as fodder shortages of wood products, soil degradation declaiming of crop field and insecure tenure systems. It was also observed that many people were aware of the environmental consequences of deforestation but lacked

appropriate technologies and means of alleviating the problem (Iddy, 2011). Therefore, since its inception, the HASHI/ICRAF project puts its emphasis on environmental problems through use of agro forestry, which means tree on farm. Five technologies have been developed and tested with farmers namely; rotational woodlot, improved fallow, fodder bank, improved Ngitili and domestication of traditional medicinal trees and fruit trees *(Ibid).*

Plate 16:*The above pictures show the directive to enter NAFRAC officess and its tree nurseries The pictures were taken during the fieldwork at Lubaga area –Shinyanga. 19/012/2011*

At the outset, there was screening of multipurpose trees and development of appropriate agro forestry system suitable for semi-arid parts of Shinyanga. A total of 56 trees species were studied before introducing them in farmers' fields. This was followed by the dissemination of agro forestry technologies, by catalyzing extension and adoption of agro forestry techniques through networking and training of different stakeholders focusing on local community (Ibid).

Plate 17:Indigeneous Trees Species at Lubaga area (NAFRAC) in Shinyanga

The above picture shows the forest that was made up of indigeneous trees species.

The picture was taken at Lubaga area (NAFRAC) in Shinyanga, 19/12/2011

Plate 18: ***Adoption of the Indigeneous Trees (Ngubalu) in Making the Artificial Forest.***

The above picture shows the adoption of the indigeneous trees(Ngumbalo) in making the artificial forest. This trial was done at Lubaga area- Shinyanga under ICRAF. The picture was taken during the fieldwork. 18/ 12/ 2011

Plate 19: Picture showing the performance trial of the priority of the medicine trees

The above picture shows the performance trial of the priority of the medicine trees. These trees were adopted from indigeneous trees that do people use for medicine. The picture was taken during the fieldwork at Lubaga area(NAFRAC) in Shinyanga 19/12/2011

Plate 20:Tree Nursary

The picture shows one of the tree nursuries that have been developed by NAFRAC

The picture was taken during the fieldwork at Lubaga area- Shinyanga, 18/12/2011

It is seriously shown that HASHI's aim can be differentiated from those previous attempts to solve environmental crisis in Shinyanga. This view is predicated in HASHI's attempt to encourage mixed farming (agro forestry) and allowing in plough drawing cattle to graze in the reserved area during the start of the farming season in the region, there has been not attempt so far to change the perception regarding the value of cattle, and the extent to which they contribute in degrading the environment (Kamata, 1993:74 op cit).

It was also observed that the commencement of the HASHI project in Shinyanga attracted many others agencies. These include local and foreign governmental and non governmental institutions. These include DANIDA, UNDP and CONCERN at

the international level, and Shinyanga Green-Belt Association at local level. All these focus on soil conservation and reforestation efforts (Ibid).

HASHI also worked with other agencies and local programmes. This took place where HASHI's agenda overlaps with these other institutions/agencies. Working through flexible networks in this way is the most effective way of using limited resources, and enabled HASHI to respect, share and benefit from such institutions (Beetz, 2002). The following below are some of the institutions that collaborated with HASHI.

- Maswa, Meatu and Kahama Rural Development programmes
- Domestic Water Supply Programme – Shinyanga Region
- OXFAM (NGO)
- World Vision International (NGO)
- The Small Holders Development Project Marginal Areas (SDPM) – IFAD
- Green Shinyanga Group (NGO)
- Mipa Shinyanga, Bariadi Mission – Church Organization
- Pest Management (IPM-GTZ)
- District Council. (Ibid)

Using the above mentioned institutions, HASHI managed the use of local management and local institutions to conserve the environment (Ibid). In the same line of argument, the interviews reveal that another important step was to formulate by-laws and village working plans for protection the fire under Village Environmental Committee. Although the Miombo forest boundaries are not rigidly

demarcated, ownership rights are well respected and protected through local community by-laws, which are enforced by the local scouts called "*sungusungu*" or "*wasalama*," with heavy penalties to offenders (Kalabo, et al, 2011). These militiamen work in patrols; the frequency of patrolling varies depending on fuel load, topography and weather. Since a large number of youth in rural areas are jobless, the system has created opportunities for them to earn income especially when a person is caught and found guilty of committing an offence such as arson. The penalty charged is partly allocated to the village and the rest is distributed to the patrol crew. This has provided more incentive for people to become involved in safeguarding the forest. Local communities also establish fire breaks to help prevent fire from spreading when it does occur (Ibid).

The initial success of these measures led to increased community involvement not only in fire management, but also in the protection of forest resources. There is now a consensus at the village level on the importance of mapping and demarcation of the village forest, as a step towards the provision of title deeds to local residents (Kalabo, 2011 op cit). For example in Kilulu village residents have finished mapping the village forest and efforts are being made by the District council to channel this information to the Ministry of Natural Resources and Tourism for declaration. This is one important step ahead since it will encourage the rest of the villages to address and solve the problem of land tenure (Ibid). Mlenge (2004) in this, puts that bee husbandry activities as traditionally practiced can help the community to manage fire risks. Farmers or households who invest in beekeeping activities in a particular forest lot or reserve are always alert and aware of the fire hazard. Therefore in the course of

protecting their beehives, they automatically help to safeguard the forest as a whole from fire (Mlenge,2011 op cit).

Likewise, the rural communities normally set aside some areas for conservation of "*ngitili*," (a Sukuma term meaning "enclosure.") This is a traditional form of forest management among the Sukuma people, in which an area near a village is closed off at the beginning of the wet season to preserve fodder, and opened during the dry season for grazing cattle when fodder is scarce. As soon as an area has been identified for such an enclosure, the villagers will plough strips around the area for demarcation purposes; these strips of ploughed and bare land can also function as fire lines (Ibid).

Based in the above articulated assertion, recent global trends in environmental management have focused on the devotion of environment management from state authorities to local communities though community based approaches. It is that assertion that shaped the Village Environmental Committee (Nyamana et al,2009:180). In the same line of idea interviews reveal that local resistance to the loss of access rights to land resources has motivated new efforts by international conservation NGOs. This redistributed tourism benefits and promoted social welfare in communities adjoining protected areas. Continued pressure from "below" necessitated further attention to questions of land rights and justice. Increasingly in contemporary cases, local groups, often through the formation of indigenous NGOs, are demanding full control of land and resources. They also perceive as customary property rights that have been degraded by the state. In this context, it is often sociopolitical claims, not land pressure per se, which motivate encroachments' into

protected areas. Local demands can be politically radical and most international conservation NGOs and state authorities are reluctant to go so far as to grant sole control of forests and wildlife habitat to villages or other local political entities. Local participation and local benefit sharing, however, are not the same as local power to control use and access. Yet, in the end, this is what many communities seek (ICRAF,2011 Interviews)

So far, pastoralists are the main social group organizing to redress the perceived injustices of wildlife conservation in Tanzania. Other affected groups, such as peasant farmers on other park boundaries, have not yet organized around similar issues. The potential exists, however, for a much more widespread and comprehensive political struggle over land and resource rights in protected areas, such as developed as part of the nationalist movement in the colonial period. Provided with new democratic openings, pastoralists are moving away from 'everyday form of resistance' and protest toward more organized and formalized forms of political action. It is difficult to predict what new structures and policies for wildlife conservation will emerge because of their activism. Land rights activists have, however, made it clear that wildlife conservation issues cannot be addressed without considering broader struggles for human rights and social justice (Neumann,1998).

In Africa, however, the element of central government control prevailed until fairly recently. This is understandable, because under colonial rule a strong central administration had been established in order to have power over and bring under

central control the tribes and communities, which were seen as a source of trouble. Uprisings against the colonial powers continued until independence, re-enforcing the centralistic of colonial governments. This was also revealed from the interviews conducted in Morogoro and Shinyanga when interviewees urged differently by disgracing the role of NGOs specifilly on the ownership of the resource and distribution. For example in Meatu- Shinyanga it was said that the NGOs did not advice the government on the compensation of the natives in the protected areas and reserves. It was pointed out that Maswa Game reserve was initially not protected as anybody was free to use. After its proclamation to be the National Game Reserve by the government, no any direct compensation was done to the natives who are affected by the policies. And there is no any NGO that demands the rights of the natives who have been divorced from the area. Many of the NGOs insist on conserving the environment that they regarded by the natives as the main implementers of the government policies that have colonial legacy (Gayunzulu,2011). In Morogoro it was negatively asserted that NGOs and External Agencies have no new ideal that is different from colonial period. These NGOs just exercise the government policies of environmental conservation. Most of them educate people on environmental protection and planting of trees. Some provide education that the natives should respect the protected areas for the benefit of the future generation. It was assessed that the education and instruction given by the NGOs have no difference from the colonial times. The difference lies on the approach that the NGOs do not use force in implementing their activities in conserving the environment. While internally the government does use force through

policies and legislation that had been inherited from the colonial masters (Lekai et al 2011).

It is concluded in this chapter that post colonial environmental conservation policies inherited to a large extent colonial environmental conservation policies. It has been noted that the policies adopted by the Tanzanian government had no big difference from colonial era. In 1975 the Tanzania government adopted villagization policy that had great impact on the environment. The policy failed, and the government transformed into liberal economy that paved the room for NGOs and other agencies to deal with environmental issues in the third world countries. These NGOs do insist on participatory approach to the communities in environmental conservation.

CHAPTER EIGHT

8.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 Summary

This study has managed to investigate the effects on environmental conservation policies in colonial and post colonial Tanzania, 1922-2000 the case of Morogoro and Shinyanga regions. In its discussion the study has shown the impact of capitalism development on environmental conservation from one historical epoch to another.

Four objectives have been used in the study: The investigation began with the first objective that analyzed the pre- colonial environmental conservation strategies in Morogoro and Shinyanga regions. In this objective, the discussion was divided into three sections namely; the environment and people among the Luguru and Sukuma, pre-colonial environmental conservation strategies and practices basing on traditional institutions and taboos. The findings revealed that available evidence does indicate that the pre-colonial societies became the first, to access and use the natural resources. This therefore, reflected the effort that balanced the relationship between their environment and activities. The general belief is that low population densities, unsophisticated agricultural and hunting practices and immobile populations meant that ecological conservation tended to be built into routine economic, social and religious activities of the era It was asserted that pre- colonial environmental conservation practices involved human and nature interaction. It did not create separate categories for conservation, but rather devised strategies for conserving nature while at the same time guaranteeing access to it.

The second objective was marked by the discussion on the colonial environmental conservation policies among the Luguru and Sukuma of Tanzania. It was asserted that during the colonial period the environmental conservation policies engaged by the colonialists excluded the natives in their implementation programme. They completely ignored the traditional conservation knowledge of the indigenous people in the study areas. In view of the above the British colonialists introduced the environmental conservation policies particularly from 1920s to 1959. These policies essentially based on wildlife conservation, soil and forest management. It was asserted that the policies had a great impact on peoples' lives.

For instance, in implementing these policies, in the Shinyanga among the Sukuma, it was noted that with respect to the exact time when the environmental problem started in Shinyanga, the period between 1920s and 1930s could be taken for convenience as the benchmark for tracing origin of the problem. This is because, during this period, an intensive tsetse-fly and quelea quelea eradicating campaign was launched. The outcome of this programme to the environment was deforestation and soil degradation which on the whole characterized the onset of the semi – arid conditions in the region. In the same line of argument one of the interviewees had this to say: "although the colonialists advocated deforestation to control tsetse fly infestation, at the back of their minds they had the intention to introduce cotton production in Shinyanga. Similarly, it was asserted that during the 1920s cotton growing was introduced in Shinyanga, and it was further stated that the coincidence between cotton growing and the onset of the environmental problem suggested a link between

the two. This evidence asserts that the problem of environment became more critical with the increase in the number of cotton producers.

The third objective, gave the light on the impact of environmental conservation policies on cultural aspect in both regions. It mainly keeps an insight on how the policies affected the Luguru and Sukuma culture. The aspect of culture among the Luguru and Sukuma covers many practices: traditional farming practices, tradition hunting and taboos. All these aspects were directly associated with the environment. Therefore, colonial environmental conservation policies ruined this relation (environment and culture). It has seriously shown how the pre colonial social formation used their culture in conserving the environment. When the colonialists came ignored these experiences and introduced their policies that divorced the natives from their nature. This practice continued until the country got independence.

In the findings, it was found that there are similar perspectives among the scholars and interviewees on the impact of colonial environmental conservation policies on cultural practices. Interviewees emphasized that the new technique of colonial environmental conservation policies ignored the traditional methods of environmental conservation. For example, an interview conducted with Kaloli Andrea at Doma- Morogoro, revealed how colonial environmental policies ignored the traditional strategies of conserving the environment. Kaloli further says that introduction of colonial environmental conservation policies went together with alienation of traditional forest from traditional possession into colonial state owned (Kaloli, 2011 op cit). The process hindered the practice of traditional rituals like

initiation ceremonies and traditional sacrifice activities to be carried out by the natives. In Shinyanga among the Sukuma the policies indirectly affected their culture when over stocking policy was implemented. In this view, it was stated that the overstocking policy damaged the traditional commercial grazing as it provided no incentive for an individual pastoral peasant to destock. This means that the reduction of number of cattle did not have direct returns to the pastoral peasant in terms of land for grazing. Similarly, it was added that stock owners saw that the policy as disadvantage to them as they maintained that cattle were best and safest form of wealth, providing security for lean times and that livestock was essential to the social structure of the "tribe" it was used for "customary payments" like dowries. One of the interviewees in Shinyanga has the same view when he gives a deeper insight that environmental conservation policies during the colonial period affected many pastoralists. For them cattle is of the vital importance. The policy of overstocking affected many pastoralists as it involved the reduction of the herds. It is noted that cattle and sukuma culture can not be separated. Cattle cover all the Sukuma's life style. Some of the Sukuma did use cattle's skin to cover dead body during the funeral. For the Sukuma, it was perceived that the reduction of the cattle had direct impact on their culture.

Another observation, asserted that colonial environmental conservation policies displaced Africans to pave the way for wild life management and conservation projects, and it was the government initiative to isolate pockets of Island and reserving them.Therefore, the natives were denied the access to their environment where they could practice their culture.

Last objective, discussed the post-colonial environmental conservation policies. It mainly looked at the adoption of the colonial environmental conservation policies by the post-colonial government. Post colonial dreams of a disgruntled citizenry, in a situation of inadequate human and other resources had to look for quick fixes in advancing environmental conservation. They resulted to a populist approach to environmental conservation. This was an approach to environmental conservation guided by: politically motivated state sanctioned activism in social-economic development; use of poorly researched and inappropriate technologies, top-down victimizing decision-making processes, unsustainable exploitative environmental conservation methods, and the false belief in virtuous, rational and community minded institutions of the early 1960s. It was done in total disregard or without prior analysis of the key underlying factors that affected the existing environmental conservation and poverty reduction situation. Inevitably this led to further marginalization and alienation of the people from their natural resources.

This went on up to the late 1970s when the governments of Tanzania was forced to admit that with dwindling external support and without the people environmental conservation efforts were heading to the wrong direction. By the time poorly informed and essentially externally-driven neo-liberal approaches of the late 1980s and 1990s came to address environmental conservation and poverty reduction. Many bridges had been crossed and broken, and a lot of mistrust and lack of faith between the key actors in environmental conservation and poverty reduction had taken place. Vested interests and influence stood on the way to effective and efficient environmental conservation. Short terms programmes had entered into the

environmental conservation arena through donor-driven externally supported projects/programs. This has no clear understanding and appreciation of the historical injustices and prejudices that constraint the way to genuine transformative change in environmental conservation and poverty reduction. But the faith has not been totally lost, the struggle to find people-centered, genuine ways of doing environmental conservation is still on. The examples given in this study and the opportunities and challenges they offer give us that hope that we shall overcome someday.

The impact of vilagisation policy on environment was also discussed. From 1980s there was the changing of global relation that was emanated from the disintegration of the Soviet Union. It was during this time when financial institutions like International Monetary Fund (IMF) World Bank and World Trade Organization took a role of readjusting the economy of the third world countries included Tanzania. These changes signified the collapse of socialism policy in Tanzania.

It was from these changes, where the approaches on environmental conservation reflected the foreign model conservation approaches under NGOs and other foreign agencies. These NGOs and agencies influenced the communities on environmental conservation in the concept of community based environmental conservation. Furthermore, the role of Non-Governmental Organizations (NGOs) on environmental conservation was discussed. These NGOs, tried to clear up the situation by signifying their involvement in the communities to conserving the environment and promoting social welfare programmes in the communities surrounding the protected areas. This gave a new pattern whereby the communities demanded an independent control

of natural resources. Therefore both the state and NGOs are making emphasis on community based management of natural resources. This is implemented though participatory approach.

8.2 Conclusion

This thesis has not fully addressed environmental conservation policies in Tanzania during the liberal economy especially from 1980s. It was during this time when Tanzania transformed from solcialist economy to liberal economy. Generally in this phase Tanzania economy was directed into capitalist economy which is market oriented and largely controlled by the private sector. This phase was characterized by privatization of major means of production, abolition of price control and independence of the central bank. These changes therefore, modified the framework of environmental conservation approaches based on the national environmental conservation policies.

It was during this period when many foreign NGOs and International Agencies had interests in environmental conservation in the developing countries. This step also, influenced the formation of Indigeneous or Local NGOs that have a role too in environmental conservation. The main challenge from local NGOs was that there is a serious demand of an autonomous control of land and other resources which they view as customary property rights that have been usurped by the state. It was asserted also that there was the debate at a higher level during the late 1990s on how to include issues of ownership of natural resources. It was as a result of policy shift emanating from such debate that a presidential commission was appointed in 1995.

The commission chaired by professor Shivji, a University of Dar es Salaam, Law professor recommended new land legislation which repealed the 1923 Land Ordinance, in 1999. These land tenure reforms sought to provide a framework for promoting private investment and ownership of land, as well as to secure community rights amidst substantial pressure to do so following the widespread land tenure insecurity of the previous two decades. The new legislation retained formal ownership of land in the hands of the state but strengthened the legal status of customary land rights and established a more accountable governance framework for village councils to manage lands on behalf of village communities.

In this context, it is often sociopolitical claims, not land pressure per se, which motivate encroachments into protected areas. Local demands can be politically radical and most international conservation NGOs and state authorities are reluctant to go as far as to grant sole control of forests and wildlife habitat to villages or other local political entities. Local participation and local benefit sharing, however, are not the same as local power to control use and access. Yet, in the end, this is what many communities seek.

So far, pastoralists are the main social group organizing to redress the perceived injustices of wildlife conservation in Tanzania. Other affected groups, such as peasant farmers on park boundaries, have not yet organized around similar issues. The potential exists, however, for a much more widespread and comprehensive political struggle over land and resource rights in protected areas, such as developed as part of the nationalist movement in the colonial period. Provided with new

democratic openings, pastoralists are moving away from ‘everyday form of resistance’ and protest toward more organized and formalized forms of political action. It is difficult to predict what new structures and policies for wildlife conservation will emerge because of their activism. Land rights activists have, however, made it clear that wildlife conservation issues cannot be addressed without considering broader struggles for human rights and social justice.

In Africa, however, the element of central government control prevailed until fairly recently. This is understandable, because under colonial rule a strong central administration had been established in order to have power over and bring under central control the tribes and communities, which were seen as a source of trouble. Uprisings against the colonial powers continued until independence, re-enforcing the centralistic of colonial governments.

Therefore, foreign financial influence, national economic concerns, and a governance system of single party socialism, continued unable until challenges from below move the discourse to a new level of struggle of the ownership over natural resources.

By the 1990s, because of an array of external influences and internal pressures, a reform agenda emerged that called for the transfer of authority for environmental management to the local level. However, these reforms have encountered considerable obstacles from entrenched institutional interests in environmental resources on the part of state agents. Reform is largely restricted to the expression of policy statements designed to attract donor support and pacify local concerns. Donor

agencies and international conservation organizations have been the main influences behind the development of the reform agenda, but have their own institutional limitations and disincentives to developing adaptive and potentially more effective strategies for promoting institutional change. The fundamental barriers to environment management reform in Tanzania thus lies in the historical legacy of centralization, the resultant institutional incentives within the bureaucracy for maintaining control over a valuable resource, and the relative lack of influence of other actors on policy processes in Tanzania's current political environment. These factors not only explain the divergence between policy and practice in Tanzania, but also reflect fundamental institutional challenges facing environmental conservation efforts.

It is also concluded in the thesis with an insight on the basis of pre-colonial social formation that European capital penetration alone did not automatically simplify the imposition of colonial environmental conservation policies. Other agencies including internal local structures of the social formation had reciprocal action in shaping conservation policies. For example, inability of local ruling classes, to control and manage environmental resources, paved the way for the emergence of conservation architecture which operated in favour of colonial interests. Like the chiefs of the colonial era, presided over superstructure that stood on borrowed strength in that it was foreign donor funded both in terms of resources and expertise. It was these weaknesses in the economic base, which influenced the imposition of colonial environmental conservation policies. This was witnessed in Shinyanga when the interviewees reaveled that some kingdoms like Nindo kingdom under Chief Mihashi

Limihagati who strongly rejected colonial policies. They also gave another observation that other kingdoms were not strong because they failed to reject colonial policies a good example was that of Chief Makwaiya he supported tse tse fly act (Ntemi,2011).

Another interviewee commented that in Shinyanga, some chiefs were very weak and they strongly supported the introduction of the new environmental conservation policies in the area. For example Samuye area under chief Masali and Usule area under chief Salamba and Kapela acted on behalf of the colonial government by welcoming new environmental conservation policies like overstocking policy and tsetse fly act. Chiefs were responsible even to find out those people who were reluctant in implimenting the policies. They therefore, acted as administrators on behave of the colonial government (Luchanganya, 2011). In the same line of an argument in Morogoro, it was revealed that some chiefs at Doma were very weak so they accepted colonial environmental conservation policies. For exmple chief Mandewa who was one of the chiefs who accepted large part of his area to be reserved.

These weaknesses continued after independence when the government itself weakened the ability of the local institution in governing and controling their natural resources. In this view it was asserted that after independence, the new administration of feared the centrifugal powers of tribalism and in the case of Tanzania, discouraged the traditional local structures. The traditional chiefs were done away with and local governments dissolved. Central government

representatives were put into villages and services such as schooling, medical care and agricultural extension, but also protection of crops from wild animals were affirmed to be tasks of the government.

The central government promised to take care of these aspects of village life and in fact managed to deliver, until in the seventies the economic performance began to slip and finances ran shot. This was also the case where natural resource and wildlife management were concerned. Wildlife has traditionally been perceived as threat to crops and life as well as a source of meat and income through trade in wildlife products, mainly ivory.

At the same time, new protected areas were created at an accelerating rate and managed under what is now called the "fences and fines" approach. Communities were barred from entering and disturbing these areas, with a few exceptions such as the case of the Ugalla Game Reserve, where a special arrangement was introduced for fishermen and honey producers. For instance, up to the early seventies between 2,000 and 4,000 elephants were shot by government game scouts every year as part of crop protection in Southern Tanzania alone (Buldus, 2009).

The prevailing attitude by both conservationists and game wardens has remained that every local villager as a potential poacher. Police action, rifles and handcuffs were regarded by the authorities as the instruments to settle this conflict. This approach was based on the illusion that governments everywhere on the continent were in control of the natural resources and were able to protect them countrywide. In reality

African administrations and economies started to under perform soon after independence. Very often government officials colluded with would be poachers or even were in the forefront of poaching. While the protection of wildlife inside the parks and reserves could to a certain extent be maintained by the "fences and fines" approach, at least in Southern and Eastern Africa, very little effective law enforcement took place outside these protected areas. As a result, wildlife resources outside parks and reserves were being "mined" at levels that could not be sustained (Ibid).

8.3 Remmendations

The findings presented in the thesis have the following suggestions for further studies:

First, the same study of environmental conservation can be conducted to other regions of Tanzania. The natural environment of Tanzania differs from on region to another,

Thus, we expect to overcome different responses and implementation of the environmental approaches from the societies concerned.

Second, the theoretical applications used by the present study can be used to conduct further research in environmental discourses of any historical paradigm.

Third, based on the present study's experience, there is a need for the environmental conservation scholars and academicians to review and research the narratives and organizational models for promoting more meaningful local involvement in

environmental management. This will be able to redefine the status of the local communities on the ownership of environmental resources.

Fourth, Various theories and historiography, understandably preoccupied through the first quarter-century of the country's post-colonial history with the impact of imperialism and capitalism on Tanzania and East Africa at large, tended to overlook the initiatives taken by rural societies to transform themselves. Therefore, historians should critically use and interpret the theories and historiography that can provide profound and the right reflection of the society concerned on environmental management and utilization.

Finally, so far there is good motive for historians to rethink about the causes of change and innovation in the rural communities of Tanzania, since farming system, pastoral practice and environmental conservation approaches have constantly changed as they adjusted to changing environmental settings.

REFERENCES

Abdallah, M. (2008), the Evolution of Wildlife Conservation Policies in Tanzania during the Colonia and Post- Independence Periods, *Development Southern Africa,* Vol.25, Number, 5.pp.589-600

Adams, W. (2003), "Nature and Colonial Mind" in Adams. W and Mukigani. M (eds) *Decolonizing Nature: Strategies for Conservation in post colonial Era,* London: Ethscan,

Barrow and Mlenga, W. (2003), The contribution of plantation and Agro forest to livelihoods: Trees as key to pastoralist ask management in semi-Arid landscape in Shinyanga, Tanzania and Turkana, Kenya in the Rural Livelihoods, Forest and Biodiversity, International conference (Bonn-Germany:

Barrow at al, (1992), Hifadhi Shinyanga, An Evaluation Report for Ministry of Tourism, Natural Resources and Environment, *United Republic of Tanzania and Norwagian Agencey for International Development, Dar es Salaam*

Bassert, M.L. (1993), Introduction: Land Acquisition and Agriculture Transformation in Sub- Saharan Africa in T.J Crummey (eds), Land in African Agrarian System,(USA: University of Wisconsin press

Bassert, M.L. (1993), Introduction: Land Acquisition and Agriculture Transformation in Sub- Saharan Africa in T.J Crummey (eds), *Land in African Agrarian System,*(USA: University of Wisconsin press

Chachage, C.S.L. (1998), Social Apects of Conservation in Eastern ARC Mountain Forest, in *Journal of East African Natural History* 87: 253-263

Chachage, CS.L (1998)Social Apects of Conservation in Eastern ARC Mountain Forest, in Journal of East African Naturaral History 87: 253-263

Charney, S. (1994) *Rice and Environment: Environment Impacts of Rice Production, Economic Development and Environment* Willingford:ARI Publishing,

Chenje, M and others (1994), Learning from History in State of the Environment in Southern Africa: A report by Southern Africa Documentation Centre, 21-38 Harare

Colding J. and Folke C. (2001), Social Taboos: '' Invisible '' System of Local Resources Management and Biological Conservation

Cronon, W. (1982),"A Place for Stories: Nature: Some Historiographical Observation" in the *Scandinavian Journal of History*, D.F. Rutatora, and Others, The importance of Farmer Participation in Rehabilitating Degraded Mountain Slopes: The Experience from Magadu and Towero Villages in Morogoro region- Tanzania, in *African Study Monographs*, 17(3):117-128, 1996

Dan B. (2006), *Fortress Conservation, The preservation of the Mkomazi Game Reserve, Tanzan*ia (Dar es Salaam, Mkuki na Nyota,

David A. and Richard, G (eds) (1999), *Conservation in Africa: People, Policies and Practices* (Cambridge: Cambridge University Press

Duff, P.C (1961), Ulugulu Land Usage Scheme, Entry in Morogoro District, University of Dar es Salaam Microfilm, MF /1/8.

E. Barrow and W. Mlenge (2003), Trees as key to pastoralist risk Management in Semi-arid landscapes in Shinyanga, Tanzania and Turkana, Kenya, in the

international conference on Rural livelihoods, Forest and Biodiversity 19-23 May,

Edward S. (2006), *Black Poachers White Hunters, A Social History of Hunting in Colonial Kenya*, (Athens: Ohio University Press,

Eliakim, Z. and others (2009) , *Forest Land Tenure System in Tanzania an overview of Policy Changes in Relation to Forest Management, Department of Ecology and Natural Resource Management,* Norwegian University of life Sciences

Eliakim, Z. and others (1994), *Forest Land Tenure System in Tanzania an overview of Policy Changes in Relation to For est Management, Department of Ecology and Natural Resource Management,* Norwegian University of life sciences

Fred, N. (2007), *The Evolution and Reform of Tanzania Wildlife management*, U.S.A: studies New Haven

Fred, N. (2009), *Community Management of Natural Resources in Africa: Impacts of Natural Resources in Africa*,(London: International Institute for Environment and Development (UK)

Furaha N. (2008), A Century of Government Regulated Land Access in Tanzania, Discussing Paper for the Video conferencing Workshop on Land Administration in Africa, covering Tanzania, Ghana, Malawi and South Africa, May, 15 G.C.

G'wanza, K. (1993), The Politics of Environment in Tanzania, the case of pastoral peasants of Shinyanga (MA Dissertation) Dar es salaam University press

Gillingham, S. (1998), *Giving wildlife value: A case study of Community wildlife Management Around the Selous game reserve, Tanzania.* PHD thesis, Cambridge University

Guha, R. (1989), "Radical American Environmentalism and Wilderness Preservation: A Third World Critique." *Environmental Ethics*, 11:71-83.

Heini V. (2007), *Contextualizing Natural Resource Management in the South* (Helsinki University Print, Helsinki

Helge, K. (1971), Ecological *control and Economic Development in East Africa*, (Athens:Ohio University press,

Hilborn, R. and Lundwing D. (1993), *The limits of ecological Research, Ecological Applications* 3(4) 550-552, Homewood, K and Rodgers,

Hurst, A**,** (2003), **"**A State Forestry and spatial scale in Development Discourse of post – colonial Tanzania, 1961-197**"** *In the Geographical Journal, vol.* 167

Ireneus , F and Rud Hahn (1998), Reconciling Human Interests with conservation in the Selous Game Reserve (Tanzania), Wildlife Division Ministry of Natural Resources and Tourism ,Dar es salaam

Jafari Kidegesho R. (2006), *Wildlife Conservation and LocalLand use Conflicts in WesternSerengeti Corridor, Tanzania,* Trondheim: Norwegian University of Sciences, and Technology, Phd Thesis

Jamie M. (1996), 'Canoe – building under colonialism. Forestry and food policies in the inner Kilombero valley, 1920 – 1994' in the Madock G and Kimambo, I.N. *Custodian of the land,* (Athens: Ohio university press

John M. M. (2007), Institutionalizing Environmental Conservation and poverty reduction: Directions from the field in East Africa,(st Clements University, (PhD thesis)

John S. A. S and Blancaa. C (2011), "Wildlife Conservation, Safari Tourism and the Role of Tourism Certification in Kenya; A Post colonial Critique" in *Tourism Recreation Research* Vol. 36 (3)

Jonathan A. and Thomas M (1996), *the Myth of Wild Africa: Conservation without Illusion,* London: W.W.Norton,

Juhan K. (1994), *Development for exploitation: German Colonial Policies in Mainland Tanzania, 1884-1914,* Finland: Raamattutalo,

Juma, M. A and Monela G.G. (2007), An Overview of Miombo Woodlands in Tanzania, in the working papers of the Finnish Forest Institute 50: MIOMBO – Management of Indigenous Tree species for Ecosystem Restoration and wood production in semi and Miombo woodlands in Eastern Africa.

Proceeding of the first Miombo Project Workshop held in Morogoro, Tanzania, 6th – 19th February,

Kaale, B.K. (2001), Forest Landscape Restoration, Tanzania Country Report Tanzania specialist Organization on community Natural resources and Biodiversity conservation (Dar es Salaam,

Kideghesho, J .R (2010) 'Serengeti shall not die': transforming an ambition into a reality 'in the Journal - *Tropical Conservation Science* Vol.3 (3):228-248,

Kilihama F.B (1994), Tree and I indigenous Ecological Knowledge about Agro forestry Practices in the Ranglands of Shinyanga Region in the *Tanzania Forestry and Agriculture*, (Bangor: University of Wales,

Kilihama F.B (1994), Tree and I indigenous Ecological Knowledge about Agro forestry Practices in the Ranglands of Shinyanga. Region in the *Tanzania Forestry and Agriculture*, Bangor: University of Wales,

Kissaka, H.S (1999), The Changing of Traditional Methods in Conservation of Forests and Agricultural Land: the Impact of Foreign Religious Practices , A case Study of Ugweno and Usangi division (MA Dissertation) (Dar es salaam: udsm university press

Leon, V and Others (2002), *Political Ecology of Land- Use Change: Affluent Ranchers and Destitute Farmers in the Mexican Manicipio of Alamos*, the Alamos

Linda M. (2011) Tanzania and the Geo-Politics of Rural Development: The Return of Neo-Liberation in the Journal of emerging markets India and USA: Berkely Eletronic Press, Vol. 3 P. 460

Ludwig S. (2001) Community Based Conservation: 13 years of experience in Tanzania in Rolf D. Baldus and others (eds), Tanzania Wildlife discussion paper No. 29 (Dar es salaam:GTZ wildlife programme,

Ludwig S. D. Baldus and (eds) (2001), Tanzania Wildlife Discussion paper No. 29, Wildlife Programme, Dar es Salaam,

Lungred B.O and Lungred, L. (1982), Social- Economic and Constraints in Forest Management: Tanzania, New York, John Wiley and Sons Ltd,

Lungred B.O. and Others, (1982) *Social – Economic and constraints in Forest Management: Tanzania,* (*N*ew york, John Wiley and Son Ltd,

MacKenzie, J.M (1996), The Empire of Nature: Hunting, Conservation and British Imperialism Manchester,Manchester University Press, Maddox, G and I. N Kimambo (eds), *Custodians of the land,* Athens Ohio University press

Madox, G and Kimambo, I.N (1996), *Custodians of Land*, Athens: Ohio University press

Madulu, N. (1999), "Population and Environment and Natural Resources Management in Tanzania: A Potential partnership for sustainable development, in UAPS and NPU (eds), The African Population in the 21st

Century proceeding of the 3rd African conference, Vol.1 Dakar, Union for African Population Studies,

Malcolim, D.W. (1953), *Sukuma land, African People and their Land: A study of Land Use in Tanzania*, London,OUP

Mario, Z. (2001), Disciplinary Nature: Land, Environment and Political Coercion in Colonial Southern Africa, Working PaperMarshall W. Murphree, Community Based Conservation Old ways, New Myths and Enduring Challenges in Rolf D. Baldus and Ludwig Siege (eds), Tanzania Wildlife Paper No. 29, Wildlife Division, GTZ Wildlife Programme in Tanzania, Dar es Salaam,

Masona, T. (1987), Colonial Game Policy: A study of the origin and administration of game policy insouthern Rhodesia - 1890 - 1945. Unpublished dissertation, (department of Economic History,University of Zimbabwe

Masunzu, C. (1998), Assessment of crop Damage and Application of Non-Lethal Deterrents for crop protection East of the Selous Game Reserve, in the *Tanzania wildlife Discussion paper* No 24,

McCann J (1999), Greenland, Brown Land, Black Land, an Environmental History of Africa 1800-1900 Portsmouth: Heinemann

McNell J (2003), "Observations on the Nature and Culture of Environmental History" In *History and Theory,* 42

Meertens, H.C Ndege, L (1995), *Dynamics in Farming Systems Change in Time and Space I Sukumaland, Tanzania*, Netherland: KIP press,

Merchant, C (1989), *Ecological Revolutions: Nature, Genda and Science in New England*, Chapelhill: University of North Carolina press

Mikidadi, H.A (2011), "From Game and Forest to Environmental Conservation of the colonial Tanzania" *Journal of the Teofilo Kisanji University*, Mbeya*:* volume II No. 1.

Ministry of Natural Resource and Tourism, Forest and Beekiping Divison, (2006) Conservation and Management of the Eastern Arc Mountains Forest Project Dar es salaam

Monela, S .A.O Chamshama, Mwaipopo R. and Gamassa, D.M (2005), a Study *on the Social, Economic and Environmental Impacts of Forest Landscape Restoration in Shinyanga Region, Tanzania,* The World Conservation Union , The Ministry of Natural Resources and Tourism ,

Munamato C. & Dennis M. (2010), Toboos as Sourse of Shona People's Environmental Ethickthes in Journal of *Sustainable Development in Africa*, Pennsylvania: University of Pennsylvania, Volume 12, No.7,

Murombedzi JC (2003), Pre- Colonial Conservation Practices in Southern Africa and their legal today,

National Forest Policy (1998) Dar es Salaam, Government Printer,

Ndalahwa Madulu, F. (1998), Changing *Lifestyles in Farming Societies of Sukumaland: Kwimba District,Tanzania*, **(**Netherlands: Afrika-Studiecentrum ASC Working Paper

Nelson, F. (2007), The Evolution and Reform of Tanzanian Wildlife Management,(U.S.A: studies New Haven

Ng'wanza, K. (1993), The Environment of Tanzania: A case of the Pastoral Peasants of Shinyanga Dar es Salaam, Dissertation

Nuding, M. (2001), "Best practices in Natural Resource management", In the wildlife in the Development cooperation context GTZ-TOEB Eschborn, Sciences

Pamera M. (1996),"We don't want Terraces" in the G. Maddox, JL Giblin and I..N .kimambo (eds*), Custodians of the Land*, (Athens: Ohio University Press,

Peter P. (1998), *Miaka 100 ya Kanisa Katoliki Matomba 1987 – 1997*, Uholaunzi: Mzumbe book Project,

Peter, M. (2008), Indigenous Knowledge in Disaster Management in Africa,(Nairobi: United Nations Environment Programme

Pius M.(1987), Livestock versus Cotton: A conflict in the early British Colonial Economy Policy in Usukuma 1920 – 1950s, A case study of Shinyanga District – Tanzania, Dar es salaam: University of Dar es salaam Dissertation

Rodgers, W. Aand Mapunda, J. D (1976) “A History of Elephant Control in Tanzania 1919-1976”.

Rovick P. N (1993), Imposing Wildness: Struggle Over live hood and Natural Preservation in Africa, New York, the university press

Rutatora, D.F. (1996) and others,The Importance of Farmer Participation – Rehabilitating the degraded Uluguru mauntain slopes. The experiences from Mapadu and Towelo villages in Morogoro Region, Tanzania in *the Africa study monographs*, 17 (3):pp117-128,

Schoffeleers, J.M. "Introduction", in J.M. Schoffeleers (ed.) (1998), *Guardians of the Land: Essays*

Schuknecht, R.(2008), British Colonial Development Policy, After the Second World War: th Case of Sukumaland in Tanganyika, London: Transactions Publishers

Sera ya Wanyama Pori Tanzania, Wizara ya Maliasili na Utalii *Tanganyika notes and records,* 1982 *in Tanzania Notes and Records No83*,

Stephen D. (2003) Africa, New York: The University press of New York

The Parliament of t he United Republic of Tanganyika 1964 and Zanzibar, An Act to provide for the Conservation, Development and Improvement of G r a z i n g Lands, No. 51 O

Twaha W. C. (2011), An assessment of Environment Conservation Policies in colonial Tanzania, 1920s – 1959. A case study of Morogoro Region (Dissertation), (Mbeya: Teofilo Kisanji University

United Republic of Tanzania (URT) (1994), Tanzania; Natural Environmental Action Plan, A First Step, Ministry of Tourism, Natural Resources and Environment, Dar es salaam

V. G Nyamana and others "Impacts of Participatory Forest Management on Livelihoods: A case of EASTERN ACR Mountain area of Tanzania" in L. Nshubemuki and others (eds) (2009), *Proceedings of the First Participatory Forestry Management Research Workshop: Participatory Forestry Management for Improved Forest Quality, Livelihood Governance*, Morogoro:Danida, MFA-Finland and the Government of Tanzania,

William B. and Joann Mc G.(2003), (eds), *Social History and African Environments*, Athens: Ohio University Press

William B. and Peter C. (2005), Environment and History, the Taming of Nature in the U.S.A and South Africa, Routlegde: London and New York,

Worster D. (1993), The Wealth of Nature Environmental History and the Ecological Imagination Oxford University Press

Young R. and Fosbrooke, H. (1960), Land and Politics among the Luguru of Tanganyika, London, Routldge & Kagan Paul Ltd,

Yusufu L. (2002) "Where Physical and Ideological Landscapes meet: Landscapes and Technological knowledge in Iraqw, Northern Tanzania*" in the International Journal of Africa Historical Studies*, vol.32 No 2-3(1999)p p.297-298

Yusufu Q. L.(2002), May the Spider web Blind Witches and Wild Animals: "Where Physical and Ideological Landscapes meet: Landscapes and Technological knowledge in Iraqw, Northern Tanzania in the Iraqw Land, Tanzania, 1900-1985, (PhD thesis) (Michigani: A bell and Howell Company

Zimbabwe: An exploration of Practices and Concepts in Common Lands, (Canada,Unpublished PhD Dissertation,University of Waterloo, 1991

Achieve Materials- Files and Reports

TNA, tsetse Bloc.ks 15 – 15, Acc. No. 47 No. 94/47

TNA, settlement, reserve and tsetse fly block, file No. 95 A. P. 1.

TNA, Tanganyika Territory Forest Ruling of 1921

TNA file No; 74 P3 ACC NoVol. 1 forest Morogoro

TNA, Acc.No 85. File NO. 95 Land Usage in the Usukumaland

Tanzania National Archives (TNA), *Morogoro District book in General Information* B1

TNA/ Stock Reduction/Access No. 46. File No. 95

TNA/ Stock Reduction/Access No. 46. File No. 95

TNA, Gama Reservation Ordinance, File No15/111 P.513

TNA 215/21154 – Shinyanga District report 1947 p.38

TNA, File No74B Acc No. Vol I, Forests – Morogoro

TNA, settlement, reserve and tsetse fly block, file No. 95 A. P. 1.

TNA Uduha Tsetse Areas, File No. 93A. Acc.67 P.1.

TNA, Tsetse Control, Shinyanga District book, P.2

The natural resource legislation-adopted by the SFC see TNA 215/115 DC Mwanza, 'List of Rules and Orders of the Sukumaland Federal Council' (6.7.1951).

The natural resource legislation-adopted by the SFC see TNA 215/115 DC Mwanza, 'List of Rules and Orders of the Sukumaland Federal Council' (6.7.1951).

TNA 215/R1-DC Maswa to Coordinating Officer Sukuma Development, Malya (14/12/1947) and TNA 215/R3-DC Mwanza to DPC Sukumaland (5/10/1950).

Annual Report of the Game Department in Tanganyika Territory 1951-1952 P.6.6

The Annual Report of the Forest Department of 1956

Annual Reports of the Forest Division for the year ended 31st December, 1961 and 1962 of the Tanganyika government

The Annual Report of the Forest Department of Tanganyika Territory, 1923 pp2- 7

The Annual government Report of the Forest Department, Tanganyika Territory 1928

Annual Report Tanganyika forest Department, 1942 – 1953, p.13

Annual Report of the forest Department, Tanganyika Territory, 1955 pp. 3-4).

Annual Report of the Department December, 1957 pp. 2-3

Tanzania National Archives (TNA), File No.74B, Accession No.Vol-1 Forest Morogoro

TNA, Tsetse-fly Elimination, Acc.63 File No. 370. P73

The natural resource legislation-adopted by the SFC see TNA 215/115 DC Mwanza, 'List of Rules and Orders of the Sukumaland Federal Council' (6.7.1951)

TNA 215/2010 – Maswa District Report (1946)

TNA,File No. 15/ii Accession No.2, Preservation Ordinance

TNA, Tanganyika Territory Forest Ruling of 1921

TNA 215/21154 – Shinyanga District report 1947 p.38

The Annual Report of the Forest Department of Tanganyika Territory, 1923 pp2- 7

The Annual government Report of the Forest Department, Tanganyika Territory 1928

TNA, Acc No. 85 file 95 land usage in Sukuma land.

Annual Report Tanganyika forest Department, 1942 – 1953

Annual Report of the forest Department, Tanganyika Territory, 1955

The Annual Report of the Forest Department of 1956

TNA,File No. 15/ii Accession No.2, Preservation Ordinance.

Tanzania Nation Achieves, Shinyanga District Book, *Historica-History before British Occupation, Sheet* no 1

TNA/ Stock Reduction/Access No. 46. File No. 95

Tanzania National Archives (TNA), *Morogoro District book in General Information* B1

Tanzania National Archives (TNA), File No.74B, Accession No.Vol-1 Forest Morogoro

TNA, Acc.No 85. File NO. 95 Land Usage in the Usukumaland

Oral interviews

-Key Interviewees Consulted during the Fieldwork

Morogoro Region

Mr Hamza Kisegeyu at Kiloka, in Morogoro. 06/08/2011

Abdu Athman Ramadhan, Kiroka, Morogoro 29/06/20122

Fatuma Kilasa at Doma Village, in Morogoro 04/07/2011

Shomari, Kiroka, Morogoro, 29/06/2011

Mohamed Shombi, at Mkuyuni in Morogoro, 29/06/11

Kibwana Mbega, at Mkuyuni, in Morogoro 06/08/2011 Asha Bogasi at Kiloka 09/07/11, this is a retired woman; she saved as the chair person of the village government. She was the one who initiated the village environmental committee at Kiroka

Martim Mbago at Mgeta in Morogoro, 03/07/11

Martim Mbago at Mgeta in Morogoro, 03/07/11

Abdallah Mdung'ile at Mgeta, Morogoro, 07/8/2011

Charles Kobwe at Mgeta, Morogoro, 03/8/2011

Omari S. Mfunga at, Mkata, Doma, Morogoroa, 27/06/2011.).

Rajabu Ramadhani, at Mkuyuni, in Morogoro 29/06/2011

Petrol Malipula, at Doma, Morogoro, 26/06/2011

Mr. Jackson W. Mkude, at Mgeta Morogoro 03/05/2011

Mohamed, Matombo Morogoro. 1 July 2011

Longinus Amina at Doma- Morogoro, 27/06/201

Salumu Kioga at Doma-Morogoro, On 26th June 2011

Paskari Notikel, at Matombo-Morogoro 01/06/2011

Zainabu Chawila at Mkuyuni, Morogoro, 29/06/2011

Seleman Nassoro, at Matombo village –Morogoro, 01/06/2011

kaloli Andrea at Doma- Morogoro On 26th June, 2011

Mohamedi Mwigo at Doma-Morogoro, On 27th June 2011

Adam Said at Mgeta, june, 2011

Martin Mloka, Mgeta,-Morogoro 03/05/2011

Hussein Bakari was interviewed at Matombo- Morogoro, 29/06/2011

Asha Kurwa was interviewed at Doma- Morogoro 29/06/2011

Silivina Mrisho at Kiroka-Morogoro on 29th June, 2011

Rashidi Juma Mgunge at Kiroka-Morogoro on 29th June 2011.

Tausi Abdalah Kihali at Matombo-Morogoro on 1st July 2011

Laurent Costa at Matombo-Morogoro 1st July, 2011

Eliminata Modester, Matombo, Morogoro, 01/06/2011

Amina Mohamed, Matombo, Morogoro 02/06/2011

Hassan Kiwambo at Doma-Morogoro, On 27th June 2011

John Mdumbwa at Doma-Morogoro, On 27th June 2011

Beno Dimosko, Mgeta, Morogoro, 21/08/2011

Ramadhan Dilunga at Matombo on 1st July 2011

Omari S. Mfunga, Kioga Kilenga, Joseph P. Mkunde, Malusa Said, John Mdubwa, Chamanda J. Mrisho and James Elias at Doma in Morogoro, 27.06.2011

Victoria Thadea Machozi Ramadhan Dilunga and Sidia Augustino at Matombo-Morogoro, 26.06.2011

Members from of the Environmental Committee of Changa village, Mkuyuni ward, Mkuyuni Division, in Morogoro 26/06/2011

Joha Masoud Musa was interviewed at Mgeta- Morogoro 29/06/2011

Lekai Leah Editha Silili, Kalolina Pascal and Peter Kidawala, at Matombo Morogoro, 22/08/2011

Semeni Bakari at Kiroka in Morogoro, 29/06/2011

Mzee Sudi Ally was interviewed at Doma 29/06/11

Mr Shomari O.Mkunde, at Kirka, in Morogoro

Omari Musa at Doma Morogoro 27.06.2011

Hamza Hassan at Doma, Morogoro Regio, 07/08/11

Amina Kilasa at Doma, Morogoro, 03/8/2011

Albina Ally at Matombo in Morogoro, 30/06/11

Christna at Nyendiva village- Mgeta, 21/08/2011,

Dimoso, Nyendiva village- Mgeta 21/08/2011

Fabiola Michael, Suileman Nassoro and Hamza Kisegeyu of Kiroka and Matombo – Morogoro, 01.06.2011

Madenge at Mkuyuni in Morogoro 29/06/2011

An interview with forester at Kibungo Village, Mkuyuni Ward, Morogoro 29/06/2011

Shinyanga Region

Mhuli Ntobo, at Shishan, Bariadi – Shinyanga, 05.04.2011

Christopher Limbu Gimba, on 04/01/11 at Kilulu village, Bariadi in Shinyanga Kabbi

A Forest Researcher, Mr Endrew Mwakisu in Shinyanga, 19/12/2011

Mzee Maroda, Iddi at Kizuka ward in Shinyanga, 3/04/2011

Mzee Gimba, at Kilulu village, Bariadi in Shinyanga, 04/04/2011

HamiAbdallah Ms said Kisege, Ndale Shinyanga akanja Morogoro, 03/May/2011

Mr Daniel Ntimba, Shinyanga, 02/04/2011

Mr Samweli Kisusi, Masengwa village, Shinyanga, 02/04/2011

Mr Mwandu Damweli, at Ndala "B" Shinyanga, 08/04/2011

Mr Maganga Samson of Shinyanga Urban 08/04/2011

Paulina Tungu, at Mamambaji Village in Shinyanga, 07/04/2011

Mr Christopher Limbu Gimba, on 04/01/11 at Kilulu village, Bariadi in Shinyanga region.

Mr Steven Sabuni at Ngokola ward in Shinyanga 04/04/11

Mr. Samwel Kisusi Mangwa village Shinyanga, 02/04/11

Juma Rashidi, at Ibinzamata, Shinyanga, 04/04/2011)

Misheki Nyaraja at Shishani ward in Bariad- Shinyanga 05/04/2011

Masunga Masai, at Mwanyahina, Mwajidalala (Lndon), 18/12/2011, meatu Shinyanga

Said Masunga at Ngokolo, Shinyanga 08/04/2011

LD.Derera, Shinyanga, 08/04/2011)

Ntuli Ntobo Shishani – Longalombogo, 05/04/2011 Shinyanga – Bariadi

Ntuli Ntobo Shishani – Longalombogo, 05/04/2011 Shinyanga – Bariadi

Hamiss.Kinge at Ndala Village Shinyanga 02/04/2011

Magwala Mwenda, at Kwimba in Shinyanga, 02/01/2011

Saba Nungula, Mwanyahinya, Meatu-Shinyanga, 05/04/2011

Kioga

E.K Ntemi., Chasmagua, Shinyanga,02/04/2011

Charles Ntindigwe, Ndembezi, Shinyanga, 02/04/2011

Gayunzuru Kobela, at Mwahinya- Meatu in Shinyanga, 6/04/11. This interviewee is a traditional healer to the said village in the Meatu District.

Charles Ntindigwe, Ndembezi, Shinyanga,02/04/2011

Stephan Maduka, Ndembezi Shinyanga, 03/04/2011

Christopher Limbu Gimba, Kilulu, Bariadi, Shinyanga, 4/04/2011

Charles Koyo Nkwambi, Kilulu, Bariadi, Shiyanga, 04/04/2011

Kasani Masaka, Mwabuma, Bariadi, 05/04/2011

Francis Budoya, Wanzimbila, Bariadi, Shinyanga, 04/04/2011

Mr. Samuel Kisusi, at Masengwa village in Shinyanga, 04/04/2011

Amos Masanja at Longalombogo village in Bariadi- Shinyanga. This village is very closer to the Serengeti National Park. The villagers have no an access to enter the park. 06/04/2011

Hamisi Said Kisenge at Ndala village in Shinyanga, 02/04/2011

Pius Kalega at Ndembezi, Shinyanga, 03.04.2012

Limbu Gimba, Kilulu, Bariad-Shinyanga, 4.04.2011

Mr. Mhange Tungu, Shishani village – Bariad – Shinyanga 5.5.2011

Mr. Charles Koyo Nkwabi at Kiluku in Bariad – Shinyanga 24.04.2011

Sayi Kibyala in Bariadi Shinyanga 5.4.2011

Hans S. Kisenge at Ndala, Shinyanga 02.04.2011

Ganyunzulu Kobela at Manyahina – Meatu Shinyanga – 05.04.2011

Mr. Katunge Ipolu, Shinyanga Urban 18.12.2011

Omary Iddy (at ICRAF Offices who works under Tanzania Research Institute) at Lubada area in Shinyanga 19.12.2011

Abdalla Makumbea, Hamisi Mnyani, Mwajuma Kiningomela, Abdu Hassan Panza, Hamza Shabani, Deus Mkoba, Mohamed Korongo, Mh Kungugu Shomari Dick Mbezi and Ally

Makomba Kalabo, Chanzu Ng'wisabi, Elizabeth Tuma, and Buluga Buza at Kilulu village – Bariadi Shinyanga, 04/04/2011

Gayunzulu Kobela, Joseph Ndomo, John Nyenge and Daudi Mayuma at Mwanyahina in Meatu Shinyanga, 06/04/2011

Ally Sawasawa at Kilulu-Shinyanga 04/04/2011

Bahati Maganga Malele, was interviewed at Mwanyahinya- Meatu Shinyanga 04/04/2011

Flora Mabura was interviewed at Kilulu- Bariadi Shinyanga, 06/04/2011

James Ngasa, was interviewed at Ndala –Shinyanga 06/04/2011

Joseph Dubiro was interviewed at Ndala–Shinyanga 06/04/2011

Kashinde Athumani was interviewed at Ngokola, - Shinyanga 05/04/2011

Lembeli Said, was interviewed at Ndala Shinyanga 05/04/2011

Mohamed Masesa was interviewed at Ndala Shinyanga 05/04/2011

Mwajuma Maganga, was interviewed at Kilulu- Shinyanga 07/04/2011

Mzee Mgeni was interviewed at Kiroka 29/06/2011

Oska Nusu, was interviewed at Shinyanga, 05/04/2011

Pili Khamisi was interviewed at Mkuyuni – 26/06/11

Ramadhani Maganga was interviewed Longalombogo, Bariadi –Shinyanga 03/04/2011

Salum Maganga was interviewed at Longalombogo, Bariadi –Shinyanga 03/04/2011