



STATUS OF LAND USE PLANNING, LAND TENURE AND BIODIVERSITY CONSERVATION: A FOCUS OF UDZUNGWA-MAGOMBERA-SELOUS LANDSCAPE AND MNGETA CORRIDOR IN KILOMBERO DISTRICT



September 28, 2017

Author: National Land Use Planning Commission, Tanzania



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The Nature Conservancy



WORLD RESOURCES INSTITUTE



AFRICA BIODIVERSITY COLLABORATIVE GROUP

COVER PHOTO: ©Geofrey Sima/NLUPC

CAPTION: On going deforestation of Namwai Forest Reserve in Ihenga Village

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III. ACRONYMS

ABCG	Africa Biodiversity Collaborative Group
CCROs	Certificate of Customary Right of Occupancy
GCA	Game Controlled Area
GRO	Granted Right of Occupancy
LTSP	Land Tenure Support Programme
NLUPC	National Land Use Planning Commission
SAGCOT	Southern Agricultural Corridor of Tanzania
SUDECO	Sugarcane Development Company
VLUM	Village Land Use Management
VLUPs	Village Land Use Plans

I. INTRODUCTION

The Kilombero Cluster supports a wide range of important global biological diversity and is regarded as an ecological bank with its abundant natural resources, including wetlands, wildlife, fertile soils, forests and water catchment areas and it inhabits the Kilombero Valley Flood Plain, a World Heritage, which is one of the Africa's largest river basin joining the Great Ruaha, Rufiji and Luwegu rivers. Further, Kilombero Ramsar Site, Teak forests, Udzungwa Mountains National Parks, Selous Game Reserves and Kilombero Game Controlled Area (KGCA) that serves as a wildlife corridor between the Selous Game Reserve and Mikumi and Udzungwa National Parks are also part of the Kilombero Cluster.

Due to its immense potential productivity, the Cluster also forms part of the Southern Agricultural Corridor of Tanzania (SAGCOT). Presence of these attractive natural resources, protected resources, fertile land, water resources, extensive grazing land, reliable rains and availability of large-scale plantations have attracted large concentrations of both human being and livestock. This multi-layered resource endowment scenario calls for effective planning to enable sustainable utilization of resources and the avoidance of conflicts. Land use planning which also involves issuance of customary certificates of right of occupancy (CCROs) provide groundbreaking for tenure security, equity and hence sustainability on resource use and management.

Land use plans enable people to translate the goal(s) of sustainability into specific objectives and to integrate a wide range of decisions. Fundamental to this are: a) strengthening institutions and coordinating mechanism; b) improving and strengthening planning and management systems; and c) creating mechanism(s) to facilitate the active involvement and participation of people at local level. Land Use Planning (LUP) addresses resources management in a holistic way to incorporate broader interactions between natural and socio-economic conditions of local production systems, macro-policy implications and the national context. Analysis, negotiation and decision-making in LUP are multi-sector tasks integrating different fora both horizontally and vertically distributed, in which action takes place (individuals, families, communities, village, district, nation, and supra-national).

Implementation of village land administration is a fundamental step in the process of participatory village land use planning, administration and management. In this step, the village land parcels that belong to individuals, groups of individuals or the community is adjudicated and granted Certificate of Customary Right of Occupancies (CCROs). The objective of this process is to enhance tenure security and remove disincentives to invest in the longer-term management and productivity of the land.

Issuance of individual and group CCROs as mechanisms for securing land at the individual and group levels is provided by section 51 of the Village Land Act No.5 of 1999. Under this section, a Village Council may, either of its own motion and shall, on the application of not less than fifty villagers, recommend to the Village Assembly that a process of village adjudication be applied to the whole, or a defined portion of, village land available for grant of customary right of occupancy.

The process of land titling and issuance of CCROs are in essence supposed to be facilitated by village governments, but currently are mostly facilitated by the District Councils, other national agencies and other actors to administer the village land. For effective and sustainable land use and land tenure security in the country, land use planning, administration and management needs to be a bottom-up process largely engineered by village governments involving every category of the community and thus requiring more local level land tenure analysis, dialogues and sensitization.

I.1 RATIONALE OF LAND TENURE STATUS SURVEY

Hot investment areas, especially the SAGCOT region, are attracting different investment interests in the agriculture, livestock, wildlife and tourism sectors. While SAGCOT intends to bring up much of the farmland into commercial production for regional and international markets, the same zone is known for containing rich biodiversity that requires integrative planning for facilitating the provision of ecosystem services to the agricultural industry and diversification of production activities. For instance, the Kilombero cluster of SAGCOT in Morogoro is so congested with contesting issues of land administration, environmental and biodiversity conservation that it requires integrative and coordinated planning by all stakeholders at all levels.

Land use planning and titling are significant components of land administration in the environment where increasing productivity, population growth and investments exerts huge pressure to land resources and ultimately altering or hampering land tenure security to majority. Given the resource use pressure and availability of so many actors on land use planning, administration and management in the Kilombero Cluster, an in-depth analysis of the status of land use planning, land tenure administration and management in the area was required. The National Land Use Planning Commission in collaboration with African Wildlife Foundation undertook a detailed survey of land tenure status, land use planning, administration and management in the two landscapes.

I.2 OBJECTIVES OF THE SURVEY

Objectives of the survey were to document land tenure status, socio-economic and biodiversity profiles in the Mngeta Corridor and Udzungwa-Magombera landscapes. Also, this survey underscored the importance of land use planning, implementation and management as a key tool for natural resources use and conflict management in the two clusters. Results of these documentations will be used for stakeholders' dialogue to address land and natural resources management challenges, sensitize the public on the importance of tenure security (both individual and group CCROs) and recognition of land use planning, administration and management as an effective tool for coordination and sustainable landscape management within the Kilombero Cluster.

I.3 APPROACH AND METHODOLOGY USED

The survey employed various data collection methods including questionnaires, interviews and documentary reviews. Field visits in all 20 villages covering the two landscapes were done by administering questionnaires and conducting interviews at ward and village levels.

In ward levels, ward executive officers and extension officers were interviewed to gather information on administrative structures, socio-economic data, and land and natural resources management issues at ward level. At the village levels, village leaders (village chairperson and village executive officers) were interviewed to obtain information on land tenure status, status of land use planning, implementation and management and biodiversity and natural resource management issues including conflicts.

Through field visits, spatial data collection was undertaken whereby biophysical data such as forests, water resources, topography and major land utilization types were identified. Through observation, various pictures depicting environmental conservation and degradation, tenure security documents (CCROs) and socio-economic infrastructures such as irrigation canals, water catchments, waterfalls and plantations were taken.

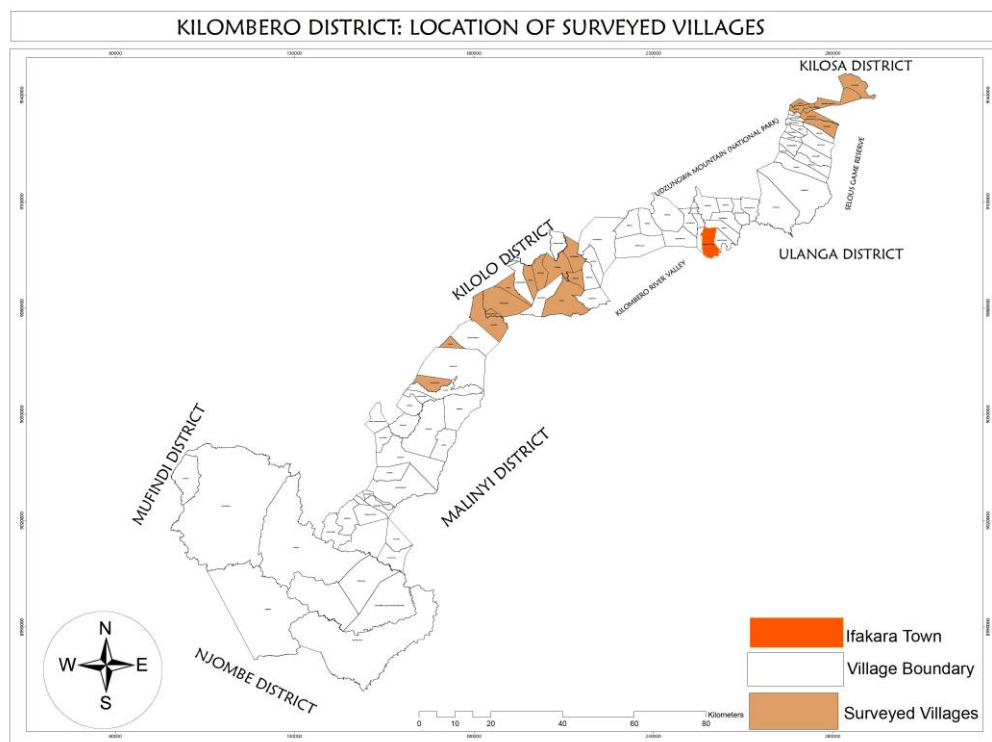
2. SOCIO ECONOMIC PROFILE OF THE LANDSCAPES

2.1 LOCATION AND DESCRIPTION OF THE LANDSCAPES

Mngeta Corridor and Udzungwa-Magombera landscapes are located in Kilombero District. The two landscapes cover a total of 21 villages (13 in Mngeta Corridor and eight in Udzungwa – Magombera landscape). Mngeta corridor is located in the northwestern part of the district covering 13 villages in six wards of Namawala, Chita, Igima, Mchombe, Mngeta and Mofu.

Udzungwa - Magombera landscape is located in the northeastern of the district and it covers eight villages available in four wards of Mkula, Sanje, Mang’ula B and Msolwa Stesheni.

Figure 1 | Location of surveyed villages in the SAGCOT area



Source: Field Data, 2017 and SAGCOT Land Use Framework Plan 2014-2024

Table 1 | List of villages covered in the survey

No.	Landscape/Corridor	Ward	Village
1.	Udzungwa-Magombera Landscape	Sanje	Sanje
		Mang'ula B	Kanyenja
		Mkula	Mkula
			Sonjo
			Katurukila
			Magombera
Msufini			
Msolwa Stesheni	Msolwa Stesheni		
2.	Mngeta Corridor	Mchombe	Mchombe
			Lukolongo
			Njage
		Mofu	Mofu
			Ihenga
		Mbingu	Igima
			Vigaeni
			Mbingu
		Chita	Makutano
		Namawala	Kisegese
		Mngeta	Ikule
Mngeta			

2.2 DEMOGRAPHIC CHARACTERISTICS

Based on the National Population Census of 2012, the projected population of the Kilombero District was 475,329 in 2016 with 236,323 male and 239,006 females. The population of people in the two landscapes (Mngeta Corridor and Udzungwa-Magombera-Selous landscape) is shown in Table 2 below.

Table 2 | Population distribution for seven wards covering the two landscapes by 2016

Ward	Population 2016			% of Total Population	Households
	Male	Female	Total		
Sanje	6,392	6,475	12,867	2.7	3,216
Mang'ula	20,669	21,489	42,158	8.9	10,540
Mkula	5,178	5,415	10,593	2.2	2,649
Mchombe	22,911	22,131	45,042	9.5	9,008
Mofu	7,021	6,639	13,660	2.9	2,732
Mbingu	13,404	13,070	26,474	5.6	6,618
Chita	13,515	12,896	26,411	5.6	5,283
TOTAL	89,090	88,115	177,205	37.3	40,046
Total Population of the District, 2016			475,329		

Source: Kilombero District Land Use Framework Plan 2016-2026

Table 3 | Population distribution for 10 wards covering the Mngeta Corridor and Udzungwa – Magombera-Selous Landscape by 2017

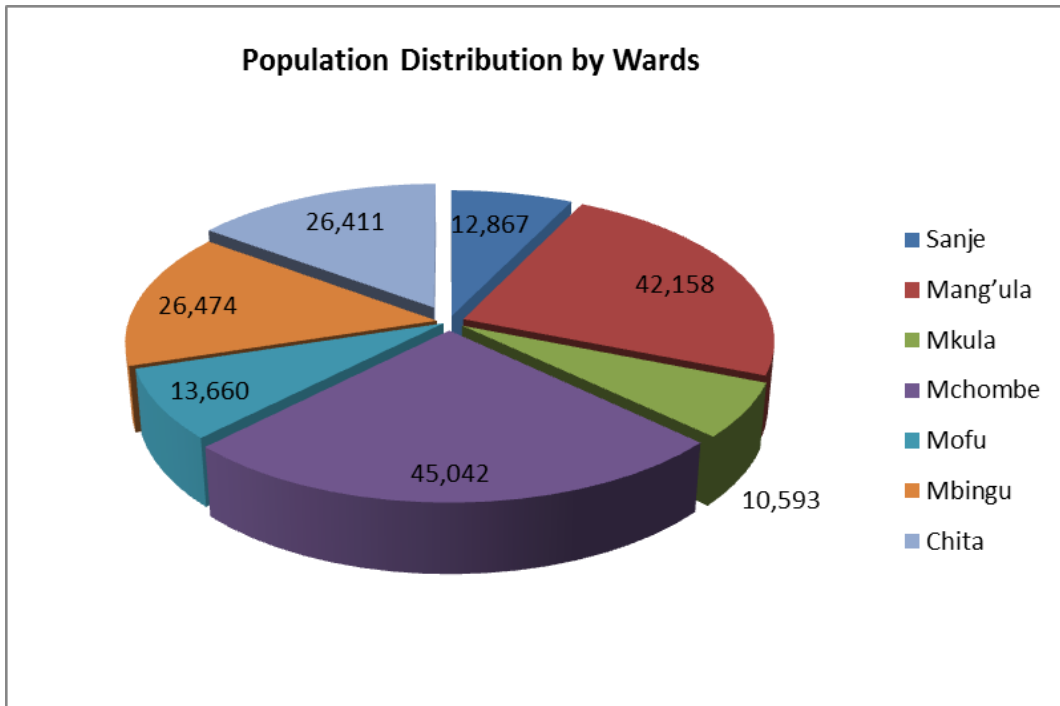
Landscape	Ward	Village	Population 2017				% of total Population	Households
			Children	Adult Male	Adult Female	Total		
Udzungwa-Magombera-Selous Landscape	Sanje	Sanje		2,176	2,340	4,516	1.0	1,146
	Mang'ula	Kanyenja	555	355	435	1,345	0.3	460
	Mkula	Mkula	649	399	420	1,468	0.3	592
		Sonjo	602	257	350	1,209	0.3	357
		Katurukila		1,864	1,941	3,805	0.8	951
		Magombera		463	553	1,016	0.2	294
	Msufini		2,010	2,092	4,102	0.9	1,026	
	Msolwa Stesheni	Msolwa Stesheni	1,266	1,264	1,344	3,874	0.8	919
Sub Total		3,072	8,788	9,475	21,335	4.5	5,745	
Mngeta Corridor	Mchombe	Mchombe	1,884	1,691	1,846	5,421	1.1	1,150
		Lukolongo	2,805	1,859	2,341	7,005	1.5	1,405
		Njage		1,621	1,572	3,193	0.7	867
	Mofu	Mofu	1,016	610	738	2,364	0.5	591
		Ihenga	2,442	670	738	3,850	0.8	963
	Mbingu	Igima		2,443	2,542	4,985	1.0	1,246
		Vigaeni	969	679	724	2,372	0.5	645
		Mbingu	1,427	1,358	1,557	4,342	0.9	1,750
	Chita	Makutano	749	713	760	2,222	0.5	517
	Namawala	Kisegese	3,345	2,080	1,862	7,287	1.5	1,285
Mngeta	Mngeta	2,095	1,893	1,823	5,811	1.2	1,453	
Sub Total		16,732	15,617	16,503	48,852	10.3	11,872	
TOTAL		22,876	33,193	35,453	91,522	14.8	20,623	

Source: Field Data, 2017

Also, the total number of households was 110,267 with an average size four people per household. The average population growth rate stood at 3.9% per annum that were above region growth rate (2.4%) and national growth rate that is 2.7%. The projected population for seven wards covering the two landscapes was 177,205 as shown in the Table 1 above.

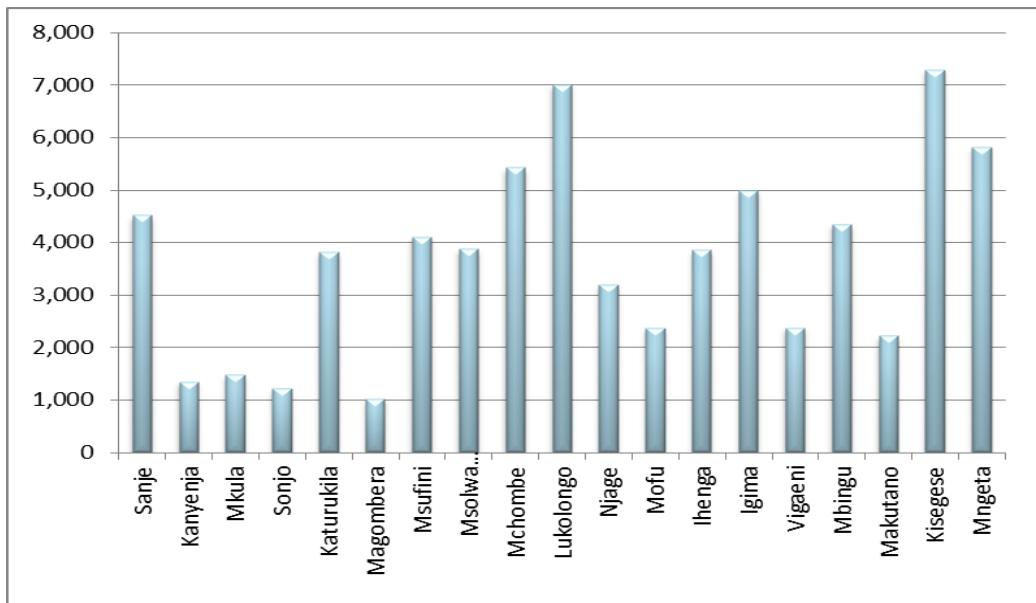
In 2017, the projected population by village in the two landscapes is 70,187 segregated by children, adult males and adult females as shown in Table 3 (above).

Figure 2 | Population distribution for seven wards for the two landscapes in 2016



Source: Kilombero District Land Use Framework Plan 2016-2026

Figure 3 | Population distribution by village in the two landscapes in 2017



Source: Field Data, 2017

2.3 TOPOGRAPHY AND BIODIVERSITY

2.3.1 Topography

The large area of the two landscapes falls within the Kilombero Valley which consists of alluvial floodplains. Also, the landscapes have mountainous landforms comprised of the Udzungwa escarpments that forms part of the Great Eastern Arc Mountain Ranges. Apart from the elaborated general description the following are specific major physical features of the district.

Mountainous

These are long stretch of mountains cutting across all wards covering the two landscapes except Mofu and Msolwa Stesheni Wards. Mountains available in the two landscapes are part of the protected areas in the Udzungwa scarp consisting of Udzungwa National Park, Kilombero Nature Reserve and Uzungwa Nature Reserve. These mountains harbour major water catchments for many rivers available in the two landscapes.

Figure 4 | Udzungwa Mountain Range



Source: *Field Data, 2017*

Low Lands

Large areas of the Mngeta Corridor and Udzungwa Magombera landscapes consist of low lands (valleys and plains) which are situated at an elevation of slightly less than 300m above sea level. These low lands are part of the Kilombero Valley that extend from the southern to the eastern part of the district along the major Kilombero river catchment.

2.3.2 Biodiversity (Forestry, Wildlife and Water Resources)

The two landscapes are endowed with various biodiversity species of wildlife, plants species, wetlands and catchment areas found in protected and general lands.

Forestry

The landscapes are endowed with dense forest cover both on reserved and general land. The reserved forest cover includes the Udzungwa National Park, Uzungwa Scarp Nature Reserve, Kilombero Nature Reserve, Selous Game Reserve, Magombera Forest Reserve, Kanyenja Forest Reserve, Matundu Forest Reserve, Ihondo Forest Reserve and Kisomola Forest Reserve administered by Tanzania Forest Service (TFS).

Table 4 | Forest reserves available in the two landscapes

No.	Forest Reserve	Area (Ha)	Ownership	Villages Covered
1.	Matundu Forest Reserve	17,664	Central Government	Kisegese, Mbingu, Igima
2.	Iyondo Forest Reserve	27,974.5	Kilombero Nature Reserve	Njage, Mchombe, Mngeta
3.	Uzungwa Scarp NR	20,720	Central Government	Ikule, Chita
4.	Magombera	NN	Central Government	Magombera, Katurukila, Kanyenja, Msolwa Station
5.	Namwai	1,800	District Council	Ihenga
	Total	68,158.5		

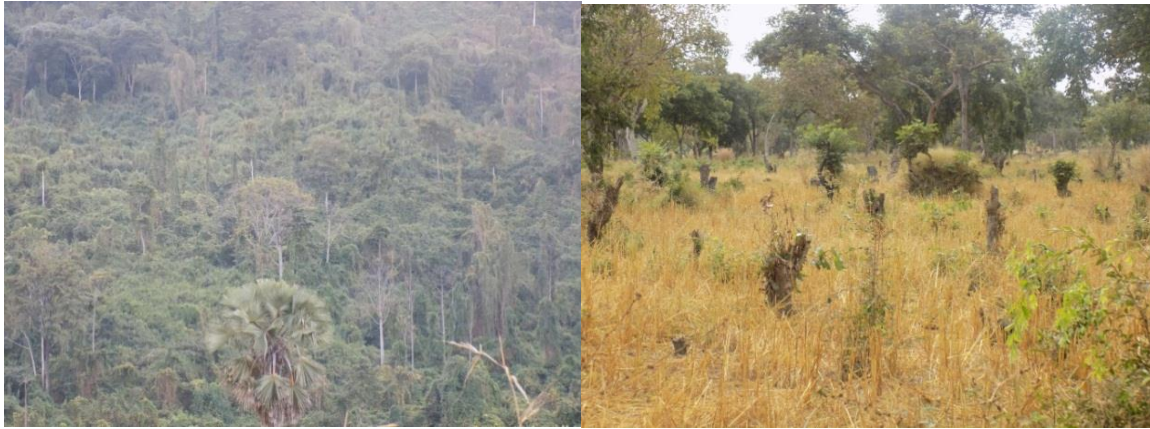
Source: District Land Use Framework Plan 2016-2026

Also, there are village forests which are owned and administered by the village governments. Such village forests include Mapewe (Mofu), Namwai (Ihenga), Ihyungi (Mngeta), Kanyenja (Kanyenja), Magombera (Magombera), King'ulung'ulu and Njage (Njage). These are mainly evergreen montane forests with dense canopy and moist throughout the year.

The Udzungwa Mountains forests are essential for water catchments supplying water for agricultural and domestic use in the two landscapes. Also, the Udzungwa Mountain range and its forests generate a microclimate that increases rainfall in the area. On the other hand, village forests are mainly used for beekeeping and forest resources harvesting especially charcoal, timber and poles.

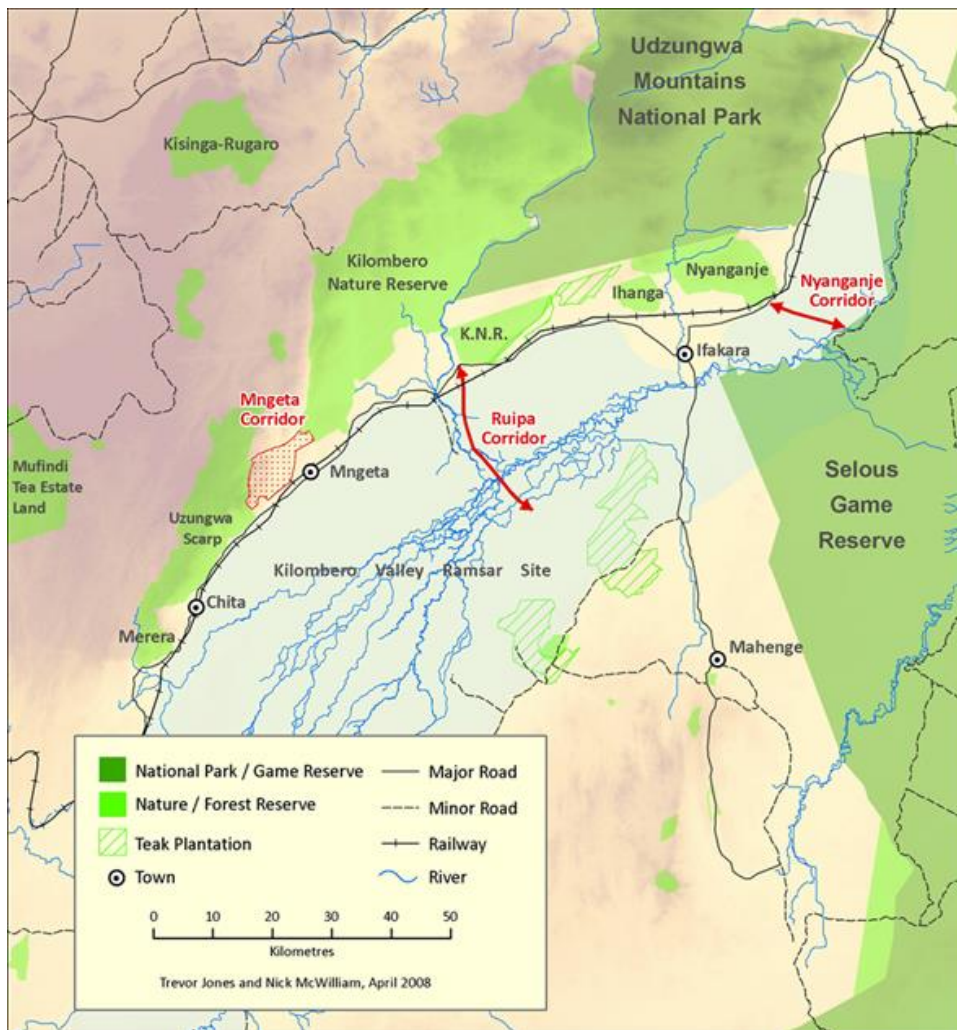
Despite their ecological importance, these resources are experiencing huge pressure resulting from illegal timber, charcoal and pole harvesting, agriculture, settlements and grazing activities. For instance, the Namwai Village Forest (Figure 5 - right) has been hugely degraded in the past 10 years due to agriculture, settlements and grazing. Although some part of the Namwai Forest is being reserved by the Kilombero Farm, large part of it has undergone significant land cover changes due to aforementioned challenges.

Figure 5 | Protected Forest Reserve (Kilombero NR) (left) and encroached Forest Reserve-Namwai Forest Reserve in Ihenga Village (right).



Source: Field Data, 2017

Figure 6 | Protected areas and wildlife corridor in the landscapes



Source: Tanzania Wildlife Research Institute, 2009

Wildlife

Wildlife resources in the two landscapes are mostly found in the protected areas of Udzungwa National Park, Uzungwa Scarp Nature Reserve, Kilombero Nature Reserve, Kilombero Game Controlled Area and Selous Game Reserve. Wildlife species in these protected areas include primates, Iringa red colobus and Sanje crested mangabey which are endemic in Udzungwa National Park. Also, Kilombero Game Controlled Area is home of endemic Puku Antelope species, other wildlife and various species of birds, vertebrates and reptiles. These areas also host the big five animal wildlife species of elephants, lion, leopards, rhino and buffalo. The Kilombero valley Ramsar site hosts variety of aquatic species of hippo, crocodile and high diversity of fish species.

According to local leaders, there were three main wildlife migration corridors connecting protected areas. The Mngeta Corridor linking the Uzungwa Scarp Nature Reserve to the northern Udzungwa forests (protected as Udzungwa Mountains National Park and Kilombero Nature Reserve) and Ruipa corridor which connects Kilombero Nature Reserve and Kilombero Game Controlled Area and Kilombero Ramsar site. The Udzungwa-Magombera-Selous landscape is also known as the Nyanjange Corridor connects the Udzungwa National Park, Nyanjange Forest Reserve, Kilombero Game Controlled Area, Kilombero Ramsar Site and Selous Game Reserve.

Water Sources

The Mngeta Corridor and Udzungwa-Magombera-Selous landscapes are rich in permanent and seasonal surface water sources such as rivers, dams and wetlands. Majority of these sources originate from Udzungwa Mountains and flows south towards the Kilombero Valley. Major rivers in the landscapes are Kilombero, Msolwa, Sonjo, Mkula, Matebe, Kiluluma, Mtendezi, Mtalawanda, Rondo, Ruaha, Nyarubungo, Ruipa, Ifumbo, Mchombe, Mngeta, Njage, Fussi, Kiani, Chita, Ifakara, Kivale.

Also, the two landscapes harbour the great kilombero river wetland and endowed with waterfalls and swampy areas. Such waterfalls are found in Sanje (Sanje, Karumanga and Kisa na Mbega) and Njage. Swamps are found in Njage (Itende and Ipongolelo Swamps), Njage (Ilola, Mhomakilo and King'ulung'ulu Swamps).

These water resources are mainly used for irrigation farming, domestic use, artisanal fishing, and livestock feeding. Despite increased human activities that have detrimental impacts to water resources, there are ongoing efforts being taken to protect water resources. These efforts include establishment and implementation of village and district by-laws, designation and demarcation of buffer zones, prohibition of farming activities within 60 meters from riverbanks and frequent patrol by the village environment and natural resources committees.

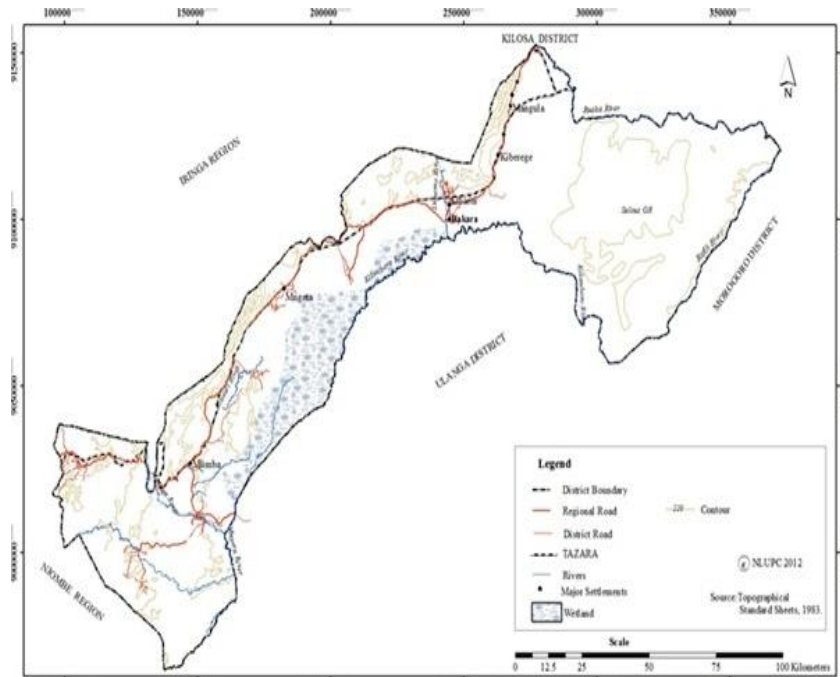
2.4 CLIMATIC CONDITION

Generally, the Kilombero District has high temperatures (hot weather conditions) and has bimodal rainfall patterns. Short rains begin at the end of November and ends in January or February. Long rains usually start in March and ends in May or June. The annual rainfall ranges from 1200mm to 1600mm while temperature ranges from 26°C to 32°C. Kilombero experiences seasonal flooding which cause some parts of the district to be inaccessible during the rainy season.¹

¹ Morogoro Regional Profile, 2007

However, due to climate change and variability, villages in the two landscapes experiences altered rainy seasons with varying rainfall intensity and distribution impacting crop production systems in the area.

Figure 7 | Drainage pattern of Kilombero District



Source: Kilombero District Land Use Framework Plan 2016 -2026

Figure 8 | Encroached river for paddy cultivation at Katurukila village (Left) and protected river at Mngeta Village (right)



Source: Field Data, August 2017

According to information obtained from local leaders and some villagers, there are various economic activities in the landscapes ranging from farm and off-farm activities, but crop farming is the most predominant economic base in the area. Households in the two landscapes are involved in crop farming, both food and cash crops. Other economic activities include keeping livestock and bees, small enterprises, and the harvesting of forest resources.

The main food crops grown in the landscape include rice, maize, banana, sweet potatoes and cassava. The cash crops are sugarcane, which is grown mainly in the Udzungwa Mangombera landscape, and cocoa in the Mngeta Corridor. Recently, there has been an increase in the cultivation of sunflower and sesame. Surplus food crops are sold as cash crops.

Crop farming is mainly rain-fed with limited farm implements and dominated by the use of hand hoes and ox ploughs, which is limited to only one growing season. The average harvest of major crops is estimated to be five to ten bags per acre for rice and three to seven bags per acre for maize.

There is also the cultivation of crops that are reliant on irrigation, mainly rice and sugarcane in Njage and Kisegese (Rice) in Mngeta Corridor and Mkula, Magombera, Sonjo, Katurukila, Msufini (sugarcane and rice) in Udzungwa-Magombera landscape. Farming in these schemes is done annually with three harvesting cycles for rice. The average production is estimated to be 15-25 bags per acre.

Figure 9 | Irrigated paddy farm at Njage Village (left) and sugar cane farming at Katurukila Village (right)



Source: Field Data, August 2017

Traditionally, locals in the landscapes are not livestock keepers but they own small stocks under zero grazing such as goats, pigs, chicken, ducks and few cattle which are mainly for cultivation (ox-farming). Also, according to locals, there are observed immigration of livestock keepers in the landscapes with large herds of livestock. However, due to inadequate grazing land in host village lands, majority of them are encroaching protected and reserved areas such as forests and wetlands.

Other main economic activities in the landscape include petty business activities especially in the emerging urban centres such as Mbingu and Mngeta.

3 . LAND TENURE STATUS IN THE LANDSCAPES

3.1 LAND OWNERSHIP AND ACCESS

According to local leaders, land ownership in the two landscapes is mainly under a customary system through which inheritance and allocation is done by the village councils. For instance, in Igima and Mofu villages, the majority of inhabitants own land through inheritance while majority of inhabitants in Ihenga, Katurukila and Njage villages own land through allocation by village councils. It has been revealed that, in all villages, majority of men own land compared to other groups such as women and youth. Traditions and customs prevent women from owning major means of production such as land although there is increasing knowledge and awareness in the community that increases women and youth participation in land matters.

Allocation of land by village councils is mainly to landless elders, youth and disabled depending on its availability. However, it was revealed that due to increasing demand of land, most villages do not have enough land for allocation, thus necessitating land use planning and titling to minimize land use conflicts.

Apart from inheritance and allocation by village government, land purchase is another way of owning land in the two landscapes, but the numbers are few compared to the other means. The majority of buyers are from outside the district with the intention of establishing farms, building residences or keeping the land as an asset.

3.2 LAND CERTIFICATION STATUS IN THE TWO LANDSCAPES

3.2.1 Certificate of Customary Right of Occupancy (CCROs)

With reference to the Village Land Act, villagers who have occupied land for many years are entitled to customary rights of occupancy and are eligible to register the right and obtain a title called Certificate of Customary Right of Occupancy. Villagers have a customary right of occupancy for village land that they hold under customary law or have received as an allocation from the village council. Customary rights of occupancy can be held individually or jointly, are perpetual and heritable, and may be transferred within the village or to outsiders with permission of the village council.

Assessment of land certification in the two landscapes has shown that land surveys and titling has not been adequately undertaken in villages within the landscapes. In the Udzungwa-Magombera-Selous landscape land surveying and issuance of CCROs has been undertaken in sugarcane farms in Msufini, Sonjo, Magombera and Mkula villages in 2015. It was facilitated by MKURABITA through Kilombero Sugar Company (ILLOVO).

Table 3 | Number of CCROs issued in the two landscapes

No.	Name of Village	Parcels adjudicated	CCROs Issued
1.	Sonjo	100	20
2.	Msufini/Mkula	900	20
3.	Magombera	60	6

Source: Field Data, August 2017

According to village leaders, the cost of obtaining CCRO was 2500/-TZS per land parcel. Absence of village land registry and actual records of CCROs issued hinders collection of land rent by village councils. Also, due to lack of coordination and communication between sectors involved in the process, coupled with absence of proper data management and record keeping systems at district land registry, it was difficult to ascertain the number of land parcels adjudicated and number of CCROs issued at each village. Not any village surveyed has a land registry for keeping records. Records for villages that issued CCROs are being stored in the district land registry, which poses a challenge for village leaders to make follow-ups and monitoring of land ownership in their respective villages.

Although the main aim of issuing CCROs is to enhance tenure security of land owners, CCROs can also be used as collaterals for accessing loans from financial institutions. However, it was noted that, in villages where CCROs have been issued, no any land owner has used it or been able to obtain loans from financial institutions. One of the reasons given was that, financial institutions are reluctant to grant loans due to the unsecured system of issuing and management of CCROs, lack of business plans to support loans applications and difficulty, and the bureaucratic process of reclaiming defaulted loans using CCROs. However, MKURABITA and the Sugarcane Farmers Association have made efforts in collaboration with CRDB Bank, NMB Bank and Insurance Companies by creating awareness and education to farmers on accessing the loans by using CCROs as collateral.

Speaking about using CCROS as collateral for accessing loans, Mr. Ismail Kipalanga of Mkula Village said that:

Quote in Kiswahili

“Baada ya kupata hatimiliki, nilienda benki kuulizia taratibu za kupata mkopo kwa kutumia hatimiliki, lakini niliambiwa ni sharti tujiunge kwenye vikundi vya watu kumi na maeneo yetu yawe na ukubwa wa kuanzi ekari 15, lakini mimi mashamba yangu pekee yana ukubwa zaidi hivyo naona kama haya masharti ni magumu sana kutekeleza kwani sio kila mmiliki anataka kukopa lakini pia wengine wanaweza kushindwa kulipa mkopo na kutuletea mzigo wa kulipa.”

English translation

“After receiving the CCRO, I went to the bank to inquire about the procedure of getting a loan by using the CCRO as a collateral but was told that I had to be part of a group of ten and our land size should be a minimum of 15 acres. I find these regulations difficult to adhere since my own parcel of land is bigger than the minimum set size and not every land owner desires to borrow money. In addition, some people might not be able to repay the loan and this would place the burden of repaying the loan to other group members.”

Figure 10 | Mr. Ismail Kipalanga of Mkula Village holding his CCROs



Source: Field Data, August 2017

However, Kilombero district is among the three pilot districts for implementation of the Land Tenure Support Programme under the Ministry of Lands, Housing and Human Settlement Development. Village land use planning for eight villages have been undertaken from November 2016 and currently, systematic adjudication for 15 villages is ongoing. Until August 2017, a total of 22,814 farms have been adjudicated, about 6,000 CCROs have been prepared and 2,100 CCROs have been issued through the Land Tenure Support Programme (LTSP) in collaboration with Kilombero District Council. Therefore, villages falling in the two landscapes will be covered by the current project in the upcoming phases.

The Land Tenure Support Programme has developed a comprehensive database for preparation, production and management of CCROs. The database keeps records of CCROs showing relevant Districts, Wards, Villages, hamlets, owners of CCROs, gender, size of the parcel, ownership type and land use type for every land parcel.

Table 4 | Sample database sheet for CCROs management

district	ward	village	hamlet	uka na	full owner name	sex	acre	ownership type	proposed land use
KILOMBERO	MSOLWA STATION	NYANGE	MBANANO	094KLM/MBN/1	MWANAHAWA ABDALLA MAHANGA	Ke	2.72	Pekee	Kilimo
				094KLM/MBN/101	MARY JOSEPH MAGOHA	Ke	2.42	Pekee	Kilimo
				094KLM/MBN/102	BAHATI MAULIDI MISUKE	Me	1.09	Pekee	Kilimo
				094KLM/MBN/104	HENRY HEBEL NYALUSI	Me	4.65	Pekee	Kilimo
				094KLM/MBN/105	EMILY ARONI MWAMAJUJA	Me	0.86	Pamoja	Kilimo
					ENEAH ABERI NYARUSI	Ke	0.86	Pamoja	Kilimo
				094KLM/MBN/108	ALLY MSHAM UMILA	Me	2.29	Pekee	Kilimo
				094KLM/MBN/109	SAFIA HASAN KAHONGA	Me	0.69	Pekee	Kilimo
				094KLM/MBN/11	ZAINA ALLY KINJIMBI	Ke	0.7	Pekee	Kilimo
				094KLM/MBN/110	SALIMA THABITI KILAO	Ke	1.7	Pekee	Kilimo

Source: Land Tenure Support Programme, 2017

3.2.2 Granted Right of Occupancy (GRO)

Apart from CCROs, the survey has shown that there is a number of Granted Right of Occupancies granted to plantation farms. Table 5 below shows Granted Rights of Occupancies in the two landscapes.

Table 5 | Granted right of occupancies in the two landscapes

No	Plot No/ID No.	Village	Area (Ha)	Uses	Owner
1.	411	Mngeta	5,818	Agriculture & pastoralism	KPL
2.	289875	Mbingu	0.2	Agriculture & pastoralism	Stephano George Mbwambo
3.	88/702336	Mbingu	3,621	Agriculture & pastoralism	The Registered Trustee of Diocese of Mahenge
4.	371	Kisegese	196.4	Agriculture & pastoralism	George Themi Salewa
5.	Ruipa	Ruipa (ILLOVO)	10,324	Agriculture	Kilombero Sugar Company Ltd
6.	Ruipa	Ruipa	4,030.17	Agriculture & pastoralism	Kilombero Farms Limited
7.	371	Kisegese	196.54	Farm	George Temi
8.	107	Mngeta	64.48	Farm	Rufiji Basin Development Authority
9.	210	Mkula	1.511	Farm	Willibard R. Makamla
10.	502	Msolwa	17.55	Farm	Rashid M. Mkwaya
11.	507	Msolwa	27.78	Farm	Fred L. Mwasakile
12.	702274	Msolwa	240	Farm	Sadrudin R. Meghji & Moez R. Meghji
13.	702573	Msolwa	193.96	Farm	Sadrudin Meghji
14.	979	Sanje	153.72	Farm	Saleh S. Nahid
15.	978	Sanje	153.72	Farm	Mohamed Suleiman
16.	703798	Sanje	103.114	Farm	Ally O. Madenge
17.	798/799	Mbingu	4.12	Farm	Stephano G. Mbwambo
18.	985	Msolwa	981	Farm	Environment Camping Hunting
19.	702650	Mchombe	10.42	Farm	The Registered Trustees of Diocese of Mahenge
	TOTAL		26,137.685		

Source: Kilombero District Land Use Framework Plan, 2016

4. LAND USE PLANNING, MANAGEMENT AND ADMINISTRATION

4.1 COVERAGE OF THE DISTRICT LAND USE FRAMEWORK PLAN IN THE TWO LANDSCAPES

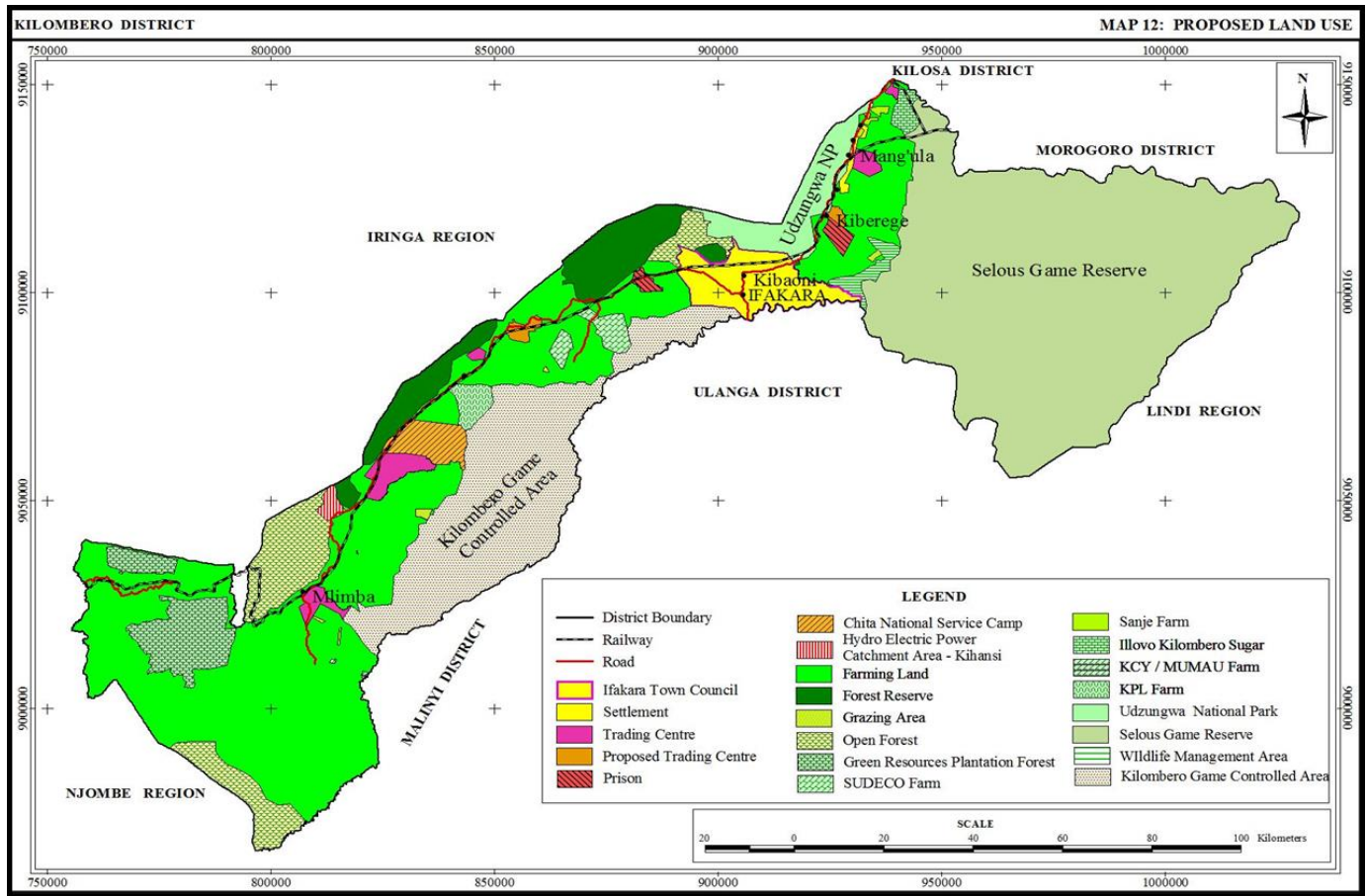
The Kilombero District Land Use Framework Plan (DLUFP) outlines how land resources in the district can be economically utilized based on its potential and limitations by providing guidance for decision making, management and allocation of land resources for different uses.

The Kilombero District Land Use Framework Plan (of which the two landscapes are found) was prepared and approved in 2016. The framework outlines various land use categories and provides proposals for sustainable management of natural resources. The framework provides guidance for conservation and protection of natural resources in the district.

In Mngeta Corridor and Udzungwa-Magombera-Selous landscape, the District Land Use Framework Plan recommends agricultural intensification to increase crop productivity that will improve people's livelihoods by maximizing output while at the same time sustaining the environment (reduce expansion of agricultural land through deforestation). The District Land Use Framework Plan also provides basis and guidance for public awareness and involvement on land, environment and natural resources management legislations such as land acts and policy, forest and wildlife acts and environment management act together with encouraging village councils to introduce tough by-laws to control encroachment and degradation of natural resources.

It is recommended that, district land use framework should be prepared before developing village plans, for Kilombero district village land use plans were prepared prior to DLUFP. However, the preparation of DLUFP took into account the village land use plans which were prepared and made some recommendations to review some of village plans where it was deemed necessary so as to avoid potential conflicts over uses, conservation of land and its natural resources.

Figure 11 | Kilombero District Land Use Framework Plan Map (2016 - 2026)



Source: Kilombero District Land Use Framework Plan (2016 - 2026)

4.2 VILLAGE LAND USE PLANNING IN THE TWO LANDSCAPES

Until August 2017, a total of 16 villages in the two landscapes have land use plans prepared by the National Land Use Planning Commission in collaboration with the Land Tenure Support Programme and the Kilombero District. But, due to village subdivision that took place in 2013 and 2014, a land use plan of Mofu village that was prepared in 2012 was distorted. Although there are some planned land uses such as planned areas for community services (hospitals, police station, schools), cemeteries and agricultural areas encompassing areas for SUDECO (Sugarcane Development Company) that are still being used, the village still requires the re-preparation of a land use plan to address the current land use needs brought about by subdividing Mofu village and forming another village (Ihenga village).

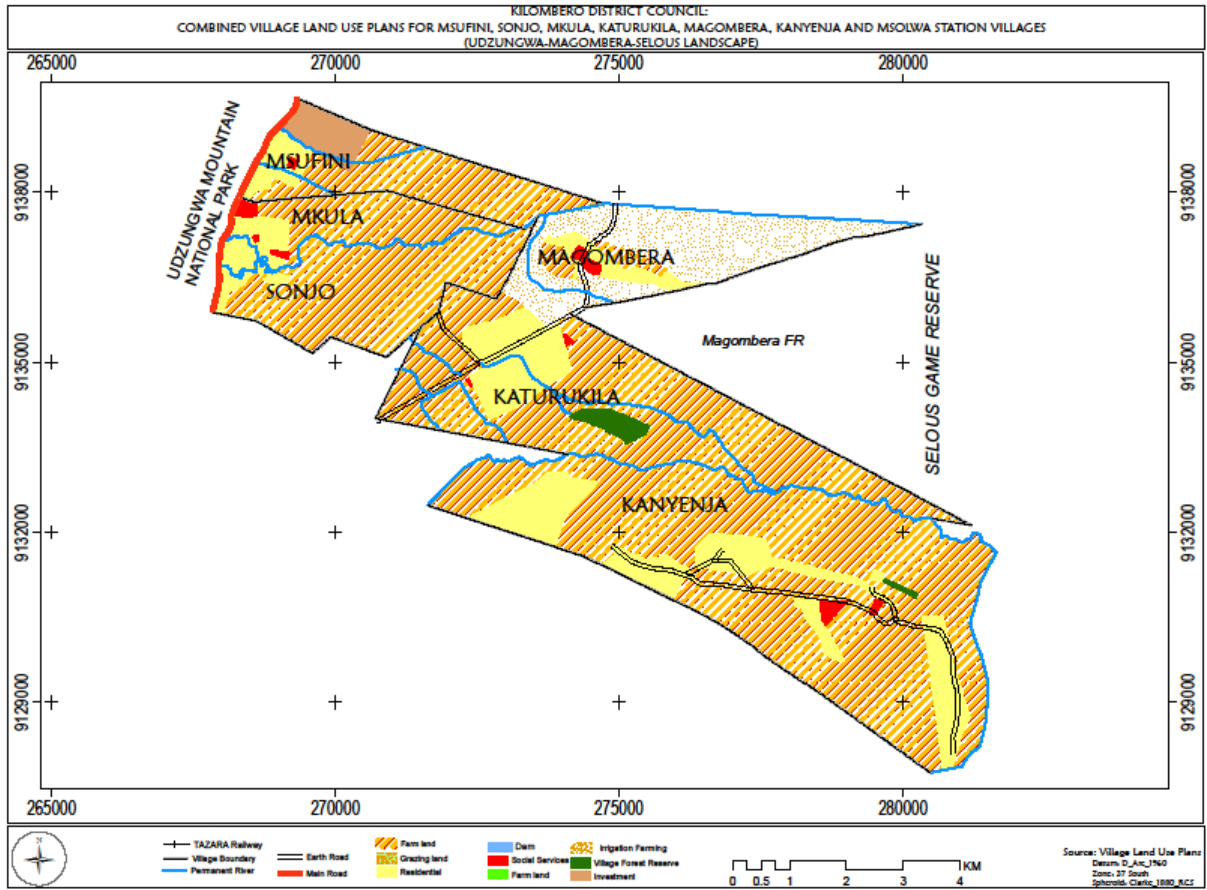
Table 6 | Villages with existing Land Use Plans by August 2017

No	Name of Ward	Name of Village	Year Prepared/Reviewed
1.	Namawala	Kisegese	Prepared in 2010
2.	Mbingu	Vigaeni	Prepared 2017
3.	Mbingu	Mbingu	Reviewed 2012
4.	Msolwa stesheni	Msolwa stesheni	Prepared 2016
5.	Igima	Igima	Reviewed 2017
6.	Mchombe	Njage	Reviewed 2017
7.	Mchombe	Mchombe	Prepared in 2012
8.	Mchombe	Lukolongo	Being reviewed
9.	Mkula	Magombera	Prepared in 2012
10.	Mkula	Msufini	Prepared in 2012
11.	Mkula	Mkula	Prepared in 2012
12.	Mkula	Sonjo	Prepared in 2012
13.	Mang'ula B	Kanyenja	Prepared in 2012
14.	Mngeta	Mngeta	Prepared in 2012

Source: *Field Data, 2017 and NLUPC*

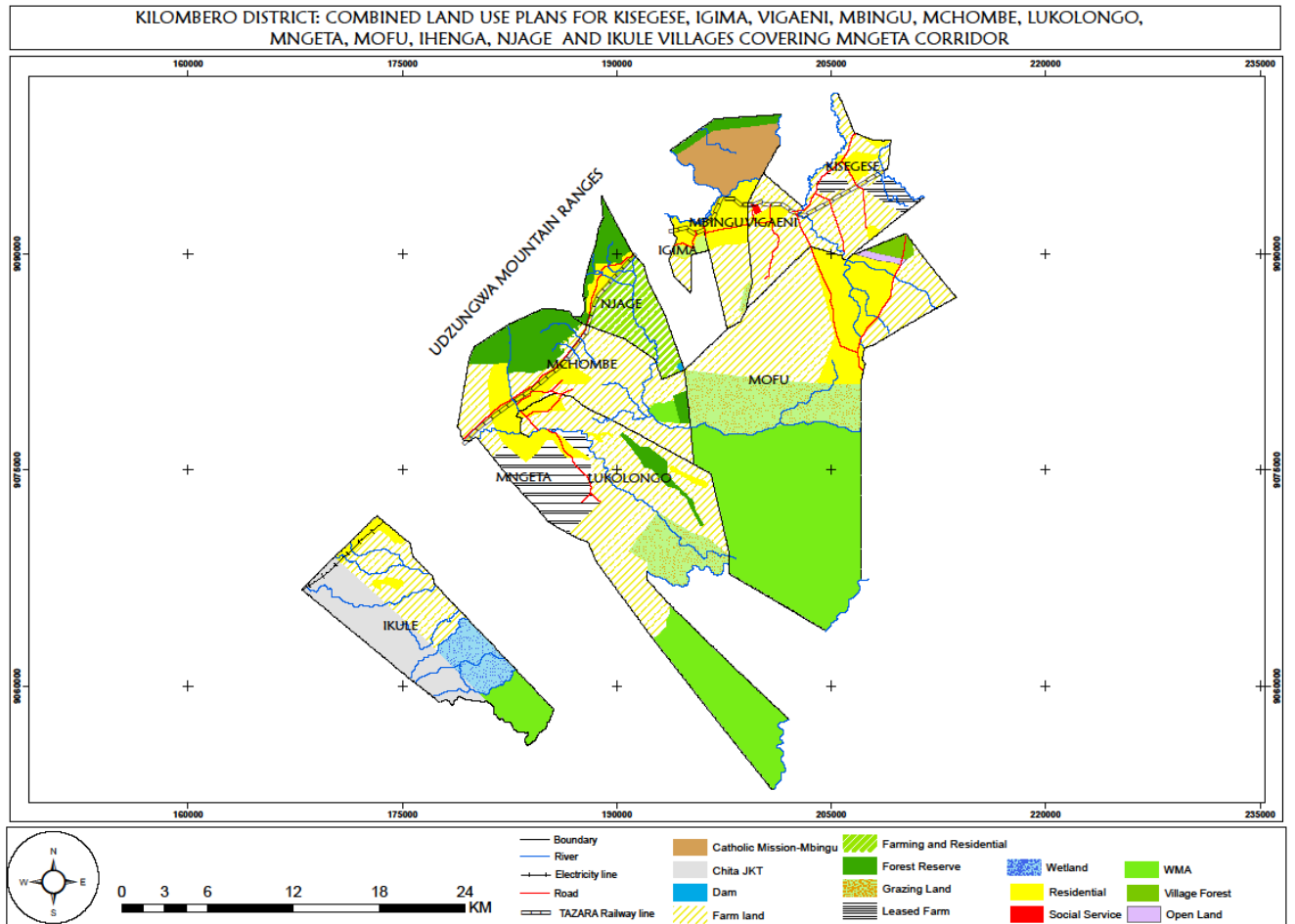
On the other hand, challenges hindering implementation of the VLUPs included the inadequate capacity and understanding by VLUM committee on their roles and responsibilities in village land use planning, administration and management. It was revealed that, the VLUM teams are redundant and assumes their responsibilities ended after the approval of the plan by the village assembly.

Figure 12 | Combined Village Land Use Plans in the Udzungwa-Magombera- Selous Landscape



Source: Village Land Use Plans Covering the Udzungwa-Magombera-Selous Landscape

Figure 13 | Combined map of villages with Land Use Plans in the Mngeta Corridor



Source: Village Land Use Plans Covering the Mngeta Corridor

5 . CHALLENGES OF LAND USE PLANNING, IMPLEMENTATION AND MANAGEMENT IN THE TWO LANDSCAPES

5.1 SUBDIVISION OF VILLAGES

Subdivision of Mofu village has hindered implementation of the land use plan prepared in 2012. Mofu village was subdivided to form Ihenga village thus separating major land uses (previously planned in Mofu village) for two of the villages. Also, village subdivision meant change of boundaries that demarcated the mother village with the rest of the neighboring villages. Due to that, the surveyed revealed that, despite Msufini, Nyange and Msolwa Stesheni having land use plans, these villages do not have boundary maps.

5.2 LAND CONFLICTS

5.2.1 Land Use Conflicts

In recent years, the Kilombero district has been experiencing serious land use conflicts between pastoralists and indigenous farmers, as well as large agricultural farms versus villagers. Such conflicts occur when pastoralists who move from one place to another in search of water and pastures tend to graze their cattle in farms. This case is more evident in Mofu Village which also hosts the encroached Namwai Forest Reserve.

Various measures and efforts have been taken by the village and district authorities to resolve these land use conflicts; which include establishment of district and village land dispute tribunals, ward tribunals, public education, discussion and agreements with livestock keepers and expulsion of illegal migrants especially the livestock keepers. For instance, in ward level, Mofu Ward leaders always organize discussion meetings between farmers and livestock keepers to agree on modality to which livestock keepers and crop farmers can utilize land between growing and after harvesting seasons. Livestock keepers are not allowed to graze their animals in farmers' lands during growing seasons but only to do so after harvesting period.

5.2.2 Village Boundary Conflicts

Village boundary disputes frequently occur in many villages in Kilombero district. A survey in the two landscapes has shown that there are boundary conflicts between Mofu Village and Miyomboni Village; Magombera and Katulukila Villages versus Selous Game Reserve; Vigaeni Village versus Kisegese Village; Mbega Farm versus neighboring villages; Sanje village versus Miwangala village and Ihenga village versus Kisegese Village. Also, according to village leaders, there is an ongoing conflict between Kilombero

Sugarcane Farm and neighboring villages. These conflicts are partly caused by ignorance on village boundaries among the village leadership and incorrect survey plans which are not agreed by the neighboring villages.

For instance, the boundary conflict between Sanje Village and Miwangala has emerged after subdivision of Sanje Village to form another village, Miwangala Village. Subdivision was undertaken before complete survey of boundaries was done thus resulting to unclear and understandable boundary of the two villages. Also, in some cases, change of village governments has led to rejection of village boundaries that were earlier accepted by the outgoing leadership.

According to local leaders, several measures have been taken toward resolving these village boundary disputes including re-demarcation of the village boundaries using participatory approach encompassing relevant village authorities. Also, preparation of village land use plans in villages covering the two landscapes has contributed to the reduction of land use conflicts. The ongoing village land use planning, adjudication and issuance of CCROs in all villages of Kilombero district aims at ensuring tenure security and elimination of land use and boundary conflict in the district.

5.2.3 Land Disputes – Chita National Service Camp and Ikule Village

There is an ongoing dispute caused by a shortage of land available to surrounding villages. Much has been done to resolve the conflict, including a recent consultation with top government officials. Due to that, it was also impossible to undertake data collection in Ikule Village.

6. RECOMMENDATIONS

6.1 LAND USE PLANNING, ADMINISTRATION AND MANAGEMENT

Almost all villages in the two landscapes have land use plans, but there is a lack of its implementation. For instance, areas planned for grazing are still being used for crop farming. Also, absence of important infrastructure in areas planned for grazing leads to encroachment in other protected areas in search of water and pastures. The latter is also a result of absence of monitoring and evaluation of prepared land use plans and failure of undertaking the 5th and 6th stages of land use planning, administration and management in respective villages. In this case, it is recommended that, through an integrated landscape approach, relevant stakeholders in the landscapes collaborate to undertake and complement efforts of environmental management by surveying of land parcels for respective uses, issuance of CCROs and undertaking detailed management planning in areas planned for key land uses such as agriculture, livestock keeping and human settlements.

6.2 ISSUANCE OF CCROS AND THEIR RELATED BENEFITS

Since the majority of villages have land use plans as a pre-condition for systematic or spot adjudication of the village land, there is a need of promoting issuance of CCROs (both individual and group CCROs) in order to ensure tenure security and protect the natural environment at this time where the cluster is attracting different kind of investment. Also, it is recommended that more sensitization to the community and related financial institutions is inevitable for ensuring that, apart from meeting other business requirements, CCROs are considered as eligible document for accessing loans.

6.3 BIODIVERSITY CONSERVATION AND PROMOTION OF AGRO-TOURISM

Increasing competition between community conservation, biodiversity hotspots and the expansion of crop farming around parts of the Mngeta Corridor, the Udzungwa-Magombera-Selous landscapes and the whole of Kilombero Cluster in the SAGCOT area necessitates the integrated landscape approach encompassing different players in the region to protect the natural environment while promoting sustainable utilization of land through different uses. Also, the presence of abundant natural resources presents the Kilombero Cluster as a potential area for agro-tourism.

7. REFERENCES

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